MWP

REMEDIAL ENVIRONMENTAL IMPACT ASSESSMENT

Ros an Mhíl Deep Water Quay

Volume I: Non-Technical Summary

Department of Agriculture, Food and the Marine

October 2025

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1. Introduction

This Remedial Environmental Impact Assessment Report (rEIAR) has been prepared by Malachy Walsh and Partners (MWP) to accompany an application for Substitute Consent by Department of Agriculture, Food and the Marine (DAFM), the 'Applicant', to An Coimisiún Pleanála (ACP). The application for Substitute Consent is made under the provisions of section 177E of the Planning and Development Act 2000, as amended, for retrospective permission in relation to development works undertaken between 11th July 2023 and 20th May 2024 for a new Deep Water Quay at Ros an Mhíl Fishery Harbour Centre, Ros an Mhíl, Co. Galway. Planning permission for the new Deep Water Quay was previously granted by Galway County Council under Planning Reg. Ref. 17/967. That permission expired in July 2023 at which point the quay construction was only partially completed. The Substitute Consent application relates to works undertaken after the permission expiration but which were in accordance with the details of the development that had been permitted under Planning Ref 17/967.

The intended purpose of the rEIAR is to assess and outline likely significant effects, if any, on the environment, which have occurred or which are occurring or which can reasonably be expected to occur because of the development, the subject of the application for substitute consent; and to detail (i) any appropriate remedial measures undertaken or proposed to be undertaken to remedy any significant adverse effects on the environment; and (ii) the period of time within which any proposed remedial measures will be carried out.

1.1 Site Location

Ros an Mhíl Harbour is located on the north-east shore of Cashla Bay near the village of Ros an Mhíl in Connemara. Ros an Mhíl is located, approximately 40 kilometres to the west of Galway city, within the functional area of Galway County Council. The location of the application site within Ros an Mhíl harbour is shown on Figure 1.

Ros an Mhíl village is located approximately 1km from the harbour. A number of residential dwellings, a local shop, a school, and a church are located within the village. Throughout the surrounding area there are a few localised industries making use of the harbour facilities. These include fish processing, net repairs, boat repairs and diesel and oil supply companies. These industries are dependent on the continued operation of Ros an Mhíl Harbour.

Ros an Mhíl is connected to Galway and the national primary road network via the regional R336 and R372 roads. The R336 / R372 provides a reasonable, albeit low capacity, highway route connecting Ros an Mhíl to Galway and the rest of the country.

Ros an Mhíl Harbour is primarily a fishing port and serves the Irish and foreign fishing fleet that operates off the coast of Galway. It lies between the major fishing ports of Killybegs to the north and Dingle and Castletownbere to the south. It can accommodate vessels up to approximately 5m draught.

The inner harbour is positioned on the north-east shore of upper Cashla Bay and is well sheltered. The existing harbour currently comprises two piers, known as Piers 1 and 2, along with a dedicated passenger ferry terminal and a small craft harbour. Pier 2 is the more recent development of the two piers. The disposition of these piers is such that they create an approximately rectangular shaped basin at the centre of the harbour.

Údarás na Gaeltachta have invested in basic infrastructure in the harbour area. To date the investment has taken the form of two commercial buildings, service roads wastewater treatment plant and a slipway. The commercial units are leased to private tenants. Other employers operating in the Harbour area include Bord Iascaigh Mhara (BIM) who operate an Ice Plant; and Iasc Mara Teoranta who operate a pelagic fish (mainly mackerel and herring) processing facility.

Figure 2 provides an aerial view of the development site prior to any working on the deep-water quay being undertaken.

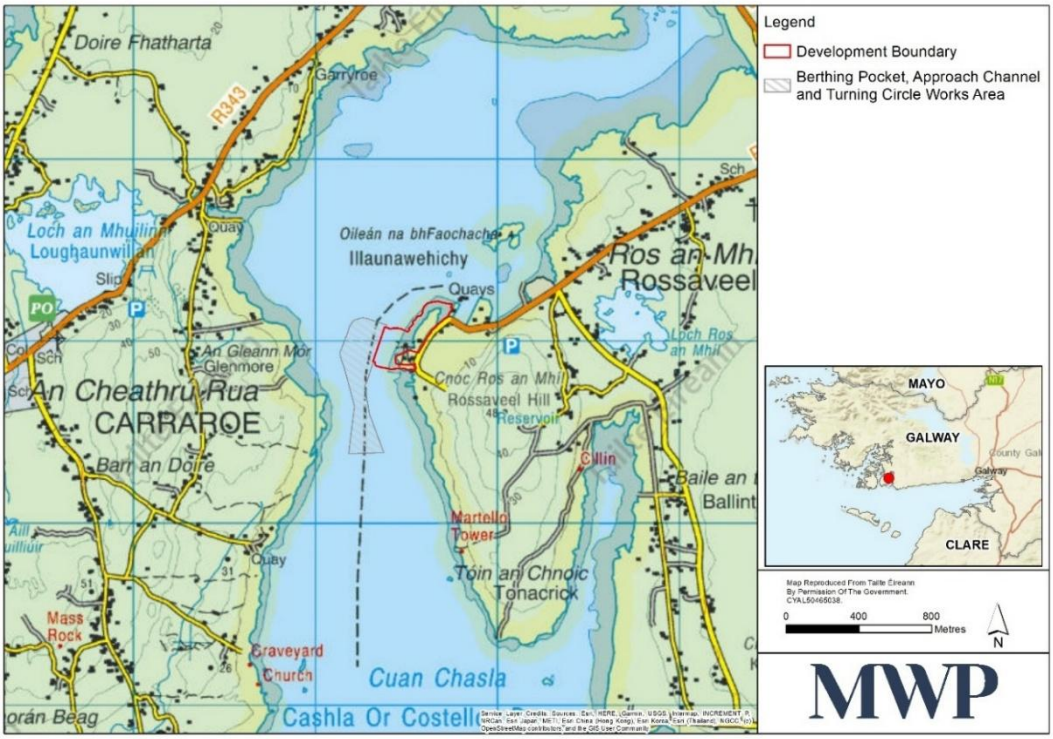


Figure 1: Location of the Development site at Ros an Mhíl

Figure 2: Photograph showing view of the development site in February 2021 (prior to any works for the Deep Water Quay Development). (Source Google Earth Pro)

2. Description of Development

A full description of the development works undertaken between January 2023 to 20th May 2024 is provided in Chapter 2 of Vol. II of the rEIAR.

2.1 Development Background

Planning permission for a new Deep Water Quay development at Ros an Mhíl was previously granted by Galway County Council on 2nd April 2018. (Planning Ref 17/967). Having regard to sections 251 and 251A of the Planning Act, the expiry date of the permission was 11th July 2023.

The permitted Deep Water Quay Development included the following main construction elements:

- Construction of a new 200m long quay wall structure, with a concrete slab finish
- Land reclamation area of circa 2.4 hectares behind the quay wall
- Low concrete sea walls and rock armour revetments along the northern and southern boundaries of the development
- Dredging of a 30m wide x 200m long berthing pocket adjacent to the new quay to a depth of -12.0m Chart Datum
- Dredging of a Navigation Channel and 200m diameter Turning Circle to a depth of -8.0m Chart Datum
- Provision of access road, lighting, drainage infrastructure, water & electrical services
- Ancillary security and access arrangements for Quay Facilities including palisade fencing, roadside guard rails, gates and traffic barrier.

Works on the development commenced on 26th January 2023 and were well advanced throughout 2023.

Prior to the expiration date of 11th July 2023, an application was made to the Planning Authority, Galway County Council, on 29th May 2023 to extend the duration of the permission for a further 5-year period. Galway County Council issued a decision to extend the permission on 11th July 2023. (Planning Ref 23/218 refers). (For completeness, two earlier applications to extend the duration of the permission were made, Planning Ref 22/460 was refused and Planning Ref 23/60548 was declared incomplete.)

With the benefit of the grant of the 5-year extension of duration, to 11th July 2028, the DAFM continued the works in the expectation to have same completed within approximately one year.

However, on or about 4th September 2023, legal proceedings were commenced to question the validity of the decision of the Council to extend the duration of the permission on the basis that the development subject of the decision to extend the duration required Environmental Impact Assessment (EIA) and Appropriate Assessment (AA): *Wild Ireland Defence CLG v. Galway County Council*, High Court 2023 1007 JR.

On 17th May 2024, the Council wrote to the solicitor representing *Wild Ireland Defence CLG* to state that the Council did not intend to defend the proceedings and would consent to an order quashing the decision to the extend the duration of the planning permission. The DAFM ceased work on the lands on 20th May 2024.

The final order in the *Wild Ireland Defence CLG* proceedings was made on the 29th October 2024 and the decision to extend the duration of the permission was quashed by an order of certiorari of the High Court.

Therefore, the permission for the development under Planning Reg. Ref 17/967 expired on 11th July 2023. It thus follows that:

- Development up to and including 10th July 2023 was carried out as lawful permitted development under and in accordance with Planning Reg. Ref. 17/967;
- Development carried out from 11th July 2023 to 20th May 2024, which was presumed lawful permitted development under and in accordance with Planning Reg. Ref. 17/967 as extended by Planning Reg. Ref. 23/218, now requires to be regularised by way of an application for substitute consent; and
- Development permitted under Planning Reg. Ref. 17/967, but not yet carried out, now requires new permission by way of a further application to ACP under section 37L of the Planning Act.

2.2 Overview of Works undertaken between January 2023 and 10 July 2023

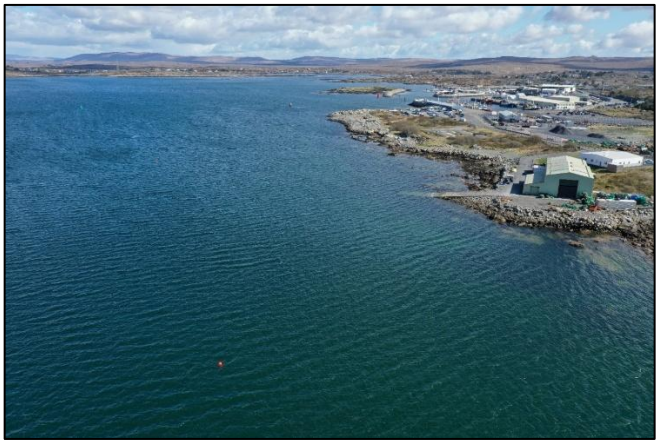
The first phase of the construction process from 26th January to 10th July 2023 took place during the permitted period (Planning Ref. 17/967). It included the following works:

1. Mobilisation and development of construction compound and facilities.
2. Reclamation: importing rock fill material to increase the existing ground level to the high-water level and to fill the marine area behind the proposed quay wall (east side) to create a construction surface to the level of +5mCD
3. Rock Armour for revetments (35%).
4. Drilling and blasting of 15% of the proposed quay wall trench and berthing pocket (2 blast events).
5. Off-site construction and delivery of 20 pre-cast concrete caissons, 2 L-shaped blocks and 8 foundation beams.

On the basis of the foregoing, prior to the end of the appropriate period or "life" of the permission on 10th July 2023, significant works had been completed. Approximately 90% of the 2.4 hectares reclamation was complete and 15% of the rock blasting in the middle of the berthing pocket and quay wall trench was complete.

The reclamation involved the use of imported engineering fill material transported from local quarries to the site, tipping from the lorries and use of excavators to place and level the material. The approximate quantity placed is 390,000 tonnes of stone.

Site Status Pre-Commencement



Site Status 10th July 2023

Figure 3: Photographs of development site showing status pre commencement and status on 10th July 2023

2.3 Overview of Works undertaken between 11th July 2023 and 20th May 2024

The works carried out between 11th July 2023 to 20th May 2024 for which substitute consent is being applied for are summarised below. The works which took place during this period were understood by DAFM to be permitted by reason of a permission (Planning Ref. 23/218) for the extension of duration of Planning Ref. 17/967. These works were:

1. Completion of Reclamation area by placing engineering fill material into a remaining area of 0.12 ha within the middle of the reclaimed lands.
2. Creation of a temporary protective berm around the quay wall trench. This is a temporary structure needed for the construction of the quay wall.
3. Drilling and blasting of the remaining 85% (18 blast events) of quay wall trench and berthing pocket was completed along with a small circular area in the channel adjacent to the berthing pocket
4. Dredging of rock in quay wall trench (50m long).
5. Filling and dredging the blasting platforms in berthing pocket.
6. Installation of Concrete Batching plant.
7. Installation of 48m of quay wall foundations.

A temporary contractors compound was located in the northern corner of the proposed project site adjacent to the existing Ross an Mhíl harbour facilities in a surfaced area previously used for parking. This site included temporary site offices (Portacabins), staff welfare facilities and car parking, and equipment lay down areas.

Office compound welfare facilities were connected to waste-water holding tank installed for the duration of the construction works and removed thereafter. The waste water holding tank was emptied as required and effluent disposed of at a municipal Wastewater Treatment Plant (WWTP).

The area of drilling and blasting for the quay wall and berthing area undertaken is indicated in purple in Figure 4. The relevant Planning Drawings of these works are 24984-XX-DR-MWP-CE-5010, 24984-XX-DR-MWP-CE-5011, 24984-XX-DR-MWP-CE-5012 and 24984-XX-DR-MWP-CE-5013.

Figure 4:Map of the development works area, including the reclamation area, the blasting and dredging areas, the berm construction areas and rock armour placed undertaken between Jan 2023 and May 2024.

When works were suspended in May 2024, all the contractor's equipment, facilities and materials were removed from site. The caissons and beams that had been delivered but not installed were returned to the manufacturer This removal process took place between 20th May – 29th Oct 2024. A photograph of the final cleared site is provided in Figure 5.

Figure 5 Aerial View of the development site March 2025 (Source Google Earth Pro)

3. Alternatives Considered

A detailed description and assessments of the alternatives considered is provided in Chapter 3 of the rEIAR. This chapter provides an analysis of the alternatives (in terms of location, design and construction methods) which have been considered as part of the design of the development. In addition, the chapter profiles the need and objectives of the project.

The objectives of the deep-water quay development are to improve the Ros an Mhíl fisheries harbour infrastructure to provide a deep-water quay that would support the continued sustainable operation of Ros an Mhíl Harbour and associated local businesses that are at risk without the addition the new quay infrastructure. This includes providing facilities for larger vessels and more space and facilities for onshore fisheries operational activities. Figure 6 provides a photograph of the existing over-subscribed fisheries harbour facilities at Ros an Mhil during the peak fishing season.

Figure 6: Photograph of the limited space in the existing Ros an Mhíl Fisheries harbour during the peak fishing season.

3.1 Alternative Deep Water Quay Sites and Shapes

As discussed in Chapter 1 (rEIAR Vol. II), the Ros an Mhíl deep-water quay has been the subject of the following previous planning applications:

- 2002 granted planning permission by Galway County Council with a subsequent amendment also granted planning permission by the Council in 2006 (and extension to the duration of that permission granted in 2011); and
- 2018 granted planning permission by Galway County Council, which expired in July 2023 and efforts to extend the planning permission were legally challenged and denied in October 2024.

The most detailed consideration of site and design alternatives was undertaken in advance of the 2002 application. This considered an in-shore quay option that was dismissed as impractical and inappropriate given that it would generate a significant, in the order of approximately five times greater, dredging quantities and the cost and environmental implications of the larger dredging volumes associated with inshore schemes was considered to heavily outweigh the advantages of avoiding marine works for an off-shore quay development.

The most suitable deep-water site identified was in the navigation channel about 380m west south-west of the existing fisheries harbour. Five off-shore options at this site were considered for the location and alignment of the deep-water quay as well as its associated vessel approach corridor and turning circle. These were all in the same deep-water area but considered different depths, angles of the quay and turning circle option. Option 5 was selected as the preferred option as it was close to the 5m contour which would provide for a smooth vessel departure and, with refinement, dredging quantities could be reduced slightly. There were also no significant negative features identified with this option.

There would be no significant difference in visual, traffic, material assets, water quality, flood, land and soils, cultural heritage, and population and human health effects between these different site options. The main environmental effects of concern would be related to the loss of marine habitat and disturbance or fatalities to marine species and water quality effects during the construction phase. There are unlikely to be any significant

differences in these effects from the 5 No. site options considered. Ultimately, the choice of site and design was based on need and practical, financial and operational constraints.

The 2002 assessment also considered different quay shape alternatives. A full reclamation with one deep water quay was one option considered, but there was other partial reclamation options associated with different quay wall shapes that were also considered. The advantages of the L and T quay shapes are that they would provide more berths of different depths and reduce the reclamation required. This would potentially reduce the loss of existing marine habitat although these areas would still be temporarily affected during the construction phase.

A full reclamation with one deep water quay would reduce the number of berths but would provide more onshore space for quayside fishing operations. From an environmental perspective, this option would lead to a greater loss of shallow coastal marine habitat compared to partial reclamation alternatives.

There was not expected to be any significant difference in visual, traffic, material assets, water quality, flood, land and soils, cultural heritage, and population and human health effects between these different shape options.

3.2 2017 Planning Application

The 2017 application proposed the preferred 2002 site option but did away with the inside quay. This application also proposed a deeper quay – not surprising due to the shipping technology developments and growth in size of vessels over time. An assessment of this alternative is provided in Section 3.3 below.

In the second planning application in 2017, the preferred development option for the deep-water quay was modified. The proposed -8mCD dredge depth in the channel and vessel manoeuvring area was maintained, but the alongside depth at the quay was increased to -12mCD to provide for the tidal arrival and departure of deeper draught vessels. The inside berthing face was also removed so that a larger open back-up hard standing area could be provided landward of the berthing face to better support quayside fishing operations. In addition to providing greater flexibility for quay side operations, removing the inside berthing face also reduced the capital cost of the development. This proposed full reclamation option with one 200m deep water quay was also more similar to the quays available at the Killybegs and Foynes harbours.

3.3 Alternative Deep Water Quay Construction Methodologies (2023-2024)

Various quay wall construction methods were considered in the preparation of the 2017 EIS. These included the following:

1. A Suspended Deck Option;
2. A Sheet-piled Wall Option; and
3. A Caisson Wall Construction.

These different methods and their effects were assessed, and the preferred option was the caisson wall construction method. This choice was largely informed by the comparative financial, practical and logistical aspects of the construction. This caisson quay wall was the simplest and most cost-effective option. From an environmental point of view the caisson wall construction method would also require less complicated and lengthy marine works.

Whatever method was used would require the same amount of reclamation and loss of existing shoreline habitat. The main differences in environmental effects would be related to the duration of the work and associated noise and water quality effects from construction and dredging activities. However, these were not expected to be substantially different. The sheet pile wall would require the use of more imported steel and coatings which would

likely make greater contributions to carbon emissions and climate change. However, the use of concrete and steel supports for the precast concrete for the caissons would also contribute to carbon emissions and climate change.

There would be no significant difference in visual, traffic, material assets, flood, land and soils, cultural heritage, and population and human health effects between these different construction options.

3.4 Alternative Blasting and Dredging Options

The granite bedrock within the proposed dredge areas is too strong to be dredged economically by any dredger without marine pre-treatment works. For this site it is necessary to initially break up the rock prior to removal by a dredger. The 2017 EIS anticipated that the drilling, blasting and dredging would be undertaken using a floating drilling and blasting pontoon.

Unfortunately, only foreign European based contractors have the equipment and expertise for such a project, and the location and size of this dredging project was not sufficient to make it worthwhile for them to undertake this work. Consequently, an Irish contractor was appointed to undertake both the dredging works and the civils construction work. The appointed contractor proposed an alternative method of drilling and blasting that was approved. The two sections which follow describe these two methods.

The contractors appointed in 2022 proposed that the blasting and dredging works be undertaken by filling the marine area above each section of the quay wall trench and berthing pocket with rocks up to the high-water level to create a blasting platform. The drilling and blasting of the quay wall trench was undertaken in 20 segments. Each segment to be blasted was first filled with rock to the high-water level and then 51 No. holes were drilled into the fill material and bedrock to 2m below the required depth of the quay wall foundations level. These holes were then filled with casings and explosives and blasted. The dredged rock was then removed with excavators and used to construct the next segment to be blasted. A more detailed discussion and photographs of this process are provided in Section 2.2.4 of EIAR Vol. II Chapter 2.

Once the blasting got started, the dredged rock was used to construct a temporary protective berm around the quay wall trench to facilitate the construction works and protect the divers during the construction of the quay wall (see Figure 2-21 in Section 2.2.4 of EIAR Vol. II Chapter 2).

The main differences in environmental effects between these different blasting and dredging methods would be related to the duration of the works and associated noise and water quality effects from construction and dredging activities.

The 2017 blasting in the sea method was expected to take 4 No. months, while the blasting of the platforms took 10 No. months. The noise and vibration from blasting directly in the sea would also have been higher than that from blasting the constructed rock platforms.

The adopted method included the protective berm which would have reduced the noise and water quality effects within the channel. Consequently, while the adopted method had a longer duration of noise effects, the noise levels would have been lower and would have lower effects on marine mammals and other species.

The adopted method required a much larger volume of rock to be imported from local quarries than the 2017 proposed method. This increased the number of construction vehicles entering and leaving the site and increased the traffic effects on local roads. The traffic effect has been assessed in Chapter 14 of the rEIAR Vol. II. and found to be not significant.

There would be no difference in visual, material assets, flood, land and soils, cultural heritage, and population and human health effects between these different blasting and dredging methods.

4. Population and Human Health Effects

The assessment of effects on population and human health (rEIAR Vol.II Chapter 4) evaluates the potential effects on population and human health as a result of the construction works for the Ros an Mhíl deep water quay works between January 2023 and May 2024. The overarching concern is ensuring no substantial reduction in quality of life for individuals or communities took place due to the project works. It reflects the WHO's definition of health, acknowledging that development impacts can influence well-being in both direct and indirect ways.

Ros an Mhíl Harbour sits beside a small village of roughly 200 residents within a wider electoral division of 1,403 people. The local community is sparsely populated, in generally good health, and works across professional services, trade, and manufacturing, while tourism thrives on ferry connections to the Aran Islands and the Wild Atlantic Way. Land around the harbour remains dedicated to marine and coastal uses, with no changes expected to agricultural or residential areas.

During the construction phase of the Ros an Mhíl Deep Water Quay, mitigation measures were implemented to safeguard population and human health. Works were confined to zoned harbour and foreshore lands, avoiding impacts on residential, agricultural, and tourism areas, with temporary facilities placed on previously developed surfaces. All activities adhered to the Construction Environmental Management Plan (CEMP), with controls in place for noise, vibration, dust, and traffic, alongside strict health and safety oversight by the Project Supervisor Construction Stage (PSCS). While no mitigation was required for settlement patterns or employment, construction traffic was carefully managed to prevent disruption to ferry services, fisheries, and public access, ensuring compatibility with the harbour's maritime setting and preserving local amenities.

A range of best practice mitigation measures were implemented throughout the construction phase, and a detailed list of these can be found in Chapter 16 of the rEIAR Vol.II.

The assessment of the likely population and human health effects associated with the project found that the construction of the deep-water quay at Ros an Mhíl ran from January 2023 to May 2024 took place entirely within the existing harbour and foreshore, employing around 30 people at peak times without displacing any local residents or altering settlement patterns. Temporary nuisances such as noise, dust, traffic, and visual disruption, were confined to the work area, were well managed, and had no lasting impact on health or quality of life. All works used land already zoned for marine and industrial purposes, so there was no change to agricultural, residential, or recreational land uses. Local suppliers, quarries, and service providers benefited from increased demand for goods and services. Ferry services and tourist access remained largely uninterrupted with only minor, short-lived inconvenience for visitors.

After the application of all mitigation measures summarised above, the residual impacts to population and human health from construction activities were determined to be not significant. All effects were short-term, localised, and within acceptable levels.

The assessment identified no significant cumulative impacts from other projects in the vicinity during the same period. The impact on population and human health from the development is not considered significant.

5. Biodiversity – Terrestrial Ecology Effects

This summary provides an overview of the effects on terrestrial biodiversity associated with the Deep Water Quay (DWQ) development works at Ros an Mhíl, County Galway. Ecological surveys were undertaken to characterise the ecological features of the Site and its surroundings and to identify key ecological receptors potentially affected by the project. These surveys included comprehensive assessments of habitats, flora, mammals (excluding bats), bats, birds, reptiles, amphibians, invasive species, and terrestrial macroinvertebrates. Initial surveys were carried out in 2010 and updated in April 2025 to reflect recent site conditions and construction activities.

The Site comprises a mixture of buildings, piers, bare ground, and vegetation such as dry humid acid grassland and scrub habitats. It also includes water features such as a coastal lagoon located adjacent to the eastern boundary overlooking Cashla Bay. The dominant habitats recorded were dry humid acid grassland, scrub, and disturbed ground that are common and widespread in the greater area. Based on the surveys and publicly available information, the Site does not support any particularly sensitive habitats or protected plant species.

While the site itself is not designated under any nature conservation protections, four designated Natura 2000 sites are located within the Zone of Influence (ZOI), including the Connemara Bog Complex SAC (002034), Kilkieran Bay and Islands SAC (002111), Connemara Bog Complex SPA (004181) and the Inishmore Island SAC (000213). Potential effects on biodiversity were assessed through both Environmental Impact Assessment (EIA) and Appropriate Assessment (AA) processes. The NIS concluded that the construction of a deep water quay near Ros an Mhíl Harbour in County Galway will not adversely affect (either directly or indirectly) the integrity of these four European sites, namely the Connemara Bog Complex SAC, Kilkieran Bay and Islands SAC, Connemara Bog Complex SPA, and Inishmore Island SAC, either alone or in combination with other plans or projects, in light of the specific conservation objectives of each site.

The biodiversity assessment of the development works completed to date, including reclamation, rock blasting, and installation of quay wall foundations. Potential effects during the construction phase included habitat loss and alteration, notably of dry humid acid grassland and scrub, species disturbance or displacement, and effects on water quality. These effects are assessed as temporary, short-term, or slight to moderate but not significant when appropriate mitigation is applied.

Key ecological features assessed include mammals such as hedgehog, Irish hare, otter, and badger; birds including waders, gulls, corvids, passerines, seabirds, and waterbirds; reptiles and amphibians including common frog, smooth newt, and common lizard; invasive non-native species; and terrestrial macroinvertebrates. The majority of these species and habitats are common and widespread locally, with no significant populations or high-value habitats identified within the Site.

Potential effects identified included some permanent loss of dry humid acid grassland and scrub habitats that are common regionally and are unlikely to significantly affect biodiversity. Temporary disturbance resulting from noise, lighting, human presence, and construction activities may have caused disturbance or displacement effects on fauna, which are assessed as temporary and slight to moderate in severity. Potential indirect effects on aquatic and semi-aquatic species, particularly amphibians, may have arisen from sedimentation or pollution affecting water quality; however, these effects are considered to have been managed through appropriate mitigation. There was also a recognised risk of the introduction of invasive non-native species which was mitigated through stringent site hygiene and machinery control measures. Dust and pollution risks are acknowledged and were managed through environmental controls outlined in the Construction Environmental Management Plan (CEMP).

The management of the construction works incorporated a range of measures designed to mitigate potential effects, including dust suppression, noise and vibration management, invasive species prevention protocols, protection of water quality, and careful handling of materials and machinery to avoid spills and contamination.

In conclusion, with the full implementation of avoidance and mitigation measures, no significant residual effects on biodiversity occurred as a result of the development works, either individually or cumulatively with other developments in the area. No remedial mitigation measures are therefore required.

6. Land and Soils Effects

This chapter of the rEIAR evaluates the potential effects on Land and Soil due to the Ros an Mhíl deep water quay construction works between January 2023 and May 2024.

A desk-based study was undertaken to establish the baseline conditions of soils, geology, and hydrogeology in the vicinity of the proposed development, in line with national guidelines. The site is located along the shoreline and includes reclaimed land composed of imported rock fill. Adjacent areas are relatively flat and host industrial and commercial units.

The underlying geology is dominated by the Galway Granite Batholith, specifically the Banded Zone and Shannawona Granite formations, both of Devonian age. These granites exhibit complex mixing features and contain microdiorite enclaves. Quaternary sediments include bedrock outcrops, glacial till, and alluvial deposits with organic clay, peat lenses, and carbonate sands and gravels.

The area is generally poorly drained, with peaty podzols and shallow bedrock. Topsoil is thin or absent, resulting in sparse vegetation. Hydrogeology is controlled by fractures in the granite, with limited permeability and poor drainage in overlying peat.

Two Geological Heritage Sites are located within 5km: Costelloe Murvey Granite Quarry and Costelloe Road Cutting, both significant for their granite exposures and structural features.

The site lies within a High Radon Area, with 1–5% of dwellings predicted to exceed reference levels. No active faults are located within 1.5km of the development site.

A range of best practice mitigation measures were included in the Construction Environmental Management Plan (CEMP) and implemented throughout the construction phase to minimise potential impacts on land and soils, are detailed in Chapter 16 of the rEIAR Vol.II. These measures were designed to protect soil integrity, prevent contamination, and uphold environmental best practices throughout the construction period.

The construction works did not alter the overall land use of the harbour, with temporary use of existing parking areas for site compounds and batching facilities. Most activities occurred on unused harbour land and newly reclaimed areas, without displacing existing operations.

During construction, the site transitioned from a natural coastal landscape to engineered infrastructure. Rock blasting, dredging, and reclamation reshaped the shoreline and seabed, using clean imported and excavated rock to form protective berms and quay wall foundations. These activities caused structural changes to local soils and geology but did not result in contamination.

Only a portion of the quay wall foundations was installed before works were suspended. The concrete used was confined to the trench base and had no significant impact on underlying geology. Since suspension of the works, the site has remained fenced and inactive, with no operational effects.

A review of local planning applications found no other significant developments that would have interacted with the development works. Based on the assessment of previous and future construction activities, along with surrounding land use, the potential for cumulative effects on land and soils is considered negligible. As such, no additional remedial mitigation measures are required.

The assessment confirms that no significant effects on land, soils, or geology occurred during construction, owing to the effective implementation of mitigation measures and best practice procedures. No cumulative impacts have been identified in relation to other developments in the area. As a result, there are no residual effects requiring further remediation or monitoring.

7. Water Effects

This chapter of the rEIAR considers the likely effects that have occurred or are occurring on the existing water environment due to the construction works of the Ros an Mhíl Deep Water Quay development undertaken during the period January 2023 to 20 May 2024. The overarching concern in this assessment of water effects is ensuring

no substantial reduction in water quality due to the project. It reflects the objectives of the Water Framework Directive (WFD 2000/60/EC) which is to prevent the deterioration of water bodies and to protect, enhance and restore them with the aim of achieving at least good status, and to achieve compliance with the requirements for designated protected areas.

The deep-water quay development is located within the Hydrometric Area 31 waterbody, a catchment of Galway Bay North. Cashla_SC_010 is the subcatchment, while the river sub basin is Keeraunnagark_North_010. Cashla Bay is designated as a coastal waterbody (IE_WE_190_0000), considered 'Not at Risk' under the WFD. A geophysical survey consisting of a sub bottom profiling and side scan sonar surveying was undertaken by Hydrographic Surveys Ltd at Ros an Mhíl Harbour main channel on the 19th and 20th of January 2016 prior to the submission of the 2017 application. This was performed using a Sub Bottom Profiler to read the ground surface in the main channel and provide information on the features of the seabed. Quaternary geology in the area is representative of glacial deposition occurring in the harbour in the form of large boulders and boulder clay. The existing harbour itself was underlain by granite bedrock of the Galway Granite Batholith, which is of Devonian age. The granite occurred in two main types, the Shannawona Granite and Banded Zone Granite. The area of the development is classified as infralittoral rock by the EU Sea Maps. Previous water quality monitoring was carried out by DAFM at three locations during an historical dredging and disposal campaign in Ros an Mhíl Harbour in 2004. The monitoring found that dredging and disposal activities could not be correlated to any significant changes in water quality, either in terms of an improvement or deterioration in water quality across the range of parameters measured. Results of the monitoring of turbidity and Dissolved Oxygen (DO) during the 2023/4 construction works show that while there were some exceedances of the limits imposed, none were of a long duration, and the increase is suspended sediment was dispersed quickly by currents in the bay.

A Flood Risk Assessment (FRA) was conducted by Hydro Environmental Limited in 2016/7. The development site is located in an area designated as Flood Zone A. This is an area with the highest probability of flooding, exceeding 0.5% for coastal areas, meaning there is a greater than 1-in-200 chance of coastal flooding occurring in these zones. The results of hydrodynamic modelling conducted in 2002 indicated that the construction of the deep-water quay would not significantly affect the current hydrodynamic regime in Ros an Mhíl Harbour. DAFM has reported that there was no damage to the incomplete harbour facilities as a result of storm Éowyn in January 2025. Subsequent bathymetric surveys of the site have confirmed the lack of damage. The location of the harbour deep within a sheltered inlet north of the main Galway Bay provides considerable protection to the development site.

A range of best practice mitigation measures were implemented throughout the construction phase and are outlined in detail in Chapter 16 of the rEIAR Vol. II.

The construction of the deep-water quay at Ros an Mhíl ran from January 2023 to May 2024 entirely within the existing harbour and foreshore. The site was completely cleared of all equipment, facilities and materials when works ceased on the 20th May 2024. The site remains un-used and has been fenced off. Water impacts and risks relevant to the construction phase included:

- Drilling, Blasting, Dredging;
- Land Reclamation;
- Surface Water Run-off;
- Oils and Fuels Usage and Storage;
- Use of Concrete;
- Flooding.

After the mitigation measures were applied and adhered to, there were minimal effects on the water quality in the vicinity of the site during the construction of the works completed to date. Residual effects are considered to be Not Significant and of a temporary nature.

There were no significant effects from other projects in the vicinity during the same period.

During the construction phase of the project, best practice measures were implemented to minimise any adverse effects on water quality. The impact on water quality from the development is not considered significant.

8. Marine Effects

This chapter of the rEIAR considers the likely effects that have occurred or are occurring on the existing marine environment arising from the construction works of the Ros an Mhíl Deep Water Quay development undertaken during the period January 2023 to 20 May 2024. The overarching concern in this assessment is determining whether any substantial effects on the marine environment occurred. The chapter has been written in adherence to the relevant legislation and guidelines for assessments of development effects on marine environmental and species. In undertaking this assessment two intertidal benthic surveys were undertaken by Acquafact. One in 2013 to inform the previous planning application and one in June 2025 to inform this rEIAR.

The 2025 survey of the littoral zone within the study area comprises of boulders and is relatively sheltered to wave action. The upper shore consists of a narrow band of *Pelvetia canaliculata* with the spiral wrack *Fucus spiralis* below it. In parts, barren rock or yellow and grey lichens dominate the upper shore. The mid-shore is dominated by dense knotted wrack *Ascophyllum nodosum*, which supports the epiphytic algae *Vertebrata lanosa*. The green algae *Cladophora rupestris* is present on the rocks below the *A. nodosum* zone. Within the *A. nodosum* zone, raised areas of bedrock are colonised by barnacles and limpets. A narrow band of the serrated wrack *Fucus serratus* is present below the *A. nodosum* zone and below that kelp *Laminaria digitata* is present in the sublittoral fringe.

The intertidal survey carried out by Aquafact in 2013 provided very similar results to those identified above.

The main channel is predominantly coarse gravel and sand with decaying red and green seaweeds with tunicates on them and anemones buried in the sand and the starfish *Asterias rubens* on the substrata. The pinnate sea pen *Virgularia mirabilis* was also recorded from the area. There is also a patch of circalittoral muds in the centre of the channel.

The western margin of the channel is mainly dominated by a mixed substratum with *L. saccharina* and mixed filamentous algae (SS.SMp.KSwSS.SlatR). There are also patches of sandy gravel dominated by seagrass *Zostera marina* along this western margin (SS.SMp.SSgr.Zmar). The Zostera beds in the southern part of the western margin are extensive whereas the beds in the northern part are quite sparse.

Aquafact re-surveyed the study area in October 2016 (grab survey) and February 2017 (drop- down video) to reconfirm the habitats and communities present. Further recent surveys were carried out to establish if the baseline had significantly changed, with the grab survey and drop-down video surveys undertaken on the 30th of June 2025.

Marine mammals in Ireland are protected under the EU Habitats Directive (92/43/EEC). All cetaceans are listed under Annex IV of the Habitats Directive as species requiring strict protection in their natural range (Article 12, EC Council Directive 92/43/EEC). The harbour porpoise *Phocoena phocoena* and the bottlenose dolphin *Tursiops truncatus*, together with both seal species occurring in Irish waters, the grey seal *Halichoerus grypus* and the harbour seal *Phoca vitulina*, are listed in Annex II and further protected under Article 3 of the Directive, as species whose conservation requires the designation of Special Areas of Conservation (SACs).

Harbour seals are known to haul out at several locations in Cashla Bay. A robust baseline population assessment was conducted in 2003, numbers at haul out sites in Cashla Bay ranged from 1 to 12 individuals. Subsequent monitoring surveys recorded maximum counts in inner Cashla Bay of 108, 77 and 77 in 2009, 2010 and 2011 respectively, while counts of 74 and 72 were recorded in inner Cashla Bay in 2012 and 2013 respectively. Grey

seals are recorded within Cashla Bay; however, there are no known grey seal haul out or breeding sites in Cashla Bay. Grey seal individuals are known to frequent the area to forage within the active fishing port of Ros an Mhíl.

A number of cetaceans have the potential to occur in the vicinity of the development. A search of the IWDG casual cetacean sightings database, accessed through the National Biodiversity Centre portal revealed that five species of cetacean were recorded in Cashla Bay and adjacent waters in Galway Bay. Species recorded were bottlenose dolphin, common dolphin *Delphinus delphis*, harbour porpoise, minke whale *Balaenoptera acutorostrata* and humpback whale *Megaptera novaeangliae*. Of these species, only bottlenose dolphins were recorded in inner Cashla Bay, while bottlenose dolphin and minke whale were recorded in at Cashla Point.

The Cashla system is a good example of western acidic spate river which supports both Atlantic salmon *Salmo salar* and sea trout *Salmo trutta*. Juvenile salmon spend two years in freshwater before migrating to the sea as smolts in April or May. The spawning stock in the Cashla river varied between circa 500-1000 individuals from 2019-2023.

Juvenile salmon spend two years in freshwater before migrating to the sea as smolts in April or May. From January to May, spring (multi-sea winter, MSW) salmon return to Irish rivers, from June to October summer salmon (1SW or 'grilse') are present. Grilse generally make up the majority of the spawning stock, with spring salmon contributing a smaller proportion. The spawning stock in the Cashla river varied between circa 500-1000 individuals from 2019-2023 and is currently assessed as above the advised Conservation Limits for the river.

Inland Fisheries Ireland fish counter data for the year 2023 reported; 69 spring salmon, 389 grilse, 68 late summer salmon, and 827 sea trout in the Cashla river.

European eel *Anguilla anguilla* are reported from numerous sites in Connemara and potentially occur within the Cashla catchment also. Adult European eels leave Irish rivers between September and January with juvenile 'glass eel' returning from January to March.

A number of commercially important shellfish species also occur within the bay. Ros an Mhíl is an active fishing port with an active inshore fishing fleet, larger inshore vessels (>10m) from Ros an Mhíl generally fish along the north shore of Galway Bay and out to the Aran Islands, however a number of smaller inshore vessels (<10m) operate within Cashla Bay. These vessels may target European lobster and brown crab throughout the year with creels or shrimp with shrimp pots from September to December. A set net fishery targeting bait, crayfish *Palinurus elephans* or pollack *Pollachius pollachius* (pending availability of quota) may also occur in outer Cashla Bay and Galway Bay. Line fishing for Mackerel or Pollack can also occur depending on availability of quota. A mixed demersal fishery and seasonal pelagic mid-water trawl fishery are also noted in the North Sound and north shore of Galway Bay.

Two recreational shore mark locations are reported within Cashla Bay: at Ros an Mhíl harbour and Carraroe. Reported species include cod, pollack, dogfish species, thornback ray *Raja clavata*, black pollack *Pollachius virens*, mackerel, wrasse species, whiting, European conger eel *Conger conger*, mullet *Chelon spp.* and European flounder *Platichthys flesus.*

A range of best practice mitigation measures were implemented throughout the construction phase to avoid and minimize impacts on the marine environment and species, which include Pollution Control, Invasive Alien Species and Marine Mammal Monitoring. A comprehensive list of these mitigation measures are presented in Chapter 16 of the rEIAR Vol. II.

Marine Impact relevant to the construction phase included.

- Habitat Disturbance or Structure change;
- Suspended Sediments, smothering and siltation rate changes;
- Underwater Noise;

- Death or injury by collision.

The significance of each relevant impact was assessed taking into consideration the Sensitivity of Important Ecological Factors (IEFs) and the Magnitude of the Impact in compliance with the guidelines for assessment of marine effects.

Regarding habitat disturbances and structure change, it was determined that the significance of the construction phase effects would be Slight, with no remedial mitigation measures required. The significance of suspended sediments, smothering and siltation rate changes was determined to be not significant and no remedial mitigation measures are required. The significance of death or injury by collision effects was deemed imperceptible and again, no remedial mitigation measures are required.

Underwater noise effects for the dredging, drilling and blasting works were assessed separately.

Dredging works are required for the berthing pocket and reclamation works. Regarding the significance of injury from underwater noise associated with dredging works, this was determined to be of imperceptible significance apart from Group 3 fish, which was determined to be not significant. No remedial mitigation measures are required. Significance of disturbance from dredging activities was determined to be not significant for IEFs apart for low frequency cetaceans, which was determined to be imperceptible. There is no remedial mitigation measures required. The same significance rating and determination was decided for injury and disturbance from **drilling activities** and no remedial mitigation measures were required.

While some non-compliance with Marine Mammal Monitoring provisions occurred during the dredging and drilling works, the significance of any potential effects was considered to be not significant. The were no non-compliances related to the blasting works.

The significance of Injury to IEFs from **blasting** events ranged from not significant to moderate depending on species, and there is no suggested remedial mitigation measures recommended. Disturbance to species from blasting was determined to be not significant to slight depending on species with no suggested remedial mitigation measures.

Residual impacts were identified for the permanent loss of benthic marine habitat to land reclamation and blasting and dredging, however, the impacted benthic habitats are widespread in Irish waters including the Connemara coast, and are not identified as habitats of conservation concern or protected under any national or international Legislation or Agreement. No significant residual impacts were identified for any other IEF identified.

Underwater noise from blasting was identified as the sole cumulative impact requiring assessment. It is considered unlikely that underwater noise from blasting at the development site gave rise to cumulative impacts resulting in injury or disturbance to sensitive IEFs. There were no significant cumulative effects from other projects in the vicinity during the same period.

It is concluded, in light of the above presented evidence, that the development was in line with mitigation measures outlined above, had minimal adverse effects on the receiving environment either individually or cumulatively with other developments in the area.

No remedial marine mitigation measures are required for the development.

9. Material Assets Effects

The material assets assessment has addressed the construction related effects of the proposed development on material assets located in the vicinity of the proposed Ros an Mhíl Deep Water Quay in County Galway. Material Assets comprise the physical resources in the environment, which may be of human or natural origin. Material

Assets in the vicinity of the proposed development include electrical/grid infrastructure, wastewater infrastructure, water supply, surface water drainage, telecommunications, gas and waste management.

The development works for the proposed quay took place mainly along the shoreline on reclaimed land, so there were no existing services or infrastructure on most of the site before construction began. The only exception was the location of the construction compound and concrete batching plant which was sited in a former parking area within the existing harbour. Table 9-1 provides a summary of the current situation with regard to material assets around the development site. As the construction works for the quay were suspended and not completed, there were no services related infrastructure installed or connected to the existing service networks in the locality during the previous works. Mitigation measures to avoid and minimize effects on existing material assets were incorporated into the CEMP and complied with. These planning and management approaches ensure that potential disruptions or environmental harm are minimized throughout the lifecycle of the development.

As a result of the suspension of works and the application of mitigation measures there were no effects on material assets during the previous development works.

Table 9-1: Existing Situation for Material Assets

Material Asset	Existing Situation
Grid Capacity and Electrical Infrastructure	Electricity to the Ros an Mhíl harbour area is supplied by overhead power lines along a nearby road and underground cables that connect to a substation close to the quay site. This substation then distributes power to the harbour area.
Waste Water Infrastructure	The harbour's wastewater is managed by a system operated by Údarás na Gaeltachta, which uses gravity-fed pipes and pumping stations to send sewage to a treatment plant located just south of the site. This plant treats the sewage before releasing it into Cashla Bay. The plant currently operates below its full capacity.
Water Supply	Water is supplied to the harbour by a main pipe from the nearby Carraroe/Ros an Mhíl system, and smaller pipes distribute water around the harbour. The Department of Agriculture, Food and the Marine (DAFM) manages the water supply within the harbour area. There is no specific water supply infrastructure installed yet at the quay site.
Surface Water Drainage	Before the development, much of the site had no drainage infrastructure. The area includes coastal land and parts of Cashla Bay. However, the wider harbour area has drainage systems made up of stormwater drains and gullies.
Telecommunications	Copper wire telecommunications are provided throughout the harbour by Eir.
Gas	There are no gas transmission lines within the development site.
Waste Management	No specific waste management activities are currently carried out on the development site itself. However, the wider port area is covered by a Port Waste Management Plan maintained by the DAFM to ensure proper handling of waste and to protect the marine environment.

10. Archaeology and Cultural Heritage Effects

This chapter assesses the potential impact of the Ros an Mhíl Deep Water Quay development works on the surrounding archaeological, architectural, and cultural heritage environment. It considers both the works completed to date and any cumulative effects, drawing on previous assessments and baseline studies undertaken as part of the original planning application.

The development site is located on the northwest shore of Ros an Mhíl Hill, within a low-lying coastal landscape bordering Cashla Bay. It lies in the townland of Ros an Mhíl, part of the civil parish of Kilcummin and barony of Moycullen, in County Galway's Gaeltacht region.

The surrounding area holds rich archaeological and cultural significance, with evidence of early medieval ecclesiastical sites, ringforts, middens, and holy wells. Notable features include the Martello Tower at Cashla Bay (constructed 1811–1814) and Garraí na bPáistí, a children's burial ground used until the 1940s. The ruins of a deserted post-medieval village and a historic corn mill also lie nearby.

Marine and terrestrial surveys identified no previously unrecorded heritage features within the development footprint including the proposed approach channel and turning circle. The quay site itself comprises reclaimed shoreline, rocky intertidal zones, and no protected structures are present within the site boundary.

To safeguard cultural heritage during dredging and blasting works, the developer complied with the National Monuments Acts and implemented monitoring protocols approved by the National Monuments Service. An Archaeological Method Statement was prepared in advance, ensuring protection of any potential heritage features near the site.

No archaeological, architectural, or cultural heritage features were identified within the development footprint, and construction works carried out between January 2023 and May 2024 did not uncover any previously unrecorded resources. This outcome aligns with pre-construction assessments and underwater surveys, which found no heritage interest in the development area.

Known monuments outside the site boundary, including the nearby Martello Tower, were monitored and found to be unaffected by construction activities. A pre- and post-works survey confirmed no damage occurred.

As the development lies within a Gaeltacht region, cultural mitigation included bilingual signage with Irish as the primary language, prioritised employment of Irish-speaking workers, and the appointment of an Irish-speaking Liaison Officer to support community engagement. The use of English-only signage was considered to posed a slight, short-term cultural impact. Mitigation measures were implemented to ensure all signage was in the English and Irish languages.

No remedial mitigation measures are required. The mitigation protocols implemented during the works were effective, and no ongoing or cumulative effects on heritage resources have been identified. Known heritage sites in the surrounding area are located at sufficient distance from the development, and any potential effects are considered imperceptible or insignificant.

11. Noise and Vibration Effects

The noise and vibration assessment chapter of the rEIAR evaluates the potential noise and vibration impacts associated with construction works carried out at the Ros an Mhíl Deep Water Quay between January 2023 and May 2024. The assessment considers how these activities may have affected noise sensitive locations (NSLs) and outlines the mitigation measures implemented to manage any impacts.

Before construction began, a detailed baseline noise survey was conducted in January 2023 to establish typical ambient noise levels in the surrounding area. Monitoring was undertaken at the nearest sensitive locations (NSLs),

including near residential dwellings and public buildings such as Scoil Náisiúnta Ros a Mhíl. These measurements captured both day and night-time conditions and provided a reference point for assessing the impact of the construction works.

Construction activities included HVG traffic, dredging, , rock breaking, drilling, rock armour placement, blasting, concrete batching plant and general plant operation. Daytime and evening works remained within recognised limits and were considered acceptable based on national and international guidance.

Overall, construction noise impacts were found to be imperceptible to not significant, local in extent, and short-term in duration.

An assessment of noise from construction-related traffic showed a negligible change in noise levels along the local road network (less than 1 dB increase). This change is considered imperceptible and not significant.

Activities such as blasting and heavy construction plant use were also assessed for their potential to cause vibration. Vibration monitoring was carried out during construction, particularly near sensitive receptors such as the historic Martello Tower, which lies just over 1 km from the blasting zone. All recorded vibration levels remained well below the threshold at which structural damage could occur. A post-construction inspection confirmed no damage to the Martello Tower. or any other nearby buildings. Consequently, vibration impacts were assessed as neutral to imperceptible, with no significant effects.

A range of best practice noise mitigation measures were implemented throughout the construction phase and are outlined in Chapter 16 of the rEIAR Vol. II. These measures were effective in controlling noise and vibration impacts and ensuring protection of local residents and structures. After the application of all mitigation measures, residual noise and vibration impacts from construction were determined to be not significant. All effects were short-term, localised, and within acceptable levels. There were no significant cumulative impacts from other projects in the vicinity during the same period.

Construction of the Ros an Mhíl Deep Water Quay was carried out with appropriate environmental safeguards in place. No significant adverse effects were recorded, and sensitive receptors, including nearby residences and the Martello Tower, were adequately protected. The project complied with best practice standards, and no long-term or residual noise or vibration issues remain from the construction works.

12. Air Quality and Climate Effects

This chapter describes the likely significant effects the construction works for the deep-water quay development carried out during the period January 2023 to May 2024 has had on air quality and climate. The assessment followed best practices and current guidelines. It evaluated the baseline air quality, the potential impact of construction activities such as dust and vehicle emissions, and the potential climate impacts associated with the construction and operation of the harbour. The cumulative effects of nearby developments and future climate change impacts were also considered.

Under the Air Quality Standards Regulations (2011), the development site is located in Zone D, Rural Ireland (areas excluding Dublin, Cork City and other large cities and towns). Long term trends (2010-2021) for small towns in Ireland show a downward trend for the main pollutants of concern, $PM_{2.5}$ and NO_2. The primary sources for these pollutants are solid fuel combustion and vehicle emissions. The annual mean for years 2010 -2021 is well below the Ambient Air Quality and Cleaner Air for Europe (CAFÉ) Directive limit values which were transposed into the Air Quality Standards Regulations 2011 (S.I. No. 180 of 2011).

Movement of machinery, construction vehicles and the use of generators during the construction phase would have generated exhaust fumes containing predominantly carbon dioxide (CO_2), sulphur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), and particulate matter (PM_{10}).

Traffic levels during the construction period of the development were above the TII criteria which warrant a quantitative assessment of construction traffic. Traffic volumes were assessed for the period and the change in volumes with the development were input into the TII Tool, Road Emissions Model to assess pollutants generated from the additional traffic. The % change to baseline air quality from traffic emissions was determined as not significant and would not affect the national Air Quality Standards given the scale of dispersion and limited duration of the works.

In terms of air quality, the greatest likelihood of effects during the construction stage will be from dust emissions associated with the construction works.

Using Institute of Air Quality Management (IAQM) methodology, the dust emission magnitude is considered low risk across all construction activities. There are no highly sensitive receptors in close proximity to the development area. As part of the Construction Environmental Management Plan (CEMP), dust mitigation measures were implemented. Therefore, effects from dust were temporary and not significant, with mitigation measures applied.

Dredging operations can sometimes lead to the release of unpleasant odours, particularly if the dredged material contains decaying organic matter or other contaminants. During historical dredging operations in Ros an Mhíl Harbour, hydrogen sulphide (H2S) was not encountered. However, during the site investigation works undertaken by Fugaro in 2001, there was evidence of a high organic content in some locations (inner harbour area) with a moderately strong to strong organic odour noted. Dredging that took place after July 2023 was of rock rather than sand or silt and therefore no odour was noted during the works.

As part of the CEMP, the contractor was required to implement an Energy Management System for the duration of the works. This process included measures to reduce CO_2 emissions. These included re-use of all dredged material within the project boundary, sourcing of materials as locally as possible to reduce transport emissions and waste audits to maximise re-use and recycling rates to reduce downstream carbon emissions.

The impact of greenhouse gas emissions from the development was considered as it related to Ireland's Carbon Budget 2021-2025 and Industry Sectorial Emissions Ceiling and the effect was considered to be not significant (minor adverse) on climate.

Other projects considered for cumulative effects are detailed in Chapter 1 of this rEIAR. An effect during the construction phase on air quality was only likely to arise if the construction phase of the development ran concurrently with construction of another project. Based on a review of developments, plans and projects in proximity to the development during that period, there was no significant cumulative air quality effect.

For GHG Assessment, the receptor is the global climate and impacts on the receptor from a project are not geographically constrained, therefore the normal approach for cumulative assessment in EIA is not considered applicable. However, by presenting the GHG effect of a project in the context of its alignment to Ireland's trajectory of net zero and any sectoral carbon budgets, this assessment will demonstrate the potential for the project to affect Ireland's ability to meet its national carbon reduction target. Therefore, the assessment approach is considered to be inherently cumulative.

The assessment of the likely air quality and climate effects associated with the project found that during the previous development works, best practice measures were implemented to effectively minimise any significant adverse effects on air quality and climate.

13. Landscape and Visual Effects

This chapter outlines the landscape and seascape setting of the Ros an Mhíl study area and evaluates the effects of the development works on local character and visual amenity.. The appraisal draws significantly from the 2017 Landscape and Visual Impact Assessment prepared for the original Ros an Mhíl Deep Water Quay planning application.

The development site lies within a distinctive coastal setting in west Connemara, characterised by rocky inlets, small islands, and gently rising terrain. Ros an Mhíl Harbour sits at the mouth of the Cashla River, with Ros an Mhíl Hill and the settlement of An Cheathrú Rua (Carraroe) forming prominent features in the surrounding landscape.

This area is part of a designated 'Coastal Landscape' under the Galway County Development Plan, with a high sensitivity to change and a scenic identity shaped by natural features, dispersed Gaeltacht settlements, and cultural heritage. The landscape supports marine industries, tourism, and crafts, with a strong sense of place and community.

Ros an Mhíl Harbour is a working port with industrial infrastructure, contrasting with the more tranquil upland areas to the northeast. The site is visible from nearby roads and coastal viewpoints, including the Wild Atlantic Way, but lies outside the line of sight from designated protected views.

The reclaimed area and protective berm are visually consistent with the existing harbour setting. At high tide, parts of the berm and reclaimed land are submerged, further softening the visual impact. The surrounding inland areas remain industrial in character, with fragmented vegetation and adjacent port buildings.

Due to its location within an existing harbour complex, the deep water quay cannot be readily screened from view, nor is this considered necessary. Instead, visual assimilation has been prioritised. The use of rock armour along the edges of the reclamation area and protective berm helps integrate the development with the surrounding rocky coastline and existing port infrastructure. The siting and design of the quay inherently minimise landscape and visual impacts, and as such, no additional mitigation measures are required.

The reclaimed area and protective berm comprised of rock visually integrate with the surrounding rocky coastline, minimising landscape and visual disruption. As the works were located within an existing harbour complex, the visual impact was consistent with the character of the area. Following the expiry of planning permission, all construction materials and equipment were removed, leaving no ongoing visual effects.

No visual mitigation was required for the previous works, and no remedial measures are needed. The incomplete deep water quay is well integrated into the existing Ros an Mhíl Harbour and does not result in any significant residual landscape or visual effects.

Cumulative effects have been considered in relation to the existing harbour. The development increased activity during construction but remained visually consistent with the character and scale of surrounding harbour operations. It also helped consolidate a previously underutilised reclaimed area. Overall, the reclaimed area and protective berm does not contribute to significant cumulative effects in the local landscape or seascape context.

Assessment of the completed works confirms that no significant landscape or visual effects have occurred or are ongoing. The development is visually assimilated into the existing harbour setting, and the only outstanding remedial action is the completion of the proposed quay wall and associated facilities.

14. Traffic Effects

This chapter assesses the traffic and transport impacts associated with construction activities carried out between January 2023 and May 2024 for the Ros an Mhíl Deep Water Quay development. The appraisal evaluates how site

activities may have affected local transport infrastructure and quantifies the volume of trips generated during the review period, with particular focus on their impact on the surrounding road network.

The R372 connects to the R336 Regional Road approximately 2.6 km northeast of the development site and forms part of the Wild Atlantic Way tourist route. Local roads such as the L1200 and L1201 provide additional connectivity, with footways, pedestrian crossings, and traffic calming measures in place near key community facilities including Scoil Colmcille and Ros an Mhíl Community Centre.

The area is served by Bus Éireann route 424 and includes several public car parks near the ferry terminal and harbour. Street lighting and parking restrictions are in place within the Department of Agriculture, Food and the Marine (DAFM) zone.

Traffic surveys conducted in April 2025 recorded peak hours between 8:30–9:30 a.m. and 5:15–6:15 p.m. Data from Transport Infrastructure Ireland (TII) indicates that traffic volumes in the region peak during the summer tourist season, particularly in August. Comparative analysis using TII counters at Maam Cross shows that traffic volumes have steadily increased from 2022 to 2024, with August 2024 volumes 10.5% higher than in 2022.

Despite seasonal fluctuations, both the R372 and R336 are operating well within their estimated rural and urban road link capacities. Volume-to-capacity ratios for the R372 remain below 36% in rural zones and below 21% in urban zones during peak periods, indicating sufficient capacity to accommodate existing and seasonal traffic demands.

The Ros an Mhíl Deep Water Quay construction phase, carried out between January 2023 and May 2024, generated temporary increases in traffic volumes, primarily associated with HGV movements and site deliveries. However, these were effectively managed through a suite of mitigation measures, including staggered vehicle arrivals, route restrictions, and peak-hour avoidance.

Traffic surveys and TII data confirm that the local road network, including the R372, R336, and L1200, operated well within its capacity throughout the construction period. Seasonal peaks linked to tourism and ferry activity were anticipated and accounted for in the assessment. Volume-to-capacity ratios remained low, with the R372 urban section peaking at just 21% during the busiest periods.

No significant other developments, in the vicinity of the subject development, were constructed, or commenced operations, during the subject development construction. On the basis of the EPA EIAR Guidelines, the cumulative effects of the subject development construction with any other developments was slight to moderate negative effects and temporary to short term.

No additional remedial construction mitigation measures are required.

15. Conclusion

In the whole rEIAR there was a total of 105 different potential effects that were identified and assessed in the rEIAR. After mitigation the overwhelming majority of effects were rated as not significant, and only eight remaining effects were rated as slight. Six of these slight effects were visual effects.

During the construction of the Ros an Mhíl Deep Water Quay, a range of mitigation measures, many embedded through avoidance by design, were implemented to minimise environmental impacts. Best practice protocols under the Construction Environmental Management Plan (CEMP) addressed noise, dust, traffic, and health and safety. Soil and marine protection measures included sediment controls, secure chemical storage, spill prevention, and marine mammal monitoring. Infrastructure and waste systems were managed to prevent service disruption and contamination. As a result, all residual effects were short-term, localised, and not significant, with no cumulative impacts or need for further remediation.