Prepared by
Roughan & O'Donovan
Arena House, Arena Road, Sandyford, Dublin 18
Tel: +353 1 2940800 Fax: +353 1 2940820
Email: info@rod.ie www.rod.ie

GLENGARRIFF PIER DREDGING, GLENGARRIFF, CORK (FS006970)

Stage 2 Appropriate Assessment Report

October 2022

Client:
Foreshore Unit
Department of Housing, Local Government and Heritage
Newtown Road
Wexford
Y35 AP90

ROD
ROUGHAN & O'DONOVAN

Foreshore Licence Application for Glengarriff Pier Dredging, Glengarriff, Co. Cork (FS006970)

Stage 2 Appropriate Assessment Review Report

TABLE OF CONTENTS

1.0 INTRODUCTION 3
1.1 Background 3
1.2 Competent Experts 3
1.3 Application Documents 3
1.4 Relevant Consultation Responses 4
1.5 Assesment of observations and responses 4
1.6 Legislative Context 12
2.0 DESCRIPTION OF THE PROPOSED DEVELOPMENT 15
2.1 Summary 15
2.2 Site Location 15
2.3 Project Components 19
2.4 Potential Impacts on the Receiving Environment 20
3.0 FINDINGS OF THE AA SCREENING REPORT 21
3.1 Summary of AA Screening Report 21
4.0 STAGE 2 APPROPRIATE ASSESSMENT 24
4.1 Introduction 24
4.2 Identifcation and Assessment of Adverse Effects 24
4.3 Mitigation Measures 28
4.4 Evaluation of Mitigation Measures 30
5.0 CONCLUSION 33

1.0 INTRODUCTION

1.1 Background

Roughan & O'Donovan (ROD) has been commissioned by the Foreshore Unit of the Department of Housing, Local Government and Heritage (DHLGH) to prepare this Appropriate Assessment (AA) Stage 2 Report. The aim of the report is to inform and assist the Competent Authority in carrying out its AA determination on whether or not an application by Cork County Council for a foreshore licence (FS006970) for the proposed pier dredging at Glengarriff Pier, Co. Cork, either individually or in combination with other plans and projects, will have adversely affect one or more European sites identified at the AA Screening stage for likely significant effects, in view of their Conservation Objectives.

A Foreshore Licence if required in order to complete the proposed dredging of the area under the pontoon. An application for such a licence was submitted to the Foreshore Unit of the Department of Housing, Local Government and Heritage (DHLGH) by Cork County Council on the 14th October 2019 (hereafter referred to as "the Application").

It is the considered opinion of ROD, as the author of this Stage 2 Report, that given the full and proper implementation of the mitigation prescribed in the NIS, the proposed development, either individually or in combination with other plans or projects, will not adversely affect the Glengarriff Harbour and Woodland SAC or any other European Site.

1.2 Competent Experts

This report has been undertaken by Patrick O'Shea and Rachel Heaphy. Patrick has a degree in Botany from Trinity College Dublin and an MSc in Ecological Management and Conservation Biology from Queen's University Belfast. He is a Full Member of the Chartered Institute of Ecology and Environmental Management and has over nine years' experience in the ecological assessment including impact assessment and Appropriate Assessment. Rachel holds a BSc (Hons) in Zoology from University College Cork and an MRes degree (with distinction) from the University of Roehampton and has one year's experience in experience in ecological assessment.

1.3 Application Documents

The following documents submitted with the Foreshore Licence Application were used to inform this AA Stage 2 Report:

- Foreshore Licence Application Form (dated 11/10/2019)
- Appropriate Assessment Screening Report (included in Appendix 2 of the Natura Impact Statement) (dated February 2022)
- Natura Impact Statement (Version C, dated February 2022)
- Site Location Map (dated June 2019)
- Foreshore Licence Map (dated June 2019)
- Proposed Dredge Plan Map and Cross Sections (dated June 2019)
- Admiralty Chart (dated June 2019)
- Archaeological Impact Assessment (dated June 2019)
- Otter Survey Summary and Map (dated 11/04/2019)

- Stages of Appropriate Assessment (included in Appendix 1 of the Natura Impact Statement (dated August 2019)
- Site Investigation Survey Report (included in Appendix 3 of the Natura Impact Statement) (dated August 2019)
- Marine Mammal Risk Assessment (included in Appendix 4 of the Natura Impact Statement) (dated August 2019)
- Glengarriff Otter Survey Report (included in Appendix 5 of the Natura Impact Statement) (dated 11/04/2019)
- Copies of Newspaper Notices (dated 17/07/2020 and 18/07/2020)
- Observations from Prescribed Bodies
- Responses to Submissions from Prescribed Bodies (dated 28/01/2021)
- The submissions received from prescribed bodies and members of the public as part of the public consultation which was undertaken in accordance with Regulation 42 of SI 477/2011 between April 2021 and October 2021.
- The responses from the Applicant to the submissions received as part of the public consultation which was undertaken in accordance with Regulation 42 of SI 477/2011 between April 2021 and October 2021.

1.4 Relevant Consultation Responses

The first Public Consultation for the proposed development was held between April – October, 2021. Observations from Prescribed Bodies with relevance to AA and Applicant's responses during the first Public Consultation are provided in in Table **1.*1***.

The second Public Consultation for the proposed development was held between 12th September 2022 and 11th October 2022. Observations from Prescribed Bodies and Applicant's responses during the second Public Consultation are provided in Table 1.2.

1.5 Assesment of observations and responses

The submissions received as part of the public consultation process did not raise any issues pertinent to Appropriate Assessment and the observations, nor the applicants responses, do not change the findings of the NIS.

Table 1.1 Submissions/Observations Received from Prescribed Bodies during the first Public Consultation

Prescribed Bodies	Date Response Received	Details of Submission/Observation	Applicant's Response to Submission
Department of Housing, Local Government and Heritage. DHLGH Engineers Report.	05/01/2021	The respondent details a brief description of the project methodology along with the motivation for the development. An analysis of the site assessment is included, and the works are proposed to improve the safety and access for the general public and so are in the public interest. The department recommends approval of the application for a foreshore licence to dredge subject to the following. • The Drawing Titled Foreshore Licence Map, Drawing No: 19505-5001 Rev.D Date: 05.01.2021 should be attached to and referenced in the licence document. • The dredging works shall be conducted in accordance with documents submitted and specifically drawings, Drawing No:19505-5003 Rev.C Date: 11.10.2019 and Drawing No:19505-5005 Rev.C Date: 11.10.2019. • The Department shall be notified 2 weeks prior to any works proceeding.	The applicant responded to confirm that: The dredging works will be carried out in accordance with the documents and drawings submitted. The Council will notify the Department 2 weeks prior to any works proceeding.
Marine Institute	3/12/2020	The respondent provides a brief description of the proposed works and the project location. The respondent also states that considering the location, nature, and scale of the proposed dredging works on the foreshore, they are satisfied that the proposed works will not have an adverse impact on the marine environment and will not have a significant impact on other legitimate uses/ users of the area and therefore has no objections to a licence being granted.	The applicant in response confirmed that: The Council will use that part of the Foreshore the subject matter of this licence for the purposes as outlined in the application and for no other purposes whatsoever. The Council will ensure that the works are carried out and completed in accordance with the plans and particulars lodged with the application. .
National Park and Wildlife Service (DAU) and UAU.	No date in document.	The respondent states that in relation to: **Underwater Archaeology** They refer to the foreshore licence applications for the three piers [one of which is Glengarriff Pier] and associated proposed dredging works and the submitted Underwater Archaeological Impact Assessment (UAIA). The following are the recommendations of the Underwater	The applicant did not have any further comments on this response.

Prescribed Bodies	Date Response Received	Details of Submission/Observation	Applicant's Response to Submission
		Archaeology Unit of the National Monuments Service, in keeping with the mitigation strategy proposed in the UAIA: **Archaeological Monitoring:** Archaeological monitoring is to be carried out during dredging works at all three piers [including Glengarriff Pier] and to take the following format: • The services of a suitably qualified and suitably experienced underwater archaeologist (with experience in the archaeological monitoring of marine dredging operations) to be engaged to carry out the archaeological monitoring for the three dredging works programs. • The archaeological monitoring should be licensed by this Department and a detailed method statement is to accompany each licence application (for each of the three piers dredging works). • The method statements are to lay out the monitoring strategy for each location of the dredging works. • A communication strategy is to form part of the monitoring strategy to ensure full communication is in place between the monitoring archaeologist and the plant operators at all times during works. • The archaeological personnel undertaking the monitoring will be in a position to monitor directly all elements of the dredging works, to ensure they have unobstructed views of the dredging plant head, and the plant and machinery operators should be prepared to facilitate the archaeological personnel in the undertaking of their monitoring work. • As part of the Finds Retrieval Strategy in the methodology, 25% of the dredged material removed from each area (i.e., 25% from Courtmacsherry, 25% from Glengarriff and 25% from Reen) is to be spread and metal detected to assess the artefacts-bearing potential. If large quantities of artefacts are present, then the percentage of material being assessed may be increased. Similarly, if, after an agreed period of time, there is minimal artefactual evidence, the archaeological assessment of the dredged spoil may be scaled down. The methodology should seek to have a representative percentage assessed from all areas, i.e., from the area immediate to the pier, from the approach channel,	

Prescribed Bodies	Date Response Received	Details of Submission/Observation	Applicant's Response to Submission
		etc. • Sufficient archaeological personnel will be in place to cover all aspects of the monitoring and assessment of the dredging works (i.e., monitoring of dredging's and assessment of dredged spoil). • Should potential archaeology be identified during the dredging works, then the dredging is to be suspended in that location pending full resolution of the archaeology, which may include archaeological assessment, testing, avoidance/preservation in situ or full excavation. • In the event that potential archaeology is identified and dredging works have to be suspended, the Underwater Archaeology Unit should be contacted immediately to ensure the least delays to works are incurred. Reason: To ensure the continued preservation (either in situ or by record) of our underwater cultural heritage and all associated features, objects and structures. **Nature Conservation** The respondent acknowledges the Natura Impact statement for dredging at Glengarriff and notes that there would likely be no significant effect on the conservation features of this site provided appropriate mitigation is implemented in full, this conclusion is supported by the NPWS.	
Department of Agriculture, Food, and the Marine (DAFM)	No date in document.	The respondent states that following consultation with their technical advisors, the conditions below should be included in any license that is issued: 1. There should be no significant impacts on any aquaculture sites due to the proposed works, provided all works are carried out correctly and, in the location, detailed by the applicant. 2. Sufficient notice should be given to all users of the pontoon before its temporary removal.	The applicant did not have any further comments on this response.
Marine Survey Office	09/11/2020	The respondent has no comment in regard to the dredging works but states that any ship which will be engaged in the dredging project is required to comply with our national legislation whilst operating domestically, thus an application for survey should be made via the Mercantile Marine Office for each vessel to ensure compliance if required.	The applicant responded to the submission from the Marine Survey Office as follows: It is understood that any ship which will be engaged in the dredging project is required to comply with the national legislation. An application for survey will be made via the Mercantile Marine Office for each vessel to ensure compliance if required.

Prescribed Bodies	Date Response Received	Details of Submission/Observation	Applicant's Response to Submission
			The condition outlined by the Marine Survey Office has been brought through to section 6 of this Report as a recommended condition for a foreshore licence.
Inland Fisheries Ireland	6/01/2020	The respondent gives an outline of the project works at Glengarriff along with the expected duration of 3 weeks. The following comment/ recommendations were made. 1 The time period of works for Glengarriff is not specified. IFI recommend not scheduling work for the March to May period as salmon and seatrout smolts are migrating through the estuary. The application states that the dredging will take place on high tide however it's not clear if this is daylight hightide or both high tide cycles (day and night). As many migratory fish species migrate at night it would be beneficial to avoid dredging the nighttime high tide. 2 IFI would point out that the mitigation measures and guidance of NPWS regarding marine mammals are not transferrable to fish species. The fish remain invisible to any shore- or boat-based observer. IFI recommend the use of soft-start and ramp up procedures for the dredging undertaken – both on a day-to-day basis and on re-start after any stoppages within any day. 3 The IFI comments above do not cover commercial marine fish and the advice of SFPA should be sought in regard to impacts on the eggs/larvae and adult life stages of commercially important fish species in the area of the proposed works. 4 The mitigation of accidents and the protection of the aquatic and marine environment is outlined in the supporting document. All refueling of machines and equipment must take place well away from the shoreline. All fuels, lubricants and hydraulic fluids must be kept in secure bunded areas away from the shoreline. Dredging should be undertaken in a manner that reduces the volumes of sedimentation in the water column. 5 The location for disposing of the dredged material on land is not outlined in the applications. The location and method of	The applicant responded to the comment made stated the following. 1 With regards to timing of the works, no seasonal constraints were identified in the NIS. The timing is dependent on finalising of required permits. Once dates are confirmed for commencement of the works the local IFI office will be informed with contact details for the site supervisor. 2 We note the IFI recommendation for the use of soft-start and ramp-up procedures for the dredging to be undertaken, both on a day-to-day basis and on re-start after any stoppages during the day. This will be included as a requirement in the Works Contract. 4 All refuelling of machines and equipment will take place well away from the shoreline. All fuels, lubricants and hydraulic fluids must be kept in secure bunded areas away from the shoreline. Dredging will be undertaken in a manner that reduces the volumes of sedimentation in the water column. 5 The location and method of disposal along with control measures will be forwarded to the local IFI environmental officers in advance of works. 6 The council will inform local angling clubs in advance of the commencing of the dredging works.

Prescribed Bodies	Date Response Received	Details of Submission/Observation	Applicant's Response to Submission
		disposal along with control measures should be forwarded to the local IFI environmental officers in advance of works. 6 There is a large angling community within the vicinity of these piers and IFI recommend informing the local angling clubs in advance of the commencement of the dredging activity. 7 The effect of dredging on the habitat and the noise generated during the operation while potentially significant for the local fish species present the temporary nature of the work 1-3 weeks and if all mitigation measures are implemented fully there should be no negative impact on the aquatic environment.	

Table 1.2 Submissions/Observations Received from Prescribed Bodies during the second Public Consultation.

Prescribed Bodies	Details of Submission/Observation	Applicant's Response to Submission
Marine Institute	The respondent as reviewed the AA Screening conclusion and agrees with its conclusion that full AA is required in respect of the proposed development. The respondent agrees with the proposed mitigation measures provided for otter and seal in the NIS. In relation to cumulative effects, the respondent refers to Roycroft et al., (2007) to conclude that seals are habituated to rope mussel aquaculture operations in Bantry Bay and are therefore unlikely to be disturbed by the proposed development. With regard to otter, the respondent concluded that as otters are primarily active during early morning and evening, they are unlikely to be disturbed by the proposed development.	**The applicant has reviewed the observations and has no further comments to add.**
Inland Fisheries Ireland (IFI)	Inland Fisheries Ireland had no further comment.	
Department of Housing, Local Government and Heritage (DHLGH) – Development Applications Unit (DAU), National Park and Wildlife Service (NPWS) and Underwater Archaeological Unit (UAU).	The Development Applications Unit had no further comment.	
Marine Survey Office	The Marine Survey Office had no further comment.	
Department of Housing, Local Government and Heritage (DHLGH), Marine Advisor's Engineering report.	The Marine Advisor's Engineering Report had no further comment.	
Department of Housing, Local Government and Heritage (DHLGH), Marine Advisor's Environmental report.	The respondent describes the habitat and species present in the Glengarriff Harbour and Woodland SAC and provides a description of the legislation in place for the protection of European sites and Annex IV species in respect of plans or projects. The respondent concludes that they have no objections to the application for a foreshore licence in respect of the proposed development and will populate their final report on completion of the public consultation process and the work of the Independent Environmental Consultants. The respondent's final report may include case-specific conditions and will have regard	

Prescribed Bodies	Details of Submission/Observation	Applicant's Response to Submission
	to the information obtained during the public and prescribed bodies consultation.	
Department of Agriculture, Food, and the Marine (DAFM)	The Department of Agriculture, Food, and the Marine had no further comment.	
Sea Fisheries Protection Agency	The Sea Fisheries Protection Agency had no further comment.	

1.6 Legislative Context

Council Directive 92/43/EEC of the 21st May 1992 on the conservation of natural habitats of wild fauna and flora ("the Habitats Directive") and Directive 2009/147/EC of the European Parliament and of the Council of the 30th November 2009 on the conservation of wild birds ("the Birds Directive") list habitats and species which are important for conservation and in need of protection. This protection is afforded in part through the designation of sites which support significant examples of habitats or populations of species ("European sites"). Sites designated for birds are termed "Special Protection Areas" (SPAs) and sites designated for natural habitat types or other species are termed "Special Areas of Conservation" (SACs). The complete network of European sites is referred to as "Natura 2000".

In order to ensure the protection of European sites in the context of land use planning and development, Article 6(3) of the Habitats Directive provides for the assessment of the implications of plans and projects for European sites, as follows:

> "*Any plan or project not directly connected with or necessary to the management of the site* [or sites] *but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site* [...]*, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned* [...]."

The requirements arising out of Article 6(3) are transposed into Irish law by Part XAB, Appropriate Assessment (including section 177V of the Planning and Development Act 2000 (as amended)) (and in other circumstances by Part 5 of the Habitats Regulations).

The determination of whether or not a plan or project meets the two thresholds for requiring AA is referred to as "Stage 1" or "AA Screening". The first threshold is reached if the plan or project is not directly connected with or necessary to the management of one or more European sites. In its ruling in *Waddenzee*[1], the Court of Justice of the European Union (CJEU) interpreted the second threshold as being reached where "*it cannot be excluded, on the basis of objective information, that* [the plan or project] *will have a significant effect on that site*". Thus, in applying the Precautionary Principle, the CJEU interpreted the word "likely" to mean that, as long as it cannot be demonstrated that an effect will not occur, that effect is considered "likely". A likely effect is considered to be "significant" only if it interrupts or causes a delay in achieving the Conservation Objectives of the site concerned.[2]

[1] Landelijke Vereniging tot Behoud van de Waddenzee, Nederlandse vereniging tot Bescherming van Vogels *v*. Staatssecretaris van Landbouw, Naturbeheer en Visserij (Waddenzee) [2004] C-127/02 ECR I-7405.

[2] Conservation Objectives are referred to, but not defined, in the Habitats Directive. In Ireland, Conservation Objectives are set for Qualifying Interests (the birds, habitats or other species for which a given European site is selected) and represent the overall target that must be met for that Qualifying Interest to reach or maintain favourable conservation condition in that site and contribute to its favourable conservation status nationally.

Prior to approval of a plan or project which is the subject of AA (also referred to as "Stage 2"), it is necessary to "*ascertain*" that the plan or project will not "*adversely affect the integrity of the site*". In its guidance document (EC, 2018), the European Commission stated that "*the integrity of a site involves its constitutive characteristics and ecological functions*" and that "*the decision as to whether it is adversely affected should focus on and be limited to the habitats and species for which the site has been designated and the site's conservation objectives*". Regarding the word "ascertain", the CJEU, also in *Waddenzee*, interpreted this as meaning "*where no reasonable scientific doubt remains as to the absence of such effects*". Therefore, the legal test at Stage 2 is satisfied (and the plan or project may be authorised) when it can be demonstrated beyond reasonable scientific doubt that the plan or project will not interrupt or cause delays in the achievement of the Conservation Objectives of the site or sites concerned. AA is informed by a "Natura Impact Report" (NIR) in the case of plans or a "Natura Impact Statement" (NIS) in the case of projects.

The CJEU has made a relevant judgment on what information should be contained within documents supporting AA[3] (in the NIR or NIS):

> "[The AA] *cannot have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the works proposed on the protected site concerned.*"

The High Court and Supreme Court[4] have also provided clarity on how competent authorities should undertake AA[5] and has stated that the following four matters require to be addressed:

- First, an appropriate assessment must identify, in the light of the best scientific knowledge in the field, all aspects of the development project which can, by itself or in combination with other plans or projects, affect (a) European site(s) in the light of its conservation objectives.
- Second, there must be complete, precise and definitive findings and conclusions regarding the previously identified potential effects on any relevant European site(s) this and may not have lacunae or gaps. The requirement for precise and definitive findings and conclusions requires analysis, evaluation and decisions. Further, the reference to findings and conclusions in a scientific context requires both findings following analysis and conclusions following an evaluation each in the light of the best scientific knowledge in the field.
- Third, on the basis of those findings and conclusions, the Competent Authority (here An Bord Pleanála) must be able to determine that no scientific doubt remains as to the absence of the identified potential effects.
- Fourth, where the aforesaid three requirements are satisfied, An Bord Pleanála ("the Board") may determine that the proposed development will not adversely affect the integrity of any relevant European site. Accordingly, an appropriate

[3] *Sweetman v. An Bord Pleanála* [2013] Case C-258/11.

[4] See *Kelly (Eoin) v An Bord Pleanála* [2014] I.E.H.C. 400 where the High Court (Finlay Geoghegan J.) held that section 177V(1) of the Planning and Development Act 2000 (as amended) must be construed so as to give effect to Article 6(3) of the Habitats Directive, and hence, an appropriate assessment carried out under section 177V(1) of the 2000 Act must meet the requirements of Article 6(3) of the Habitats Directive as interpreted by jurisprudence of the CJEU case law; *Connelly v An Bord Pleanála* [2018] 2 I.L.R.M 453; [2018] I.E.S.C. 31.

[5] *Kelly v. An Bord Pleanála* [2014] IEHC 422.

assessment may only include a determination that the proposed development will not adversely affect the integrity of any relevant European site where upon the basis of complete, precise and definitive findings and conclusions made the Board decides that no reasonable scientific doubt remains as to the absence of the identified potential effects.

The “Foreshore Act 1933” (as amended) makes provision for the granting of a lease or licence pertaining to any works or installation of structures in the State-owned foreshore. The granting of these leases or licences is made by the Minister for Housing, Local Government and Heritage. In addition, the “Dumping at Sea Act 1996” requires a Dumping at Sea Permit be granted for the disposal of waste materials, including dredged materials, in the maritime area.

2.0 DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1 Summary

Glengarriff Pier in Glengarriff Harbour is located along the Beara Peninsula on the west coast of County Cork. The existing pontoon lies adjacent to Glengarriff Pier and is used by both leisure and commercial activities, including passenger ferries to Garnish Island. The pontoon is accessed via a walkway to Glengarriff Pier. The current pontoon is substandard as it grounds and twists at low tide. Is it proposed to dredge the pier to stop the current grounding and twisting of the pontoon and to increase the amenity value of Glengarriff Pier and Harbour.

The proposed development comprises the following:

- The removal and replacement of the pontoon;
- Disconnection and reconnection of power and water supplies to the pontoon;
- Dredging of the channel and immediately around the pontoon to a depth of -5.0mODM (proposed dredged footprint is 815m^2);
- Disposal of dredged materials at a suitably-licensed facility on land.

2.2 Site Location

The location of the proposed development is on Glengarriff Pier, just outside the village of Glengarriff. Glengarriff village is approximately 75km west of Cork City, and 10 km north of Bantry on the Beara Peninsula in County Cork. Glengarriff Harbour is comprised of approx. 4 km^2 of sheltered waters, away from the exposed coast of Bantry Bay. The site of the proposed development is situated within the Glengarriff Harbour and Woodlands SAC and the Transitional Waterbody of Glengarriff Harbour. The location of the site is shown in Figure 2.1, Figure 2.2 and Figure 2.3 below.

Figure 2.1 Site Location of the proposed Glengarriff Pier Dredging at Glengarriff, Co. Cork

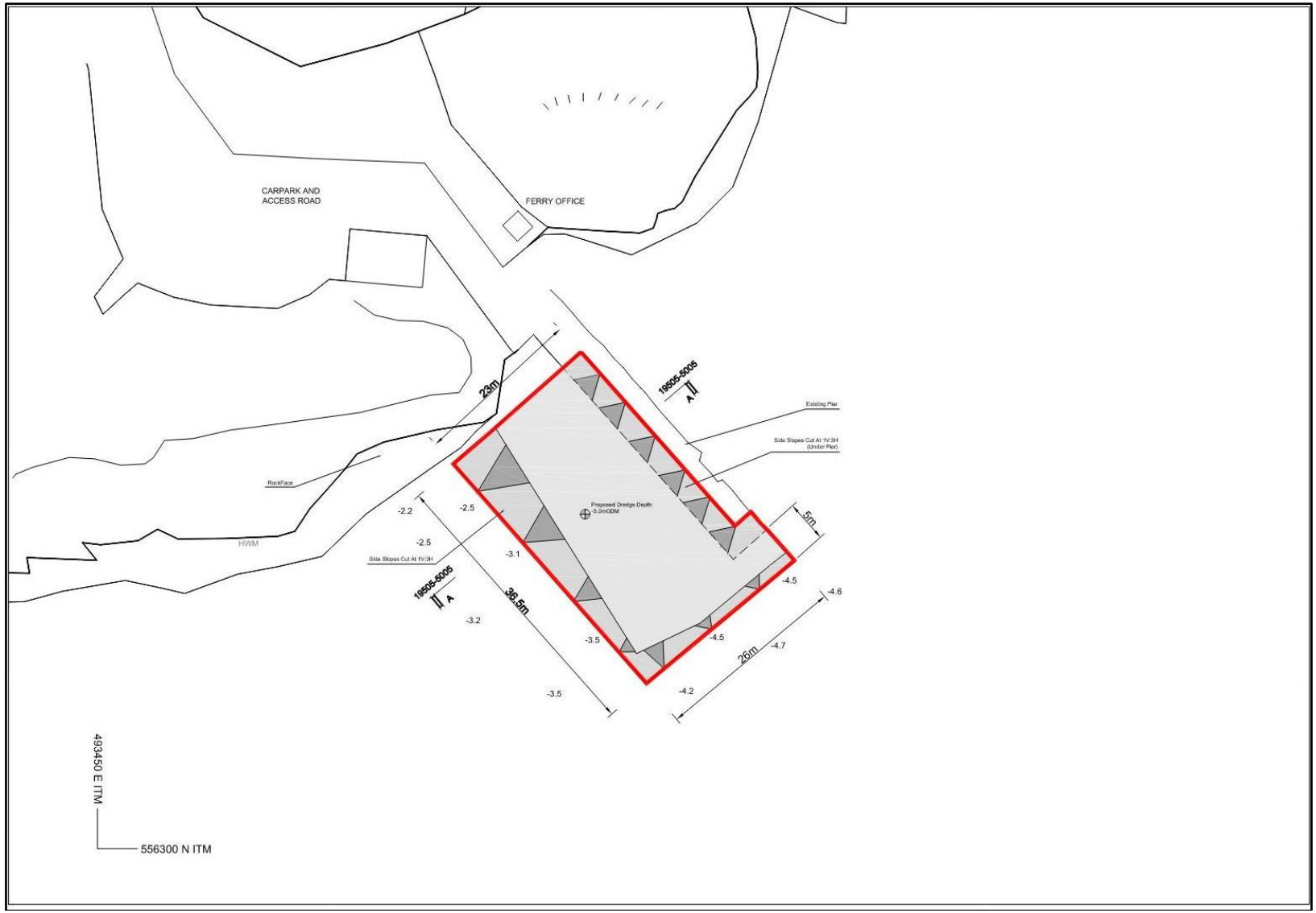

Figure 2.2 Glengarriff Pier Dredging Project Site Boundary

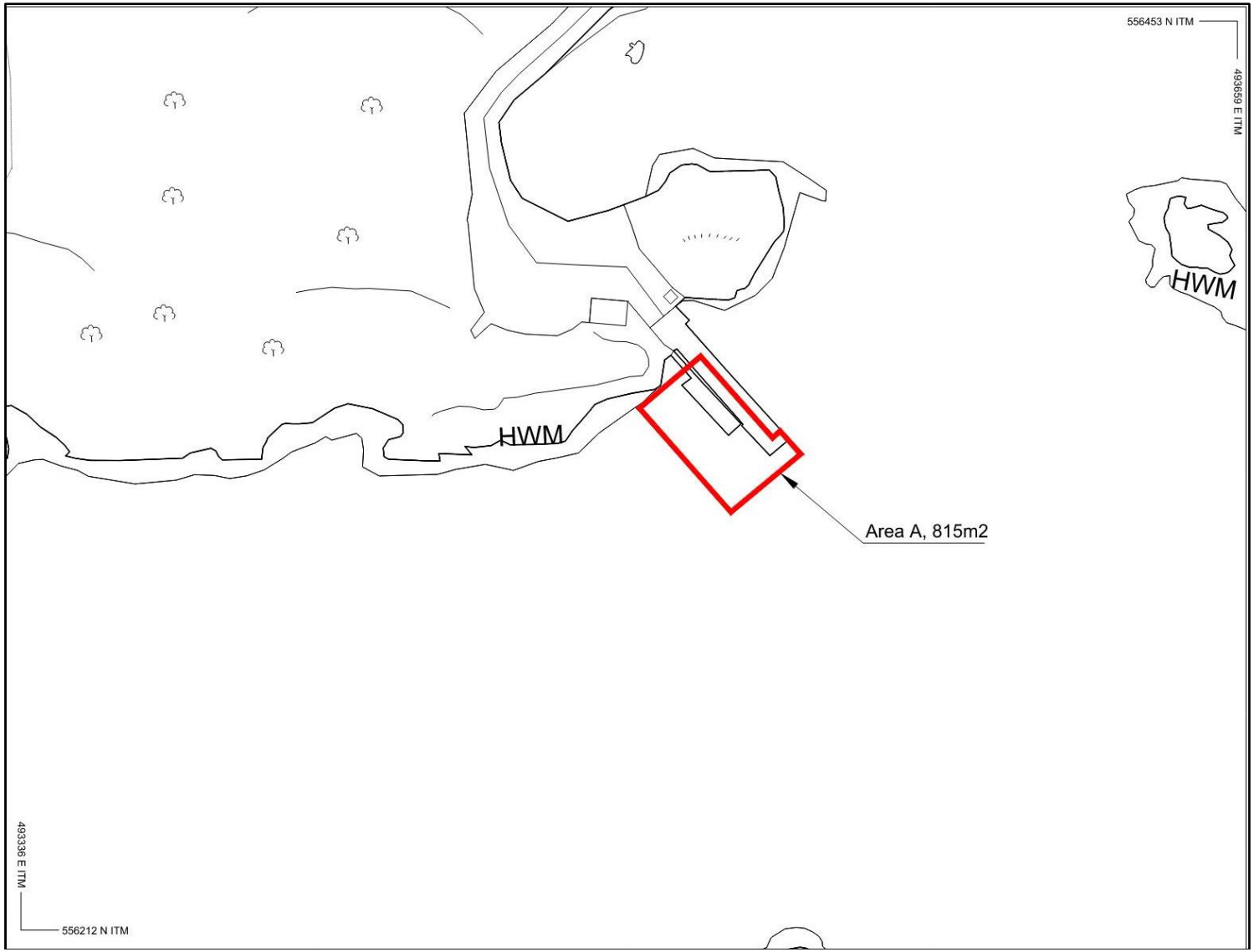

Figure 2.3 Foreshore Licence Area

2.3 Project Components

This section contains a summary of the proposed activities which will be undertaken as part of the proposed development. This information was contained in the NIS, which the Applicant submitted as part of the Application.

Table 3.1 Summary of proposed development components

Details of Activity	
Size, scale, area, land-take	Glengarriff pontoon is located adjacent to Glengarriff Pier just outside Glengarriff village. The proposed works will be restricted to the existing pontoon and the surrounding dredge pocket. The proposed dredge footprint is approximately 900m^2. The proposed works overlap with the Glengarriff Harbour and Woodland SAC (000090). There will be no land-take within the SAC.
Details of physical changes that will take place during the various stages of implementing the proposal	Proposed works include: • The removal and replacement of the pontoon; • Dredging of the channel and immediately around the pontoon to a depth of -5mODM; • The proposed dredge footprint is 900m^2; • Disposal of dredged materials on land. Initial works will require the removal and storage on-site of the existing pontoon. This will be done using a crane or excavator. Dredging works will be carried out by a long-reach excavator operating from a barge or from land as necessary. Spoil will be loaded onto trucks and will then be taken off-site. Once dredging works are complete, the barge (if required) and excavator will leave the site. The pontoon, removed at the project commencement, will be returned reinstalled in its original location.
Description of resource requirements for the construction/operation and decommissioning of the proposal (water resources, construction material, human presence, etc)	The equipment and resources required for the works will include: • Crane for removing and reinstating pontoon; • Barge to facilitate dredging; • Safety boat; • A long-reach excavator; • On-site personnel; • Trucks: These vehicles would be used to remove dredge spoil from the site. These vehicles will also be used to relocate the pontoon.
Description of timescale for the various activities that will take place as a result of implementation (including likely start and end date)	• Proposed works should take a total of 1 to 2 weeks, including site setup and demobilization. • Likely start date will be dependent on seasonal constraints.
Description of wastes arising and other residues (including quantities) and their disposal	• Dredge spoil will be the only significant waste generated on site. This spoil will be removed from the site and disposed of at a suitable location. • Fuel/oil/lubricants associated with the barge (if used) /excavator/truck. • Wastes will not be left on or adjacent to the pier. • All waste will be removed off site to an appropriate disposal site.
Identification of wastes arising and other residues	• A portion of dredge material is considered marginally contaminated. Marine sediment sample parameters that lie

(including quantities) that may be of particular concern in the context of the Natura 2000 network	within Class 2 include arsenic, cadmium, nickel and zinc. One sample exceeded the upper guidance limit for copper (Class 3). With the exception of arsenic, cadmium, copper, nickel and zinc all other parameters are below the lower Irish action limit within the proposed dredge area. All dredge spoil will be removed from site for disposal on land. • Fuels and oils will be present which pose a risk to Natura 2000 sites were a fuel spill or oil leak to occur. All fuels/oils will be stored within the temporary site compound.
Description of any additional services required to implement the project or plan, their location and means of construction	• A temporary site compound will be located adjacent to Glengarriff Pier.

2.4 Potential Impacts on the Receiving Environment

Construction activities required as part of the proposed development have potential to cause potential impacts on the ecology of the surrounding area of the proposed development. Potential impacts may arise from the following activities:

- Dredging of marine sediments around the existing pontoon;
- The use of plant, equipment and vehicles;
- Increased human presence;
- The use of oils, fuels, lubricants, etc.

Construction Phase

Habitat loss

There is potential for loss and alteration of seabed habitat at during dredging activities at the location of the proposed development site.

Water Quality

There is potential for water quality impacts to effect habitats and species as a result of the proposed development including sedimentation, increased turbidity and pollution of the marine environment.

Disturbance/Displacement

There is potential for the proposed development to cause disturbance or displacement impacts to species in the vicinity of the proposed development from noise and vibration, increased vessel movements and water quality impacts.

Operational Phase

There are no potential impacts on the receiving environment associated with the proposed development.

3.0 FINDINGS OF THE AA SCREENING REPORT

3.1 Summary of AA Screening Report

This section contains a summary of the AA Screening Report which the Applicant submitted as part of the Application. The purpose of the AA Screening Report was to determine whether or not the proposed development, either individually or in combination with other plans and projects, had the potential to significantly affect one or more European sites in view of their Conservation Objectives.

The AA Screening Report adopted the precautionary principle and identified all European sites within 15 km of the proposed development. Table.1 below presents the European sites within the 15 km zone of influence and states whether or not there was potential for likely significant effects.

The AA Screening Report concluded that the proposed development, either individually or in combination with other plans or projects, is likely to have a significant effect on one European site, namely the Glengarriff Harbour and Woodlands SAC in view of its Conservation Objectives.

A separate AA Screening Report was prepared by ROD on behalf of the DHLGH and reached the same conclusions.

Table 3.1 European Sites within 15 km of the proposed development

European site [site code]	Distance from the proposed development site	Likely Significant Effect (LSE)? Explain.
Glengarriff Harbour and Woodlands SAC [000090]	0 km – The proposed development occurs within the boundary of this European site.	**LSE.** This European site screened in for Stage 2 AA for the following reasons: • The proposed development is located within this European site and as such, an impact pathway exists. • There are potential for water quality impacts to reach this European site during the construction phase. • There is potential for habitat loss and/or fragmentation to impact the Qualifying Interests of this European site during the construction phase. • There is potential for noise and disturbance to impact the Qualifying Interests of this European site during the construction phase.
Caha Mountains SAC [000093]	0.8 km southwest of the proposed development site in a direct, overland distance.	**No LSE.** This European site screened out for Stage 2 AA for the following reasons: • No hydrological connection or pathway for impact between the proposed development and this European site. • This European site is designated for terrestrial and freshwater habitats and species. • The nature and location of the proposed development in relation to this European site.
Derryclogher (Knockboy) Bog SAC [001873]	6.3 km northeast of the proposed development site in a direct, overland distance.	**No LSE.** This European site screened out for Stage 2 AA for the following reasons: • No hydrological connection or pathway for impact between the proposed development and this European site. • This European site is designated for one terrestrial habitat. • The nature and location of the proposed development in relation to this European site.
Maulagowna Bog SAC [001881]	8.2 km northwest of the proposed development site in a direct, overland distance.	**No LSE.** This European site screened out for Stage 2 AA for the following reasons: • This European site is designated for one terrestrial habitat. • The nature and location of the proposed development in relation to this European site. • No hydrological connection or pathway for impact between the proposed development and this European site.

European site [site code]	Distance from the proposed development site	Likely Significant Effect (LSE)? Explain.
Clonee & Inchiquin Loughs, Uragh Wood SAC [001342]	8.6 km northwest of the proposed development site in a direct, overland distance.	**No LSE.** This European site screened out for Stage 2 AA for the following reasons: • No hydrological connection or pathway for impact between the proposed development and this European site. • This European site is designated for terrestrial and freshwater habitats and species. • The nature and location of the proposed development in relation to this European site.
Glanlough Woods SAC [002315]	14.9 km northeast of the proposed development site in a direct, overland distance.	**No LSE.** This European site screened out for Stage 2 AA for the following reasons: • No hydrological connection or pathway for impact between the proposed development and this European site. • This European site is designated for Lesser Horseshoe Bat (*Rhinolophus hipposideros*) only. • The nature and location of the proposed development in relation to this European site.
Sheep's Head SAC [00102]	13.8 km southwest of the proposed development site in a direct, overland distance.	**No LSE.** This European site screened out for Stage 2 AA for the following reasons: • No hydrological connection or pathway for impact between the proposed development and this European site. • This European site is designated for terrestrial habitats and species. • The nature and location of the proposed development in relation to this European site.
Kenmare River SAC [002158]	13 km north of the proposed development site in a direct, overland distance.	**No LSE.** This European site screened out for Stage 2 AA for the following reasons: • No hydrological connection or pathway for impact between the proposed development and this European site. • This European site is designated for marine, coastal and terrestrial habitats and species. • The nature and location of the proposed development in relation to this European site.

4.0 STAGE 2 APPROPRIATE ASSESSMENT

4.1 Introduction

This section contains a summary of the Natura Impact Statement which the Applicant submitted as part of the Application. The purpose of the NIS was to determine whether or not the proposed development, either individually or in combination with other plans and projects, had the potential to adversely affect one or more European sites in view of their Conservation Objectives.

Appendix 2 of the NIS refers to the AA Screening Report and states that likely significant effects on the Glengarriff Harbour and Woodland SAC could not be excluded, and therefore, the proposed development proceeded to Stage 2 AA and an NIS was prepared.

4.2 Identifcation and Assessment of Adverse Effects

Section 5.0 of the NIS titled 'Assessment of Potentially Significant Impacts' identifies the construction and operational impacts of the proposed development which have the potential to adversely affect the Glengarriff Harbour and Woodland SAC.

Potential impacts were identified as follows:

- Loss of habitat and/or alteration
- Habitat or species fragmentation
- Water quality
- Disturbance and/or displacement of species
- In-combination effects

The potential impacts are described in the following sub sections:

Loss of habitat and/or alteration

Habitat loss or habitat alteration of European sites has the potential to reduce suitable habitat available for Qualifying Interests of these sites. This would decrease the viability of existing habitats while simultaneously increasing pressures, potentially resulting in further deterioration.

There are no pathways for impact between the proposed development and either of the two terrestrial woodland habitats for which the Glengarriff Harbour and Woodland SAC is designated. Therefore, neither '*Old sessile oak woods with* Ilex *and* Blechnum *in the British Isles',* nor *'Alluvial forests with* Alnus glutinosa *and* Fraxinus excelsior *(Alno*-Padion, Alnion incanae, Salicion albae*)'* had been selected for assessment of adverse effects in the NIS.

With respect to Harbour Seal and Otter, the proposed development will not result in a significant loss or alteration of suitable habitat for either of these species. However, according to the precautionary principle, mitigation measures for the protection of water quality, listed in Section 6.0 of the NIS, will extend to these species.

Habitat or species fragmentation

Habitat fragmentation, which typically occurs due to an external disturbance causing an alteration of the spatial composition of a particular habitat, results in spatial separation of habitat units which had previously been in a state of greater continuity and value. Adverse effects of habitat fragmentation on species/populations includes

increased isolation which can detrimentally impact their resilience or robustness, potentially altering species abundance and leading to a reduction in overall diversity. The proposed works at Glengarriff Harbour will be small in scale and short in duration (1-2 weeks). Given the nature, scale and location of the proposed development, significant habitat or species fragmentation is not anticipated as a result of the proposed dredging operations. Therefore, it can be concluded beyond reasonable scientific doubt that that significant habitat or species fragmentation impacts are not likely to occur within the Glengarriff Harbour and Woodland SAC as a result of the proposed development.

Water quality

There are several aspects of the proposed development which could result in a decrease in water quality in the Glengarriff Harbour and Woodland SAC. Potential water quality impacts as a result of the proposed development include increased sedimentation and an increased risk of release of contaminants into the marine environment. These impacts have the most potential to occur during dredging activity.

Increased sediment and silt in aquatic habitats as a result of dredging can impact fish species as their gills can become damaged due to increased exposure to suspended solids. Impacts to fish in terms of water quality could have potential indirect impacts on otter or seals who depend on fish as a food source. Aquatic invertebrates, algal communities and submerged plants are also at risk as they may become smothered by excessive deposits of silt from suspended solids.

Accidental spillage of material during transportation also has potential for water quality impacts. Any sediment which does become re-suspended into the water column during dredging or accidental spillages will eventually settle out resulting in sedimentation in either the general area or potentially elsewhere due to dispersion as a result of natural tidal processes within the area. Concentrations of suspended sediment are expected to lower significantly with distance from the dredging operation as material naturally settles out.

Dredging also has the potential to result in the release of contaminants or harmful substances from substrates, particularly silts and clays, into the aquatic environment. Mobilisation of chemicals/toxins previously deposited on the seafloor and released into the water column from dredging activities can significantly impact water quality and marine ecosystems. Marine sediments can be a sink for contaminants that end up in harbours and ports mainly from anthropogenic sources such as sewage discharges, marine traffic, industrial wastewater and historically poor environmental management (Cronin et al. 2006).

The principal sources of pollutants at the site would potentially be hydrocarbons associated with vessels, machinery and equipment. The substances that are considered of most concern for the marine environment are those with combined properties of persistence, toxicity and liability to bio-accumulate (PTB). In terms of water quality, the most important contaminants associated with dredged material include organotin compounds, heavy metals, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs) and oils. The Marine Institute provide Upper and Lower action levels to assess the suitability of sediments for disposal at sea. These values do not apply directly in this case given that dredged material will be removed to an off-site facility. However, they can provide some indication of the level of contamination that is acceptable in the small-scale dispersal of secondary sediment.

With regards to the potential release of contaminants from sediments into the surrounding environment, sediment sampling was undertaken for the proposed development. It was found that the material to be dredged is marginally contaminated with arsenic, cadmium, nickel and zinc. One of the sampling stations was heavily contaminated with copper.

None of the sampling stations exceeded the upper Irish action level for arsenic of 70mg/kg. Arsenic can occur naturally within bedrock; therefore, sediments within the dredge site are not considered to pose any risk of significant adverse effects to marine water quality. Cadmium exceeded the lower Irish action level of 0.7mg/kg at two of the three sampling stations. None of the sampling stations exceeded the upper Irish action level for cadmium of 4.2mg/kg. Nickel exceeded the lower Irish action level of 21mg/kg at all three sampling stations. Zinc exceeded the lower Irish action level of 160mg/kg at all three sampling stations. Copper values exceeded the lower guidance level of 40mg/kg at two of the three sampling stations. Cooper exceeded the upper guidance level of 110mg/kg at one sampling station (G1) (Hydrographic Surveys Ltd.).

In relation to the potential for impairment of marine water quality as a result of release of contaminants from sediments it is noted that all dredge spoil is to be removed and transported offsite for disposal at a suitable licenced facility. There will be no disposal of dredge spoil within Glengarriff Harbour or within the boundary of the Glengarriff Harbour and Woodland SAC.

Accidental spillage of hydrocarbons from vessels, equipment and machinery could result in toxic chemicals entering the aquatic environment via surface water run-off or groundwater contamination. Hydrocarbons can have direct phytotoxic effects, including reducing the ability of plants to absorb water and nutrients from their environment. These compounds can also alter the nutrient balance and microbiota in soil and water, which can benefit some plant species while detrimentally affecting others. Such changes have the potential to alter the vegetation structure and composition of the habitat.

To summarise, the proposed development will result in localised disturbance of sediment on the seabed within the vicinity of the pontoon as a result of dredging activity. Any sediment which does become resuspended during dredging or transportation will either settle out in the area of the pier or will disperse on the ebbing tide eventually settling out of suspension. In relation to the disposal of dredge spoil, all dredged material will be removed off-site to a suitably-licensed facility for disposal.

While significant water quality impacts to the Glengarriff Harbour and Woodland SAC are not expected to occur as a result of the proposed development, according to the precautionary principle, mitigation measures for the protection of water quality are recommended and are included in Section 6.0 of the NIS and summarised in Section 4.3 below.

Disturbance and/or displacement of species

Noise, vibration and visual disturbance impacts from the proposed development have the potential to cause disturbance to or displacement of fauna during dredging activities.

Harbour Seal

The guidance document, *'Guidance the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters'* (DAHG, 2014) has listed activities such as dredging, drilling, pile driving, geophysical acoustic surveys and blasting all as having the potential to pose risks to marine mammals.

Harbour seal are known to occur throughout the year in Glengarriff Harbour, with peak numbers in August and September. Harbour seal pups have been recorded in the area during June and July (Berrow, 2019) and have the potential to be in the vicinity of the proposed development during dredging activities, given the proposed development location within the SAC, their mobile nature and regular sightings in the area.

Sound exposure levels from the dredging activities are considered below what is expected to cause injury to marine mammals. However, disturbance from the noise generated by the proposed development including the general dredging activity, physical presence of machinery and vessels and increased water turbidity all have the potential to cause low-level disturbance, masking or behavioural impacts to Harbour seal (DAHG, 2014) in the Glengarriff Harbour and Woodland SAC.

According to the Marine Mammal Risk Assessment (MMRA) appended to the NIS, localised disturbance to marine mammals in the vicinity of the proposed development may occur during dredging activities. However, disturbance will be limited due to the inshore location of the site, the shallow nature of the dredging site the regular transit of fishing and recreational vessels, the short duration of the dredging works and although pupping by harbour seals occurs between June and July, the potential disturbance is very low and localised and will not affect pupping or haul out sites (Berrow, 2019).

Any disturbance or displacement impact to Harbour seal as a result of the proposed development will be low, due to the regular exposure seals in the area have to small vessels, the location of the dredging excavator on land, the fact that dredged materials will be removed from the site. However, as disturbance or displacement impacts cannot be completely discounted without suitable mitigation measures, the precautionary principle applies and mitigation measures for the protection of Harbour seal against disturbance impacts are recommended. These are included in Section 6.0 of the NIS and summarised in Section 4.3 below.

Otter

The proposed development has the potential for disturbance and/or displacement impacts to otter in the Glengarriff Harbour and Woodland SAC. Otter are known to be present and active within the vicinity of the proposed development and the surrounding Glengarriff Harbour.

Dredging activities and associated noise emissions from vessels, machinery and equipment as well as increased human presence for the duration of the works have the potential to result in disturbance/displacement impacts to foraging or commuting otter in and around Glengarriff Harbour.

Given the abundant evidence of otter recorded in vicinity of the proposed development during ecological surveys, it is likely that any otters present during the dredging activities comprise part of the resident local population and are likely habituated to the existing levels of disturbance already present in Glengarriff Harbour. Considering the location of the proposed development, the small-scale and temporary nature of the works and the habituation of the local otter population to human-related activities, disturbance/displacement impacts to otter as a result of the proposed development are not likely to be significant. However, considering otter are present within the immediate vicinity to the proposed development and are a qualifying interest of the Glengarriff Harbour and Woodland SAC, mitigation measures are recommended in accordance to the precautionary principle.

Additionally, as the dredging activities have the potential for water impacts quality (e.g. sedimentation) to fish which otter depend on as a food source, indirect impacts

to otter cannot be excluded. Therefore, according to the precautionary principle, mitigation measures for the protection of otter against water quality impacts are recommended. Mitigation measures are included in Section 6.0 of the NIS and summarised in Section 4.3 below.

In-combination effects

The following existing plans and projects within the vicinity of Glengarriff Harbour and Woodland were considered for potential cumulative effects in the NIS (Section 4.4):

- **Existing pier operations:** There is potential that leisure/commercial boat activity may occur in the vicinity of the proposed development at the same time.
- **Current/outstanding grants of Planning Permission:** There are six granted/outstanding planning applications related to residential dwellings and retention permission for telecommunications infrastructure in the general vicinity and the adjacent townland of Monteensudder.
- **Licenced Activities:** An existing licenced wastewater treatment plant is located in Glengarriff village, approx. 250 m west of the proposed development site. This WwTP has an overall compliance rating of 'fail' due to lack of secondary treatment.

Considering the nature, scale and location of the proposed development, there is potential for an interaction between the proposed development and the aforementioned existing activities to cause in-combination effects to the receiving environment. Therefore, mitigation measures are required.

4.3 Mitigation Measures

Section 6.0 of the NIS titled ‘Mitigation’ identifies the mitigation measures to be implemented as part of the proposed development. Section 6.0, ‘Mitigation’ prescribes generic mitigation measures to avoid or reduce adverse effects on the integrity of the Glengarriff Harbour and Woodland SAC. For ease of reference, the Qualifying Interests and their Conservation Objectives, the potential effects and the prescribed mitigation measures are presented in Table 4.1 below.

Table 4.1 Summary of Sources of Adverse Effects and Mitigation Measures on the Glengarriff Harbour and Woodland SAC.

Qualifying Interest	Conservation Objective (NPWS, 2015)	Source of Adverse Effect	Mitigation Measure
Otter (*Lutra lutra*) [1355]	*"To maintain the favourable conservation condition of Otter in Glengarriff Harbour and Woodland SAC"*	• Impacts on water quality during construction • Impacts from disturbance and/or displacement	• Water Quality • Guidelines – *'Guidelines for Treatment of Otters Prior to the Construction of National Road Schemes'.*
Harbour Seal (*Phoca vitulina*) [1365]	*"To maintain the favourable conservation condition of Harbour Seal in Glengarriff Harbour and Woodland SAC"*	• Impacts on water quality during construction • Impacts from disturbance and/or displacement during construction	• Water Quality • Guidelines – *'Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters'.*

4.4 Evaluation of Mitigation Measures

The mitigation measures are presented below under the headings taken directly from the Section 6.0 of the NIS. An evaluation of their practicality, suitability and effectiveness is also provided.

Water Quality

- Fully brief the contractor beforehand on the sensitivities of the site.
- Ensure dredging is undertaken in a manner that reduces the volume of sediment that escapes into the water column and becomes suspended.
- Overflow of dredge material from either the excavator bucket or trucks should be avoided.
- Care should be taken to ensure a minimum amount of spillage from the excavator bucket while transporting spoil to trucks.
- It is recommended that appropriate fuel management measures are put in place. A fuel management plan should be prepared and implemented by the contractor prior to the commencement of works so as to minimise any potential risk to the environment as a result of fuel/oil spill.

The source of potential adverse effects, or receptor/ Qualifying Interest(s) that these mitigation measures apply to are not stated, however it can be assumed that the mitigation measures provided under this heading relate to all sources of adverse effects. These mitigation measures are appropriate for a development of this nature and reduce the risk of adverse effects arising during the construction phase.

Marine Mammals (Harbour Seal)

In-line with NPWS guidance and the MMRA for the proposed works, it is recommended that a suitably qualified and experienced marine mammal observer (MMO)7 is present for the duration of the proposed works to implement NPWS Guidelines. This observer will determine the presence or absence of marine mammals in the area and will log all relevant events using standardised data forms (DAHG, 2014). The use “ramp up” procedures for noise and vibration emitting operations will also be implemented into the operation.

The NPWS recommend a distance of 500m radial distance of the dredging sound source in water depths of <200m (NPWS 2014) on commencement. The MMRA, prepared in support of this application, recommends a Mitigation Zone of 200m is sufficient given the limited sound exposure of even large scale dredging operations (McKeown 2017 as cited in Berrow, 2019). If a significant negative change in behaviour is recorded such as rapid movement away from vessel or distress then the MMO should have the authority to cease operations until the exposed animal is clear of the site (Berrow, 2019).

As per the MMRA, the following mitigation measures are proposed to minimise the potential impacts on marine mammals, including harbour seal, and to allow animals move away from the dredging area:

1. All personnel will be appropriately trained about environmental issues prior to the start of the operation.
2. All equipment will be in good condition to avoid spillage or discharge of oil, smoke and excessive noise.
3. Refuelling will be carried out by competent and trained people away from any environmentally sensitive areas; and dredger to be moored up securely.

4. An appropriate waste container will be placed to collect waste before the final disposal by authorised company and hazardous material storage areas will be identified, labelled, and properly marked and fitted with spill containment systems;
5. Excavators and barges will be checked for any fuel/oil leaks on a regular basis by the crew.
6. Any spills we be reported immediately to the site agent/authorities
7. In the event of a major spill due to damage to the dredger. Locate and isolate, inform harbour authorities, Project manager and environmental agency.
8. A dedicated Marine Mammal Observer will conduct a 30 minute watch for marine mammals within 500m of the excavator prior to start up. If a seal or cetacean (or otter) is sighted within 100m of the excavator, start-up must be delayed until the animal is observed to move outside the mitigation zone or the 15 minutes has passed without the animal being sighted within the mitigation zone.
9. The excavator will be started at lowest revs of the pump, with pump revs increased over a 15 minute period to allow wildlife an opportunity to move further away from the vessel prior to the pumps reaching full power.

These mitigation measures are appropriate for a development of this nature and reduce the risk of adverse effects arising during the construction phase.

Otter

With regards to otter, the following mitigation measures are recommended, as per the guidance document '*Guidelines for Treatment of Otters Prior to the Construction of National Road Schemes*' (NRA, 2008):

- A pre-construction survey for otter should be carried out prior to the commencement of any works to search for signs of otter activity in the vicinity of the works, in particular any breeding and/or resting sites. Otter breeding may take place at any season of the year, so breeding activity at holts will need to be determined on a case by case basis.
- Where potential holts are identified, a period of monitoring over several days (e.g. five or more days of checking activity at the holt either with sticks or with sand pads to identify footprints) may be required to determine whether holts are active, inactive or disused. Otters do not tolerate disturbance at or near holts that are in active use.
- If a period of time has elapsed between the recommended pre-construction survey and commencement of the works, a further inspection of the development area, immediately prior to the works, should be carried out to ensure that no new holts have been created in the intervening period and to check if any of the previously identified holts are in active use by breeding females or have otter cubs present.

With regards to site works in the vicinity of active otter holts (where identified):

- No works should be undertaken within 150m of any holts at which breeding females or cubs are present. Following consultation with NPWS, works closer to such breeding holts may take place – provided appropriate mitigation measures are in place, e.g. screening and/or restricted working hours on site.
- No wheeled or tracked vehicles (of any kind) should be used within 20m of active, but non-breeding, otter holts. Light work, such as digging by hand or scrub clearance should also not take place within 15m of such holts, except under licence.

- The prohibited working area associated with otter holts should, where appropriate, be fenced with temporary fencing prior to any possibly invasive works. Appropriate awareness of the purpose of the enclosure should be conveyed through notification to site staff and sufficient signage should be placed on each exclusion fence. All contractors or operators on site should be made fully aware of the procedures pertaining to each affected holts.
- Where holts are present in close proximity to invasive construction works but are determined not to require destruction, construction works may commence once recommended alternative mitigation measures to address otters have been complied with.

These mitigation measures are appropriate for a development of this nature and reduce the risk of adverse effects arising during the construction phase.

5.0 CONCLUSION

The information contained in the NIS provides clear, concise, and definitive findings, capable of removing all scientific doubt as to the effects of the proposed development on the Glengarriff Harbour and Woodland SAC. Therefore, the competent authority may determine that the proposed development, either individually or in combination with other plans or projects, will not lead to adverse effects on the integrity of the Glengarriff Harbour and Woodland SAC, or any other European site.