

# **ROSS SWIFT ECOLOGY LTD.**

## **NATURA IMPACT STATEMENT**

**Garrykennedy Inner Harbour Upgrade  
Garrykennedy,  
Co. Tipperary**





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## 1.0 INTRODUCTION

Ross Swift Ecology Ltd. has been appointed to prepare the relevant Appropriate Assessment (AA) Screening and Natura Impact Statement (NIS), relative to the proposed development, which will allow the competent authority, to undertake AA of the development at Garrykennedy Inner Harbour Upgrade, Garrykennedy, Co. Tipperary. This report presents the assessment of the likely significant effects, if any on designated European Sites as a result of the construction or operational phase of the proposed development. The Natura Impact Statement has been prepared with regard to the European Communities (Natural Habitats) Regulations 1997 (S.I. No. 94 of 1997), and the later amendment regulations (S.I. No. 233 of 1998; S.I. No. 237 of 2005; S.I. No. 477 of 2011). Article 10 of the Habitats Directive states that Member States shall endeavour in their land use planning and development policies, to encourage the management of features of the landscape which are of major importance for wild flora and fauna. Mitigation measures will be implemented to prevent an adverse effect on the Lough Derg (Shannon) Special Protection Area (SPA).

Tipperary County Council intends to make an application for approval to An Bord Pleanála to carry out a development which involves the redevelopment of Garrykennedy Inner Harbour and facilities. Coordinates (ITM: E 576852.61, N 683835.03). The proposed Inner Harbour Upgrade works will replace the existing walkways at Garrykennedy. The site is located within Lough Derg (Shannon) SPA (Site Code 004058).

### 1.1 DETAILED DESCRIPTION OF DEVELOPMENT

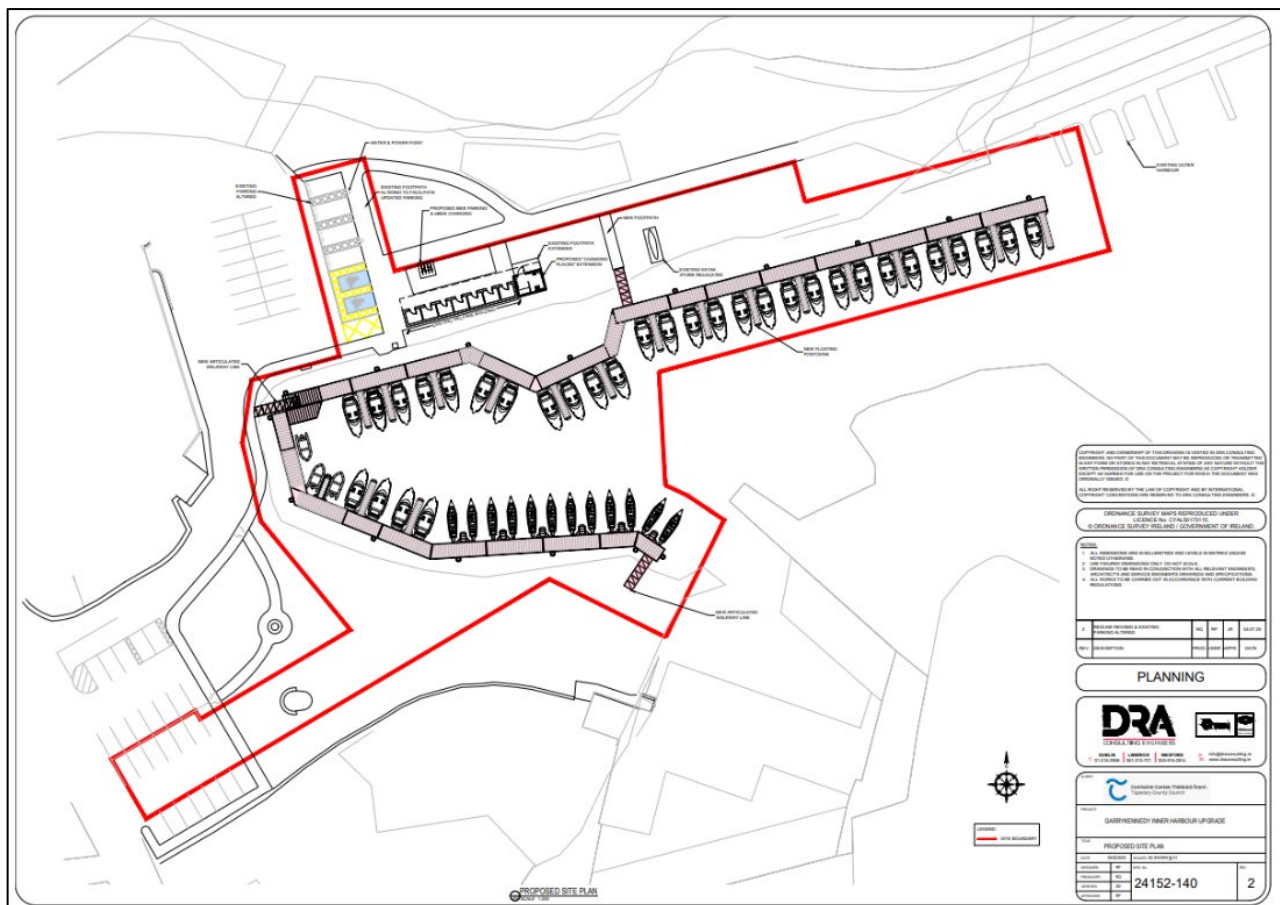
- Clearance of the Inner Harbour including removal of abandoned boats.
- Addressing safety concerns in relation to the existing boardwalk by removal of existing and replacement with new floating pontoons for 47 No small boat berths that include facilities to enable wheelchair users to access the water.
- Extension to existing welfare building to provide “changing places” facility.
- Alternations to existing parking to facilitate 4 No recreational vehicle parking spaces with power and water points and updated accessible parking.
- Provision of bike parking / charging facilities

As per the site layout by **DRA Consulting Engineers** the proposed development will require the removal of the existing metal frame in sections. The fixings on the existing frame will be detached and the walkways will be removed in sections. This will be removed via a mobile crane or teleporter.



The existing frame and boardwalk will be treated as waste material, due to the presence of invasive molluscs the frame will be sterilised before removal to a licenced waste facility.

To construct the new pontoon a piling rig on a barge will be brought to site. The piling rig will install steel driven piles. The driven piles will be pushed into the lough bed at the inner harbour. There will be no coring or excavating of material from the lakebed for any of the proposed works. A piling vibration hammer will vibrate the pile into the correct position. This will minimise disruption to the lough bed as only the diameter of the pile touches the bed during pitching of the pile. When the piles are installed, the pontoon will be placed in the water, floated into position and fixed to the piles. The piles will be galvanised steel, and the pontoons will be galvanised steel frames with composite panels. Services ran along pontoons will be polyethylene watermain and electrical cables. The extension to welfare building will have concrete foundations, blockwork walls and a timber roof. There will be modifications to the foul drainage network to accommodate this new extension and a new access footpath. There will be a new soakaway for surface water runoff at the existing welfare building. The proposed development will not require the removal of any mature trees and will take approximately six months to complete. The existing lighting scheme will remain in place with modifications as per M&E.



**Figure 1.1: Proposed site layout**



## 1.2 STATEMENT OF AUTHORITY

This report and the ecological assessments were undertaken by Dr Ross Donnelly-Swift who has a BSc (Hons) in Biology from Maynooth University NUI, an MSc in Environmental Science from Trinity College Dublin and a PhD in Biosystems Engineering from University College Dublin. Ross has extensive ecological knowledge gained from academic research and field work, from species-specific and protected species surveys for the completion of scientific and ecological reports to support planning applications and compliance with regulations, for projects both small and large in a range of areas such as industrial, commercial, agricultural, residential, amenity, and recreational developments. He has completed detailed ecological assessments for Appropriate Assessment Screening & Natura Impact Statement, Ecological Impact Assessments, Environmental Impact Assessment Reports, Species Specific Surveys (flora, birds, bats, badgers, otters, and invasive species). In 2025 Ross completed an Advanced Diploma in Planning and Environmental Law at King's Inns (The Honorable Society of King's Inns).

## 2.0 APPROPRIATE ASSESSMENT SCREENING

The Habitats Directive (92/43/EEC) seeks to conserve natural habitats and wild fauna and flora by the designation of Special Areas of Conservation (SACs) and the Birds Directive (2009/147/EEC) seeks to protect birds of special importance by the designation of Special Protection Areas (SPAs). It is the responsibility of each member state to designate SPAs and SACs, both of which will form part of Natura 2000, a network of protected sites throughout the European Community. SACs are selected for the conservation of Annex I habitats (including priority types which are in danger of disappearance) and Annex II species (other than birds). SPAs are selected for the conservation of Annex I birds and other regularly occurring migratory birds and their habitats. The annexed habitats and species for which each site is selected correspond to the qualifying interests of the sites; from these the conservation objectives of the site are derived. An 'Appropriate Assessment' (AA) is a required assessment to determine the likelihood of significant impacts, based on best scientific knowledge, of any plans or projects on Natura 2000 sites. A screening for AA determines whether a plan or project, either alone or in combination with other plans and projects, is likely to have significant effects on a Natura 2000 site, in view of its conservation objectives. This AA Screening has been undertaken to determine the potential for significant effects on relevant Natura 2000 sites. The



purpose of this assessment is to determine, the appropriateness, or otherwise, of the proposed development in the context of the conservation objectives of such sites.

Article 6(3) of the Habitats Directive establishes the requirement for appropriate assessment when planning new developments that might affect a Natura 2000 site. Article 6(3) of the Habitats Directive states;

*“Any plan or project not directly connected with, or necessary to the management of the site, 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, and subject to the provisions of paragraph 4, 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 and, if appropriate, after having obtained the opinion of the general public.”*

Article 6(4) states:

*If, in spite of a negative assessment of the implications for the [European] site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.*

The screening determination must be based on scientific information relevant to the likely effects on the conservation objectives of the relevant European sites. The information should be up-to-date and based on the best available techniques and methods to estimate the presence and extent of effects. This is because if there is any scientific uncertainty as to the absence of significant effects, the project must be screened in for appropriate assessment.

Screening for Appropriate Assessment involves:

- Description of the project and area characteristics (existing environment);
- Identification and description of Natura 2000 sites that could potentially be affected, and compilation of information on their qualifying interests and conservation objectives;
- Assessment of likely effects – direct, indirect and cumulative, undertaken on the basis of availability of objective information as necessary;
- Screening statement with conclusions.





## OVERVIEW OF SCREENING AND APPROPRIATE ASSESSMENT

### STAGE 1 Screening

Screening should be undertaken without the inclusion of mitigation measures. If the effects are deemed to be significant, potentially significant, or uncertain, or if the screening process becomes overly complicated, then the process must proceed to Stage 2 AA.



### STAGE 2 Appropriate Assessment

The Second stage of the AA process assesses the impact of the project or plan (either alone or in combination with other projects or plans) on the integrity of the Natura 2000 site, with respect to the conservation objectives of the site and its ecological structure and function. A Natura Impact Statement (NIS) containing a professional scientific examination of the project or plan is required and includes any mitigation measures to avoid, reduce significant negative impacts.



### STAGE 3 Assessment of Alternative Solutions

If the outcome of Stage 2 is negative with adverse impacts to the sites cannot be scientifically ruled out with the inclusion of mitigation measures, the plan or project should proceed to Stage 3 or be abandoned. This stage examines alternative solutions to the proposal.



### STAGE 4 Assessment where no alternative solutions exist and where adverse impacts remain.

The final stage is the main derogation process examining whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project to adversely affect a Natura 2000 site, where no less damaging solution exists.

The following project elements of the proposed development have been examined for relevance to possible effects on the Natura 2000 sites;

- Earthworks & Excavation
- Sediment & Hydrocarbon Runoff
- Stormwater & Waste Water
- Disturbance to Protected Species
- Impact on Protected Habitats
- Dust and Noise
- Invasive Species



## 2.1 GUIDELINES AND LEGISLATION FOR APPROPRIATE ASSESSMENT SCREENING

This report has been carried with reference to the following guidelines:

- OPR Practice Note PN01 (2021) Appropriate Assessment Screening for Development Management Office of the Planning Regulator;
- Appropriate Assessment of Plans and Projects in Ireland. Guidelines for Planning Authorities. DoEHLG, 20010;
- Article 6 of the Habitats Directive – Rulings of the European Court of Justice. Final Draft September 2014;
- Circular NPWS 1/10 & PSSP 2/10 Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities;
- Communication from the Commission on the precautionary principle. European Commission (2000);
- Managing Natura 2000 sites – The Provisions of Article 6 of The Habitats Directive 92/43/EEC. European Commission, 2000;
- EC Natura 2000 Spatial Planning. European Commission (2017);
- Assessment of Plans and Projects Significantly Affecting Natura 2000 sites. Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. European Commission, 2002;
- Commission Notice “Managing Natura 2000 sites the provisions of Article 6 of the Habitats Directive 92/43/EEC. European Commission, 21.11.2018;
- CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3. Chartered Institute of Ecology and Environmental Management, Winchester.

## 2.2 DATA AND DESKTOP REVIEW

An ecological desktop study was completed for this report by Identification of European Sites within the Zone of Influence (ZoI) of the proposed site boundary. The NPWS database was reviewed for the site synopsis and conservation objectives for European Sites identified to be in the Zone of Influence. Desktop research was conducted to gather information relating to European sites and to the habitats and species that they support. The following data sources were consulted in February 2025;

- Tailte Éireann mapping and aerial photography;
- National Parks and Wildlife Service (NPWS);
- Google and Bing aerial imagery;
- EPA Envision Maps;



- National Biodiversity Data Centre (NBDC);
- National Planning Application Database;
- Water Quality Data from the EPA;
- Geological Survey of Ireland;
- Wetland Maps of Ireland;

As per the **Tipperary County Development Plan 2022-2028**;

**Planning Policy:**

- **11.1:** In assessing proposals for new development to balance the need for new development with the protection and enhancement of the natural environment and human health. In line with the provisions of Article 6(3) and Article 6 (4) of the Habitats Directive, no plans, programmes, etc. or projects giving rise to significant cumulative, direct, indirect or secondary impacts on European sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans, programmes, etc. or projects).
- **11.2:** Ensure the protection, integrity and conservation of European Sites and Annex I and II species listed in EU Directives. Where it is determined that a development may individually, or cumulatively, impact on the integrity of European sites, the Council will require planning applications to be accompanied by a NIS in accordance with the Habitats Directive and transposing Regulations, 'Appropriate Assessment of Plans and Projects, Guidelines for Planning Authorities', (DEHLG 2009) or any amendment thereof and relevant Environmental Protection Agency (EPA) and European Commission guidance documents.



### 3.0 BACKGROUND DESCRIPTION OF SITE ENVIRONMENT

The proposed development is located within Garrykennedy (Garraí Uí Chinnéide) village that is listed as a Local Service Centres. A settlement plan has been prepared for Garrykennedy as part of Tipperary County Development Plan 2022-2028 the Settlement Strategy recognises that each town and village has an important role in providing services, employment opportunities, social and recreational facilities for the communities of Tipperary; *Garrykennedy (Garraí Uí Chinnéide) village is a small lakeside settlement on the shores of Lough Derg on the River Shannon. The ruins of Garrykennedy Castle sit on the water's edge alongside the quay. Garrykennedy is circa 10km northwest of Nenagh town. There is an impressive public harbour and a slipway in the village with private harbour facilities also. There are two public houses in the village with one offering restaurant facilities. Garrykennedy is a popular destination with the fishing and boating fraternity, tourists and locals. Recent improvements to the harbour, the provision of changing facilities, and amenity walks to the woodlands to the north-west of the village have significantly added to the attractiveness of the village. In addition, Garrykennedy is a designated trailhead on the Lough Derg Canoe trail and facilities for same will be provided in the village.*

- **GO1:** To facilitate low density development proposals to meet local housing demands together with the provision of local and community services / facilities and local employment opportunities within the village/settlement boundary in accordance with the principles of proper planning and sustainable development, and the Council's 'Design and Best Practice Guidelines for Cluster Housing Schemes in Rural Villages'.
- **GO2:** To ensure that new development within the settlement has regard to the principles and objectives set out in the Garrykennedy Village Design Statement 2007.
- **SO1:** To promote and support the development of tourism infrastructure and facilities within the village as a key tourism destination on Lough Derg, in accordance with the provisions of the Lough Derg Visitor Development Plan 2020-2024, Tourism Masterplan for the Shannon 2020-2030 and as part of the Ireland's Ancient East and Ireland's Hidden Heartlands brands.
- **SO2:** To support linkages between Garrykennedy and other key tourism destinations along Lough Derg.
- **SO3:** To protect the support the enhancement of existing amenity facilities within the village, both land and water based, and support their development in a sustainable manner
- **SO4:** To support the continued use and development of the Lough Derg Canoe trail.
- **SO5:** To identify suitable locations for the provision of cycle racks within the village.
- **SO6:** To support the enhancement of existing walking trails within the village and the provision of new trails along Lough Derg.
- **SO7:** To encourage the provision of commercial and employment development within the village which will maintain and enhance the tourism base in the village.



- **SO8:** To ensure the protection of protected structures, historic buildings and buildings/structures of archaeological significance.
- **SO9:** To maintain the integrity of the Natura 2000 sites and to carry out Appropriate Assessments where necessary and appropriate.
- **SO10:** To require the submission of Flood Impact Statements, as appropriate, in respect of lands which are liable to flood.

As per the Flood Risk Assessment (PFRA) Mapping tool by the Office of Public Works (OPW), the proposed development site is located within an area of fluvial flood, indicative of 10% AEP (10-yr) event, 1% AEP (100-yr) event and within a 0.1% AEP (1000-yr) event. The proposed development is a floating pontoon and therefore will rise as water levels rise in Lough Derg.



**Figure 3.1:** Location of proposed development site (Open Street Map ©)





**Figure 3.2.1:** Landcover surrounding proposed development site (Bing Imagery ©)



**Figure 3.2.2:** Garrykennedy Inner Harbour (Google Imagery 2025 ©)



### 3.1 SURFACE WATERBODIES

The proposed development is located within the Shannon [Lower]\_SC\_070, which is part of the Lower Shannon Catchment. The proposed development is located along the shoreline and marginal zone of Garrykennedy Harbour which is within Lough Derg (Code: 25\_191a). The closest mapped watercourse to the proposed development site is the Garranmore (EPA Code: 25G83 – Order 1) which flows into Lough Derg within Garrykennedy Harbour. The River Shannon (Segment Code: 25\_191\_88 – Order 7) flows through Lough Derg. See **Figure 3.3** below. The Environmental Protection Agency (EPA) undertakes surface water monitoring along the River Shannon. EPA comments on the most recent monitoring results for the Lower Shannon are as follows: *“Moderate ecological quality continues at Incherky Quay (station 2060) in August 2023. Density and diversity of macroinvertebrates was low at this station.* **Table 3.1** below shows the Water Framework Directive (WFD) Status of the River Shannon and the Garranmore. **Figure 3.4** shows the location of the site and WFD water quality from the last monitoring programme. **Table 3.2** shows the monitoring stations in proximity to the proposed development.

The proposed development is located over a GSI Bedrock Aquifer listed as “Lake” and the proposed extension is mapped as LI “Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones”. However, given the location of the development the Bedrock Aquifer will be “Lake”. The Ground waterbody is Nenagh (EPA Code: IE\_SH\_G\_178) and is listed as “Not at risk”.

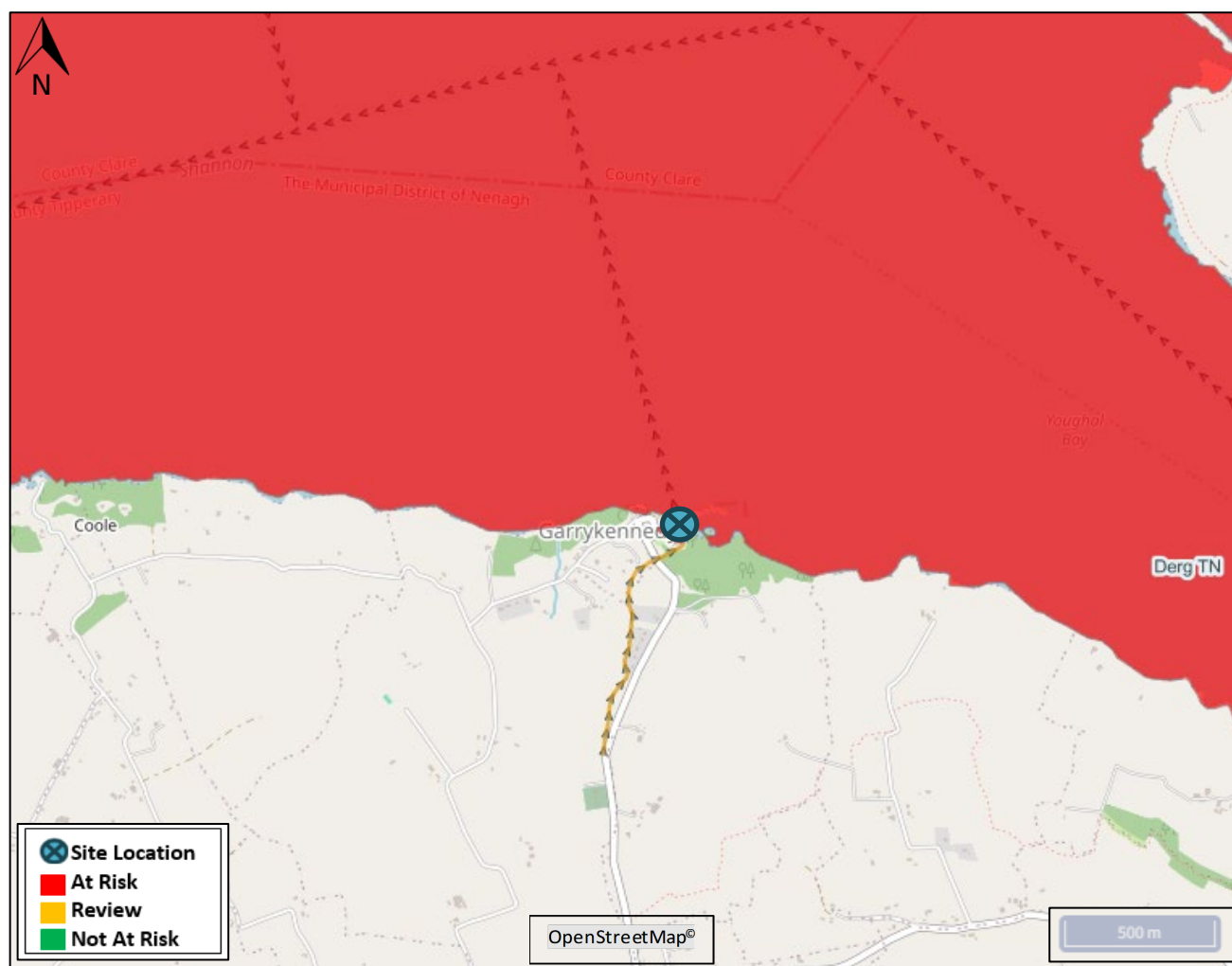
TABLE 3.1 SURFACE WATERBODIES AND WFD STATUS			
RIVER	CODE	STREAM ORDER	OVERALL WFD STATUS
Garranmore	SHANNON (LOWER)_040	1	Review
Lough Derg	IE_SH_25_191a	-	At Risk

TABLE 3.2 MONITORING STATIONS			
WATERBODY NAME	STATION CODE	STATUS	APPROX. LOCATION FROM SITE
Lough Derg	LS250155b04500120	Surveillance And Operational	2km East
Lough Derg	LS250155b04500130	Surveillance And Operational	2.6km West
Lough Derg	LS250155b04500110	Surveillance And Operational	3.9km Northwest



**Figure 3.3:** Mapped waterbodies within proximity to development site





**Figure 3.4: Water Quality Monitoring Programme**

## 3.2 HABITATS AND SPECIES

Site characterisation assessments was undertaken on the 18<sup>th</sup> of January 2025, 23<sup>rd</sup> and 24<sup>th</sup> February 2025 to examine the ecological context of the development site, by systematically walking the proposed site and boundaries and determining the habitats present. The habitat survey was undertaken in accordance with the standard methodology outlined in Fossitt's *"A Guide to Habitats in Ireland"*, a hierarchical classification scheme based upon the characteristics of vegetation present. The Fossitt system also indicates when there are potential links with Annex I habitats of the E.U. Habitats Directive (92/43/EEC). Other guidance followed was the Heritage Council guidelines, *"Best Practice Guidance for Habitat Survey and Mapping"*, (Smith *et al.*, 2011). Any species on The Flora (Protection) (S.I. No. 235 of 2022), or Third Schedule Invasive Flora will be noted and discussed in



detail if found. Any species on The Flora (Protection) (S.I. No. 235 of 2022), or Third Schedule Invasive Flora will be noted and discussed in detail if found. A full ecological site assessment will be contained within the **Ecological Impact Assessment** (Document Reference **EcIA RSE 010325**). The main habitats observed at the site are the following; Lough Derg is classified as mesotrophic lakes (**FL4**). Along the shoreline further into the lough is reed and large sedge swamps (**FS1**) habitat. Along the south shoreline is amenity grassland (**GA2**), this is also found around the public amenities. Buildings, pontoon, walkway, car park and other associated modified surfaces are classified as building and artificial surfaces (**BL3**). There is scattered trees and parkland (**WD5**) along the harbour boundary and in Garrykennedy village. Riparian woodland (**WN5**) and mixed broadleaved/conifer woodland (**WD2**) is found surrounding the harbour and near Garrykennedy Castle. There are no Third Schedule Invasives Flora located along the marginal zone of the harbour. The identified habitats at the proposed development site, as per the Fossitt habitat classification scheme, are summarised in **Table 3.3** below. See **Appendix** for Photo Log of site assessment. The habitats within the harbour are not classified as Annex I.

**Table 3.3:** Summary of Habitats Identified at the Proposed Development Site

HABITAT CLASSIFICATION HIERARCHY		
LEVEL 1	LEVEL 2	LEVEL 3
<b>F</b> Freshwater	<b>FL</b> Lakes and ponds	<b>FL4</b> Mesotrophic lakes
	<b>FS</b> Swamps	<b>FS1</b> Reed and large sedge swamps
<b>W</b> Woodland and scrub	<b>WN</b> Semi-natural woodland	<b>WN5</b> Riparian woodland
	<b>WD</b> Highly modified / non- native woodland	<b>WD2</b> Mixed broadleaved/conifer woodland
		<b>WD5</b> Scattered trees and parkland
	<b>WS</b> Scrub / transitional woodland	<b>WS3</b> Ornamental/non-native shrub
<b>G</b> Grassland and marsh	<b>GA</b> Improved grassland	<b>GA2</b> Amenity grassland
<b>B</b> Cultivated and built land	<b>BL</b> Built land	<b>BL3</b> Buildings and artificial surfaces

See accompanying **Ecological Impact Assessment** (Document Reference **EcIA RSE 010325**) for complete list of fauna observed during the site assessments. No waterfowl associated with Lough Derg (Shannon) SPA were observed within the Inner Harbour, Cormorant (*Phalacrocorax carbo*) [A017] was observed on Lough Derg in proximity to Garrykennedy Castle.



## 4.0 NATURA 2000 SITES WITHIN THE ZONE OF INFLUENCE

As per *Appropriate Assessment Screening for Development Management* (OPR, 2021) the Zone of Influence (Zoi) is the criteria for screening any potential impact on the Natura 2000 network. A Zone of Influence (Zoi) for a project is established on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors within vicinity of the proposed development. The Zoi takes into account the potential for connectivity to ecological receptors through the Source-Pathway-Receptor (S-P-R) model and assesses potential impacts of the proposed development on both immobile and mobile qualifying interests of identified European sites. Functional pathways can include the use of an application site for foraging by a QI/SCI species of an SAC or SPA.

**Table 4.1:** List of European Sites Within Potential Zone of Influence

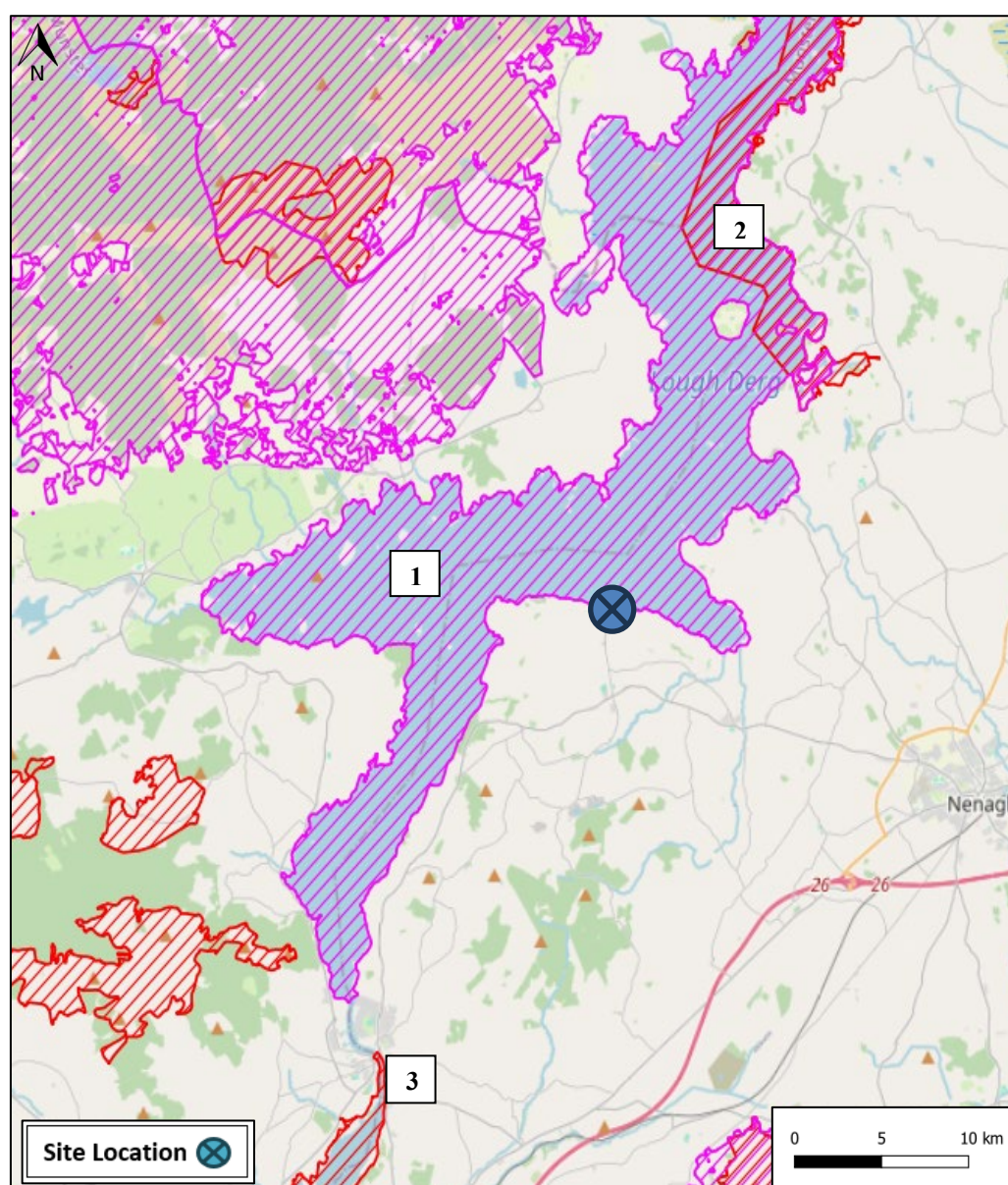
SITE NAME	DESIGNATION	SITE CODE	DISTANCE	S-P-R	FIGURE 4.1.1
Lough Derg (Shannon)	SPA	004058	Within Boundary	Yes	1
Lough Derg, North-east Shore	SAC	002241	6.8km NE	No	2
Lower River Shannon	SAC	002165	12.4km SW	No	3

Lough Derg SPA (Site Code: 004058) is considered to be within the Zone of Influence of the proposed development is due to the development is within the site boundary of the SPA. This SPA will be assessed further within this report. See **Figure 4.1.2** for location relative to proposed development site. See **Figure 4.2** for map of the Lough Derg (Shannon).

Lough Derg, North-east Shore SAC (Site Code:002241) is located 6.8km to north east. The hydrological connection is approximately 7.2km and is located both upstream and through a large lake. It is not likely that any potential pollutants will travel upstream in a large lake. There will be no disturbance of habitats associated with this SAC. None of the Qualifying Interests are found within the harbour. There are no species listed as Qualifying Interests for this SAC therefore disturbance noise will not significantly impact this SAC. There is no significant Source-Pathway-Receptor between this designated SAC and the proposed development site therefore the proposed development has been screened out for a likely significant impact to this Lough Derg, North-east Shore SAC.

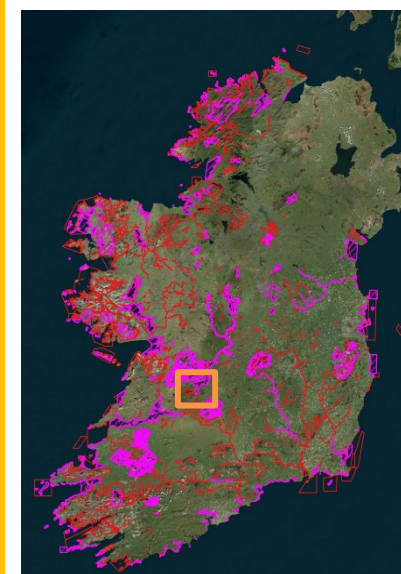
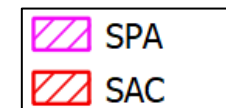
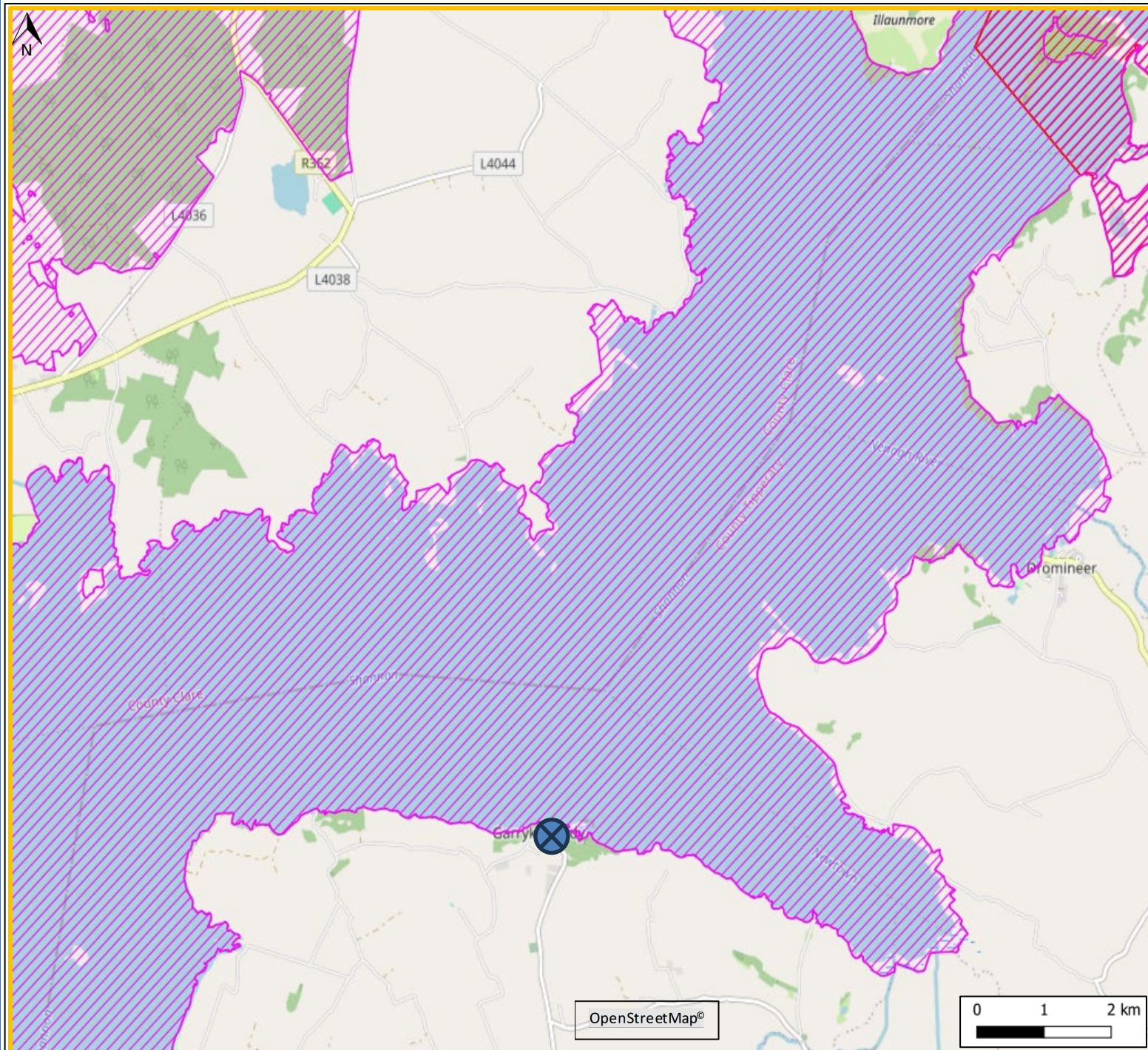


Lower River Shannon SAC (Site Code: 002165) is located 12.4km to south west. The hydrological connection is approximately 16.3km and is located downstream. The hydrological link is via Lough Derg which is a large body of water (116.50 Km<sup>2</sup>). Given the type of works that will be contained within the harbour and the hydrological link the S-P-R is not significant to cause a likely significant impact to the Qualifying Interests of this SAC therefore the proposed development has been screened out for a likely significant impact to this Lower River Shannon SAC. In **Figure 4.1.2** below are the Natura 2000 sites within close proximity to the development site. In **Figure 4.1.1** below is the potential SAC and SPA in the ZOI of the proposed development.



**Figure 4.1.1:** Location of proposed development and SAC/SPA in the potential ZOI

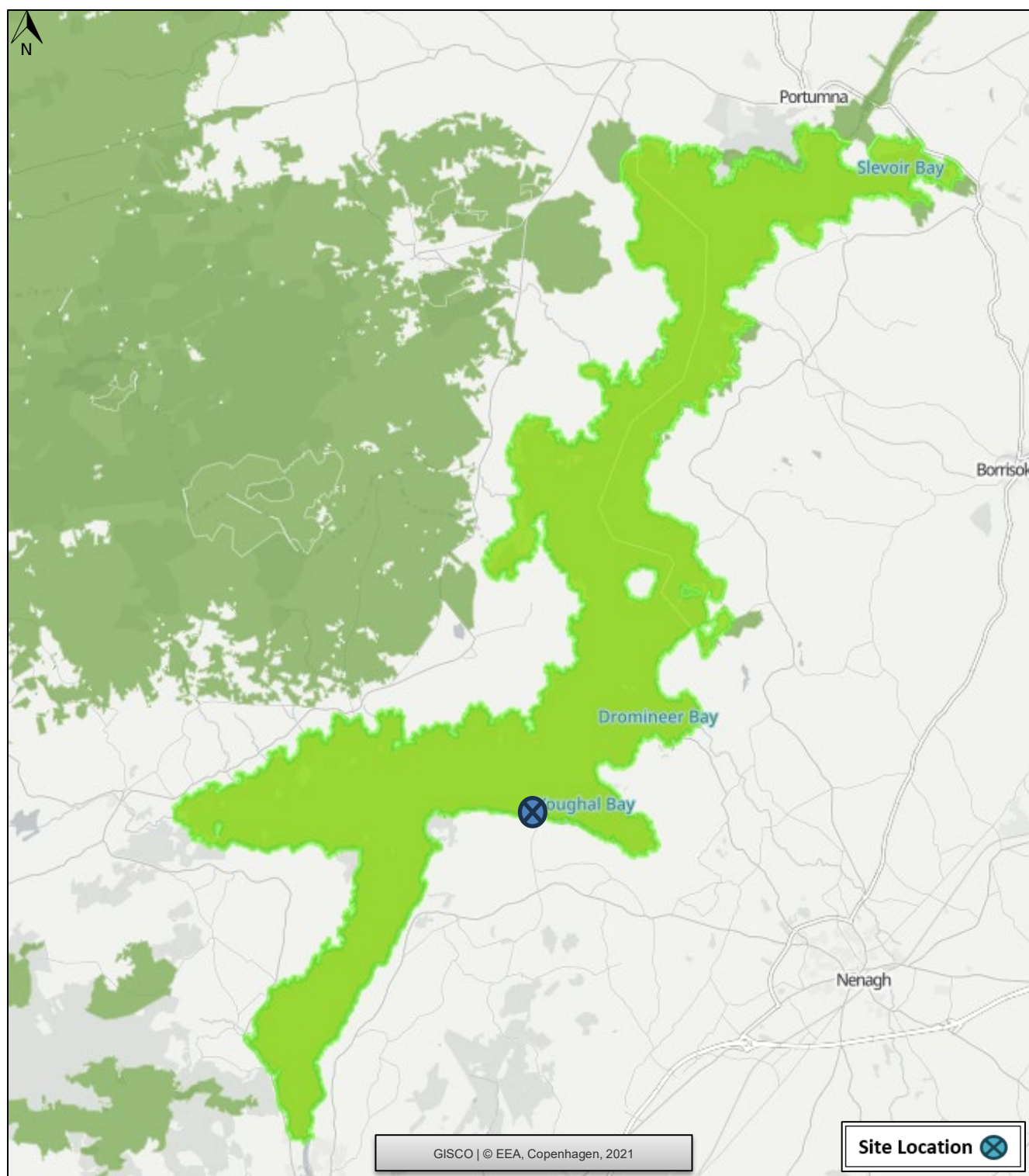




**Figure 4.1.2:** Location of proposed development at Garrykennedy Inner Harbour and Lough Derg (Shannon)SPA







**Figure 4.2:** Full Map of Lough Derg (Shannon)SPA (highlighted in light green)

#### **4.1 LOUGH DERG (SHANNON) SPA (SITE CODE: 0004058)**

Lough Derg lies within counties Tipperary, Galway and Clare and is the largest of the River Shannon Lakes, being some 40 km long. Its maximum breadth across the Scarriff Bay -Youghal Bay transect is 13 km but for most of its length it is less than 5km wide. See **Figure 4.2**. As per



**Table 4.2** below the site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species and associated habitats:

QUALIFYING INTERESTS OF THE LOUGH DERG (SHANNON) SPA	
Species	
Cormorant ( <i>Phalacrocorax carbo</i> ) [A017]	
Tufted Duck ( <i>Aythya fuligula</i> ) [A061]	
Goldeneye ( <i>Bucephala clangula</i> ) [A067]	
Common Tern ( <i>Sterna hirundo</i> ) [A193]	
Wetland and Waterbirds [A999]	

## 4.2 NATIONAL CONSERVATION STATUS OF QUALIFYING INTERESTS

As per the Habitat's Directive, favourable conservation status of a habitat is achieved when: its natural range and areas it covers within that range are stable or increasing, and the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and the conservation status of its typical species is favourable as defined below. As per the Habitat's Directive, favourable conservation status of a species is achieved when: Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis. To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the Natura 2000 site has been selected. The conservation status of the associated waterfowl are listed as per Gilbert, et al (2021) Birds of Conservation Concern in Ireland 2021-2026. The conservation status of each habitat and species is listed in **Table 4.3** below;

QUALIFYING INTERESTS	CONSERVATION STATUS
Lough Derg (Shannon) SPA	
[A017] Cormorant ( <i>Phalacrocorax carbo</i> )	Amber
[A061] Tufted Duck ( <i>Aythya fuligula</i> )	Amber
[A067] Goldeneye ( <i>Bucephala clangula</i> )	Red
[A193] Common Tern ( <i>Sterna hirundo</i> )	Amber



## 5.0 ASSESSMENT OF POTENTIAL IMPACTS TO NATURA 2000 SITES

The threats to the integrity of the European sites and the lists of potential impacts that could arise as a result of the policy groupings, the impacts were grouped into the following categories which will be used to scope the potential impact on the QI of each site within the Zone of Influence. See Tables below (**5.1 - All Qualifying Interests**) and (**5.2 - Qualifying Interests Within the Project Zone of Interest**). Impacts on a Natura 2000 site can be from the following examples;

- Direct Habitat Loss within European site (development occurring on undeveloped sites).
- Indirect effects on the ecological networks supporting European sites (developments that cut off ecological corridors).
- Indirect threat to quality including changes to surface and ground water quality.
- Direct/Indirect threats to European sites by invasive species.

Under Regulation 49(2) of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), save in accordance with a licence granted under paragraph (7), any person who plants, disperses, allows or causes to disperse, spreads or otherwise causes to grow in any place specified in relation to any plant which is included in Part 1 of the Third Schedule shall be guilty of an offence. Materials containing invasive species such as are considered “controlled waste”, and, as such, there are legal restrictions on their handling and disposal. Under Regulation 49(7) of the European Communities (Birds and Natural Habitats) Regulations 2011, it is a legal requirement to obtain a license to move “vector materials” listed in the Third Schedule, Part 3. The following Third Schedule Invasive Flora were recorded in the NBDC (Hectad **R78**); Canadian Waterweed (*Elodea canadensis*), Japanese Knotweed (*Fallopia japonica*), Nuttall's Waterweed (*Elodea nuttallii*) and Rhododendron ponticum. To prevent the spread of invasive aquatic flora biosecurity measures will be put in place during the removal of the existing boardwalk at the harbour. This will keep the proposed development in compliance with S.I. No. 374/2024 - European Union (Invasive Alien Species) Regulations 2024. Third Schedule invasive molluscs in Loug Derg are Asian Clam (*Corbicula fluminea*) and Zebra Mussel (*Dreissena polymorpha*).





There will be no spread of invasive species during the operational phase as the floating pontoon will remain in the water. All materials for the construction phase will not contain invasive species that could potentially impact on the Natura 2000 network.

There will be no likely significant disturbance to the habitats or species of Lough Derg (Shannon) SPA or any other Natura 2000 site. The proposed development is for the redevelopment of the harbour with the construction of a new floating pontoon. There will be no likely significant increase in disturbance of the Lough Derg during the operational phase. There is an existing harbour at this location and the habitats are not preferred habitat for nesting waterfowl. There will be no removal of mature trees as part of the proposed development. There will be no likely significant impact from dust, waste water or direct impact to an Annex I habitat.



TABLE 5.1 ALL QUALIFYING INTERESTS			
QUALIFYING INTEREST	DESCRIPTION AND LOCATION IN THE NATURA 2000 SITE RELATIVE TO APPLICATION SITE	POTENTIAL FOR IMPACTS FROM THE DEVELOPMENT	LISTED FOR FURTHER EXAMINATION
<b>Lough Derg (Shannon) SPA</b>			
Cormorant ( <i>Phalacrocorax carbo</i> ) [A017]	Breeding species on inshore waters, shallow bays, estuaries and coastal lagoons. Its diet is predominantly of aquatic invertebrates such as molluscs, worms, crustaceans, aquatic insects and insect larvae (e.g. dragonflies, damselflies and mayflies) as well as amphibians, small fish and some plant material (mainly in the autumn) such as seeds, roots and the vegetative parts of aquatic plants. Typically, inland Cormorant colonies are located in trees surrounded by or close to freshwater bodies. A significant impact on water quality could indirectly impact upon this qualifying interest by causing a reduction in prey populations and availability. Disturbance events at the nest site/breeding colony level can result in a reduction of overall productivity and even lead to the abandonment of the breeding colony. This species will be assessed further.	Yes	Yes
Tufted Duck ( <i>Aythya fuligula</i> ) [A061]	Winter visitor on lowland freshwater lakes. Often seen on town lakes, canals and slow-moving rivers. Feed predominantly on mussels, and to a lesser extent on crustaceans, insect larvae (particularly caddisfly) and bryozoans. The impact of any significant disturbance (direct or indirect) to the wintering population will ultimately affect the achievement of targets for population trend and/or spatial distribution. A significant impact on water quality could indirectly impact upon this qualifying interest by causing a reduction in prey populations and availability. This species will be assessed further.	Yes	Yes
Goldeneye ( <i>Bucephala clangula</i> ) [A067]	Wintering species on inshore waters, shallow bays, estuaries and coastal lagoons. Its diet is predominantly of aquatic invertebrates such as molluscs, worms, crustaceans, aquatic insects and insect larvae (e.g. dragonflies, damselflies and mayflies) as well as amphibians, small fish and some plant material (mainly in the autumn) such as seeds, roots and the vegetative parts of aquatic plants. The impact of any significant disturbance (direct or indirect) to the wintering population will ultimately affect the	Yes	Yes



TABLE 5.1 ALL QUALIFYING INTERESTS			
QUALIFYING INTEREST	DESCRIPTION AND LOCATION IN THE NATURA 2000 SITE RELATIVE TO APPLICATION SITE	POTENTIAL FOR IMPACTS FROM THE DEVELOPMENT	LISTED FOR FURTHER EXAMINATION
	achievement of targets for population trend and/or spatial distribution. A significant impact on water quality could indirectly impact upon this qualifying interest by causing a reduction in prey populations and availability. This species will be assessed further.		
Common Tern ( <i>Sterna hirundo</i> ) [A193]	Summer visitor from March to October to all Irish coasts. Nest colonially on the ground from April to October. Breeds on the coast, with larger colonies in Co. Dublin, Co. Wexford and Co. Galway. Also breeds inland on islets in freshwater lakes, notably in Co. Galway and in Co. Mayo. Common tern feed mainly on fish. This species will be assessed further. A breeding seabird survey of this SPA was conducted in May 2024, and no Common Tern were recorded which indicates a complete population collapse. Disturbance events at the nest site/breeding colony level can result in a reduction of overall productivity and even lead to the abandonment of the breeding colony. A significant impact on water quality could indirectly impact upon this qualifying interest by causing a reduction in prey populations and availability. This species will be assessed further.	Yes	Yes
Wetland and Waterbirds [A999]	Any significant loss to the wetland habitat within the SPA would likely negatively impact the regularly- occurring migratory waterbirds that utilise this wetland habitat. Such loss of wetland habitat would likely reduce the diversity and abundance of waterbird species that the wetland can support. Spread of invasive species will impact the wetland habitat.	Yes	Yes



TABLE 5.2 QUALIFYING INTERESTS WITHIN THE ZONE OF INFLUENCE			
CONSERVATION OBJECTIVES	THREATS AND PRESSURES	KEY ENVIRONMENTAL CONDITIONS	POTENTIAL IMPACTS FROM THE DEVELOPMENT
<p>[A017] [Cormorant (<i>Phalacrocorax carbo</i>),</p> <p>[A061] Tufted Duck (<i>Aythya fuligula</i>),</p> <p>[A067] Goldeneye (<i>Bucephala clangula</i>),</p> <p>[A193] Common Tern (<i>Sterna hirundo</i>),</p> <p>[A999] Wetland and Waterbirds.</p>	<ul style="list-style-type: none"> <li>• Deterioration &amp; loss of habitat.</li> <li>• Hunting.</li> <li>• Overfishing of food source.</li> <li>• Impact on water quality.</li> <li>• Disturbance of nesting birds.</li> <li>• Residential or recreational activities and structures generating marine pollution.</li> </ul>	<p><u>Key Conservation Measures</u></p> <ul style="list-style-type: none"> <li>• Protect from hunting and disturbance.</li> <li>• Protect habitat for foraging and nesting birds</li> <li>• Reduce/eliminate point source pollution to surface or ground waters from industrial, commercial, residential and recreational areas and activities</li> </ul>	<p><b>Yes</b></p> <ul style="list-style-type: none"> <li>• Water Quality</li> <li>• Disturbance</li> <li>• Invasive Species</li> </ul>



## 5.1 APPROPRIATE ASSESSMENT SCREENING CONCLUSION

In order for an effect to occur, there must be a pathway between the source and the receptor (the SAC / SPA). Where a pathway does not exist, an impact cannot occur.

The proposed development site is located within the boundary of the Lough Derg (Shannon) SPA (Site Code 004058). As outlined above, it is considered that the proposed development would not result in any significant impact to the protected habitats and species of the Lough Derg (Shannon) SPA due to habitat fragmentation or loss, reduction in species density or species diversity. The threshold distance of 200m from the source of disturbance is the general effect of construction activity on internationally important waterfowl. Some waterfowl are more sensitive to disturbance (Wallis et al, 2019).

However, this assessment has determined that during construction works, the proposed development has the potential to impact upon the qualifying interests / special conservation interests of the Lough Derg (Shannon) SPA due to a potential deterioration in water quality during the construction phase. The potential spread of invasive aquatic species such as Zebra Mussel and Asian Clam within the harbour will also need to be controlled. The proposed development will require removal of the existing boardwalk and building an extension to a building therefore mitigation measures to prevent an impact on the water quality, disturbance and prevent spread of invasive species will be required during the construction phase, therefore a **Natura Impact Statement is required**.



## **6.0 APPROPRIATE ASSESSMENT STAGE TWO: NATURA IMPACT STATEMENT**

The main objective of Stage 2 (Natura Impact Statement) in the Appropriate Assessment process is to determine whether the proposed development at Garrykennedy Inner Harbour, Co Tipperary (either alone or in combination with other plans, programmes, and projects) will result in significant adverse impacts to the integrity of Lough Derg (Shannon) SPA with respect to this site's structures, species, functions and/or conservation objectives. This stage also outlines the mitigation measures that should be taken in order to avoid any negative impacts on the Lough Derg (Shannon) SPA.

The proposed development has the potential to impact upon the qualifying interests of the Lough Derg (Shannon) SPA due to a potential deterioration in water quality of Lough Derg. During construction works, there is potential for water quality deterioration through the release of suspended solids during soil disturbance works and other associated construction materials from the proposed works. The term suspended sediments refers to any silt, mud or other fine sediment that becomes dissolved in water. Sediments can impact on water quality, macroinvertebrates and spawning habitats of fish (Lawler et al, 2010). Water can be contaminated by suspended sediments from open earthworks and excavations. Suspended solids can become entrained in surface water run-off and can affect aquatic qualifying interests through deposition. Nutrients can be bound in suspended solids, therefore, a significant increase in suspended solids can result in excessive eutrophication, leading to the deoxygenation of waters and subsequent asphyxia of aquatic species. Eutrophication on macroinvertebrates species is not immediately visible. The first impact will be on oxygen sensitive species and eventually impact on leaf litter breakdown which is essential of nutrient cycling. Proliferation of filamentous or planktonic algae growth is attributed to eutrophication from nutrient enrichment and pollution from runoff or discharges (Kelly, M., and Reynolds, J., 2020).

An increase in sediments has the potential to impact upon fish species by damaging gravel beds required for spawning, smothering fish eggs and in extreme cases, by interfering with the gills of fish. An increase in suspended solids also has the potential to reduce water clarity, which can impact the light penetration of water and may also affect certain behaviours of aquatic fauna such as foraging success. Excessive fine sediment loading can create a blanket of fine silt which excludes plant communities that inhabit gravel substrates. Excess fine



sediment is highly damaging, reducing both the diversity and abundances of river invertebrates through coating and clogging of benthic substrates, loss of habitat, damage feeding and breathing structures, smothering of eggs and larval stages (Kelly, M. and Reynolds, J., 2020).

A potential source of chemical contamination would be from the release of hydrocarbons (oils, fuels) from construction plant and equipment. Concrete and cement products are highly toxic to fauna, particularly fish and other aquatic species. Impact on water quality can come from hydrocarbons and from the release of excess nutrients from soils into water channels that can lead to eutrophication (Bruen et al, 2017).

All the above can lead to significant impact on water quality and can cause degradation of an aquatic ecosystem. This can impact on qualifying interests which have conservation objectives relative to water quality.

Zebra mussels (*Dreissena polymorpha*) are an invasive, fingernail-sized mollusc that is native to fresh waters in Caspian and Black Seas regions. Zebra mussels can close up and survive outside of water for up to three weeks in damp conditions (Minchin et al., 2003). They can significantly alter the aquatic ecosystem in which they are in.

Asian clam (*Corbicula fluminea*) populations are reproducing releasing vast quantities of planktonic juveniles into the water. The microscopic juvenile clams subsequently settle out of the water column attaching to underwater surfaces using sticky threads (IFI, 2025). Can compete with native species for nutrients and substrate space. In large numbers they can also displace or clog the spawning grounds of native species. Their high numbers can also block drainage or intake pipes and restrict water flow (Booy, O., Wade, M. and Roy, H. 2015.)

Invasive aquatic plants can spread by small fragments via vegetative means. Between unconnected water bodies aquatic plants can be spread by a variety of pathways (vectors) including fragments attached to boat trailers / water craft, machinery or recreational equipment. Biosecurity and best practice guidance is required to prevent further spread to unconnected waterbodies (Invasive Species Ireland, 2025).



TABLE 6.1 LOUGH DERG (SHANNON) SPA		
QUALIFYING INTEREST	SENSITIVITY AND POTENTIAL IMPACT	DEVELOPMENT TO INCLUDE MITIGATION MEASURES
<p><b>[A017]</b> Cormorant (<i>Phalacrocorax carbo</i>)</p> <p>To restore favourable conservation condition of Cormorant in Lough Derg (Shannon) SPA</p>	<p>An adverse effect on water quality could indirectly impact upon this bird by causing a reduction in prey populations and availability. Breeding bird on Lough Derg and observed drying wings on rocks in proximity to Castle Harbour during winter survey.</p> <p>As per the Conservation Objectives set for this species and given the direct hydrological connection and works within the harbour measures to protect water quality will be implemented during the construction phase. Therefore, during the construction phase mitigation measures will put in place to prevent an adverse effect on water quality. Mitigation measures to prevent disturbance to Cormorant will also be required. Buffer zone for species; 250m.</p>	Yes
<p><b>[A061]</b> Tufted Duck (<i>Aythya fuligula</i>)</p> <p>To maintain favourable conservation condition of Tufted Duck in Lough Derg (Shannon) SPA</p>	<p>An adverse effect on water quality could indirectly impact upon this bird by causing a reduction in prey populations and availability. Wintering bird on Lough Derg. Preference for deep open water and therefore unlikely to be found within the inner harbour.</p> <p>As per the Conservation Objectives set for this species and given the direct hydrological connection and works within the harbour measures to protect water quality will be implemented during the construction phase. Therefore, during the construction phase mitigation measures will put in place to prevent an adverse effect on water quality. Mitigation measures to prevent disturbance to Tufted Duck will also be required.</p>	Yes
<p><b>[A067]</b> Goldeneye (<i>Bucephala clangula</i>)</p> <p>To maintain favourable conservation condition of Goldeneye in Lough Derg (Shannon) SPA</p>	<p>An adverse effect on water quality could indirectly impact upon this bird by causing a reduction in prey populations and availability. Wintering species on Lough Derg.</p> <p>As per the Conservation Objectives set for this species and given the direct hydrological connection and works within the harbour measures to protect water quality will be implemented during the construction phase. Therefore, during the construction phase mitigation measures will put in place to prevent an adverse effect on water quality. Mitigation measures to prevent disturbance to Goldeneye will also be required. Overall likely sensitivity to disturbance – Medium/High. Buffer zone for wintering species; 150m-800m (high level disturbance).</p>	Yes





TABLE 6.1 LOUGH DERG (SHANNON) SPA		
QUALIFYING INTEREST	SENSITIVITY AND POTENTIAL IMPACT	DEVELOPMENT TO INCLUDE MITIGATION MEASURES
	Reasonably tolerant of moderate level visual disturbance, but birds that are closer than 200m to potential activities more sensitive. Was not observed within the inner harbour likely due to human disturbance and shallow waters. A precautionary approach assumes tolerance of noise up to 72dB being acceptable at the bird.	
<p><b>[A193]</b> Common Tern (<i>Sterna hirundo</i>)</p> <p>To restore favourable conservation condition of Common Tern in Lough Derg (Shannon) SPA</p>	<p>An adverse effect on water quality could indirectly impact upon this bird by causing a reduction in prey populations and availability. Breeding population on Lough Derg.</p> <p>As per the Conservation Objectives set for this species and given the direct hydrological connection and works within the harbour measures to protect water quality will be implemented during the construction phase. Therefore, during the construction phase mitigation measures will put in place to prevent an adverse effect on water quality. Mitigation measures to prevent disturbance to Common Tern will also be required. Overall likely sensitivity to disturbance – Medium/High. Buffer zone for species; 200m-400m.</p>	Yes
<p><b>A999]</b> Wetland and Waterbirds</p> <p>To maintain favourable conservation condition of Wetland and Waterbirds in Lough Derg (Shannon) SPA</p>	<p>The biological communities found within wetlands can be variable, their composition depending on the environmental conditions and habitat makeup. Most of the pressures on wetlands come from various sources of pollution, including domestic wastewater, agriculture and marine aquaculture (NPWS, 2019). Therefore, there is potential for the proposed development to have an impact upon this qualifying interest due to a potential deterioration in water quality and spread of invasive species during construction works.</p>	Yes



## 7.0 IN COMBINATION EFFECTS

Plans, programmes, and projects related to sectors outside of local authority land use planning will undergo Appropriate Assessment as required. Such procedures associated with this are overseen by the relevant governmental competent authority. The following developments will have undergone Appropriate Assessment Screening if required and will have included mitigation measures (if project proceed to NIS) if required to prevent an adverse effect on the habitats and species of Natura 2000 sites within the Zone of Influence. All developments will also have reviewed Tipperary County Development Plans and for in-combination effects with the proposed development. The proposed development site is located in Garrykennedy Inner Harbour, which is located in a rural village area with architectural heritage. There will be no adverse effect to water quality (surface or ground) during the operational phase or to air quality during the construction and operational phase or any other likely significant impact that would cause an adverse effect on the qualifying interests of these protected Natura 2000 sites. On Tipperary County Councils planning systems there are residential developments within the area surrounding the proposed development site. As there are no anticipated significant risks from the proposed development and the type of works, given the small scale and nature of recent nearby developments, the type of proposed development (floating pontoon and building extension) it is considered that there would be no potential in-combination that will cause a significant impact to the Natura 2000 network. See **Table 7.1** below. Developments granted permission within the last 5 years that are in proximity to the proposed development have been assessed for a potential in combination affect.

Air emissions would be typical of an amenity building house being primarily from heating and therefore low impact in-and-of-itself. In-combination heating impacts would be controlled by national energy policies, grant schemes and motor fuel emission targets. The floating pontoon will not have any air emissions.

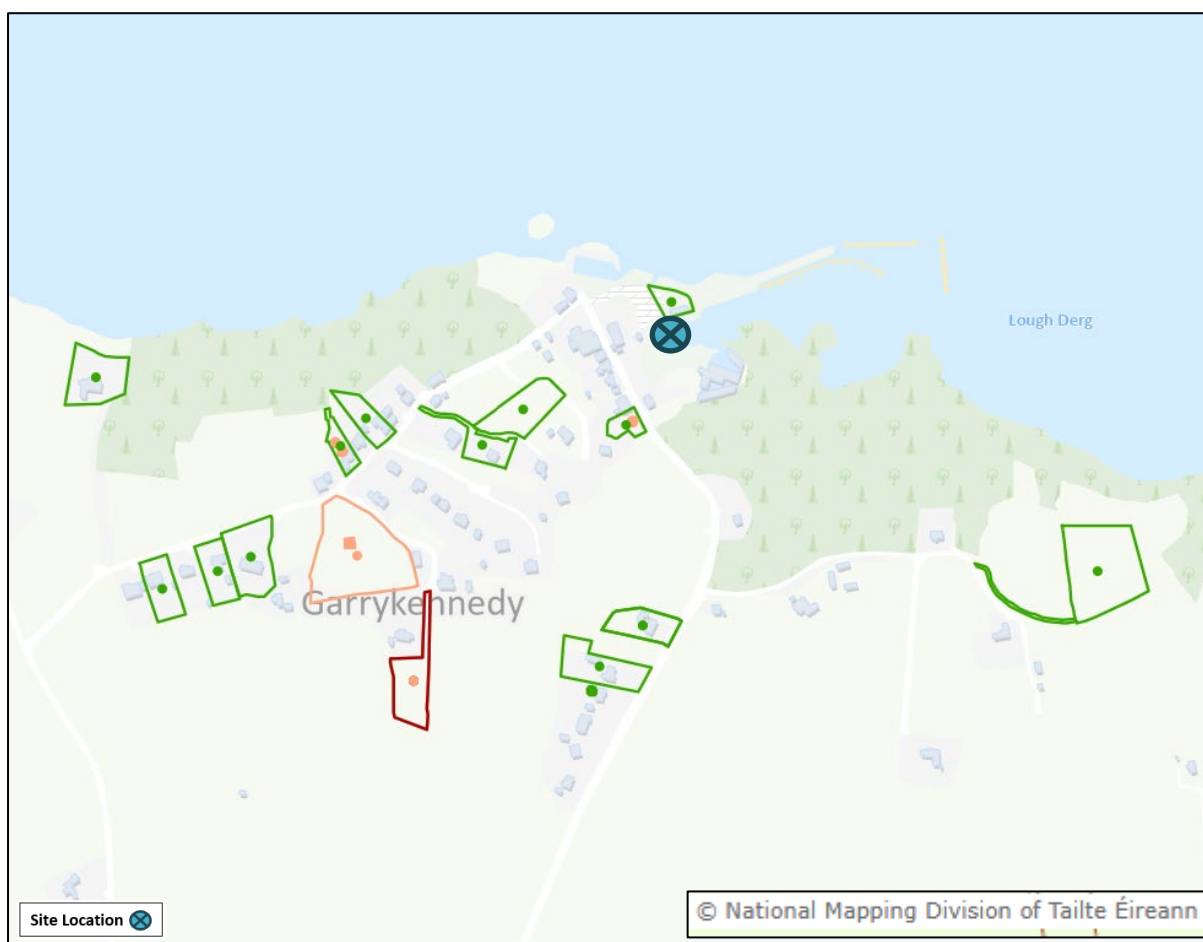


Planning Reference	Outcome	Overview	Possible significant effects from plan or project	Is there a risk of in-combination effects	Possible Significant in-combination effects
211408	Granted Conditional	Permission for the construction of a detached two storey dwelling with new site entrance, waste-water treatment system, boundary walls and ancillary site development works on a site that adjoins a protected structure (RPS 561)	Located c. 80m to the SW. This project is relatively small in scale and for a house. There will be no construction or operational activities that will cause a significant in combination effects on the Natura 2000 sites.	No	No
2260151	Granted Conditional	Permission for a dwelling house, garage, waste water treatment system & entrance along with all ancillary site works.	Located c. 90m to the W. This project is relatively small in scale and for a house. There will be no construction or operational activities that will cause a significant in combination effects on the Natura 2000 sites.	No	No
2297	Grant permission with revised conditions	Permission for a) refurbishment/alterations to existing single storey detached dwelling, b) new single storey extensions to side North-West/South-East and rear South-West elevations of existing dwelling, c) all associated site works/services.	Located c. 100m to the W. This project is relatively small in scale and for a house. There will be no construction or operational activities that will cause a significant in combination effects on the Natura 2000 sites.	No	No
21471	Granted Conditional	Permission for the construction of a vehicular entrance off existing private roadway, single storey dwelling house, domestic waste water treatment plant with polishing filter together with all associated site works	Located c. 400m to the SE. This project is relatively small in scale and for a recreational development. There will be no construction or operational activities that will cause a significant in combination effects on the Natura 2000 sites	No	No



Planning Reference	Outcome	Overview	Possible significant effects from plan or project	Is there a risk of in-combination effects	Possible Significant in-combination effects
2460212	Granted Conditional	Permission to carry out alterations and improvements to my property (to include minor alterations to the front elevation, replacing a rear shed with a small rear extension, increasing parking area in front garden etc) along with all associated site works	Located c. 480m to the W. This project is relatively small in scale and for minor works to a dwelling. There will be no construction or operational activities that will cause a significant in combination effects on the Natura 2000 sites	No	No
19601346	Granted Conditional	Permission for (1) as constructed 4 no. twin Jetties in steel with timber decking to serve development granted under Planning Register reference 15601018 allowing for up to 24 berths/boats in total, (2) as constructed Jetty J5 on existing bank in steel and concrete decking, (3) rocks as placed along an existing breakwater to combat erosion at times of high water line and/or rough weather (4) as constructed Barge Jetty-01 in steel and timber decking along existing bank to berth barge (5) rocks as placed for shore protection onto existing bank and (6) as constructed Barge Jetty-02 in steel and timber decking along existing bank to berth barge	Located c. 2.4km to the E. Planning permission will expire in June 2025 if development has not proceeded. This project underwent AA Screening and there is no likely significant impact to the SPA.	No	No

**Therefore, there will be no in combination effect with any development that will cause an adverse effect on the Natura 2000 network.**



**Figure 7.1:** Developments within proximity to the proposed development

The Water Framework Directive (WFD) (2000/60/EC) requires all Member States to protect and improve water quality in all waters so that we achieve good ecological status. It applies to rivers, lakes, groundwater, and transitional coastal waters. The WFD requires that management plans be prepared on a river basin basis. Catchments.ie ([www.catchments.ie](http://www.catchments.ie)) is an online resource tool to support the protection and aid in the improvement of the water environment from a water quality perspective and ensure compliance with the WFD. Shannon [Lower]\_SC\_070 this catchment includes the area drained by Lough Derg/Shannon. This is listed as an Urban Waste Water Treatment Directive Sensitive Area. Lough Derg TN (SH\_25\_191a) is one of the largest lakes in Ireland and it occupies most of the area of the sub catchment. Lough Derg is currently at “Moderate” ecological status. The waterbody is “At Risk” due to Chemical Surface Water Status. The main pressures on this catchment are



Hydromorphology, Invasive Species, Agriculture, Urban Wastewater and Anthropogenic Pressures.

All Wastewater from the welfare building will be sent to local waste water treatment plant (WWTP). Currently Newtown WWTP (A0195) is listed as “Green” with spare capacity (Uisce Éireann 2024). Urban Area PE <500, Plant Design PE 340, Treatment Type Secondary Treatment. Nenagh WWTP (D0027-01) (EPA, 2025). Nenagh New WWTP with a Plant Capacity PE of 11000, the treatment type is 3P - Tertiary P removal. The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence for the following: Fats, Oils & Greases mg/l. Based on ambient monitoring results a deterioration in Ammonia & BOD, concentrations downstream of the effluent discharge is noted. The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status (Uisce Éireann, 2023).

The surface water runoff drainage system has been designed to prevent a significant impact on water quality from operational runoff of the proposed development and will percolate to ground within a proposed soakaway. Surface water drainage of the boardwalk will naturally run into the harbour. The proposed development will not impact on the local drainage network or cause an impact on SuDS compliance of Garrykennedy. In addition, the proposed development will not increase the flood risk to other third parties or lands. Therefore, there would be no likely significant cumulative impacts due to flooding. Therefore, there will be no significant impact or cumulative impact on water quality of any waterbody (surface or ground) from the proposed development during the operational phase.

There are no potential in combination impacts with any national or local policies that would results in a significant impact on the Natura 2000 Network. Any local development with the potential to impact on the SAC or SPA will undergo Appropriate Assessment Screening to determine the potential impact on the Natura 2000 Network with any potential significant impacts from air, water, habitat or disturbance to species objectively and scientifically assessed during both the construction and operational phase. All developments must not cause an adverse effect to water quality as per the Water Framework Directive. There will no in combination impact from the proposed development on the Lough Derg (Shannon) SPA or any other Natura 2000 site.



## 8.0 MITIGATION MEASURES

Those measures that are proposed for implementation to minimise and/or eliminate likely effects on the favourable conservation condition of the qualifying interests. This assessment has determined that the proposed development has the potential to impact upon the Lough Derg (Shannon) SPA due to a potential deterioration in water quality and disturbance. All of the mitigation measures will be implemented in full and are best practice, and tried and evaluated, effective control measures to protect the receiving environment during the construction phase. The mitigation measures will be undertaken in an environmentally sensitive manner and must include measures for the protection of water quality such as the implementation of silt control features.

**TABLE 8.1: WATER QUALITY MITIGATION MEASURES**

Daily visual inspections will be undertaken of the harbour during all construction works. Monitoring for suspended solids will be undertaken daily and records kept.

Weather conditions will be taken into account by the appointed contractor when planning construction activities to minimise the risk of silty water runoff from the site.

Provision of silt control features as appropriate, such as silt fence barrier for controlling sediment pollution during construction phase of the extension to the welfare building. The purpose of silt fencing is to safeguard water quality. These must be installed prior to any to any site clearance.

Robust geotextile membrane silt fencing (comprising of a porous filter fabric which retains sediment) will be provided along the boundary of the site with the harbour. Silt fencing must remain in place until the completion of all construction works.

Additional silt fencing will be placed adjacent to storage areas of stockpiled soil, until such time as the excavated soil has been used in re-instatement works. Silt mats will be placed over existing manholes/gully. All silt control features must be inspected on a daily basis and maintained as appropriate. The silt fence must be capable of preventing particles of 425µm from passing through.

Silt mats will be placed on manholes/gullies along the local access road – to prevent sediments from entering the local drainage network.

Any sediment laden water must be directed to a settlement tank. Sediments must either percolate to ground or the water can be pumped into a silt buster.

Under no circumstances must sediment water be discharged to the any waterbody or the drainage network.

Water levels in Lough Derg to be observed daily and daily monitoring of the weather forecast to ensure there is no risk of flooding during construction works.

If there is a potential flood risk, then all works to stop and removal of any potential contaminants from the working area with potential to flood.



Where spoil is generated, this will only be stored temporarily and away from surface waters. Spoil will be covered or alternatively, graded to avoiding or water saturation. Excavations and earth-moving activities will be planned outside periods of heavy rainfall, to limit the potential for suspended solids to become entrained within surface water run-off.

All construction plant machinery and equipment must be maintained in good working order and regularly inspected. The temporary site compound must be used for the storage of all machinery and plant when not in use, the re-fuelling of plant and the storage of all associated oils and fuels for plant. Any fuels, oils or chemicals must be stored in accordance with the EPA guidance on the storage of materials, in designated bunded areas at the temporary site compound, with adequate bund provision to contain 110% of the largest drum volume or 25% of the total volume of containers.

The designated area for the storage of hydrocarbons must be inspected on a regular basis. Deliveries of fuels and oils to the site must be supervised. All loading and unloading of hydrocarbons will take place within the bunded area. Fuels / oils will be handled and stored with care to avoid spillage or leakage. Where appropriate, small construction plant equipment must be placed on drip trays. Any diesel generator in use must be suitably bunded. Any waste fuel / oils must be collected in bunded containers at designated areas (i.e. temporary construction compound) and properly disposed of to an authorised waste contractor.

Spill kits, adequately stocked with spill clean-up materials such as booms and absorbent pads, must be readily available onsite. In the unlikely event of a hydrocarbon spillage, contaminated spill clean-up material must be properly disposed of to an authorised waste contractor. Where re-fuelling of construction plant is required to take place onsite, re-fuelling must take place within a bunded area. Under no circumstances will re-fuelling take place within the immediate vicinity of any waterbody, including drainage ditches or beside a drainage pipe. Re-fuelling onsite must only be undertaken by experienced and trained personnel. Where construction plant shows signs of hydrocarbon leakage, site personnel must cease the operation of the item in plant in question. Any defective plant must be kept out of service until the necessary repairs are undertaken

No bulk chemicals will be stored within the active construction areas. Temporary oil and fuel storage tanks will be kept in the material storage area in suitable containers and will be appropriately bunded as required. All fuel and oil will be stored onsite in integrally bunded c.1000L storage containers approved under EN13341. All bunded containers will be impermeable and capable of retaining a volume of equal to or greater than 1.1 times (>10%) capacity of the tank. In the event of a filling spillage excess oil or fuel will be collected in the outer tank.

The use of pre-cast concrete will be prioritized. The delivery and pouring of concrete must be supervised at all times. The pouring of concrete will be avoided during periods of expected heavy rainfall. The wash-out of Ready-Mix Truck drums will not be permitted onsite, in the environs of the site, or at a location which can result in a discharge to surface water. The disposal of excess uncured concrete will be removed from site by an authorised waste contractor.

Weekly checks will be conducted to ensure surface water drains are not blocked by silt, or other items, and that all storage is located at least 10m from surface water and groundwater





receptors. A regular log of inspections will be maintained, and any significant blockage or spill incidents will be recorded for root cause investigation purposes and updating procedures to ensure incidents do not reoccur.

In the unlikely event of a suspected deterioration in water quality within any of the watercourses due to construction works at the development site, works must immediately cease, an investigation into the cause undertaken and the relevant NPWS and Inland Fisheries Ireland personnel informed.

Any temporary storage of spoil, hardcore, crushed concrete or similar material will be stored a minimum of 10m away from any surface water drains.

All construction waste must be removed from site by a registered contractor to a registered site. Evidence of the movement and safe disposal of the construction waste will be retained and presented to Local Authority upon request

The Construction Contractor will ensure compliance with the mitigation measures outlined above and ensure they are fully implemented throughout the construction phase. Construction works must clearly follow all plans submitted for approval.

In addition to the above measures, the construction works contractor will also adhere to the following guidelines:

- CIRIA, 2001: *Control of Water Pollution from Construction Sites; guidance for consultants and contractors*;
- CIRIA, 2002: *Control of Water Pollution from Construction Sites – Guide to Good Practice*;
- IFI, 2016: *Guidelines on Protection of Fisheries During Construction Works in and adjacent to Waters*;
- Best Practice Guide BPGCS005 – Oil Storage Guidelines (Enterprise Ireland 2003);
- Control of Water Pollution from Linear Construction Projects. Technical Guides (C648) and (C649) (CIRIA 2006);
- Road Drainage and the Water Environment DN-DNG-03065 (TII 2015b).

It is therefore considered that, due to the proposed design and proposed mitigation measures, there would be no adverse effect on water quality and the protected habitats and species of the Lough Derg (Shannon) SPA during the construction phase of the proposed development.



Works within 200m of a waterfowl can impact from the following noise levels. High Noise Level Disturbance – Sudden 60dB – Prolonged 72dB. Moderate Noise Level Disturbance – Sudden 55dB – Prolonged 60-72dB. Low Noise Level Disturbance – Sudden <55dB – Prolonged 55-72dB (Source: TIDE Toolbox)

<b>TABLE 8.2: DISTURBANCE MITIGATION MEASURES</b>
All plant not in operation shall be turned off and idling engines shall not be permitted for excessive periods. Regular visual inspections will be undertaken around the proposed site boundary to monitor the effectiveness of dust control measures. Plant and machinery used on-site would comply with the EC (Construction Plant and Equipment) Permissible Noise Levels Regulations, 1988 (S.I. No. 320 of 1988). All noise producing equipment must comply with S.I. No 632 of 2001 European Communities (Noise Emission by Equipment for Use Outdoors) Regulations 2001. Fitting effective exhaust silencer system on engines.
All construction activities will take place between 8:00am and 6:00pm, Monday to Friday, and 8:00am to 2:00pm on Saturdays. Any works which, by necessity, are required to be carried out outside of these times will be notified to the relevant bodies. The construction works must be phased so as to ensure noise limits are not exceeded due to cumulative activities. However, if works are to take place during winter months, then works will stop at dusk and resume at dawn. This is to prevent significant disturbance to roosting waterfowl.
Noise screens built of solid materials to minimise disturbance from construction activities.
No plant used on site will be permitted to cause an ongoing public nuisance due to noise. Care would be taken when unloading vehicles to minimise noise disturbance. Materials should be lowered, not dropped, insofar as practicable and safe. Mobile plant will be switched off when not in use and not left idling.

It is therefore considered that, due to the proposed design and proposed mitigation measures, there would be no adverse effect on protected habitats or species noise disturbance during the construction phase of the proposed development.

<b>TABLE 8.3.1: BIOSECURITY MITIGATION MEASURES</b>
<ul style="list-style-type: none"> <li>• Check all equipment and remove of any plant and animal matter before leaving a site and again before entering a new site;</li> <li>• Disinfect all equipment with an approved disinfectant, this must not be done beside a waterbody;</li> <li>• Items difficult to soak can be sprayed or wiped down with disinfectant;</li> <li>• Ensure equipment is allowed to dry before entering a new site and any residual water is drained from boats etc before leaving a site;</li> <li>• Any use of an absorbent boom must be disinfected before use in any waterbody;</li> </ul>



- Any rope or absorbent material to be disinfected and dried before use;
- Footwear to be disinfected and dried before use within the Lough Derg and other watercourses;
- If clothing worn previously at a different watercourse it must be washed at 65°C and/or disinfected;

**TABLE 8.3.2: INVASIVE MOLLUSCS MITIGATION MEASURES**

- The existing structure of the boardwalk (metal structure) must be treated to prevent the spread of invasive molluscs such as Zebra Mussel and Asian Clam. This can be done using hot water  $\geq 60^{\circ}\text{C}$ . Another method is steaming – both these options are cost effective for the large metal structure and remove the use of chemicals.
- Inspect boardwalk, equipment and machinery for adult Zebra Mussels/Asian Clam/invasive species remove them. Do not return this species to any aquatic environment;
- Clean the boat with hot water and allow it to dry after every trip. The boat must be dried out for 1 month or steam cleaned;
- Remove plant life from the boardwalk and all equipment since invasive molluscs may be attached to the plants;
- Dry out and disinfect all equipment that was used in Lough Derg.

It is therefore considered that, due to the proposed mitigation measures, there would be no adverse effect on the Lough Derg (Shannon) SPA the spreading of invasive aquatic species during the construction phase of the proposed development.

## 9.0 CONCLUSION

It is not anticipated that the proposed development, subject to recommended mitigation measures, by itself or in combination with other developments, would impact negatively upon European sites (the Natura 2000 network) during the construction or operational phases of the project.

In-combination effects from interactions with other plans and projects was considered in the assessment and the mitigation measures incorporated into the construction phase will ensure there will be no significant adverse effects as a result of the proposed development either alone or in-combination with other plans/projects.



The proposed development site is located within the Lough Derg (Shannon) SPA (Site Code 004058). It is considered that the proposed development would not result in any adverse effect to the protected habitats and species of the aforementioned sites due to habitat fragmentation or loss, disturbance or reduction in species density or introduction of invasive species.

The proposed development is hydrologically connected with the Lough Derg (Shannon) SPA (Site Code 004058). However, it is considered that there would be no adverse effects upon the qualifying interests of the Lough Derg (Shannon) SPA due to the proposed mitigation measures to be employed.

It is the conclusion of this Natura Impact Statement that, with the identified mitigation measures in place, it can be concluded, beyond all reasonable scientific doubt, that the Project, either alone or in combination with other plans and projects will not undermine the conservation objectives of any European Sites and therefore would not have an adverse effect on the integrity of any European sites, in view of the sites' conservation objectives and best scientific knowledge.

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The image displays architectural drawings for the Garraunweedy Inner Harbour Upgrade. It includes cross-sections of the proposed and existing layouts, a key plan, and a detailed existing site plan. Each section is accompanied by a table with project information and a planning stamp.

**CONTIGUOUS ELEVATION OF PROPOSED LAYOUT**

**CONTIGUOUS ELEVATION OF EXISTING LAYOUT**

**KEY PLAN**

**EXISTING SITE PLAN**

**PLANNING**

**DRA**

**GARRANEEDY INNER HARBOUR UPGRADE**

**EXISTING SITE PLAN**

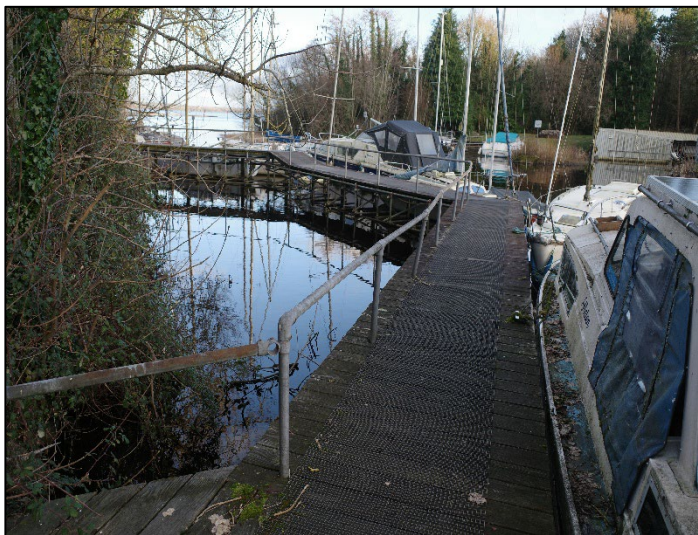
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**Plate A1:** Existing boardwalk to be removed



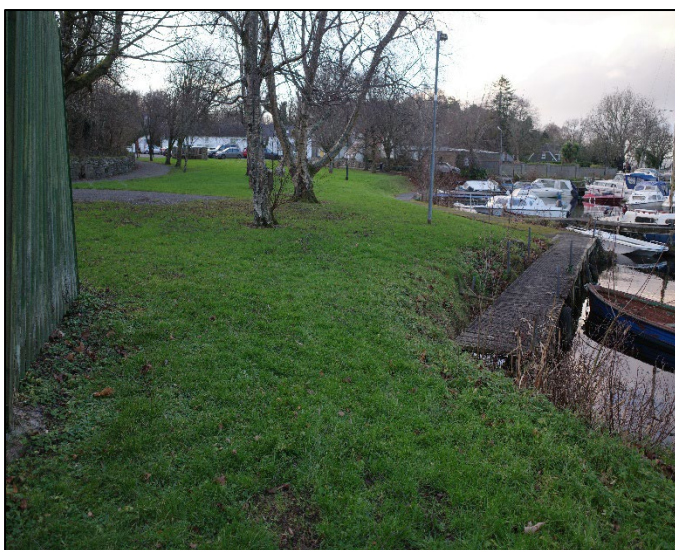
**Plate A2:** Existing boardwalk to be removed



**Plate A3:** View of harbour facing towards Lough Derg



**Plate A4:** Treeline along north boundary of harbour



**Plate A5:** Trees and amenity grassland around harbour



**Plate A6:** Amenity grassland around harbour

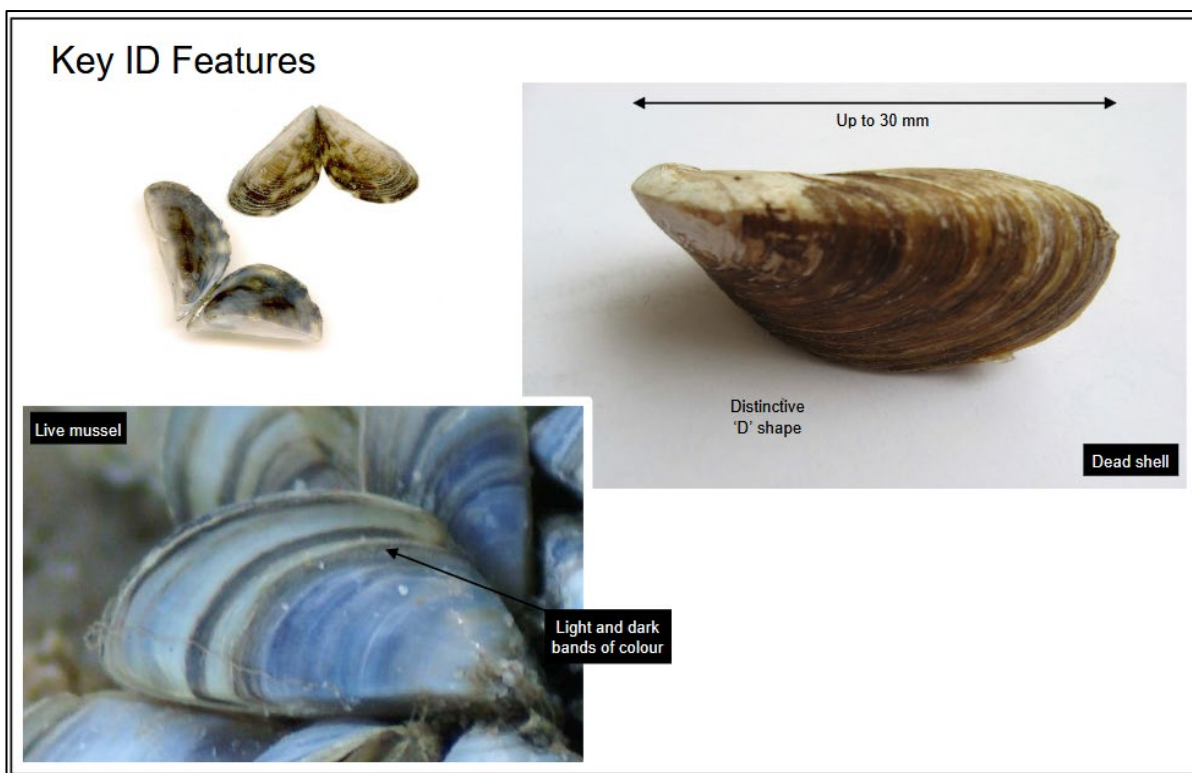




## APPENDIX: Invasive Molluscs Identification



**Plate A7:** Asian Clam ID – Invasive Species Northern Ireland



**Plate A8:** Zebra Mussel ID – Invasive Species Northern Ireland