Planning and Environmental Consultants

Appropriate Assessment Screening Report and Natura Impact Statement

Woodquay Park Enhancement

DOCUMENT DETAILS

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1. INTRODUCTION

1.1 Background

MKO has been appointed to provide the information necessary to allow the competent authority to conduct an Article 6(3) Appropriate Assessment of the Woodquay Park Enhancement Project, located in Woodquay, County Galway (ITM Co-Ordinates: 529722, 725686).

Screening for Appropriate Assessment is required under Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive). Where it cannot be excluded that a project or plan, either alone or in combination with other projects or plans, would have a significant effect on a European Site then same shall be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives. The current project is not directly connected with, or necessary for, the management of any European Site. Consequently, the project has been subject to the Appropriate Assessment Screening process.

This Natura Impact Statement (NIS) has been prepared in accordance with the European Commission's Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC (EC, 2021) and Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018) as well as the Department of the Environment's Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DoEHLG, 2010) and the Appropriate Assessment Screening for Development Management. Office of the Planning Regulator, Dublin 7, Ireland OPR (2021).

1.2 Statement of Authority

A Multidisciplinary Ecological Walkover Survey was conducted by Rachel Minogue (BSc., Environmental Science) on the 25/06/2023 and 19/06/2024. A dedicated Dusk Emergence Bat Survey was conducted on the 19/06/2024 by Rachel Minogue (BSc., Environmental Science), Matthew Kieran (BSc., Environmental Science & Ecology), and Mairead Kavanagh (BSc., Botany). Rachel has also prepared this report. Rachel is an ecologist with MKO, with the relevant qualifications in Environmental Science. This report has been reviewed by Colin Murphy (B.Sc., MSc). Colin is an experienced project ecologist and has over 4 years' professional consultancy experience.

1.3 Structure and Format of this Document

- Section 2 provides a full description of all elements of the proposed development.
- In Section 3, the characteristics of the receiving environment are fully described.
- In Section 4, a Stage 1 Screening is undertaken to identify any European Sites upon which there is a potential for a likely significant effect to occur either individually or in combination with other plans and projects as a result of the proposed development.
- Section 5, the Natura Impact Statement provides a detailed consideration of the Screened in European Sites and identifies the relevant qualifying features and how they may be affected in light of their conservation objectives.
- Section 6 provides an assessment of the potential for adverse effects on the identified European Sites as a result of the proposed development and in the absence of mitigation. This section also prescribes mitigation to robustly block any identified pathways for impact for effect.
- Section 7 provides an assessment of residual effects taking into consideration the proposed mitigation.

- In Section 8, the potential in combination effects of the proposed development on European Sites, when considered in combination with other plans and projects were assessed.
- A concluding statement is provided in Section 9.

2. DESCRIPTION OF PROPOSED WORKS

2.1 Site Location

The Proposed Works are located within Woodquay Park, Co. Galway (ITM Co Ordinates: 529722, 725686). The site is approximately 0.15 hectares in size, and is surrounded to the south, east, and west by residential dwellings, public roads, carparks and pathways. To the northwest of the site is the Galway Rowing Club. The River Corrib, which is designated as part of the Lough Corrib SAC, is located adjacent to the north of Woodquay Park (ITM Co Ordinates: 529706, 725709). The site is accessed via the R866.

The site location is shown on **Figure 2.1.**

2.2 Characteristics of the Proposed Works

2.2.1 Development Description

The Proposed Woodquay Park Enhancement consists of the following works:

I. Upgrades and expansion of the Woodquay park including the provision of:

   a) Hard and soft landscaping including rain gardens, seating areas, natural play landform, and planting of Molina meadow, spring bulbs, hedge row, and ground cover;
   b) Removal of 1 no. 'Class C', and 1 no. 'Class B' trees. Planting of 4 no. new 'Golden Alder' trees;
   c) Relocation and reduction in size of existing bike share station;
   d) Galway Orb Sculpture and Light Feature;
   e) Litter Bins;
   f) Bollards;
   g) Flexible Events and Open Space Area;
   h) Enhanced Public Lighting;
   i) Enhanced SuDS based surface water management,
   j) Relocation of existing ICA memorial; and
   k) All other associated and ancillary works;

II. Provision of 4 no. pedestrian crossings including 2 no. across Riverside, 1 no. across Waterside, and 1 no. across Corrib Terrace;
III. Hard and soft landscaping adjacent to the park (across Riverside) to provide enhanced public realm including: public lighting, drainage rain garden, seating areas, and all other associated and ancillary works;
IV. Vehicular parking consisting of relocation of 2 no. EV parking spaces, relocation of 2 no. accessible parking spaces, retention of approx. 10 no. on street parking spaces on Corrib Terrace with modifications for new pedestrian crossings, and relocation of 4 no. motorcycle spaces. This is a net removal of 11 no. existing car spaces.
V. Hard and soft landscaping adjacent to the park (across Waterside) to enable a continuation of paving type, wider footpaths, enhanced lighting, and consistent public realm design.
VI. All other associated and ancillary development and site works.

2.2.2 Site Drainage

2.2.2.1 Ground Infiltration Test

A Ground Infiltration Test was conducted was conducted in-situ in May 2024 in line with the Building Research Establishment (BRE 365) guidelines. It was determined that the existing soil had good soakage, and that infiltration to ground as a means of stormwater disposal would be possible.

For full details on the Proposed Drainage refer to the **Engineering Planning Report- 231101-PUNCH-XX-XX-RP-C-0005** submitted as part of this application.

2.2.2.2 Proposed Storm Water Drainage

The aim of the proposed surface water drainage system is to utilize the current infrastructure, and disposal means and enhance it by incorporating Sustainable Urban Drainage (SuDS) features. The SuDS features will add amenity and biodiversity as well as improve stormwater quality and reduce stormwater volumes entering the public network.

For full details on the Proposed Drainage refer to the **Engineering Planning Report- 231101-PUNCH-XX-XX-RP-C-0005** submitted as part of this application.

Further, the Proposed Drainage Layout is detailed on **Drawing 231101-PUNCH-01-XX-DR-C-0101** titled '**Proposed Drainage Layout'** submitted as part of this application.

2.2.2.2.1 *Storm Water Drainage Network*

All surface water run-off from the surrounding road is currently drained with road gullies, and these will be retained and continue to discharge stormwater into the combined sewer. The stormwater in the park itself will continue to infiltrate to ground as the main means of disposal. The use of permeable materials for the hardstand and paths will provide interception reduction in stormwater volumes and the use of biofiltration and bioretention, by means of planted raingardens, will improve stormwater quality prior to discharge via infiltration to ground.

Additional road gullies are included in the design to reduce the risk of surface ponding at crossing locations. The proposed new gullies with discharge directly into the biofiltration areas for treatment prior to discharging to ground.

There will be no direct discharge of storm water to the River Corrib (Designated as part of Lough Corrib SAC) as a result of the proposed works.

2.2.2.3 SUDs Proposals

The proposed development has been assessed in relation to Sustainable Urban Drainage Systems (SuDS). A variety of SuDS measures may be adopted to comply with Council recommendations. All SuDS measures are to be implemented with reference to the UK Suds Manual and Galway City Council drainage requirements.

The SuDS processes decrease the impact of the development on the receiving environment by providing amenity and biodiversity in many cases. Regular maintenance of the SuDS proposals is required to ensure they are operating to their optimal level throughout their design life.

The proposed SuDS measures will provide interception for rainfall events up to 5 mm, reducing the total volume of stormwater generated by the development.

The specific measures adopted for the proposed development have been agreed in principle with Galway City Council and comprise the following:

For full details on the Proposed Drainage refer to the **Engineering Planning Report- 231101-PUNCH-XX-XX-RP-C-0005** submitted as part of this application.

2.2.2.3.1 *Permeable Pavements*

The hard landscaping and paths within the park are proposed as permeable pavements. The treatment processes that occur within permeable pavements include:

- Filtration of silt and the attached pollutants–the majority of silt is trapped within the top 30mm of the jointing material between the blocks
- Biodegradation of organic pollutants, such as petrol and diesel within the pavement construction Adsorption of pollutants (pollutants attach or bind to surfaces within the construction) which depends on factors such as texture, aggregate structure and moisture content
- Settlement and retention of solids.

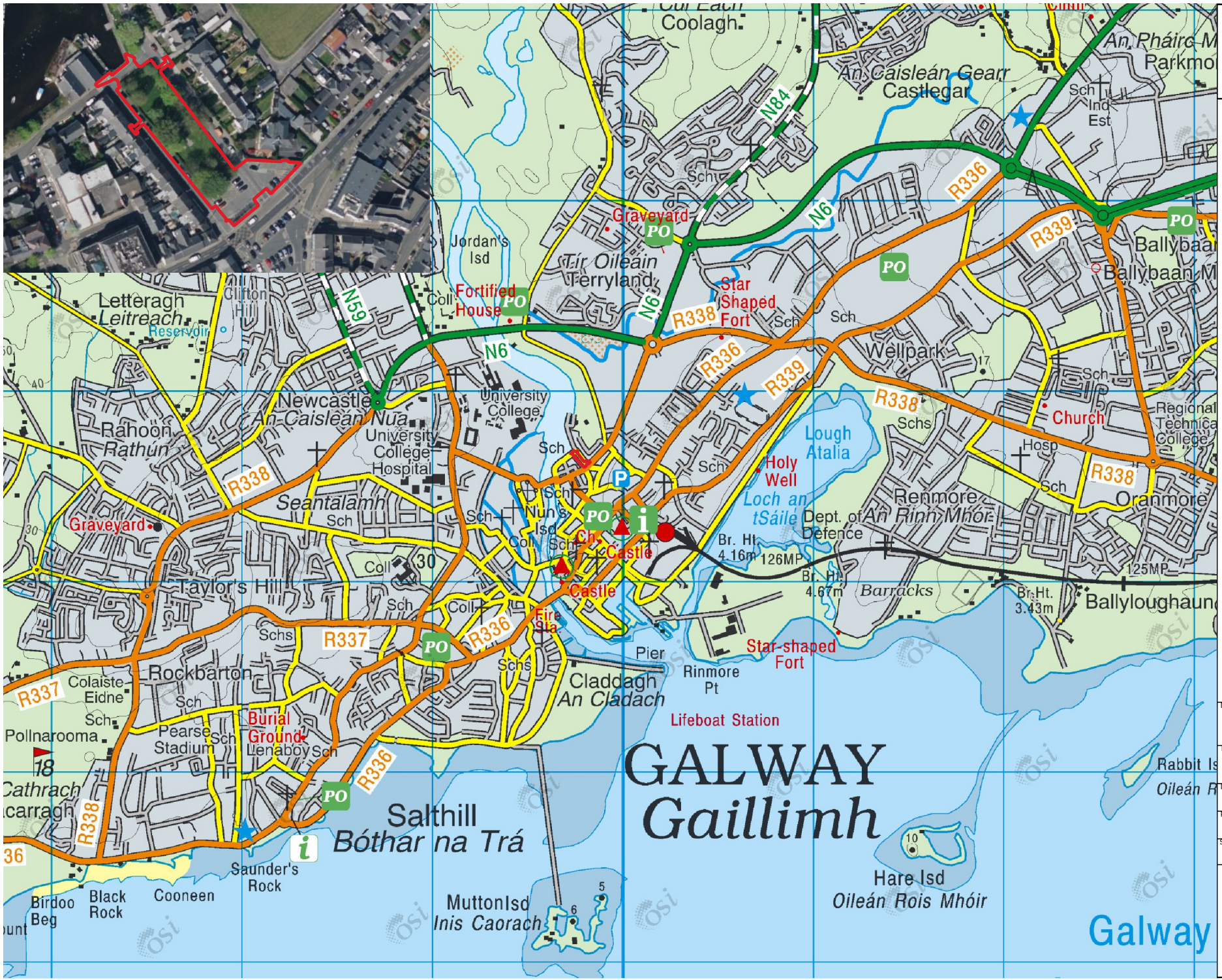
2.2.2.3.2 *Bio Retention Areas/ Modified Planters*

The bio-retention areas/modified planters will incorporate drainage stone/subsoil and will provide a level of additional attenuation within the bio-retention areas/modified planters. Bioretention systems allow the stormwater to filter downwards through a filter medium removing finer contaminants along the way. Depending on the particle size of the filter media different qualities can be achieved from the bioretention system. The infiltration rates recorded on site will allow for disposal of stormwater to ground after it has been treated via filtration.

2.2.3 Flood Risk Assessment

Punch Consulting Engineers were commissioned by Galway City Council to carry out a Site-Specific Flood Risk Assessment for Woodquay Park Enhancement. A review of the Geological Survey of Ireland (GSI) database for groundwater flooding indicates that there is no groundwater flooding in the area of the Proposed Works. It was determined that the Proposed Works site is partially located in Flood Zone B for Fluvial Flooding, and Flood Zone C for Coastal Flooding. Overall, the Proposed Works Site is water compatible in nature and is at a low risk of flooding and will not impact the flood risk to the adjacent area.

For full details refer to the **Site- Specific Flood Risk Assessment- 31101-PUNCH-XX-XX-RP-C-004SSFRA** submitted as part of this application.



Map Legend

Site Location

Drawing Title

Site Location

Project Title

Woodquay Park Enhancement

Drawn By	Checked By
RM	CM
Project No.	Drawing No.
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3. CHARACTERISTICS OF THE RECEIVING ENVIRONMENT

3.1 Ecological Survey Methodologies

3.1.1 Ecological Multidisciplinary Walkover Surveys

Multi-disciplinary ecological walkover surveys were undertaken in accordance with NRA Guidelines on Ecological Surveying Techniques for Protected Flora and Fauna on National Road Schemes (NRA, 2009), on the 25/06/2023 and 19/06/2024. These surveys provided baseline data on the ecology of the study area and assessed whether furthermore detailed habitat or species-specific ecological surveys were required. The multi-disciplinary ecological walkover surveys comprehensively covered the entire study area.

Habitats were classified in accordance with the Heritage Council's 'Guide to Habitats in Ireland' (Fossitt, 2000). Habitat mapping was undertaken with regard to guidance set out in 'Best Practice Guidance for Habitat Survey and Mapping' (Smith et al., 2011).

Plant nomenclature for vascular plants follows 'New Flora of the British Isles' (Stace, 2010), while mosses and liverworts nomenclature follow 'Mosses and Liverworts of Britain and Ireland - a field guide' (British Bryological Society, 2010).

The walkover surveys were designed to detect the presence, or suitable habitat for a range of protected faunal species that may occur in the vicinity of the proposed development.

During the multidisciplinary surveys, a search for Invasive Alien Species (IAS), with a focus on those listed under the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2011), was also conducted.

The walkover surveys were undertaken on the 25/06/2023 and 19/06/2024, The survey timing falls within the recognised optimum period for vegetation surveys/habitat mapping, i.e. April to September (Smith et al., 2011).

3.2 Results of Baseline Ecological Surveys

3.2.1 Habitats

A Multidisciplinary Ecological Walkover Survey was conducted by Rachel Minogue (B.Sc., Env) on the 25/06/2023 and 19/06/2024, in line with NRA (2009) guidelines (Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes). All habitats and floral species were readily identifiable during the survey and are described below in **Table 3.1 below.**

Table 3-1 Habitats recorded within, and directly adjacent to the Proposed Works Boundary

Habitat	Code
Buildings and Artificial Surfaces	**BL3**
Amenity Grassland (Improved)	**GA2**
Tree line	**WL2**
Hedgerow	**WL1**
Depositing/ Lowland Rivers	**FW2**

Amenity Grassland (Improved) (GA2) is the most dominant habitat recorded on the site. This area is intensively managed via mowing, producing a short, uniform sward, with a low biodiversity value **(Plate 3.1).** Species recorded in this area include Creeping Buttercup (*Ranunculus repens*), Daisy (*Bellis perennis*), Dandelion (*Taraxacum vulgaria),* White Clover (*Trifolium repens*), Broadleaved Willowherb (*Epilobium montanum*), Silverweed (*Potentilla anserina*), Nettle (Urtica dioica), Broadleaved dock (*Rumex obtusifolius*), Greater Plantain (*Plantago major*), Creeping Cinquefoil (*Potentilla reptans*), Common Chickweed (*Stellaria media),* Redshank (*Persicaria maculosa*), and Perennial Rye Grass (*Lolium perenne*).

Buildings and Artificial Surfaces (BL3) are present on the site in the form of pathways through the centre of the site **(Plate 3.2),** public roads, pathways and residential dwellings to the north, south, east, and west of the site **(Plates 3.3),** the existing carpark to the south of the site **(Plate 3.4),** the boundary metal fencing bordering Woodquay park to the north, south, east, and west of the site, and the wooden public seating within Woodquay Park **(Plate 3.5).**

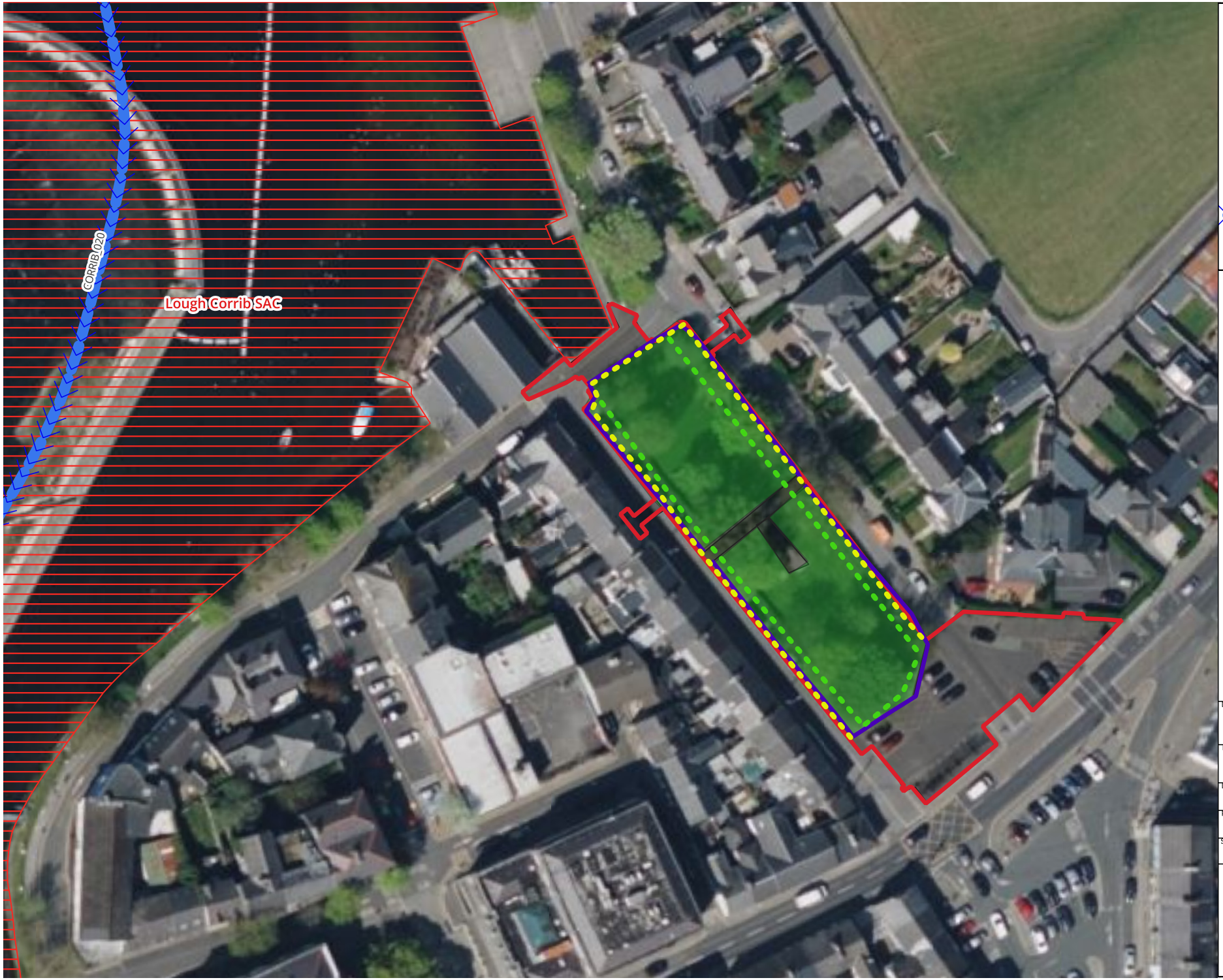
Hedgerow (WL1), which is sparse and gappy in places, is present to the north, east, and west margins of the site **(Plates 3.6 & 3.7),** along the boundary metal fencing. Species recorded within these hedgerow habitats include Spindle (*Euonymus europaeus*), Ivy (*Hedera Hibernica*), Bramble (*Rubus fructicosus*), Hawthorn (*Crataegus monogyna*), Montbretia (*Crocosmia x crocosmiiflora),* Nettle (*Urtica dioica*), Wild Teasel (*Dipsacus fullonum*), Bindweed (*Calystegia sepium*), Sycamore (*Acer pseudoplatanus*), Creeping Buttercup (*Ranunculus repens*), Narrow leaved Hawkweed (*Hieracium umbellatum*), Silverweed (*Potentilla anserina),* and Bittersweet *(Solanum dulcamara),*

Treelines (WL2) are present to the south, east and west margins of the site **(Plates 3.8),** adjacent to the hedgerows and metal boundary fencing. Species recorded within the treelines include Ash (*Fraxinus excelsior*), Whitebeam (S*orbus hibernica*), Lime (*Tilia x europaea*), Alder (*Alnus glutinosa*), Beech (*Fagus Sylvatica*), Sweetgum (*Liquidambar styraciflua),* and American Basswood (*Tilia americana*).

The River Corrib (IE_WE_30C020600), which is designated as part of the Lough Corrib SAC, is located adjacent to the north of Woodquay Park (ITM Co Ordinates: 529706, 725709) and is classified as a **Depositing/ Lowland River (FW2). (Plate 3.9)**. The River Corrib flows to south/ west of Woodquay Park, flowing in a southerly direction in Corrib Estuary (IE_WE_170_0700), which is designated as part of Galway Bay Complex SAC and Inner Galway Bay SPA.

No drainage features were identified within the Proposed Works boundary. No habitats listed under Annex I of the EU Habitats Directive were identified within the Proposed Works boundary. Further, no

QI/ SCI Species associated with nearby European Designated Sites were recorded within the proposed works site.



Map Legend

- Site Location
- Buildings and Artifical Surfaces (BL3)
- Amentiy Grassland Improved (GA2)
- Buildings and Artificial Surfaces (BL3)
- Hedgerow (WL1)
- Treeline (WL2)
- Depositing/ Lowland River (FW2)- River Corrib
- Lough Corrib (SAC)

N

Drawing Title
Habitats Recorded Within and Adjacent to Woodquay Park

Project Title
Woodquay Park Enhancement

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RM	CM
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Plate 3-1 ***Amenity Grassland (Improved) (GA2)*** *with a short uniform sward, facing to the south of Woodquay Park.*

Plate 3-2 Pathway through the centre of Woodquay Park, classified as ***Buildings and Artificial Surfaces (BL3).***

Plate 3-3 Public Road and pathway to the north of the site by Lough Corrib SAC and the Galway Rowing Club, classified as ***Buildings and Artificial Surfaces (BL3****).*

Plate 3-4 Existing carpark to the south of the site, classified as ***Buildings and Artificial Surfaces (BL3).***

*Plate 3-5 Public wooden seating in Woodquay Park, classified as **Buildings and Artificial Surfaces (BL3)***

*Plate 3-6 **Hedgerow (WL1)** recorded to the western margin of Woodquay Park.*

Plate 3-7Gappy ***Hedgerow (WL1)*** *recorded to the northeast of Woodquay Park.*

Plate 3-8 ***Treeline (WL2)*** *present to the south, east, and west of Woodquay Park.*

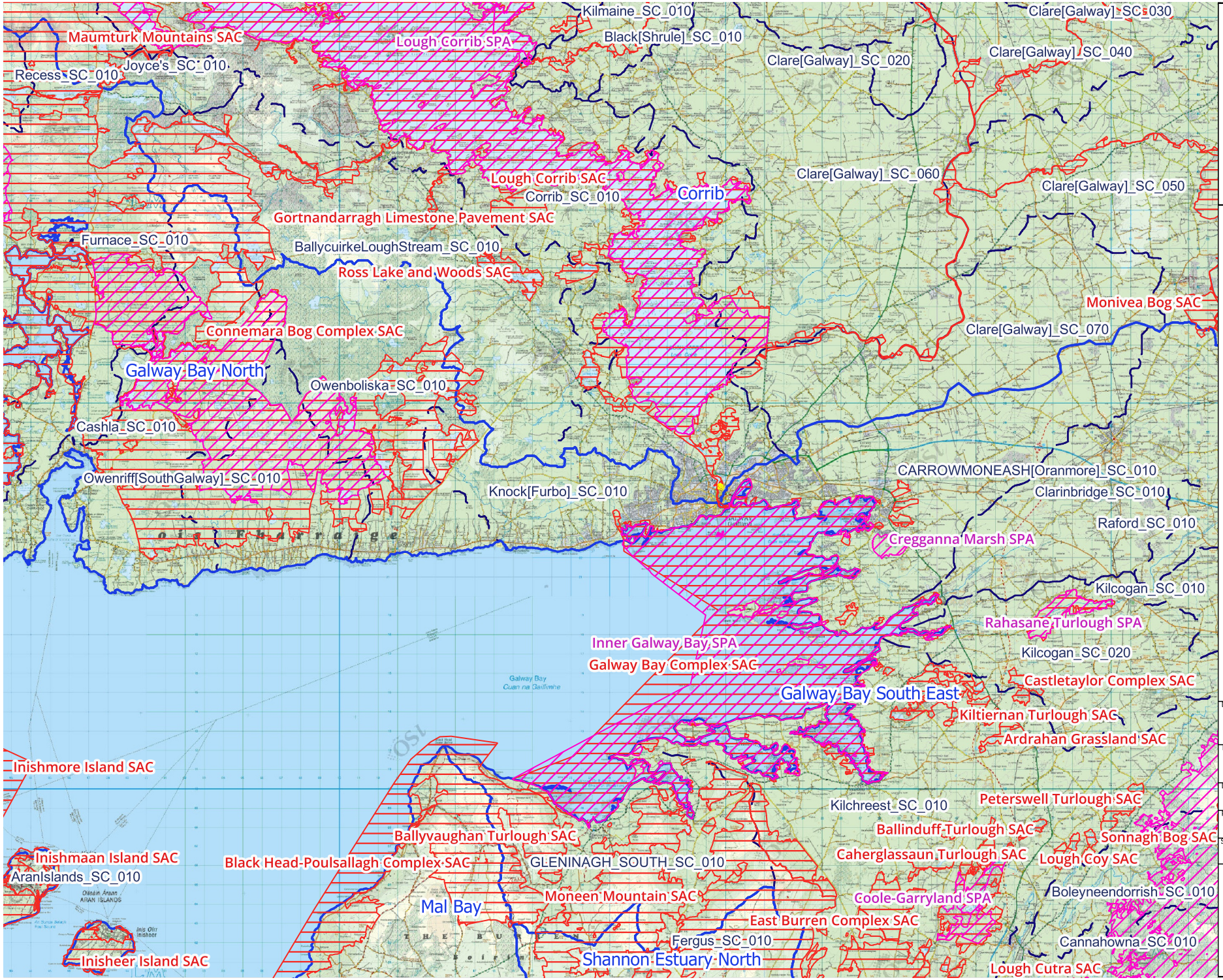
Plate 3-9 The River Corrib (IE_WE_30C020600), which is designated as part of Lough Corrib SAC located directly adjacent to the northern margin of Woodquay Park classified as a ***Depositing/ Lowland River (FW2).***

4. STAGE 1 – APPROPRIATE ASSESSMENT SCREENING

4.1 Identification of Relevant European Sites

The following methodology was used to establish any European Sites upon which there is a potential for a likely significant effect to occur either individually or in combination with other plans and projects as a result of the Proposed Works:

- Initially the most up to date GIS spatial datasets for European designated sites and water catchments were downloaded from the NPWS website (www.npws.ie) and the EPA website (www.epa.ie) on the 23/09/2024
- All European Sites that could potentially be affected were identified using a source-pathway - receptor model. To provide context for the assessment, European Sites surrounding the development site are shown on **Figure 4-1.** Information on these sites according to the site-specific conservation objectives is provided in **Table 4-1**. Sites that were further away from the proposed development were also considered and in this case connectivity with sites that were further downstream in the catchment was identified. These included Black Head- Poulsallagh Complex SAC [000020] (17.6km). However, given the nature, scale and location of the proposed works and the attenuating properties of the of the intervening waterbodies, no potential pathway for significant effects was identified
- The catchment mapping was used to establish or discount potential hydrological connectivity between the site of the proposed development and any European Sites. The hydrological catchments are also shown in **Figure 4-1.**
- In relation to Special Protection Areas, in the absence of any specific European or Irish guidance in relation to such sites, the Scottish Natural Heritage (SNH) Guidance, 'Assessing Connectivity with Special Protection Areas (SPA)' (2016) was consulted. This document provides guidance in relation to the identification of connectivity between proposed development and Special Protection Areas. The guidance takes into consideration the distances species may travel beyond the boundary of their SPAs and provides information on dispersal and foraging ranges of bird species which are frequently encountered when considering plans and projects.
- **Table 4-1** provides details of all relevant European Sites as identified in the preceding steps and assesses the potential for likely significant effects on each.
- The assessment considers any likely direct or indirect impacts of the proposed development, both alone and in combination with other plans and projects, on European Sites by virtue of criteria including the following: size and scale, land-take, distance from the European Site or key features of the site, resource requirements, emissions, excavation requirements, transportation requirements and duration of construction, operation and decommissioning were considered in this assessment.
- The site synopses and conservation objectives of these sites, as per the NPWS website (www.npws.ie), were consulted and reviewed at the time of preparing this report 23/09/2024.
- Where potential pathways for Likely Significant Effect are identified, the site is included within the Likely Zone of Impact and further assessment is required within the NIS.
- The potential for the proposed development to result in cumulative impacts on any European Sites in combination with other plans and projects was considered in the assessment that is presented in **Table 4-1**. Plans and projects considered include those that are listed in **Appendix 1** of this NIS.



Map Legend

- Site Location
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- EPA Hydrological Catchments
- EPA Hydrological Subcatchments

Drawing Title
European Designated Sites Within the Likely Zone of Influence

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Table 4-1 Identification of European Sites within the Likely Zone of Impact

European Sites and distance from Proposed Works Boundary	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 23/09/2024	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
Special Areas of Conservation (SAC)			
Lough Corrib SAC [000297] **Distance:** The Proposed Works Site is located Directly Adjacent to this SAC (ITM Co Ordinates: 529706, 725709).	› [1029] Freshwater Pearl Mussel (*Margaritifera margaritifera*) › [1092] White-clawed Crayfish (*Austropotamobius pallipes*) › [1095] Sea Lamprey (*Petromyzon marinus*) › [1096] Brook Lamprey (*Lampetra planeri*) › [1106] Salmon (*Salmo salar*) › [1303] Lesser Horseshoe Bat (*Rhinolophus hipposideros*) › [1355] Otter (*Lutra lutra*) › [1393] Slender Green Feathermoss (*Drepanocladus vernicosus*) › [1833] Slender Naiad (*Najas flexilis*) › [3110] Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) › [3130] Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoeto-Nanojuncetea*	Detailed conservation objectives for this site, (Version 1, April 2017), were reviewed as part of the assessment and are available at www.npws.ie	There will be no direct effects on this SAC as the Proposed Works are located entirely outside the boundary of this designated site. The River Corrib (IE_WE_30C020600), which is designated as part of Lough Corrib SAC is located directly adjacent to the northern margin of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows in a southerly direction to the west of site, before intersecting with the Corrib Estuary (IE_WE_170_0700). Therefore, construction activities associated with the proposed works may result in excess sediment/ surface water run off entering the River Corrib, which is designated as part of Lough Corrib SAC, adversely impacting the aquatic influenced QI habitats and species, via the deterioration of water and habitat quality, in the absence of mitigation. Further, due to the small nature and scale of the proposed works, there is no potential for the proposed works to result in groundwater pollution. The potential for ex-situ disturbance/ displacement to the QI Species: [1355] Otter (*Lutra lutra*) was also assessed. During the ecological surveys conducted by MKO on the 25/06/2023 and 19/06/2024, no signs of Otters were recorded along the section of the River Corrib, located directly adjacent to the northern margin of Woodquay Park (ITM Co Ordinates: 529706, 725709) or within Woodquay Park However, taking an extremely precautionary approach, the River

European Sites and distance from Proposed Works Boundary	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 23/09/2024	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
	› [3140] Hard oligo-mesotrophic waters with benthic vegetation of *Chara spp.* › [3260] Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation › [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates *(Festuco-Brometalia*) (* important orchid sites) › [6410] *Molinia* meadows on calcareous, peaty, or clayey-silt-laden soils (*Molinion caeruleae*) › [7110] Active raised bogs › [7120] Degraded raised bogs still capable of natural regeneration › [7150] Depressions on peat substrates of the *Rhynchosporion* › [7210] Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* › [7220] Petrifying springs with tufa formation (*Cratoneurion*) › [7230] Alkaline fens › [8240] Limestone pavements › [91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles		Corrib may provide ex-situ supporting foraging, commuting and breeding habitat for the aquatic QI Species: Otters (*Lutra lutra*). As such, a potential pathway for effect to this aquatic QI Species was identified in the form of ex-situ disturbance and displacement during the construction phase of the proposed works, in the absence of mitigation. According to map 11 in the Site-Specific Conservation Objectives Document (NPWS 2017) for Lough Corrib SAC, the closet mapped potential foraging ground for the Lesser Horseshoe Bat (*Rhinolophus hipposideros)* is approx 33km northwest of the Proposed Works. Further, no Lesser Horseshoe Bats were recorded during the manual activity bat surveyed carried out by MKO on the 19/06/2024. As such, there is no potential for the Proposed Works to result in significant impacts to this QI Species associated with Lough Corrib SAC. **A complete source pathway receptor chain was identified and in the absence of mitigation, there is potential for the proposed works to result in likely significant effects on this European Site in the absence of mitigation. Therefore, the European Site is located within the Likely Zone of Impact and is considered further in this Screening assessment**

European Sites and distance from Proposed Works Boundary	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 23/09/2024	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
	› [91D0] Bog woodland		
Galway Bay Complex SAC [000268] **Distance:680m** **Surface Water Distance: 837m**	› [1140] Mudflats and sandflats not covered by seawater at low tide. › [1150] Coastal lagoons* › [1160] Large shallow inlets and bays › [1170] Reefs › [1220] Perennial vegetation of stony banks › [1310] *Salicornia* and other annuals colonising mud and sand. › [1330] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) › [1355] Otter (*Lutra lutra*) › [1365] Harbour seal (*Phoca vitulina*) › [1410] Mediterranean salt meadows (*Juncetalia maritimi*) › [3180] Turloughs* › [5130] *Juniperus communis* formations on heaths or calcareous grasslands › [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia*) (*important orchid sites)	Detailed conservation objectives for this site, (Version 1, April 2013), were reviewed as part of the assessment and are available at www.npws.ie	There will be no direct effects on this SAC as the Proposed Works are located entirely outside the boundary of this designated site. The River Corrib (IE_WE_30C020600), which is designated as part of the Lough Corrib SAC, is located directly adjacent to the north of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows to the west of Woodquay Park, flowing in a southerly direction into Corrib Estuary (IE_WE_170_0700), which is designated as part of Galway Bay Complex SAC. The Corrib Estuary flows in a southerly direction into Inner Galway Bay after approx 837m. Therefore, construction activities associated with the proposed works may result in excess sediment/ surface water run off entering this SAC, via the hydrological pathway as described above, adversely impacting the aquatic influenced QI habitats and species, via the deterioration of water and habitat quality, in the absence of mitigation. Further, due to the small nature and scale of the proposed works, there is no potential for the proposed works to result in groundwater pollution. The potential for ex-situ disturbance/ displacement to the QI Species: [1355] Otter (*Lutra lutra*) was also assessed. During the ecological surveys conducted by MKO on the 25/06/2023 and 19/06/2024, no signs of Otters were recorded along the section of the River Corrib, located directly adjacent to the northern margin of Woodquay Park (ITM Co Ordinates: 529706, 725709).However, taking an extremely

European Sites and distance from Proposed Works Boundary	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 23/09/2024	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
	› [7210] Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae** › [7230] Alkaline fens		precautionary approach, the Corrib Estuary, and Inner Galway Bay, both designated as part of Galway Bay Complex SAC, may provide ex-situ supporting foraging, commuting and breeding habitat for the aquatic QI Species: Otters (*Lutra lutra).* As such, a potential pathway for effect to this aquatic QI Species was identified in the form of ex-situ disturbance and displacement during the construction phase of the proposed works, in the absence of mitigation. **A complete source pathway receptor chain was identified and in the absence of mitigation, there is potential for the proposed works to result in likely significant effects on this European Site in the absence of mitigation. Therefore, the European Site is located within the Likely Zone of Impact and is considered further in this Screening assessment**
Connemara Bog Complex SAC [002034] **Distance: 12.7km**	› [1065] Marsh Fritillary (*Euphydryas aurinia*) › [1106] Salmon (*Salmo salar*) › [1150] Coastal lagoons › [1170] Reefs › [1355] Otter (*Lutra lutra)* › [1833] Slender Naiad (*Najas flexilis*) › [3110] Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) › [3130] Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea*	Detailed conservation objectives for this site, (Version 1, October 2015), were reviewed as part of the assessment and are available at www.npws.ie	There will be no direct effects on this SAC as the Proposed Works are located entirely outside the boundary of this designated site. Due to the absence of a hydrological connection between the proposed works site and this SAC, and the buffering distance of approx 12.7km from the proposed works site to this SAC, no complete source-pathway-receptor chain was identified and potential for indirect impact on the European Site can be excluded. **No pathway for significant effect on this European Site was identified, when considered in the absence of any mitigation, individually or cumulatively with other plans or projects and the site is not within the Likely Zone of Impact and is not considered further in this Screening assessment.**

European Sites and distance from Proposed Works Boundary	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 23/09/2024	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
	uniflorae and/or *Isoeto-Nanojuncetea* › [3160] Natural dystrophic lakes and ponds › [3260] Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation › [4010] Northern Atlantic wet heaths with *Erica tetralix* › [4030] European dry heaths › [6410] *Molinia* meadows on calcareous, peaty, or clayey-silt-laden soils (*Molinion caeruleae*) › [7130] Blanket bogs (* if active bog) › [7140] Transition mires and quaking bogs › [7150] Depressions on peat substrates of the *Rhynchosporion* › [7230] Alkaline fens › [91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles		
Ross Lake and Woods SAC [001312] **Distance: 13.7km**	› [1303] Lesser Horseshoe Bat (*Rhinolophus hipposideros*) › [3140] Hard oligo-mesotrophic waters with benthic vegetation of *Chara spp.*	Detailed conservation objectives for this site, (Version 1, October 2018), were reviewed as part of the assessment and are available at www.npws.ie	There will be no direct effects on this SAC as the Proposed Works are located entirely outside the boundary of this designated site.

European Sites and distance from Proposed Works Boundary	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 23/09/2024	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
			As per map 3 in the Site-Specific Conservation Objectives Document for Ross Lake and Woods SAC (NPWS 2018), the nearest mapped Lesser Horseshoe Bat (*Rhinolophus hipposideros*) roost is approx 16.3km northwest of the proposed works site. Further, no Lesser Horseshoe Bats were recorded during the manual activity bat surveyed carried out by MKO on the 19/06/2024. As such, there is no potential for the proposed works to result in significant impacts to this QI Species- associated with this SAC. Further, due to the absence of a hydrological connection between the proposed works site and this SAC, and the buffering distance of approx 13.7km, there is no potential for indirect impact to the following aquatic QI Habitat: [3140] Hard oligo-mesotrophic waters with benthic vegetation of *Chara spp* associated with this SAC as a result of the proposed works. Therefore, no complete source-pathway-receptor chain was identified and potential for indirect impact on this European Site can be excluded. **No pathway for significant effect on this European Site was identified, when considered in the absence of any mitigation, individually or cumulatively with other plans or projects and the site is not within the Likely Zone of Impact and is not considered further in this Screening assessment.**

European Sites and distance from Proposed Works Boundary	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 23/09/2024	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
Lough Fingall Complex SAC [000606] **Distance: 14km**	› [1303] Lesser Horseshoe Bat (*Rhinolophus hipposideros*) › [3180] Turloughs › [4060] Alpine and Boreal heaths › [5130] *Juniperus communis* formations on heaths or calcareous grasslands › [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) › [7210] Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* › [8240] Limestone pavements	Detailed conservation objectives for this site, (Version 1, January 2019), were reviewed as part of the assessment and are available at www.npws.ie	There will be no direct effects on this SAC as the Proposed Works are located entirely outside the boundary of this designated site. As per map 5 in the Site-Specific Conservation Objectives Document for Lough Fingall Complex SAC (NPWS 2019), the nearest mapped Lesser Horseshoe Bat (*Rhinolophus hipposideros*) roost is approx 14.3km southeast of the proposed works site. Further, no Lesser Horseshoe Bats were recorded during the manual activity bat surveyed carried out by MKO on the 19/06/2024. As such, there is no potential for the proposed works to result in significant impacts to this QI Species- associated with this SAC. Further, due to the absence of a hydrological connection between the proposed works site and this SAC, and the buffering distance of approx 14km, there is no potential for indirect impact to any other QI Habitat associated with this SAC as a result of the proposed works. Therefore, no complete source-pathway-receptor chain was identified and potential for indirect impact on this European Site can be excluded. **No pathway for significant effect on this European Site was identified, when considered in the absence of any mitigation, individually or cumulatively with other plans or projects and the site is not within the Likely Zone of Impact and is not considered further in this Screening assessment.**

European Sites and distance from Proposed Works Boundary	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 23/09/2024	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
Black Head-Poulsallagh Complex SAC [000020] **Distance: 17.6km** **Surface Water Distance: 20km**	› [1170] Reefs › [1220] Perennial vegetation of stony banks › [1395] Petalwort (*Petalophyllum ralfsii)* › [3260] Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation › [4060] Alpine and Boreal heaths › [5130] *Juniperus communis* formations on heaths or calcareous grasslands › [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates › (*Festuco Brometalia*) (*important orchid sites) › [6510] Lowland hay meadows (*Alopecurus pratensis, Sanguisorba officinalis)* › [7220] Petrifying springs with tufa formation (*Cratoneurion*) › [8240] Limestone pavements › [8330] Submerged or partially submerged sea caves	Detailed conservation objectives for this site, (Version 1, May 2014), were reviewed as part of the assessment and are available at www.npws.ie	There will be no direct effects on this SAC as the Proposed Works are located entirely outside the boundary of this designated site. The River Corrib (IE_WE_30C020600), which is designated as part of the Lough Corrib SAC, is located directly adjacent to the north of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows to west of Woodquay Park, flowing in a southerly direction into Corrib Estuary (IE_WE_170_0700), which is designated as part of Galway Bay Complex SAC. Corrib Estuary flows in a southerly direction into Inner Galway Bay, discharging into the Black Head Poulsallagh Complex SAC after approx 20km. However, due to the extensive buffering distance of approx. 20km from the proposed works boundary to this SAC, and the assimilative capacity of the intervening watercourses, there is no potential for significant indirect effects in the form of water and/ or habitat deterioration during the construction phase of the proposed works on this designated European site. Therefore, no complete source-pathway-receptor chain was identified and potential for indirect impact on this European Site can be excluded. **No pathway for significant effect on this European Designated Site was identified, when considered in the absence of any mitigation, individually or cumulatively with other plans or projects and the site is not within the Likely Zone of Impact and is not considered further in this Screening assessment**

European Sites and distance from Proposed Works Boundary	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 23/09/2024	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
Special Protection Area (SPA)			
Inner Galway Bay SPA [004031] **Distance: 795m** **Surface Water Distance: 1.5km**	› [A003] Great Northern Diver (*Gavia immer)* › [A017] Cormorant (*Phalacrocorax Carbo)* › [A028] Grey Heron (*Ardea cinerea)* › [A046] Brent Goose (*Branta bernicla hrota*) › [A050] Wigeon (*Anas Penelope*) › [A052] Teal (*Anas crecca*) › [A056] Shoveler (*Anas clypeata)* › [A069] Red-breasted Merganser (*Mergus serrator)* › [A137] Ringed Plover (*Charadrius hiaticula*) › [A140] Golden Plover (*Pluvialis apricaria*) › [A142] Lapwing (*Vanellus vanellus*) › [A149] Dunlin (*Calidris alpina alpina*) › [A157] Bar-tailed Godwit (*Limosa lapponica)* › [A160] Curlew (*Numenius Arquata)*	Detailed conservation objectives for this site, (Version 1, May 2013), were reviewed as part of the assessment and are available at www.npws.ie	There will be no direct effects on this SPA as the Proposed Works are located entirely outside the boundary of this designated site. The River Corrib (IE_WE_30C020600), which is designated as part of the Lough Corrib SAC, is located directly adjacent to the north of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows to south/ west of Woodquay Park, flowing in a southerly direction into Corrib Estuary (IE_WE_170_0700), which is designated as part of Inner Galway Bay SPA. Corrib Estuary flows in a southerly direction into Inner Galway Bay after approx 1.5km. Therefore, construction activities associated with the proposed works may result in excess sediment/ surface water run off entering this SPA, via the hydrological pathway as described above, adversely impacting the supporting aquatic and Wetland habitats for SCI Species within the SPA, via the deterioration of water and habitat quality, in the absence of mitigation. Further, due to the small nature and scale of the proposed works, there is no potential for the proposed works to result in groundwater pollution The potential for the proposed works to result in ex-situ disturbance/ displacement to the SCI Species was also assessed. Woodquay Park is an urban amenity public park, with existing high levels of anthropogenic activity in the form of human activity, noise,

European Sites and distance from Proposed Works Boundary	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 23/09/2024	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
	› [A162] Redshank (*Tringa totanus)* › [A169] Turnstone (*Arenaria interpres*) › [A179] Black-headed Gull (*Chroicocephalus ridibundus*) › [A182] Common Gull (*Larus canus)* › [A191] Sandwich Tern (*Sterna sandvicensis*) › [A193] Common Tern (*Sterna hirundo)* › [A999] Wetlands and Waterbirds		and lighting. As such, the SCI Species associated with this SPA will be accustomed to high levels of anthropogenic activity. Further, the main habitats recorded within the proposed works boundary include Buildings and Artificial Surfaces (BL3), Amenity Grassland (Improved) (GA2), Treeline (WL2), and Hedgerow (WL1), all of which are common and widespread in the wider landscape. The proposed works boundary does not provide significant supporting habitat for any of the SCI Species associated with this SPA, and as such the loss of small areas of these habitats to facilitate the proposed works will not result in significant impact to the SCI species in the form of ex-situ habitat loss or disturbance/ displacement. Therefore, there is no potential for significant ex situ habitat loss, disturbance or displacement related impacts to any of the SCI species associated with Inner Galway Bay SPA. **A complete source pathway receptor chain was identified and in the absence of mitigation, there is potential for the proposed development to result in likely significant effects on this European Site Therefore, the European Site is located within the Likely Zone of Impact and is considered further in this Screening assessment.**
Lough Corrib SPA [004042] **Distance: 3km**	› [A051] Gadwall (*Anas strepera*) › [A056] Shoveler (*Anas clypeata)* › [A059] Pochard (*Aythya farina)*	Detailed conservation objectives for this site, (Version 1, January 2023), were reviewed as part of the	There will be no direct effects on this SPA as the Proposed Works are located entirely outside the boundary of this designated site.

European Sites and distance from Proposed Works Boundary	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 23/09/2024	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
	• [A061] Tufted Duck (*Aythya fuligula)* • [A065] Common Scoter (*Melanitta nigra*) • [A082] Hen Harrier (*Circus cyaneus)* • [A125] Coot (*Fulica atra*) • [A140] Golden Plover (*Pluvialis apricaria*) • [A179] Black-headed Gull (*Chroicocephalus ridibundus*) • [A182] Common Gull (*Larus canus*) • [A193] Common Tern (*Sterna hirundo*) • [A194] Arctic Tern (*Sterna paradisaea*) • [A395] Greenland White-fronted Goose (*Anser albifrons flavirostris)* • [A999] Wetlands and Waterbirds	assessment and are available at www.npws.ie	There is no hydrological connectivity via the proposed works site and this SPA. The proposed works site is located approx 3km south of Lough Corrib SPA, as such is located within the core foraging range of 3-11km for the Golden Plover (*Pluvialis apricaria*), 2-10km for the Hen Harrier (*Circus cyaneus),* and 5-8km for the Greenland White-Fronted goose (*Anser albifrons flavirostris)* (SNH, 2016). Woodquay Park is an urban amenity public park, with existing high levels of anthropogenic activity in the form of noise, and lighting. As such, the SCI Species associated with this SPA will be accustomed to high levels of anthropogenic activity. Further, the main habitats recorded within the proposed works boundary include Buildings and Artificial Surfaces (BL3), Amenity Grassland (Improved) (GA2), Treeline (WL2), and Hedgerow (WL1), all of which are common and widespread in the wider landscape. The proposed works boundary does not provide significant supporting habitat for any of the SCI Species associated with this SPA, and as such the loss of small areas of these habitats to facilitate the proposed works will not result in significant impact to the SCI species in the form of ex-situ habitat loss or disturbance/ displacement.

European Sites and distance from Proposed Works Boundary	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 23/09/2024	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
			Therefore, there is no potential for the Proposed Works to result in significant ex-situ disturbance or displacement related impacts to the SCI Species associated with this SPA. **No pathway for significant effect on this European Site was identified, when considered in the absence of any mitigation, individually or cumulatively with other plans or projects and the site is not within the Likely Zone of Impact and is not considered further in this Screening assessment.**
Cregganna Marsh SPA [004142] **Distance: 8.3km**	› [A395] Greenland White-fronted Goose (*Anser albifrons flavirostris*)	Detailed conservation objectives for this site, (Version 1, January 2023), were reviewed as part of the assessment and are available at www.npws.ie	There will be no direct effects on this SPA as the Proposed Works are located entirely outside the boundary of this designated site. There is no hydrological connectivity via the proposed works site and this SPA. The proposed works site is located approx 8.3km northwest of Cregganna Marsh SPA as such is located outside the core foraging range of 5-8km for the Greenland White-Fronted goose (*Anser albifrons flavirostris)* (SNH, 2016). Woodquay Park is an urban amenity public park, with existing high levels of anthropogenic activity in the form of noise, and lighting. As such, the SCI Species: Greenland White-fronted Goose (*Anser albifrons flavirostris*) associated with this SPA will be accustomed to high levels of anthropogenic activity. Further, the main habitats recorded within the proposed works boundary include Buildings and Artificial Surfaces (BL3), Amenity

European Sites and distance from Proposed Works Boundary	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 23/09/2024	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
			Grassland (Improved) (GA2), Treeline (WL2), and Hedgerow (WL1), all of which are common and widespread in the wider landscape. The proposed works boundary does not provide significant supporting habitat for any of this SCI Species associated with this SPA, and as such the loss of small areas of these habitats to facilitate the proposed works will not result in significant impact to the SCI species in the form of ex-situ habitat loss or disturbance/ displacement. Therefore, there is no potential for the Proposed Works to result in significant ex-situ disturbance or displacement related impacts to the SCI Species associated with this SPA. **No pathway for significant effect on this European Site was identified, when considered in the absence of any mitigation, individually or cumulatively with other plans or projects and the site is not within the Likely Zone of Impact and is not considered further in this Screening assessment.**

4.2 Stage 1 Appropriate Assessment Screening Conclusion

It cannot be excluded beyond reasonable scientific doubt, in view of best scientific knowledge, on the basis of objective information and in light of the conservation objectives of the relevant European sites, that the proposed development, individually or in combination with other plans and projects, would be likely to have a significant effect on the following European Designated Sites:

- Lough Corrib SAC [000297]
- Galway Bay Complex SAC [000268
- Inner Galway Bay SPA [004031]

As a result, an Appropriate Assessment is required, and a Natura Impact Statement shall be prepared in respect of the proposed development.

5. STAGE 2- NATURA IMPACT STATEMENT (NIS)

The potential for likely significant effects on the following European Sites in the absence of any mitigation, individually or cumulatively with other plans or projects, was identified in the preceding section:

- Lough Corrib SAC [000297]
- Galway Bay Complex SAC [000268]
- Inner Galway Bay SPA [004031]

The following sections consider each European Site individually to:

1. Determine which individual qualifying features have the potential to be adversely affected by the proposed development.
2. Provide information with regard to the Conservation Objectives and site-specific pressures and threats for those qualifying features that have the potential to be adversely affected.

5.1 Identification of relevant Qualifying Features and Desk Study

5.1.1 Lough Corrib SAC [000297]

The potential for impacts on this SAC were identified in **Section 4.1** above. The identified pathways for effect include the following:

- Deterioration of water quality/ habitat quality and supporting habitats for aquatic fauna resulting from pollution to surface waters during the construction phase, adversely impacting the aquatic influenced QI habitats and species within the SAC, in the absence of mitigation.

Table 5-1 below lists the qualifying features of this European Site and determines, in the light of their Conservation Objectives, whether there is any complete source-pathway-receptor chain, by which adverse effects may occur.

5.1.1.1 Identification of Individual Qualifying Features of Lough Corrib SAC with the Potential to be Affected

Table 5-1 Assessment of Qualifying features of Lough Corrib SAC potentially affected

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2017), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
[1029] Freshwater Pearl Mussel (*Margaritifera margaritifera*)	To restore the favourable conservation condition of Freshwater Pearl Mussel in Lough Corrib SAC	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), the conservation objective for this aquatic QI Species: Freshwater Pearl Mussel (*Margaritifera margaritifera*) applies to the Owenriff Freshwater Pearl Mussel (*Margaritifera margaritifera*) population in Lough Corrib SAC. This FWPM population is internationally important and one of eight Irish populations prioritised for conservation action (Moorkens, 2010; NPWS, 2011). As per Map 9 in the SSCO Document for Lough Corrib SAC, the nearest mapped suitable habitat target and distribution target for this aquatic QI Species is approx 24.5km upstream, to the northwest of the proposed works boundary. The nearest FWPM catchment is mapped approx 19km northwest of the proposed works boundary. There are no know records of FWPS downstream of the proposed works site, and as stated in SSCO Document, the distribution of this species is well-documented and full baseline monitoring took place in 2004 (Moorkens, 2004). As such, indirect impacts on this aquatic QI Species can be ruled out due to the absence of a hydrological connection to the upstream mapped areas of Freshwater Pearl Mussels' within the SAC, the extensive buffering distance of approx 19km to the nearest mapped FWPM catchment, the absence of suitable supporting habitat for this aquatic QI Species within the proposed works boundary, and the absence of a complete source pathway receptor chain. **No complete source- pathway- receptor chain for any effect on this species as a result of the proposed works was identified. No further assessment is required**	**N**
[1092] White-clawed Crayfish (*Austropotamobius pallipes*)	To maintain the favourable conservation condition of White-clawed Crayfish in Lough Corrib SAC	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), the distribution of this aquatic QI Species: White-clawed Crayfish (*Austropotamobius pallipes*) in Lough Corrib is uncertain. It certainly occurs in three 1km squares in the northern section of the lower basin (M2341, M2342, M2941) and is probably more widely distributed. As per Map 10 in the SSCO Document for Lough Corrib SAC (NPWS 2017), the nearest mapped record of this QI Species is approx 17.8km upstream to the northwest of the proposed works boundary.	**Y**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2017), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
		The River Corrib (IE_WE_30C020600), which is designated as part of Lough Corrib SAC is located directly adjacent to the northern margin of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows in a southerly direction to the west of the site, before intersecting with the Corrib Estuary. Taking an extremely precautionary approach, due to the full extent of the distribution of this species being uncertain, and the fact they are likely to be more widely distributed within the SAC as stated in the SSCO Document for Lough Corrib SAC, construction activities associated with the proposed works may result in excess sediment/ surface water run off entering the River Corrib, which is designated as part of Lough Corrib SAC, adversely impacting this aquatic QI Species: White-clawed Crayfish (*Austropotamobius pallipes*), via the deterioration of water and habitat quality, in the absence of mitigation. **A complete source-pathway-receptor chain for adverse effects on this species was identified and it is assessed further in this NIS.**	
[1095] Sea Lamprey (*Petromyzon marinus*)	To restore the favourable conservation condition of Sea Lamprey in Lough Corrib SAC,	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), this marine QI Species: Sea lamprey (*Petromyzon marinus*) traditionally congregate and build spawning nests in the River Corrib in Galway city, both up- and downstream of the Salmon Weir Bridge, which is located approx 230m (surface water distance) downstream of the proposed works boundary. The River Corrib (IE_WE_30C020600), which is designated as part of Lough Corrib SAC is located directly adjacent to the northern margin of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows in a southerly direction to the west of the site, through the Salmon Weir Bridge, before intersecting with the Corrib Estuary. As such, construction activities associated with the proposed works may result in excess sediment/ surface water run off entering the River Corrib, which is designated as part of Lough Corrib SAC, adversely impacting this marine QI species: Sea Lamprey (*Petromyzon marinus*) within the SAC, via the deterioration of water and habitat quality, in the absence of mitigation.	**Y**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2017), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
		A complete source-pathway-receptor chain for adverse effects on this species was identified and it is assessed further in this NIS.	
[1096] Brook Lamprey (*Lampetra planeri)*	To maintain the favourable conservation condition of Brook Lamprey in Lough Corrib SAC	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), artificial barriers can block or cause difficulties to this aquatic QI Species': Brook Lamprey (*Lampetra planeri)* migration both up- and downstream, thereby possibly limiting species to specific stretches, restricting access to spawning areas and creating genetically isolated populations (Espanhol et al., 2007). The River Corrib (IE_WE_30C020600), which is designated as part of Lough Corrib SAC is located directly adjacent to the northern margin of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows in a southerly direction to the west of the site, before intersecting with the Corrib Estuary. As such, construction activities associated with the proposed works may result in excess sediment/ surface water run off entering the River Corrib, which is designated as part of Lough Corrib SAC, adversely impacting this aquatic QI species: Brook Lamprey (*Lampetra planeri)* within the SAC, via the deterioration of water and habitat quality, in the absence of mitigation. **A complete source-pathway-receptor chain for adverse effects on this species was identified and it is assessed further in this NIS.**	**Y**
[1106] Salmon (*Salmo salar*)	To maintain the favourable conservation condition of Atlantic Salmon in Lough Corrib SAC	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), there are no barriers to migration of this aquatic QI Species: Salmon (*Salmo salar*) in Lough Corrib SAC. Salmon spawn in the headwaters of Lough Corrib tributaries. The River Corrib (IE_WE_30C020600), which is designated as part of Lough Corrib SAC is located directly adjacent to the northern margin of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows in a southerly direction to the west of the site, before intersecting with the Corrib Estuary.	**Y**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2017), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
		As such, construction activities associated with the proposed works may result in excess sediment/ surface water run off entering the River Corrib, which is designated as part of Lough Corrib SAC, adversely impacting this aquatic QI species: Salmon (*Salmo salar*) within the SAC, via the deterioration of water and habitat quality, in the absence of mitigation. **A complete source-pathway-receptor chain for adverse effects on this species was identified and it is assessed further in this NIS.**	
[1303] Lesser Horseshoe Bat (*Rhinolophus hipposideros*)	To restore the favourable conservation condition of Lesser Horseshoe Bat in Lough Corrib SAC	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), Lough Corrib SAC has been selected for this QI Species: Lesser Horseshoe Bat (*Rhinolophus hipposideros*) due to the presence of one important summer roost (roost id. 217 in NPWS database). Damage or disturbance to the roost or to the habitat immediately surrounding the roost will result in a decline in its condition (Kelleher and Marnell, 2006). As per Map 11 in the Site-Specific Conservation Objectives Document (NPWS 2017) for Lough Corrib SAC, the closest mapped potential foraging ground for this QI Species: Lesser Horseshoe Bat is approx 33km northwest of the Proposed Works at Woodquay Park. Further, no Lesser horseshoe bats were recorded during the manual activity bat surveyed carried out by MKO on the 19/06/2024. As such, there is no potential for the Proposed Works to result in significant ex-situ disturbance or displacement related impacts to this QI Species associated with Lough Corrib SAC. Therefore, indirect impacts on this QI Species can be ruled out due the absence of a complete source pathway receptor chain. **No complete source- pathway- receptor chain for any effect on this species as a result of the proposed works was identified. No further assessment is required**	**N**
[1355] Otter (*Lutra lutra*)	To maintain the favourable conservation condition of Otter in Lough Corrib SAC	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), areas mapped for this aquatic QI Species: Otter (*Lutra lutra*) include 10m terrestrial buffer along shoreline and riverbanks identified as critical for otters (NPWS, 2007). Further, this aquatic QI Species: Otters will	**Y**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2017), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
		regularly commute across stretches of open water up to 500m e.g. between the mainland and an island; between two islands; across an estuary (De Jongh and O'Neill, 2010). It is important that such commuting routes are not obstructed. As per Map 12 in the SSCO Document, the nearest mapped Otter (*Lutra lutra*) commuting buffer is approx 4.2km north of the site of the proposed works. Areas mapped include 10m terrestrial buffer along shoreline and riverbanks identified as critical for otters (NPWS, 2007). The River Corrib (IE_WE_30C020600), which is designated as part of Lough Corrib SAC is located directly adjacent to the northern margin of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows in a southerly direction to the west of site, before intersecting with the Corrib Estuary. As such, construction activities associated with the proposed works may result in excess sediment/ surface water run off entering the River Corrib, which is designated as part of Lough Corrib SAC adversely impacting this aquatic QI species: Otter (*Lutra lutra*) within the SAC, via the deterioration of water and habitat quality, in the absence of mitigation. The potential for ex-situ disturbance/ displacement to this aquatic QI Species: [1355] Otter (*Lutra lutra*) was also assessed. During the ecological surveys conducted by MKO on the 25/06/2023 and 19/06/2024, no signs of Otters were recorded along the section of the River Corrib, located directly adjacent to the northern margin of Woodquay Park (ITM Co Ordinates: 529706, 725709) or within Woodquay Park .However, taking an extremely precautionary approach, the River Corrib may provide ex-situ supporting foraging, commuting and breeding habitat for the aquatic QI Species: Otters (*Lutra lutra*). As such, a potential pathway for effect to this aquatic QI Species was identified in the form of ex-situ disturbance and displacement during the construction phase of the proposed works, in the absence of mitigation **A complete source-pathway-receptor chain for adverse effects on this species was identified and it is assessed further in this NIS.**	
[1393] Slender Green Feathermoss	To maintain the favourable conservation condition of Slender	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), this QI Species: Slender green feathermoss (*Drepanocladus vernicosus*) occurs at NW of Gortachalla Lough in transition mire, which is bounded to the west by acid bog, and is mostly confined to mesotrophic fens, a	**N**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2017), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
(*Drepanocladus vernicosus*)	Green Feathermoss (Shining Sickle-moss) in Lough Corrib SAC	transitional habitat between acid bog and base rich fen. Slender green feathermoss (*Drepanocladus vernicosus*) grows in moss-dominated, open communities generally with a low cover of grasses, maintained by a low grazing intensity by rabbits (*Oryctolagus cuniculus*) generally with a low cover of trees and shrubs. As per Map 10 in the SS CO Document for Lough Corrib SAC, the closest mapped record of this QI Species is approx 11km northeast of the proposed works boundary. As such, indirect impacts on this QI species: Slender Green Feathermoss (*Drepanocladus vernicosus*) can be ruled out due to the absence of a hydrological connection via the proposed works site and Gortachalla Lough, the extensive buffering distance of approx 11km from the proposed works site to the mapped record of this QI Species, and the absence of a complete source-pathway- receptor chain. **No complete source- pathway- receptor chain for any effect on this species as a result of the proposed works was identified. No further assessment is required**	
[1833] Slender Naiad (*Najas flexilis*)	To restore the favourable conservation condition of Slender Naiad in Lough Corrib SAC	As per Map 13 in the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), the closest mapped know habitat for this QI Species: Slender Naiad (*Najas flexilis*) is approx 36km northeast of the proposed works site. The closest mapped area of possible habitat for this QI Species is approx 17.5km northeast of the proposed works boundary. As such, indirect impacts on this QI species: Slender Naiad (*Najas flexilis*) can be ruled out due to the absence of a hydrological connection via the proposed works site and the closest mapped area of possibly suitable habitat for this QI species, the extensive buffering distance of approx 36km from the proposed works site to the mapped record of this QI Species, the absence of a complete source-pathway- receptor chain. **No complete source- pathway- receptor chain for any effect on this species as a result of the proposed works was identified. No further assessment is required**	**N**
[3110] Oligotrophic waters containing	To restore the favourable conservation condition of Oligotrophic waters	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), the distribution of this aquatic QI habitat: Oligotrophic waters containing very few minerals of sandy plains	**N**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2017), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
very few minerals of sandy plains (*Littorelletalia uniflorae*)	containing very few minerals of sandy plains (*Littorelletalia uniflorae)* in Lough Corrib SAC	(*Littorelletalia uniflorae*) in Lough Corrib SAC has not been fully surveyed. Krause and King (1994) recorded it in the "western arm proper". Within Lough Corrib, it is likely to be restricted to this 'western arm' (the north-western bay). It may, however, occur elsewhere along the northern or western shoreline of Lough Corrib, in Ballydoo Lough (N. of Corrib) and in small lakes in the Owenriff catchment. As per Map 3 in the SSCO Document, the nearest area of mapped dominant Oligotrophic water containing very few minerals of sandy plains (*Littorelletalia uniflorae*) is approx 36km upstream of the proposed works boundary. The proposed works area is connected to the lower reaches of the River Corrib, which is designated as part of Lough Corrib SAC. All lake habitats associated with this SAC are located at an upstream confluence of this section of the River Corrib. As such, there is no potential for hydrological connectivity via this QI habitat and this section of the SAC. As such, indirect impacts on this aquatic QI habitat: Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) can be ruled out due to the absence of a hydrological connection, the extensive buffering distance of approx 36km from the proposed works site to the mapped record of this QI habitat, and the absence of a complete source-pathway- receptor chain. **No complete source- pathway- receptor chain for any effect on this habitat as a result of the proposed works was identified. No further assessment is required**	
[3130] Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae and/or Isoeto-Nanojuncetea*	To restore the favourable conservation condition of Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoëto-Nanojuncetea* in Lough Corrib SAC	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), the full distribution and characteristics of this aquatic QI Habitat: Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae and/or Isoeto-Nanojuncetea* in Lough Corrib SAC have not been mapped. While the characteristic species slender naiad (Najas flexilis) was recorded in the western arm of Lough Corrib, that area appears to be dominated by lake habitat 3110, with lake habitat 3130 found towards the northern basin proper. The division between lake habitats 3130 and 3140 may be difficult to determine, and both habitats may occur throughout the lake. Habitat 3130 is thought likely to dominate Ballycuirke Lake. As per Map 3 in the SSCO Document, the nearest area of mapped dominant Oligotrophic	**N**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2017), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
		to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoeto-Nanojuncetea* is approx 23km upstream of the proposed works boundary. The proposed works area is connected to the lower reaches of the River Corrib, which is designated as part of Lough Corrib SAC. All lake habitats associated with this SAC are located at an upstream confluence of this section of the River Corrib. As such, there is no potential for hydrological connectivity via this QI habitat and this section of the SAC. As such, indirect impacts on this aquatic QI habitat: Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae and/or Isoeto-Nanojuncetea* can be ruled out due to the absence of a hydrological connection via the proposed works site and the closest mapped area of this QI habitat, the extensive buffering distance of approx 23km from the proposed works site to the mapped record of this QI habitat, and the absence of a complete source-pathway- receptor chain. **No complete source- pathway- receptor chain for any effect on this habitat as a result of the proposed works was identified. No further assessment is required**	
[3140] Hard oligo-mesotrophic waters with benthic vegetation of *Chara spp.*	To restore the favourable conservation condition of Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. in Lough Corrib SAC	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), this aquatic QI habitat: Hard oligo-mesotrophic waters with benthic vegetation of *Chara spp.*is found in Lough Corrib, notably the southern basin. Its exact distribution and area have not been mapped however, and it is likely to also extend along the eastern side of the northern basin. As per Map 3 in the SSCO Document, the nearest area of mapped dominant Hard oligo-mesotrophic waters with benthic vegetation of *Chara spp* is approx 4.3km upstream of the proposed works boundary. The proposed works area is connected to the lower reaches of the River Corrib, which is designated as part of Lough Corrib SAC. All lake habitats associated with this SAC are located at an upstream confluence of this section of the River Corrib. As such, there is no potential for hydrological connectivity via this QI habitat and this section of the SAC.	**N**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2017), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
		As such, indirect impacts on this aquatic QI habitat: Hard oligo-mesotrophic waters with benthic vegetation of *Chara spp.* can be ruled out due to the absence of a hydrological connection via the proposed works site and the closest mapped area of this QI habitat, the buffering distance of approx 4.3km from the proposed works site to the mapped record of this QI habitat, and the absence of a complete source-pathway- receptor chain. **No complete source- pathway- receptor chain for any effect on this habitat as a result of the proposed works was identified. No further assessment is required**	
[3260] Water courses of plain to montane levels with the *Ranunculion fluitantis and Callitricho-Batrachion* vegetation	To maintain the favourable conservation condition of Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation in Lough Corrib SAC	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), little is known about the distribution of this QI habitat Water courses of plain to montane levels with the *Ranunculion fluitantis and Callitricho-Batrachion* vegetation and its sub-types in this SAC. The vegetation of the River Corrib was documented in Mooney and O'Connell (1990). The River Corrib (IE_WE_30C020600), which is designated as part of Lough Corrib SAC is located directly adjacent to the northern margin of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows in a southerly direction to the west of the site, before intersecting with the Corrib Estuary. Taking an extremely precautionary approach, due to the full extent of the distribution of this habitat within the SAC being unknown, as stated in the SS CO Document for Lough Corrib SAC, construction activities associated with the proposed works may result in excess sediment/ surface water run off entering the River Corrib, which is designated as part of Lough Corrib SAC adversely impacting this aquatic QI habitat: Water courses of plain to montane levels with the *Ranunculion fluitantis and Callitricho-Batrachion* vegetation within the SAC, via the deterioration of water and habitat quality, in the absence of mitigation. **A complete source-pathway-receptor chain for adverse effects on this habitat was identified and it is assessed further in this NIS.**	**Y**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2017), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
[6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites)	To maintain the favourable conservation condition of Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) in Lough Corrib SAC	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), as all areas of this QI habitat Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) within the SAC have not been identified, the total area is unknown. The main habitats recorded within the proposed works boundary include Buildings and Artificial Surfaces (BL3), Amenity Grassland (Improved) (GA2), Treeline (WL2), and Hedgerow (WL1). As such, none of the habitats within the works boundary correspond to this QI Habitat: Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) designated as part of this SAC. As such, indirect impacts on the following terrestrial QI habitat: Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) can be ruled out due to the terrestrial nature of the habitat, and the absence of a complete source-pathway-receptor chain: **No complete source- pathway- receptor chain for any effect on this habitat as a result of the proposed works was identified. No further assessment is required**	**N**
[6410] *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)	To maintain the favourable conservation condition of *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) in Lough Corrib SAC	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), this QI Habitat: Molinia meadows on calcareous, peaty or clayey-silt laden soils (*Molinion caeruleae*) occurs mainly as small areas and in intimate association with other habitats in this SAC such as other grassland types and fens and is therefore difficult to map separately. O'Neill et al. (2013) surveyed and mapped some grassland sites within Lough Corrib SAC. However, the full extent of this habitat in this SAC is currently unknown. The main habitats recorded within the proposed works boundary include Buildings and Artificial Surfaces (BL3), Amenity Grassland (Improved) (GA2), Treeline (WL2), and Hedgerow (WL1). As such, none of the habitats within the works boundary correspond to this QI Habitat: *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) designated as part of this SAC.	**N**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2017), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
		As such, indirect impacts on the following terrestrial QI habitat: *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) can be ruled out due to the terrestrial nature of the habitat, and the absence of a complete source-pathway-receptor chain: **No complete source- pathway- receptor chain for any effect on this habitat as a result of the proposed works was identified. No further assessment is required**	
[7110] Active raised bogs	To restore the favourable conservation condition of Active raised bogs* in Lough Corrib SAC	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), There are two raised bogs for which this QI Habitat: Active Raised Bog (ARB) has been selected in Lough Corrib SAC: Addergoole Bog and Lough Tee Bog. The total area of ARB habitat for these two bogs was mapped as 45.2ha. As per Map 4 in the SSCO Document for Lough Corrib SAC, the closest mapped Active Raised Bog is Aldergoole Bog, mapped approx 2km northeast of the proposed works site. The main habitats recorded within the proposed works boundary include Buildings and Artificial Surfaces (BL3), Amenity Grassland (Improved) (GA2), Treeline (WL2), and Hedgerow (WL1). As such, none of the habitats within the works boundary correspond to this QI Habitat: Active raised bogs designated as part of this SAC. As such, indirect impacts on the following terrestrial QI habitat: Active raised bogs can be ruled out due to the terrestrial nature of the habitat, and the absence of a complete source-pathway-receptor chain: **No complete source- pathway- receptor chain for any effect on this habitat as a result of the proposed works was identified. No further assessment is required**	**N**
[7120] Degraded raised bogs still capable of natural regeneration	The long-term aim for Degraded raised bogs still capable of natural regeneration is that its peat-forming capability is re-established; therefore, the conservation objective for this	The main habitats recorded within the proposed works boundary include Buildings and Artificial Surfaces (BL3), Amenity Grassland (Improved) (GA2), Treeline (WL2), and Hedgerow (WL1). As such, none of the habitats within the works boundary correspond to this QI Habitat: Active raised bogs designated as part of this SAC.	**N**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2017), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
	habitat is inherently linked to that of Active raised bogs (7110) and a separate conservation objective has not been set in Lough Corrib SAC	As such, indirect impacts on the following terrestrial QI habitat: Degraded raised bogs still capable of natural regeneration can be ruled out due to the terrestrial nature of the habitat, and the absence of a complete source-pathway-receptor chain: **No complete source- pathway- receptor chain for any effect on this habitat as a result of the proposed works was identified. No further assessment is required**	
[7150] Depressions on peat substrates of the *Rhynchosporion*	Depressions on peat substrates of the *Rhynchosporion* is an integral part of good quality Active raised bogs (7110) and thus a separate conservation objective has not been set for the habitat in Lough Corrib SAC	The main habitats recorded within the proposed works boundary include Buildings and Artificial Surfaces (BL3), Amenity Grassland (Improved) (GA2), Treeline (WL2), and Hedgerow (WL1). As such, none of the habitats within the works boundary correspond to this QI Habitat: Active raised bogs designated as part of this SAC. As such, indirect impacts on the following terrestrial QI habitat: Depressions on peat substrates of the *Rhynchosporion* can be ruled out due to the terrestrial nature of the habitat, and the absence of a complete source-pathway-receptor chain: **No complete source- pathway- receptor chain for any effect on this habitat as a result of the proposed works was identified. No further assessment is required**	**N**
[7210] Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*	To maintain the favourable conservation condition of Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* in Lough Corrib SAC	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), this groundwater influenced QI Habitat: Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* have not been mapped in detail for Lough Corrib SAC and thus total area of the qualifying habitat is unknown. While the full extent of Annex I fen habitats (both this habitat and Alkaline fens (7230)) within the SAC is currently unknown, their area is extensive and they often occur in association with and transitional to other habitats including Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) (6410), Active raised bogs (7110), Petrifying springs with tufa formation (*Cratoneurion*) (7220) and Limestone pavements (8240) (NPWS internal files).	**N**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2017), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
		Due to the small nature and scale of the proposed works, there is no potential for the proposed works to result in groundwater pollution. As such, indirect impacts to this groundwater influenced QI Habitat: Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* can be ruled out due to the absence of a complete source-pathway-receptor chain. **No complete source- pathway- receptor chain for any effect on this habitat as a result of the proposed works was identified. No further assessment is required**	
[7220] Petrifying springs with tufa formation (*Cratoneurion*)	To maintain the favourable conservation condition of Petrifying springs with tufa formation (*Cratoneurion*)* in Lough Corrib SAC	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), this groundwater influenced QI Habitat: Petrifying springs with tufa formation (*Cratoneurion)* have not been mapped within Lough Corrib SAC and thus the total area of the qualifying habitat in the SAC is unknown. However, the necessary ecological conditions required for this habitat occur around Lough Corrib. This QI Habitat: Petrifying springs rely on permanent irrigation, usually from upwelling groundwater sources or seepage sources (Lyons and Kelly, 2013). Due to the small nature and scale of the proposed works, there is no potential for the proposed works to result in groundwater pollution. As such, indirect impacts to this groundwater influenced QI Habitat: Petrifying springs with tufa formation (*Cratoneurion*) can be ruled out due to the absence of a complete source-pathway-receptor chain. **No complete source- pathway- receptor chain for any effect on this habitat as a result of the proposed works was identified. No further assessment is required**	**N**
[7230] Alkaline fens	To maintain the favourable conservation condition of Alkaline fens in Lough Corrib SAC	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), this groundwater influenced QI Habitat: Alkaline fens have not been mapped in detail for Lough Corrib SAC and thus total area of the qualifying habitat is unknown. While the full extent of Annex I fen habitats (both this habitat and Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* (7210)) within the SAC is currently unknown, their area is extensive and they often occur in association with and transitional to other habitats including Molinia meadows on calcareous, peaty or clayey-silt-laden soils	**N**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2017), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
		(*Molinion caeruleae*) (6410), Active raised bogs (7110), Petrifying springs with tufa formation (*Cratoneurion*) (7220) and Limestone pavements (8240) (NPWS internal files). Due to the small nature and scale of the proposed works, there is no potential for the proposed works to result in groundwater pollution. As such, indirect impacts to this groundwater influenced QI Habitat: Alkaline Fens can be ruled out due to the absence of a complete source-pathway-receptor chain. **No complete source- pathway- receptor chain for any effect on this habitat as a result of the proposed works was identified. No further assessment is required**	
[8240] Limestone pavements	To maintain the favourable conservation condition of Limestone pavements* in Lough Corrib SAC	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), In Lough Corrib SAC, this terrestrial QI Habitat: limestone pavements occur along the southern and eastern margins of Lough Corrib and more extensively in the southern part of the SAC. However, the total area of the Annex I habitat in the SAC is unknown. Wilson and Fernandez (2013) mapped the indicative area in the southern part, including mosaics with other habitats (map 7). As per map 7 in the SSCO Document, the nearest mapped area of this QI Habitat is approx 2.8km northeast of the proposed works boundary. The main habitats recorded within the proposed works boundary include Buildings and Artificial Surfaces (BL3), Amenity Grassland (Improved) (GA2), Treeline (WL2), and Hedgerow (WL1). As such, none of the habitats within the works boundary correspond to this terrestrial QI Habitat: Limestone Pavements designated as part of this SAC. As such, indirect impacts on the following terrestrial QI habitat: Limestone Pavements can be ruled out due to the terrestrial nature of the habitat, and the absence of a complete source-pathway-receptor chain: **No complete source- pathway- receptor chain for any effect on this habitat as a result of the proposed works was identified. No further assessment is required**	**N**
[91A0] Old sessile oak woods with *Ilex*	To maintain the favourable conservation condition of Old sessile	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017) It is important to note that further unsurveyed areas of this terrestrial QI habitat: Old sessile oak woods with *Ilex*	**N**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2017), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
and *Blechnum* in the British Isles	oak woods with *Ilex* and *Blechnum* in the British Isles in Lough Corrib SAC	and *Blechnum* in the British Isles are likely to be present within the SAC, including at the Hill of Doon and on some of the islands in the lake (NPWS internal files). As per map 8 in the SSCO Document, the nearest mapped area of this terrestrial QI habitat: Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles is approx 26km northwest of the proposed works site. The main habitats recorded within the proposed works boundary include Buildings and Artificial Surfaces (BL3), Amenity Grassland (Improved) (GA2), Treeline (WL2), and Hedgerow (WL1). As such, none of the habitats within the works boundary correspond to this terrestrial QI Habitat: Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles designated as part of this SAC. As such, indirect impacts on the following terrestrial QI habitat: Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles can be ruled out due to the terrestrial nature of the habitat, and the absence of a complete source-pathway-receptor chain: **No complete source- pathway- receptor chain for any effect on this habitat as a result of the proposed works was identified. No further assessment is required**	
[91D0] Bog woodland	To maintain the favourable conservation condition of Bog woodland* in Lough Corrib SAC	According to the Site-Specific Conservation Objective Document for Lough Corrib SAC (NPWS 2017), this terrestrial QI Habitat: Bog woodland occurs on Addergoole Bog in Lough Corrib SAC and is regarded as a component of the Active raised bogs habitat (7110) of that bog. Bog woodland occurs at one known location in this SAC, on Addergoole Bog. This is the most westerly known location for this habitat in Ireland. As per map 8 in the SSCO Document, the nearest mapped area of this terrestrial QI habitat: Bog Woodland is approx 7.8km northeast of the proposed works site. The main habitats recorded within the proposed works boundary include Buildings and Artificial Surfaces (BL3), Amenity Grassland (Improved) (GA2), Treeline (WL2), and Hedgerow (WL1). As such, none of the habitats within the works boundary correspond to this terrestrial QI Habitat: Bog woodland designated as part of this SAC.	**N**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2017), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
		As such, indirect impacts on the following terrestrial QI habitat: Bog woodland can be ruled out due to the terrestrial nature of the habitat, and the absence of a complete source-pathway-receptor chain: **No complete source- pathway- receptor chain for any effect on this habitat as a result of the proposed works was identified. No further assessment is required**	

5.1.1.2 Site Specific Pressures and Threats for Lough Corrib SAC

As per the Natura 2000 Data Form, the site-specific threats, pressures and activities with potential to impact on Lough Corrib SAC were reviewed and considered in relation to the Proposed Works. These are provided in **Table 5.2 below**.

Table 5-2 Site-specific threats, pressures and activities for Lough Corrib SAC

Rank	Threats and Pressures
High	Agricultural intensification
	Diffuse pollution to surface waters due to household sewage and waste waters
	Invasive non-native species
	Mechanical removal of peat
	Other human intrusions and disturbances
Medium	Abandonment of pastoral systems, lack of grazing
	Continuous urbanisation
	Dispersed habitation
	Fertilisation
	Forest planting on open ground
	Infilling of ditches, dykes, ponds, pools, marshes or pits
	Other human induced changes in hydraulic conditions
	Piers / tourist harbours or recreational piers
	Removal of hedges and copses or scrub
	Roads, paths and railroads
Low	Disposal of household / recreational facility waste
	Sand and gravel extraction
Rank	**Activities, Management**
High	Diffuse pollution to surface waters due to household sewage and waste waters
	Grazing

Potential pathways for effect with regard to site-specific threats, pressures and activities have been identified in relation to potential for '*diffuse pollution to surface waters due to household sewage and waste waters*', '*Other human intrusions and disturbances*', and '*Continuous urbanisation*'.

5.1.1.3 Species Specific Information

5.1.1.3.1 *[1092] White-clawed Crayfish (Austropotamobius pallipes)*

Description from SSCO document

According to the Site-Specific Conservation Objectives Document for Lough Corrib SAC (NPWS 2017), this QI Species: White-clawed crayfish (*Austropotamobius pallipes*) are recorded from the entire lengths of the four main tributaries of the River Clare. There are post-1996 records from the following tributaries: Abbert, Grange, Dalgan and Sinking Rivers. It is also present in some minor lower order streams within the Clare catchment. The distribution of crayfish in Lough Corrib is uncertain. It is known to occur in three 1km squares in the northern section of the lower basin (M2341, M2342, M2941) and is probably more widely distributed. Further, alien crayfish species are identified as a major direct threat to this species and as a disease vector.

The NPWS Article 17(NPWS 2019) states the overall status of the species is Bad with a deteriorating trend. This represents a genuine decline since the last reporting period and is mainly due to bad Future prospects for the species due to the presence of the Crayfish Plague organism across six catchments.

Targets and Attributes

Table 5-3 Targets and Attributes for [1092] White-clawed Crayfish (Austropotamobius pallipes)

Attribute	Target
Distribution: rivers	No reduction from baseline.
Distribution: Lough Corrib	No reduction from baseline
Population structure: recruitment	Juveniles and/or females with eggs in all occupied tributaries and occupied parts of Lough Corrib
Negative indicator species	No alien crayfish species
Disease	No instances of disease
Water quality	At least Q3-4 at all sites sampled by EPA
Habitat quality: heterogeneity	No decline in habitat heterogeneity or habitat quality

5.1.1.3.2 *[1095] Sea Lamprey (Petromyzon marinus)*

Description from SSCO document

According to the Site-Specific Conservation Objectives Document for Lough Corrib SAC (NPWS 2017), this QI Species: Sea lamprey (*Petromyzon marinus*) traditionally congregate and build spawning nests in the River Corrib in Galway city, both up- and downstream of the Salmon Weir Bridge. Their further upstream passage is impeded by the regulating weir immediately upstream.

According to the Article 17 reporting (NPWS, 2019), the overall conservation status of *P. marinus* has remained unchanged since the previous reporting period (2013) and is assessed as bad. The range is assessed as bad as it is more than 10% below the favourable reference range. The population is assessed

as bad as it is estimated to be more than 25% below the favourable reference population. The habitat is assessed as inadequate as the area is not considered large enough to ensure the future long--term viability of sea lamprey. This assessment has changed since the previous reporting period and is based on new data and best expert judgement.

Targets and Attributes

Table 5-4 Targets and Attributes for [1095] Sea Lamprey (Petromyzon marinus)

Attribute	Target
Distribution: extent of anadromy	Greater than 75% of main stem length of rivers accessible from estuary
Population structure of juveniles	At least three age/size groups present
Juvenile density in fine sediment	Mean catchment juvenile density at least 1/m²
Extent and distribution of spawning habitat	No decline in extent and distribution of spawning beds
Availability of juvenile habitat	More than 50% of sample sites positive, with a minimum of four positive sites in a catchment, which are at least 5km apar

5.1.1.3.3 *[1096] Brook Lamprey (Lampetra planeri)*

Description from SSCO document

According to the Site-Specific Conservation Objectives Document for Lough Corrib SAC (NPWS 2017), artificial barriers can block or cause difficulties to this QI Species: Brook lampreys' migration both up- and downstream, thereby possibly limiting species to specific stretches, restricting access to spawning areas and creating genetically isolated populations (Espanhol et al., 2007).

According to the Article 17 reporting (NPWS, 2019), Lamprey surveys in Ireland have necessarily focused on ammocoete abundances and to a lesser extent upon observations of adult spawning events. Distribution records can only be definitively assigned to one species or the other where adult records exist. For brook lamprey in Ireland there are extensive areas of suitable habitat and no significant pressures impacting this species. The Overall Status is therefore assessed as Favourable.

Targets and Attributes

Table 5-5 Targets and Attributes for [1096] Brook Lamprey (Lampetra planeri)

Attribute	Target
Distribution	Access to all watercourses down to first order streams
Population structure of juveniles	At least three age/size groups of brook/river lamprey present
Juvenile density in fine sediment	Mean catchment ammocoete density of brook/river lamprey at least 5/m²
Extent and distribution of spawning habitat	No decline in extent and distribution of spawning beds

Attribute	Target
Availability of juvenile habitat	More than 50% of sample sites positive

5.1.1.3.4 *[1106] Salmon (Salmo salar)*

Description from SSCO document

According to the Site-Specific Conservation Objectives Document for Lough Corrib SAC (NPWS 2017), there are no barriers to migration of this QI Species: Salmon (*Salmo salar)* in Lough Corrib SAC. Salmon spawn in the headwaters of Lough Corrib tributaries. There is an artificial canal joining Lough Corrib and Lough Mask where Salmon did not have access historically and does not constistute a limit on the distribution of salmon in Lough Corrib SAC

The NPWS Article 17(NPWS 2019) states that pressures to this QI Species include exploitation at sea in commercial fisheries, interceptor fisheries in coastal waters, aquaculture, and predation. In addition, the negative influence of climate change on food prey structure and abundance has increasingly been attributed to the declines observed in stocks at sea. Within river systems, variation in individual stock abundance can be influenced by a variety of factors, notably alterations in physical habitat, water quality, environmental factors, predation, and angling and commercial fisheries exploitation pressure.

The Overall Status is assessed as Inadequate, the same as the last assessment. Although a short-term negative trend is reported for this species, the trend has reversed in the last 5 years. Therefore, an overall stable trend is reported.

Targets and Attributes

Table 5-6 Targets and Attributes for [1106] Salmon (Salmo salar)

Attribute	Target
Distribution: extent of anadromy	100% of river channels down to second order accessible from estuary
Adult spawning fish	Conservation limit (CL) for each system consistently exceeded
Salmon fry abundance	Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 minutes sampling
Out-migrating smolt abundance	No significant decline
Number and distribution of redds	No decline in number and distribution of spawning redds due to anthropogenic causes
Water quality	At least Q4 at all sites sampled by EPA

5.1.1.3.5 *[1355] Otter (Lutra lutra)*

Description from SSCO document

According to the Site-Specific Conservation Objectives Document for Lough Corrib SAC (NPWS 2017), the current range for this aquatic species: Otter (*Lutra lutra*) is estimated at 93.6% (Reid et al., 2013). The areas are mapped to include 10m terrestrial buffer along shoreline and riverbanks identified as critical for otters (NPWS, 2007) and river length is calculated on the basis that otters will utilise freshwater habitats from estuary to headwaters (Chapman and Chapman, 1982).

The NPWS Article 17(NPWS 2019) states the main threats to the otter include pollution, particularly organic pollution resulting in fish kills; and accidental deaths (road traffic and fishing gear). The Overall Status of otter is therefore considered to be Favourable, unchanged since the previous reporting period.

Targets and Attributes

Table 5-7 Targets and Attributes for [1355] Otter (Lutra lutra)

Attribute	Target
Distribution	No significant decline
Extent of terrestrial habitat	No significant decline. Area mapped and calculated as 1,054ha along riverbanks/ lake shoreline/around ponds
Extent of freshwater (river) habitat	No significant decline. Length mapped and calculated as 314.2km
Extent of freshwater (lake) habitat	No significant decline. Area mapped and calculated as 4,178ha
Couching sites and holts	No significant decline
Fish biomass available	No significant decline
Barriers to connectivity	No significant increase.

5.1.1.3.6 *[3260] Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation*

Description from SSCO document

According to the Site-Specific Conservation Objectives Document for Lough Corrib SAC (NPWS 2017), little is known about the distribution of this QI habitat: Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation and its sub-types in this SAC. The vegetation of the River Corrib was documented in Mooney and O'Connell (1990). Macrophyte vegetation has expanded in the Owenriff River resulting in a decline in the condition of this priority freshwater pearl mussel (*Margaritifera margaritifera*) population and its habitat (NPWS, 2010). The Cornamonna, Owennaraha, Owenakilla and other rivers flowing into the north-western part of Lough Corrib are worthy of further investigation

The NPWS Article 17(NPWS 2019) states the main problems for river habitats in Ireland are damage through hydrological and morphological change, eutrophication and other water pollution. The EPA

continues to highlight the decline in high quality rivers. While not all variants of the river habitat require low nutrient conditions, this trend is a significant concern. Agriculture and municipal and industrial discharges are the most significant sources of nutrient and organic pollution. The Overall Status of the habitat is Inadequate and deteriorating, unchanged since the 2013 assessment.

Targets and Attributes

Table 5-8 Targets and Attributes for [3260] Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation

Attribute	Target
Habitat area	Area stable or increasing, subject to natural processes
Habitat distribution	No decline, subject to natural processes
Hydrological regime: river flow	Maintain appropriate hydrological regimes
Hydrological regime: groundwater discharge	Maintain appropriate hydrological regimes
Substratum composition: particle size range	Maintain appropriate substratum particle size range, quantity and quality, subject to natural process
Water quality	Maintain appropriate water quality to support the natural structure and functioning of the habitat
Vegetation composition: typical species	Typical species of the relevant habitat sub-type should be present and in good condition
Floodplain connectivity: area	The area of active floodplain at and upstream of the habitat should be maintained
Riparian habitat: area	Maintain the area and condition of fringing habitats necessary to support the habitat and its sub-types

5.1.2 Galway Bay Complex SAC [000268

The potential for impacts on this SAC were identified in **Section 4.1** above. The identified pathways for effect include the following:

- Deterioration of water quality/ habitat quality and supporting habitats for aquatic fauna resulting from pollution to surface waters during the construction phase, adversely impacting the aquatic influenced QI habitats and species within the SAC, in the absence of mitigation.

Table 5-9 below lists the qualifying features of this European Site and determines, in the light of their Conservation Objectives, whether there is any complete source-pathway-receptor chain, by which adverse effects may occur.

5.1.2.1 Identification of Individual Qualifying Features of Galway Bay Complex SAC with the Potential to be Affected

Table 5-9 Assessment of Qualifying features of Galway Bay Complex SAC potentially affected

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2013), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
[1140] Mudflats and sandflats not covered by seawater at low tide	To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Galway Bay Complex SAC	According to the Site-Specific Conservation Objective Document for Galway Bay Complex SAC (NPWS 2013), the habitat area for this marine QI habitat Mudflats and sandflats not covered by seawater at low tide was estimated using OSi data as 744ha. As per map 3 in the SSCO Document, the nearest mapped area of this marine QI Habitat is approx 1.7km southeast of the proposed works area. The River Corrib (IE_WE_30C020600), which is designated as part of the Lough Corrib SAC, is located directly adjacent to the north of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows to the west of Woodquay Park, flowing in a southerly direction into Corrib Estuary (IE_WE_170_0700), which is designated as part of Galway Bay Complex SAC. The Corrib Estuary flows in a southerly direction into Inner Galway Bay after approx 837m. Therefore, construction activities associated with the proposed works may result in excess sediment/ surface water run off entering this SAC, via the hydrological pathway as described above, adversely impacting this marine QI Habitat: Mudflats and sandflats not covered by seawater at low tide within the SAC, in the absence of mitigation. **A complete source-pathway-receptor chain for adverse effects on this habitat was identified and it is assessed further in this NIS.**	**Y**
[1150] Coastal lagoons*	To restore the favourable conservation condition of Coastal	According to the Site-Specific Conservation Objective Document for Galway Bay Complex SAC (NPWS 2013), the habitat area for this marine QI habitat: Coastal Lagoons, there may be more, as yet unmapped, lagoons within this SAC. Most of the lagoons listed for this site are	**Y**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2013), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
	lagoons in Galway Bay Complex SAC	considered to be shallow; however, Aughinish lagoon and Lough Atalia do have deeper (at least 3m) parts. As per map 4 in the SSCO Document, the nearest mapped area of this marine QI Habitat is approx 978m southeast of the proposed works site. The River Corrib (IE_WE_30C020600), which is designated as part of the Lough Corrib SAC, is located directly adjacent to the north of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows to the west of Woodquay Park, flowing in a southerly direction into Corrib Estuary (IE_WE_170_0700), which is designated as part of Galway Bay Complex SAC. The Corrib Estuary flows in a southerly direction into Inner Galway Bay after approx 837m. Therefore, construction activities associated with the proposed works may result in excess sediment/ surface water run off entering this SAC, via the hydrological pathway as described above, adversely impacting this marine QI Habitat: Coastal Lagoons within the SAC, in the absence of mitigation. **A complete source-pathway-receptor chain for adverse effects on this habitat was identified and it is assessed further in this NIS.**	
[1160] Large shallow inlets and bays	To maintain the favourable conservation condition of Large shallow inlets and bays in Galway Bay Complex SAC	According to the Site-Specific Conservation Objective Document for Galway Bay Complex SAC (NPWS 2013), the habitat area for this marine QI habitat: Large shallow inlets and bays the habitat area was estimated as 10,825ha using OSi data and the Transitional Water Body area as defined under the Water Framework Directive. As per map 5 in the SSCO Document, the nearest mapped area of this marine QI habitat: Large shallow inlets and bays is approx 1.7km south of the proposed works site. The River Corrib (IE_WE_30C020600), which is designated as part of the Lough Corrib SAC, is located directly adjacent to the north of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows to the west of Woodquay Park, flowing in a southerly direction into Corrib Estuary (IE_WE_170_0700), which is designated as part of Galway Bay	**Y**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2013), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
		Complex SAC. The Corrib Estuary flows in a southerly direction into Inner Galway Bay after approx 837m. Therefore, construction activities associated with the proposed works may result in excess sediment/ surface water run off entering this SAC, via the hydrological pathway as described above, adversely impacting this marine QI Habitat: Large shallow inlets and bays within the SAC, in the absence of mitigation. **A complete source-pathway-receptor chain for adverse effects on this habitat was identified and it is assessed further in this NIS.**	
[1170] Reefs	To maintain the favourable conservation condition of Reefs in Galway Bay Complex SAC	According to the Site-Specific Conservation Objective Document for Galway Bay Complex SAC (NPWS 2013), the habitat area for this marine QI habitat: Reefs the habitat area estimated as 2773ha using 2009 and 2010 intertidal survey data and 2009 subtidal survey data (Aquafact, 2010a, b; RPS, 2012). According to Map 6 in the SSCO Document for this marine QI habitat: Reefs, the nearest mapped area of this habitat is approx 1.3km southeast of the proposed works site. The River Corrib (IE_WE_30C020600), which is designated as part of the Lough Corrib SAC, is located directly adjacent to the north of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows to the west of Woodquay Park, flowing in a southerly direction into Corrib Estuary (IE_WE_170_0700), which is designated as part of Galway Bay Complex SAC. The Corrib Estuary flows in a southerly direction into Inner Galway Bay after approx 837m. Therefore, construction activities associated with the proposed works may result in excess sediment/ surface water run off entering this SAC, via the hydrological pathway as described above, adversely impacting this marine QI Habitat: Reefs within the SAC, in the absence of mitigation.	**Y**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2013), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
		A complete source-pathway-receptor chain for adverse effects on this habitat was identified and it is assessed further in this NIS.	
[1220] Perennial vegetation of stony banks	To maintain the favourable conservation condition of Perennial vegetation of stony banks in Galway Bay Complex SAC	According to the Site-Specific Conservation Objective Document for Galway Bay Complex SAC (NPWS 2013), the habitat area for this terrestrial QI habitat: Perennial vegetation of stony banks is currently unknown. It was recorded from Rinville Point, Tawin Point and coastline from Blackhead to Carrickada during the National Shingle Beach Survey (Moore and Wilson, 1999), but the extent was not mapped. Two areas of vegetated shingle were recorded during the Coastal Monitoring Project (Ryle et al., 2009): Bishopsquarter - 0.18ha and Barna (Whitestrand) - 0.45ha. NB further unsurveyed areas maybe present within the site. According to map 8 in the SSCO Document for this terrestrial QI habitat, the nearest mapped area is approx 4.5km southwest of the proposed works site. The main habitats recorded within the proposed works boundary include Buildings and Artificial Surfaces (BL3), Amenity Grassland (Improved) (GA2), Treeline (WL2), and Hedgerow (WL1). As such, none of the habitats within the works boundary correspond to this terrestrial QI Habitat: Bog woodland designated as part of this SAC. As such, indirect impacts on the following terrestrial QI habitat: Perennial vegetation of stony banks can be ruled out due to the terrestrial nature of the habitat, and the absence of a complete source-pathway-receptor chain: **No complete source- pathway- receptor chain for any effect on this habitat as a result of the proposed works was identified. No further assessment is required**	**N**
[1310] Salicornia and other annuals colonising mud and sand	To maintain the favourable conservation condition of Salicornia and other annuals colonizing mud	According to the Site-Specific Conservation Objective Document for Galway Bay Complex SAC (NPWS 2013), this aquatic QI habitat Salicornia and other annuals colonising mud and sand was recorded at eight of the ten sub-sites surveyed and mapped, giving a total estimated area of 1.347ha. N.B. Further unsurveyed areas may be present within this site. As per map 9	**Y**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2013), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
	and sand in Galway Bay Complex SAC	in the SSCO Document, the nearest mapped area of this aquatic QI habitat: Salicornia and other annuals colonising mud and sand t is approx 4.5km southeast of the proposed works boundary. The River Corrib (IE_WE_30C020600), which is designated as part of the Lough Corrib SAC, is located directly adjacent to the north of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows to the west of Woodquay Park, flowing in a southerly direction into Corrib Estuary (IE_WE_170_0700), which is designated as part of Galway Bay Complex SAC. The Corrib Estuary flows in a southerly direction into Inner Galway Bay after approx 837m. Therefore, construction activities associated with the proposed works may result in excess sediment/ surface water run off entering this SAC, via the hydrological pathway as described above, adversely impacting this marine QI Habitat: Salicornia and other annuals colonising mud and sand within the SAC, in the absence of mitigation. **A complete source-pathway-receptor chain for adverse effects on this habitat was identified and it is assessed further in this NIS.**	
[1330] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	To restore the favourable conservation condition of Atlantic salt meadows (*GlaucoPuccinellietalia maritimae)* in Galway Bay Complex SAC	According to the Site-Specific Conservation Objective Document for Galway Bay Complex SAC (NPWS 2013), Ten sub-sites that supported this QI Habitat: Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) were mapped (114.612ha) and additional areas of potential saltmarsh (149.18ha) were identified by an examination of aerial photographs, giving a total estimated area of 263.80ha. NB further unsurveyed areas maybe present within the site. As per Map 9 in the SSCO Document, the nearest mapped area of this aquatic QI Habitat Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) is approx 4km southwest of the proposed works site. The River Corrib (IE_WE_30C020600), which is designated as part of the Lough Corrib SAC, is located directly adjacent to the north of Woodquay Park (ITM Co Ordinates: 529706,	**Y**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2013), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
		725709). The River Corrib flows to the west of Woodquay Park, flowing in a southerly direction into Corrib Estuary (IE_WE_170_0700), which is designated as part of Galway Bay Complex SAC. The Corrib Estuary flows in a southerly direction into Inner Galway Bay after approx 837m. Therefore, construction activities associated with the proposed works may result in excess sediment/ surface water run off entering this SAC, via the hydrological pathway as described above, adversely impacting this marine QI Habitat: Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) within the SAC, in the absence of mitigation. **A complete source-pathway-receptor chain for adverse effects on this habitat was identified and it is assessed further in this NIS.**	
[1355] Otter (*Lutra lutra)*	To restore the favourable conservation condition of Otter in Galway Bay Complex SAC	According to the Site-Specific Conservation Objective Document for Galway Bay Complex SAC (NPWS 2013), areas mapped for this aquatic QI Species: Otter (*Lutra lutra*) include 10m terrestrial buffer along shoreline (above HWM and along riverbanks) identified as critical for otters (NPWS, 2007). Further, Otters will regularly commute across stretches of open water up to 500m e.g. between the mainland and an island; between two islands; across an estuary (De Jongh and O'Neill, 2010). It is important that such commuting routes are not obstructed. As per map 11 in the SSCO Document, the nearest mapped Otter commuting habitat is approx 1km south of the proposed works site. The River Corrib (IE_WE_30C020600), which is designated as part of the Lough Corrib SAC, is located directly adjacent to the north of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows to south/ west of Woodquay Park, flowing in a southerly direction into Corrib Estuary (IE_WE_170_0700), which is designated as part of Galway Bay Complex SAC. Corrib Estuary flows in a southerly direction into Inner Galway Bay after approx 837m.	**Y**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2013), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
		As such, construction activities associated with the proposed works may result in excess sediment/ surface water run off entering the River Corrib, which is designated as part of Lough Corrib SAC adversely impacting this aquatic QI species: Otter (*Lutra lutra*) within the SAC, via the deterioration of water and habitat quality, in the absence of mitigation. The potential for ex-situ disturbance/ displacement to this aquatic QI Species: [1355] Otter (*Lutra lutra*) was also assessed. During the ecological surveys conducted by MKO on the 25/06/2023 and 19/06/2024, no signs of Otters were recorded along the section of the River Corrib, located directly adjacent to the northern margin of Woodquay Park (ITM Co Ordinates: 529706, 725709) or within Woodquay Park .However, taking an extremely precautionary approach, the Corrib Estuary and Inner Galway Bay may provide ex-situ supporting foraging, commuting and breeding habitat for the aquatic QI Species: Otters (*Lutra lutra*). As such, a potential pathway for effect to this aquatic QI Species was identified in the form of ex-situ disturbance and displacement during the construction phase of the proposed works, in the absence of mitigation **A complete source-pathway-receptor chain for adverse effects on this species was identified and it is assessed further in this NIS.**	
[1365] Harbour seal (*Phoca vitulina*)	To maintain the favourable conservation condition of Harbour Seal in Galway Bay Complex SAC	According to the Site-Specific Conservation Objective Document for Galway Bay Complex SAC (NPWS 2013), as per map 12, the nearest mapped Harbour Seal resting sites are approx 1.3km south of the proposed works area, the nearest mapped moulting sites are approx 5.2km south, and the nearest mapped breeding sites are approx 6km southeast of the proposed works site. The River Corrib (IE_WE_30C020600), which is designated as part of the Lough Corrib SAC, is located directly adjacent to the north of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows to south/ west of Woodquay Park, flowing in a southerly direction into Corrib Estuary (IE_WE_170_0700), which is designated as part of Galway Bay	Y

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2013), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
		Complex SAC. Corrib Estuary flows in a southerly direction into Inner Galway Bay after approx 837m. As such, construction activities associated with the proposed works may result in excess sediment/ surface water run off entering the River Corrib, which is designated as part of Lough Corrib SAC adversely impacting this aquatic QI species: Harbour seal (*Phoca vitulina*) within the SAC, via the deterioration of water and habitat quality, in the absence of mitigation. **A complete source-pathway-receptor chain for adverse effects on this species was identified and it is assessed further in this NIS.**	
[1410] Mediterranean salt meadows (*Juncetalia maritimi*)	To restore the favourable conservation condition of Mediterranean salt meadows (*Juncetalia maritimi*) in Galway Bay Complex SAC	According to the Site-Specific Conservation Objective Document for Galway Bay Complex SAC (NPWS 2013), Six sub-sites that support this marine QI Habitat: Mediterranean salt meadows (*Juncetalia maritimi*) were mapped (11.472ha) and additional areas of potential saltmarsh (8.415ha) were identified from an examination of aerial photographs, giving a total estimated area of 19.887ha. NB further unsurveyed areas maybe present within the site. As per Map 9 in the SSCO Document, the nearest mapped area of this aquatic QI Habitat Mediterranean salt meadows (*Juncetalia maritimi*) is approx 4km southwest of the proposed works site. The River Corrib (IE_WE_30C020600), which is designated as part of the Lough Corrib SAC, is located directly adjacent to the north of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows to the west of Woodquay Park, flowing in a southerly direction into Corrib Estuary (IE_WE_170_0700), which is designated as part of Galway Bay Complex SAC. The Corrib Estuary flows in a southerly direction into Inner Galway Bay after approx 837m. Therefore, construction activities associated with the proposed works may result in excess sediment/ surface water run off entering this SAC, via the hydrological pathway as described	Y

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2013), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
		above, adversely impacting this marine QI Habitat: Mediterranean salt meadows (*Juncetalia maritimi*) within the SAC, in the absence of mitigation. **A complete source-pathway-receptor chain for adverse effects on this habitat was identified and it is assessed further in this NIS.**	
[3180] Turloughs*	To maintain the favourable conservation condition of Turloughs in Galway Bay Complex SAC,	According to the Site-Specific Conservation Objective Document for Galway Bay Complex SAC (NPWS 2013), based on measured area of four known areas of this aquatic QI Habitat: Turloughs. NB there may be more, as yet unmapped, turloughs within this SAC. As per Map10 in the SSCO Document, the nearest mapped area of this aquatic QI Habitat Turloughs is approx 9.2km southeast of the proposed works site. As such, indirect impacts on this aquatic QI habitat can be ruled out due to the absence of hydrological connections to the mapped areas of this QI Habitat within the SAC, the extensive buffering distance of approx 9.2km, and the absence of suitable supporting habitat for this aquatic QI habitat: Turloughs within the proposed works boundary, and the absence of a complete source pathway receptor chain **No complete source- pathway- receptor chain for any effect on this habitat as a result of the proposed works was identified. No further assessment is required**	**N**
[5130] *Juniperus communis* formations on heaths or calcareous grasslands	To restore the favourable conservation condition of *Juniperus communis* formations on heaths or calcareous grasslands in Galway Bay Complex SAC	According to the Site-Specific Conservation Objective Document for Galway Bay Complex SAC (NPWS 2013), there is one mapped location of this terrestrial QI habitat: *Juniperus communis* formations on heaths or calcareous grasslands in this SAC. Based on site visit in March 2013. Appropriate management might encourage expansion of the area. Further unsurveyed areas maybe present within the SAC. As per Map10 in the SSCO Document, the nearest mapped area of this terrestrial QI Habitat *Juniperus communis* formations on heaths or calcareous grasslands is approx 9km southeast of the proposed works site.	**N**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2013), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
		The main habitats recorded within the proposed works boundary include Buildings and Artificial Surfaces (BL3), Amenity Grassland (Improved) (GA2), Treeline (WL2), and Hedgerow (WL1). As such, none of the habitats within the works boundary correspond to this terrestrial QI Habitat: Bog woodland designated as part of this SAC. As such, indirect impacts on the following terrestrial QI habitat: J*uniperus communis* formations on heaths or calcareous grasslands can be ruled out due to the terrestrial nature of the habitat, and the absence of a complete source-pathway-receptor chain: **No complete source- pathway- receptor chain for any effect on this habitat as a result of the proposed works was identified. No further assessment is required**	
[6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia*)(*important orchid sites)	To maintain the favourable conservation condition of Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia)* in Galway Bay Complex SAC	According to the Site-Specific Conservation Objective Document for Galway Bay Complex SAC (NPWS 2013), the extent of this terrestrial QI habitat: Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia*)(*important orchid sites) in the SAC is currently unknown. Areas are likely to be small and often in mosaic with other habitats such as limestone pavement and scrub (Dwyer et al., 2007; internal NPWS files). D The main habitats recorded within the proposed works boundary include Buildings and Artificial Surfaces (BL3), Amenity Grassland (Improved) (GA2), Treeline (WL2), and Hedgerow (WL1). As such, none of the habitats within the works boundary correspond to this terrestrial QI Habitat: Bog woodland designated as part of this SAC. As such, indirect impacts on the following terrestrial QI habitat: Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia*)(*important orchid sites)can be ruled out due to the terrestrial nature of the habitat, and the absence of a complete source-pathway-receptor chain:	**N**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2013), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
		No complete source- pathway- receptor chain for any effect on this habitat as a result of the proposed works was identified. No further assessment is required	
[7210] Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae**	To maintain the favourable conservation condition of Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* in Galway Bay Complex SAC	According to the Site-Specific Conservation Objective Document for Galway Bay Complex SAC (NPWS 2013), The full extent of this groundwater influenced habitat: Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae** within the SAC is currently unknown. Fen vegetation occurs in wetland areas to the east of Oranmore (Internal NPWS files). It has also been recorded in Ballindereen Lough. Further areas of fen are likely to occur within the SAC. Due to the small nature and scale of the proposed works, there is no potential for the proposed works to result in groundwater pollution. As such, indirect impacts to this groundwater influenced QI Habitat: Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae** can be ruled out due to the absence of a complete source-pathway-receptor chain. **No complete source- pathway- receptor chain for any effect on this habitat as a result of the proposed works was identified. No further assessment is required**	**N**
[7230] Alkaline fens	To maintain the favourable conservation condition of Alkaline fens in Galway Bay Complex SAC	According to the Site-Specific Conservation Objective Document for Galway Bay Complex SAC (NPWS 2013), The full extent of this groundwater influenced habitat: Alkaline fens within the SAC is currently unknown. Fen vegetation occurs in wetland areas to the east of Oranmore (Internal NPWS files). It has also been recorded in Ballindereen Lough. Further areas of fen are likely to occur within the SAC. Due to the small nature and scale of the proposed works, there is no potential for the proposed works to result in groundwater pollution. As such, indirect impacts to this groundwater influenced QI Habitat: Alkaline fens can be ruled out due to the absence of a complete source-pathway-receptor chain.	**N**

Qualifying Feature	Conservation Objective (NPWS, Version 1, April 2013), were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
		No complete source- pathway- receptor chain for any effect on this habitat as a result of the proposed works was identified. No further assessment is required	

5.1.2.2 Site Specific Pressures and Threats for Galway Bay Complex SAC

As per the Natura 2000 Data Form, the site-specific threats, pressures and activities with potential to impact on Galway Bay Complex SAC were reviewed and considered in relation to the Proposed Works. These are provided in **Table 5.10 below**.

Table 5-10 Site-specific threats, pressures and activities for Galway Bay Complex SAC.

Rank	Threats and Pressures
High	Diffuse pollution to surface waters due to agricultural and forestry activities
	Diffuse pollution to surface waters due to household sewage and waste waters
	Industrial ports
	Sea defence or coast protection works, tidal barrages
	Shipping lanes, ports, marine constructions
Medium	Agricultural intensification
	Hunting, fishing or collecting activities not referred to above
	Invasive non-native species
	Marine and Freshwater Aquaculture
	Non intensive cattle grazing
	Non intensive sheep grazing
	Pipelines
	Reclamation of land from sea, estuary or marsh
	Removal of beach materials
	Sand and gravel extraction
Low	Bait digging / collection
	Disposal of inert materials
	Estuarine and coastal dredging
	Golf course
	Modification of water flow (tidal & marine currents)
	Non-motorized nautical sports
	Paths, tracks, cycling tracks
	Slipways
Rank	Activities, Management

Rank	Threats and Pressures
Medium	Modification of water flow (tidal & marine currents)

Potential pathways for effect with regard to site-specific threats, pressures and activities have been identified in relation to potential for '*Diffuse pollution to surface waters due to agricultural and forestry activities'* and '*Diffuse pollution to surface waters due to household sewage and waste waters'*.

5.1.2.3 Species Specific Information

5.1.2.3.1 *[1355] Otter (Lutra lutra)*

Description from SSCO document

According to the Site-Specific Conservation Objectives Document for Galway Bay Complex SAC (NPWS 2013), this aquatic QI Species': Otter (*Lutra lutra*) area is mapped to include 10m terrestrial buffer along shoreline (above HWM and along riverbanks) identified as critical for otters (NPWS, 2007). The river length calculated on the basis that otters will utilise freshwater habitats from estuary to headwaters (Chapman and Chapman, 1982). Further, Otters will regularly commute across stretches of open water up to 500m e.g. between the mainland and an island; between two islands; across an estuary (De Jongh and O'Neill, 2010). It is important that such commuting routes are not obstructed.

The NPWS Article 17(NPWS 2019) states the main threats to the otter include pollution, particularly organic pollution resulting in fish kills; and accidental deaths (road traffic and fishing gear). The Overall Status of otter is therefore considered to be Favourable, unchanged since the previous reporting period.

Targets and Attributes

Table 5-11 Targets and Attributes for [1355] Otter (Lutra lutra)

Attribute	Target
Distribution	No significant decline
Extent of terrestrial habitat	No significant decline. Area mapped and calculated as 262ha above high water mark (HWM); 14ha along riverbanks/around ponds
Extent of marine habitat	No significant decline. Area mapped and calculated as 2040ha
Extent of freshwater (river) habitat	No significant decline. Length mapped and calculated as 4km
Extent of freshwater (lake/lagoon) habitat	No significant decline. Area mapped and calculated as 21ha
Couching sites and holts	No significant decline
Fish biomass available	No significant decline
Barriers to connectivity	No significant increase

5.1.2.3.2 *[1365] Harbour seal (Phoca vitulina)*

Description from SSCO document

The NPWS Article 17(NPWS 2019) states this QI Species: Harbour seal occur in estuarine, coastal and fully marine areas and also occupy regular haul-out sites about which animals breed, moult, rest and engage in social activity. Pressures to this species include commercial vessel-based activities such as local/regional prey removal by fisheries or by-catch in fisheries, or geophysical seismic exploration; other possible impacts may occur from coastal tourism and localised human disturbance at haul-out sites. The Overall Status of the harbour seal in Ireland is considered to be Favourable, given the current knowledge of the species' population size, distribution, ecology and prevailing pressures on the species.

Targets and Attributes

Table 5-12 Targets and Attributes for [1365] Harbour seal (Phoca vitulina)

Attribute	Target
Access to suitable habitat	Species range within the site should not be restricted by artificial barriers to site use
Breeding behaviour	Conserve breeding sites in a natural condition.
Moulting behaviour	Conserve moult haul-out sites in a natural condition
Resting behaviour	Conserve resting haul-out sites in a natural condition
Disturbance	Human activities should occur at levels that do not adversely affect the harbour seal population at the site

5.1.2.3.3 *[1140] Mudflats and sandflats not covered by seawater at low tide*

Description from SSCO document

According to the Site-Specific Conservation Objectives Document for Galway Bay Complex SAC (NPWS 2013), this QI Habitat area was estimated using OSi data as 744ha.

The NPWS Article 17(NPWS 2019) states the overall status of the habitat is Inadequate and deteriorating, the change in trend from improving to deteriorating due to a genuine decline in the habitat since 2013. This was caused partly by pollution from agricultural, forestry and wastewater sources, as well as impacts associated with marine aquaculture, particularly the Pacific oyster (*Magallana gigas).*

Targets and Attributes

Table 5-13 Targets and Attributes for [1140] Mudflats and sandflats not covered by seawater at low tide

Attribute	Target
Habitat area	The permanent habitat area is stable or increasing, subject to natural processes
Community distribution	Conserve the following community types in a natural condition: Intertidal sandy mud community complex; and Intertidal sand community complex.

5.1.2.3.4 *[1150] Coastal lagoons**

Description from SSCO document

According to the Site-Specific Conservation Objectives Document for Galway Bay Complex SAC (NPWS 2013) there may be more, as yet unmapped, areas of this QI habitat: Lagoons within this SAC. The lagoons in the site vary from oligohaline to euhaline. The lagoons within this site exhibit a variety of barrier types including cobble/shingle, karst and artificial embankment/causeway

The NPWS Article 17 (NPWS 2019) states several high-ranking pressures were identified acting on this habitat: eutrophication, modification of hydrological flow, and drainage. Other pressures noted include erosion and silting up, accumulation of seaweed, and sedimentation from peat related to turf cutting and/or forestry. The Overall Status for Lagoons is assessed as Bad, unchanged since the 2013 assessment. However, the overall trend has changed from stable to deteriorating, a genuine decline since 2013.

Targets and Attributes

*Table 5-14 Targets and Attributes for [1150] Coastal lagoons**

Attribute	Target
Habitat area	Area stable, subject to slight natural variation.
Habitat distribution	No decline, subject to natural processes.
Salinity regime	Median annual salinity and temporal variation within natural ranges
Hydrological regime	Annual water level fluctuations and minima within natural ranges
Barrier: connectivity between lagoon and sea	Appropriate hydrological connections between lagoons and sea, including where necessary, appropriate management
Water quality: Chlorophyll a	Annual median chlorophyll a within natural ranges and less than Njg/L
Water quality: Molybdate Reactive Phosphorus (MRP)	Annual median MRP within natural ranges 0.1mg/L
Water quality: Dissolved Inorganic Nitrogen (DIN)	Annual median DIN within natural ranges and less than 0.15mg/L
Depth of macrophyte colonisation	Macrophyte colonisation to at least 2m depth
Typical plant species	Maintain number and extent of listed lagoonal specialists, subject to natural variation
Typical animal species	Maintain listed lagoon specialists, subject to natural variation
Negative indicator species	Negative indicator species absent or under control

5.1.2.3.5 *[1160] Large shallow inlets and bays*

Description from SSCO document

According to the Site-Specific Conservation Objectives Document for Galway Bay Complex SAC (NPWS 2013), this QI Habitat area was estimated as 10,825ha using OSi data and the Transitional Water Body area as defined under the Water Framework Directive.

The NPWS Article 17 (NPWS 2019) states pressures on the habitat include nutrient enrichment, dredging and invasive alien species. Overall Status is assessed as Bad and deteriorating, a genuine decline since the 2013 assessment of Inadequate and improving and is based on more detailed information.

Targets and Attributes

Table 5-15 Targets and Attributes for [1160] Large shallow inlets and bays

Attribute	Target
Habitat area	The permanent habitat area is stable or increasing, subject to natural processes.
Community extent	Maintain the extent of the *Zostera*-dominated community complex and the maërl-dominated community, subject to natural processes
Community structure: Zostera density	Conserve the high quality of *Zostera*-dominated communities, subject to natural processes
Community structure	Conserve the high quality of the *maërl*-dominated community, subject to natural processes
Community distribution	Conserve the following community types in a natural condition: Intertidal sandy mud community complex; Intertidal sand community complex; Fine to medium sand with bivalves community complex; Sandy mud to mixed sediment community complex; Mixed sediment dominated by *Mytilidae* community complex; Shingle; Fucoid-dominated community complex; Laminaria-dominated community complex; and Shallow sponge-dominated community complex

5.1.2.3.6 *[1170] Reefs*

Description from SSCO document

According to the Site-Specific Conservation Objectives Document for Galway Bay Complex SAC (NPWS 2013), this QI habitat area is estimated as 2773ha using 2009 and 2010 intertidal survey data and 2009.

The NPWS Article 17 (NPWS 2019) states the main pressures on reefs come from fishing methods that damage the seafloor. As a result, the Overall Status is Inadequate and stable. While genuine improvements have occurred by the implementation of an EU Regulation restricting the use of bottom trawls, the change in status from Bad to Inadequate is mainly attributed to better knowledge gained from recent surveys.

Targets and Attributes

Table 5-16 Targets and Attributes for [1170] Reefs

Attribute	Target
Distribution	The distribution of reefs is stable or increasing, subject to natural processes.

Attribute	Target
Habitat area	The permanent habitat area is stable, subject to natural processes.
Community extent	Maintain the extent of the Mytilus-dominated reef community, subject to natural processes
Community structure: *Mytilus density*	Conserve the high quality of the *Mytilus*-dominated reef community, subject to natural processes
Community structure	Conserve the following community types in a natural condition: *Fucoid* dominated community complex; *Laminaria* dominated community complex; and Shallow sponge-dominated community complex

5.1.2.3.7 *[1310] Salicornia and other annuals colonising mud and sand*

Description from SSCO document

According to the Site-Specific Conservation Objectives Document for Galway Bay Complex SAC (NPWS 2013), this QI habitat is recorded at eight of the ten sub-sites surveyed and mapped, giving a total estimated area of 1.347ha. N.B. Further unsurveyed areas may be present within this site.

The NPWS Article 17(NPWS 2019) states the Overall Status is assessed as Favourable with a stable trend. The change in assessment from Inadequate in the 2013 report is due partly to a change in the threshold for favourable structure and functions, and partly because of a lack of evidence for the recent spread of the invasive non-native species, common cordgrass (Spartina anglica), although the extent and potential spread of this species should be monitored closely.

Targets and Attributes

Table 5-17 Targets and Attributes for [1310] Salicornia and other annuals colonising mud and sand

Attribute	Target
Habitat area	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-sites mapped: Barna House - 0.067ha, Seaweed Point - 0.003ha, Roscam West and South - 0.023ha, Kilcaimin - 0.015, Kileenaran - 0.007ha, Kinvara West - 0.017ha, Scanlan's Island - 0.117ha, Tawin Island - 1.098ha.
Habitat distribution	No decline, or change in habitat distribution, subject to natural processes
Physical structure: sediment supply	Maintain/restore, natural circulation of sediments and organic matter, without any physical obstructions
Physical structure: creeks and pans	Maintain, or where necessary restore creek and pan structure, subject to natural processes, including erosion and succession
Physical structure: flooding regime	Maintain natural tidal regime
Vegetation structure: zonation	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
Vegetation structure: vegetation height	Maintain structural variation within sward

Attribute	Target
Vegetation structure: vegetation cove	Maintain more than 90% of area outside creeks vegetated
Vegetation composition: typical species and subcommunities	Maintain the range of species-poor communities with typical species listed in SMP (McCorry and Ryle, 2009)
Vegetation structure: negative indicator species - *Spartina anglica*	There is currently no common cordgrass (*Spartina anglica*) in this SAC. Prevent establishment of cordgrass

5.1.2.3.8 *[1330] Atlantic salt meadows (Glauco-Puccinellietalia maritimae)*

Description from SSCO document

According to the Site-Specific Conservation Objectives Document for Galway Bay Complex SAC (NPWS 2013), this QI habitat: Atlantic salt meadow was mapped (114.612ha) and additional areas of potential saltmarsh (149.18ha) were identified by an examination of aerial photographs, giving a total estimated area of 263.80ha. NB further unsurveyed areas maybe present within the site

The NPWS Article 17 (NPWS 2019) states the overall Status is assessed as Inadequate, due mainly to pressures from agriculture, including ecologically unsuitable grazing regimes and land reclamation, and the invasive non-native species common cordgrass (*Spartina anglica*). This assessment is unchanged since the 2013 report. However, the overall deteriorating trend represents a genuine decline since 2013 due to losses in area.

Targets and Attributes

Table 5-18 Targets and Attributes for [1330] Atlantic salt meadows (Glauco-Puccinellietalia maritimae)

Attribute	Target
Habitat area	Area increasing, subject to natural processes, including erosion and succession. For sub-sites mapped: Barna House - 2.33ha, Seaweed Point - 1.41ha, Roscam West and South - 3.30ha, Oranmore North - 4.24ha, Kilcaimin - 6.82ha, Tawin Island - 53.85ha, Tyrone HouseDunbulcaun Bay - 9.83ha, Kileenaran - 15.37ha, Kinvara West - 13.33ha, Scanlan's Island - 4.13ha.
Habitat distribution	No decline or change in habitat distribution, subject to natural processes
Physical structure: sediment supply	Maintain/restore natural circulation of sediments and organic matter, without any physical obstructions
Physical structure: creeks and pans	Maintain creek and pan structure, subject to natural processes, including erosion and succession
Physical structure: flooding regime	Maintain natural tidal regime
Vegetation structure: zonation	Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession

Attribute	Target
Vegetation structure: vegetation height	Maintain structural variation within sward
Vegetation structure: vegetation cover	Maintain more than 90% area outside creeks vegetated
Vegetation composition: typical species and subcommunities	Maintain range of subcommunities with typical species listed in SMP (McCorry and Ryle, 2009)
Vegetation structure: negative indicator species - *Spartina anglica*	There is currently no common cordgrass (*Spartina anglica*) in this SAC. Prevent establishment of cordgrass

5.1.2.3.9 *[1410] Mediterranean salt meadows (Juncetalia maritimi)*

Description from SSCO document

According to the Site-Specific Conservation Objectives Document for Galway Bay Complex SAC (NPWS 2013) states six sub-sites that support this QI habitat Mediterranean salt meadow were mapped (11.472ha) and additional areas of potential saltmarsh (8.415ha) were identified from an examination of aerial photographs, giving a total estimated area of 19.887ha. NB further unsurveyed areas maybe present within the site.

The NPWS Article 17 (NPWS 2019) states the Overall Status is assessed as Inadequate, mainly due to pressures associated with agriculture, including overgrazing, under grazing and land reclamation. This assessment is unchanged since the 2013 report. However, the overall deteriorating trend represents a genuine decline since 2013 due to losses in area.

Targets and Attributes

Table 5-19 Targets and Attributes [1410] Mediterranean salt meadows (Juncetalia maritimi)

Attribute	Target
Habitat area	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-sites mapped: Barna House - 0.282ha, Seaweed Point - 0.931ha, Kilcaimin - 0.005ha, Tawin Island - 1.799ha. Tyrone House- Dunbulcan Bay - 8.184ha, Kileenaran - 0.271ha
Habitat distribution	No decline, subject to natural processes
Physical structure: sediment supply	Maintain/restore natural circulation of sediments and organic matter, without any physical obstructions
Physical structure: creeks and pans	Maintain creek and pan structure, subject to natural processes, including erosion and succession
Physical structure: flooding regime	Maintain natural tidal regime
Vegetation structure: zonation	Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession

Attribute	Target
Vegetation structure: vegetation height	Maintain structural variation in the sward
Vegetation structure: vegetation cover	Maintain more than 90% of area outside creeks vegetated
Vegetation composition: typical species and subcommunities	Maintain range of subcommunities with typical species listed in SMP (McCorry and Ryle, 2009)
Vegetation structure: negative indicator species - *Spartina anglica*	There is currently no common cordgrass (*Spartina anglica*) in this SAC. Prevent establishment of cordgrass

5.1.3 Inner Galway Bay SPA [004031]

The potential for impacts on this SPA were identified in **Section 4.1** above. The identified pathways for effect include the following:

- Deterioration of water quality/ habitat quality resulting from pollution to surface waters during the construction phase, adversely impacting the supporting aquatic and Wetland habitats for SCI Species within the SPA, in the absence of mitigation

Table 5-20 below lists the qualifying features of this European Site and determines, in the light of their Conservation Objectives, whether there is any complete source-pathway-receptor chain, by which adverse effects may occur.

5.1.3.1 Identification of Individual Qualifying Features of Inner Galway Bay SPA with the Potential to be Affected

Table 5-20 Assessment of Special Conservation Interest (SCI) of Inner Galway Bay SPA potentially affected

Qualifying Feature	Conservation Objective (NPWS, Version 1, May 2013 were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
› [A003] Great Northern Diver (*Gavia immer*) › [A017] Cormorant (*Phalacrocorax Carbo*) › [A028] Grey Heron (*Ardea cinerea*) › [A046] Brent Goose (*Branta bernicla hrota)* › [A050] Wigeon *(Anas Penelope)* › [A052] Teal (*Anas crecca)* › [A056] Shoveler (*Anas clypeata)* › [A069] Red-breasted Merganser (*Mergus serrator*) › [A137] Ringed Plover (*Charadrius hiaticula*) › [A140] Golden Plover (*Pluvialis apricaria*) › [A142] Lapwing (*Vanellus vanellus)*	To maintain the favourable conservation condition of the SCO Species in Inner Galway Bay SPA	Woodquay Park is an urban amenity public park, with existing high levels of anthropogenic activity in the form of noise, and lighting. As such, the SCI Species associated with this SPA will be accustomed to high levels of anthropogenic activity. Further, the main habitats recorded within the proposed works boundary include Buildings and Artificial Surfaces (BL3), Amenity Grassland (Improved) (GA2), Treeline (WL2), and Hedgerow (WL1), all of which are common and widespread in the wider landscape. The proposed works boundary does not provide significant supporting habitat for any of the SCI Species associated with this SPA, and as such the loss of small areas of these habitats to facilitate the proposed works will not result in significant impact to the SCI species in the form of ex-situ habitat loss or disturbance/ displacement. Therefore, there is no potential for significant ex situ habitat loss, disturbance or displacement related impacts to any of the SCI species associated with Inner Galway Bay SPA. Any potential pathways for indirect effects identified in the form of deterioration of water quality and supporting wetland habitat within this SPA has been assessed below under Wetland and Waterbirds [A999]. **No complete source- pathway- receptor chain for any effect on these SCI species as a result of the proposed works was identified. No further assessment is required**	**N**

Qualifying Feature	Conservation Objective (NPWS, Version 1, May 2013 were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
› [A149] Dunlin (*Calidris alpina alpina)* › [A157] Bar-tailed Godwit (*Limosa lapponica*) › [A160] Curlew (*Numenius Arquata*) › [A162] Redshank (*Tringa totanus*) › [A169] Turnstone (*Arenaria interpres*) › [A179] Black-headed Gull (*Chroicocephalus ridibundus*) › [A182] Common Gull (*Larus canus)* › [A191] Sandwich Tern (*Sterna sandvicensis*) › [A193] Common Tern (*Sterna hirundo*)			
› [A999] Wetlands and Waterbirds	To maintain the favourable conservation condition of wetland habitat in Inner Galway Bay SPA as a resource for the regularly occurring migratory waterbirds that utilise it	The River Corrib (IE_WE_30C020600), which is designated as part of the Lough Corrib SAC, is located directly adjacent to the north of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows to south/ west of Woodquay Park, flowing in a southerly direction into Corrib Estuary (IE_WE_170_0700), which is designated as part of Inner Galway Bay SPA. Corrib Estuary flows in a southerly direction into Inner Galway Bay after approx 1.5km. Therefore, construction activities associated with the proposed works may result in excess sediment/ surface water run off entering this SPA, via the hydrological pathway as described above, adversely impacting the supporting aquatic and Wetland habitats for SCI Species within	**Y**

Qualifying Feature	Conservation Objective (NPWS, Version 1, May 2013 were reviewed as part of the assessment and are available at www.npws.ie	Rationale	Potential for Adverse Effects Y/N
		the SPA, via the deterioration of water and habitat quality, in the absence of mitigation. Further, due to the small nature and scale of the proposed works, there is no potential for the proposed works to result in groundwater pollution Following a precautionary principle, a potential pathway for indirect effects on the SCI waterbirds and supporting wetland habitat was identified in the form of deterioration of water quality and supporting wetland habitat for the listed SCI species. **A complete source-pathway-receptor chain for adverse effects on this habitat was identified and it is assessed further in this NIS**	

5.1.3.2 Site Specific Pressures and Threats for Inner Galway Bay SPA

As per the Natura 2000 Data Form, the site-specific threats, pressures and activities with potential to impact on Inner Galway Bay SPA were reviewed and considered in relation to the Proposed Works. These are provided in **Table 5.21 below**.

Table 5-21 Site-specific threats, pressures and activities for Inner Galway Bay SPA

Rank	Threats and Pressures
High	Discharges
	Reclamation of land from sea, estuary or marsh
	Urbanised areas, human habitation
Medium	Dykes, embankments, artificial beaches, general
	Fertilisation
	Industrial or commercial areas
	Leisure fishing
	Marine and Freshwater Aquaculture
	Nautical sports
	Roads, motorways
	Walking, horse-riding and non-motorised vehicles
Low	Grazing
	Hunting
Rank	**Activities, Management**
Medium	Leisure fishing
	Marine and Freshwater Aquaculture
	Nautical sports
	Roads, motorways
Low	Grazing
	Hunting

Potential pathways for effect with regard to site-specific threats, pressures and activities have been identified in relation to potential for '*Discharges' and Urbanised areas, human habitation'.*

5.1.3.3 Species Specific Information

5.1.3.3.1 *[A999] Wetlands*

Description from SSCO document

According to the Site-Specific Conservation Objective Document for Inner Galway Bay SPA (NPWS 2013), the wetland habitat area was estimated as 13,267ha using OSi data and relevant orthophotographs. The wetland habitats contained within Inner Galway Bay SPA are identified as of conservation importance for the regularly occurring migratory waterbirds that utilise it. Therefore, the wetland habitats are considered to be an additional Special Conservation Interest.

According to the Site Synopsis (NPWS 2019) for Inner Galway Bay SPA '*Inner Galway Bay SPA is a very large, marine-dominated site situated on the west coast of Ireland. The inner bay is protected from exposure to Atlantic swells by the Aran Islands and Black Head. Subsidiary bays and inlets (e.g. Poulnaclough, Aughinish and Kinvarra Bays) add texture to the patterns of water movement and sediment deposition, which lends variety to the marine habitats and communities. The terraced Carboniferous (Viséan) limestone platform of the Burren sweeps down to the shore and into the sublittoral. The long shoreline is noted for its diversity, and comprises complex mixtures of bedrock shore, shingle beach, sandy beach and fringing salt marshes. Intertidal sand and mud flats occur around much of the shoreline, with the largest areas being found on the sheltered eastern coast between Oranmore Bay and Kinvarra Bay. A number of small islands and rocky islets in the Bay are included within the site'*.

Targets and Attributes

Table 5-22 Targets and Attributes for [A999] Wetlands associated with Inner Galway Bay SPA.

Attribute	Target
Habitat area	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 13,267ha, other than that occurring from natural patterns of variation

5.2 Hydrological Desk Study

Woodquay Park is located in the Corrib Catchment (Catchment_ID_30) and Corrib Sub Catchment (Sub catchment Id: 30_18). The site is located within the Maam- Clonbur Groundwater Body, in an area of High Groundwater Vulnerability, as per EPA Maps. There are no mapped watercourses within the proposed works boundary.

The River Corrib (IE_WE_30C020600), which is designated as part of the Lough Corrib SAC, is located adjacent to the north of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows to south/ west of Woodquay Park, flowing in a southerly direction in Corrib Estuary (IE_WE_170_0700), which is designated as part of Galway Bay Complex SAC and Inner Galway Bay SPA.

As per the River Waterbody Water Framework Directive (WFD) Status 2016-2021 and 2013-2018, the River Corrib was assigned 'Good' status. According to the Transitional Waterbody Water Framework Directive (WFD) Status 2016-2021, Corrib Estuary was assigned 'Moderate' status. The Ground Waterbody Framework Directive (WFD) Status 2016-2021 was assigned a 'Good' overall status. Further, the River Waterbodies Risk Cycle 2 assigned the River Corrib 'Not at Risk'. The Transitional Waterbodies Risk Cycle 2 assigned the Corrib Estuary 'Not at Risk'. Finally, the Gound Waterbodies Risk Cycle 2 assigned the Maam- Clonbur GWB 'Not at Risk'.

The nearest downstream National Water Monitoring Station is the Salmon Weir Bridge- Galway River Station, located approx. 207southwest of Woodquay Park. The latest Q Value Score was '4- Good' for this point. The nearest upstream National Water Monitoring Station is the Corrib- Waterside- Galway River Station, located approx. 218m to the north of Woodquay Park.

5.2.1 Specific Ecological Surveys

5.2.1.1 Bat Survey

Methodology

The Bat Survey Methodology is detailed fully in the **Ecological Impact Assessment Report (EcIA)** submitted as part of this application and is summarised below.

An initial walkover survey was carried out on the 25/06/2023, during which potential features of interest were first identified, as part of the ecological assessment, a dedicated daytime bat inspection survey was undertaken during daylight hours on the 19/06/2024 by MKO.

A search for roosts was undertaken within the boundary of the Proposed Works site by three licenced ecologists on the 19/06/2024 to identify any potential roost features (PRFs). The aim of the survey was to determine the presence of roosting bats, potential access points, roosting locations and the need for further survey work or mitigation. No structures were identified within the site.

Trees present within the site were examined from ground level for the presence of rot holes, hazard beams, cracks and splits, partially detached bark, knot holes, gaps between overlapping branches and any other PRFs identified by Andrews (2018).

A Manual activity survey was undertaken on the 19/06/2024. Surveyors were equipped with active full spectrum bat detectors, the Batlogger M bat detector (Elekon AG, Lucerne, Switzerland) and all bat activity was recorded for subsequent analysis to confirm species identifications. Two Surveyors were positioned to the eastern treeline and one to the western treeline of Woodquay Park, to observe commuting and foraging bats and to identify any potentially important tree features used by local bat populations.

All recordings were later analysed using bat call analysis software Kaleidoscope Pro v.5.6.8 (Wildlife Acoustics, MA, USA).

Results

The Bat Survey Results are detailed fully in the **Ecological Impact Assessment Report (EcIA)** submitted as part of this application and is summarised below.

With regard to foraging and commuting bats, prior to the manual activity survey, the proposed works site was considered to be of '*Moderate to High'* suitability due to the presence of Treeline (WL2) and Hedgerows (WL1) to the eastern and western margins of Woodquay Park. Built and open areas, such as car parks, pathways and open grassland are considered of *Low* suitability; however, they are surrounded by linear habitats of treeline, and hedgerow and do not limit connectivity within the site. With regard to roosting bats, the Treeline (WL2) includes mature deciduous trees, none of which present roosting potential for any bat species.

In total, 1326 bat passes were recorded. Activity was dominated by Soprano pipistrelle (*Pipistrellus pygmaeus*) n=1028, followed by Common pipistrelle (*Pipistrellus pipistrellus*) n=110 and then Leisler's bat (*Nyctalus leisleri*) n=27. These species are common and widespread across Ireland. No bats were observed emerging or re-entering any trees during the survey. Activity levels were concentrated to the Treeline (WL2) habitats to the east and west of the site. [1303] Lesser Horseshoe Bat (*Rhinolophus hipposideros*) is a species listed as a Qualifying Feature (QI) for Lough Corrib SAC [000297], Ross Lake and Woods SAC [001312] and Lough Fingall Complex SAC [000606]. No Lesser Horseshoe Bats were recorded utilizing the proposed works site to commute or forage during the manual activity survey. Further, the proposed works site does not provide any suitable roosting habitat for this QI Species.

The results of the manual activity survey are detailed in **Table 5.23** below

Table 5-23 Manual Activity Survey Results

Date	Leiser's bat	Common pipistrelle	Soprano pipistrelle
19/06/2024	267	110	1028

6. ASSESSMENT OF POTENTIAL EFFECTS & ASSOCIATED MITIGATION

This section of the NIS assesses the potential effects of the proposed works on the identified relevant Qualifying Interests (QI's) and Special Conservation Interests (SCI's). This assessment is undertaken in the absence of any mitigation and in respect of the conservation objectives of the European Sites. The Conservation Objectives each of the European Sites assessed were reviewed on the 23/09/2024. The Conservation Objectives for these sites are available at the following locations:

- NPWS (2017) Conservation Objectives: Lough Corrib SAC 000297. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.
- NPWS (2013) Conservation Objectives: Galway Bay Complex SAC 000268. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2013) Conservation Objectives: Inner Galway Bay SPA 004031. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Following the initial impact assessment, mitigation is prescribed where necessary to avoid adverse effects on the Conservation Objectives of the relevant QIs/SCIs.

6.1 Potential for Direct Effects on the European Sites

The Proposed Works site lies entirely outside of the boundary of any European Site and as such there is no potential for direct effects on the Qualifying Interests (QI's) of Lough Corrib SAC or Galway Bay Complex SAC, or the Special Conservation Interests (SCI's) of Inner Galway Bay SPA.

There are no Annex I habitats within the Proposed Works site. Further, no QI habitats associated with Lough Corrib SAC, Galway Bay Complex SAC, or Inner Galway Bay SPA were identified on the site of the Proposed Works during any of the ecological surveys undertaken on the site by MKO in 2023 and 2024.

The main habitats recorded within the proposed works boundary include Buildings and Artificial Surfaces (BL3), Amenity Grassland (Improved) (GA2), Treeline (WL2), and Hedgerow (WL1).

Therefore, there is no potential for direct effects on any European Site as a result of the proposed development.

6.2 Potential for Indirect Effects on the European Sites

6.2.1 Deterioration of Water Quality During the Construction Phase

Following a precautionary approach, a potential pathway for indirect effects on the aquatic dependent Qualifying Interests (QIs) of Lough Corrib SAC, Galway Bay Complex SAC, and Special Conservation Interests (SCI's) of Inner Galway Bay SPA were identified in the form of deterioration of water quality/ habitat quality resulting from pollution to surface waters during the construction phase, adversely impacting the aquatic QI habitats and species, and supporting aquatic and Wetland habitats for SCI Species within the SPA, in the absence of mitigation

The River Corrib (IE_WE_30C020600), which is designated as part of the Lough Corrib SAC, is located directly adjacent to the north of Woodquay Park (ITM Co Ordinates: 529706, 725709). The River Corrib flows to the west of Woodquay Park, flowing in a southerly direction into Corrib Estuary (IE_WE_170_0700), which is designated as part of Galway Bay Complex SAC and Inner Galway Bay SPA. The Corrib Estuary flows in a southerly direction into Inner Galway Bay.

Therefore, construction activities associated with the proposed works may result in excess sediment/ surface water run off entering Lough Corrib SAC, Galway Bay Complex SAC, and Inner Galway Bay SPA, via the hydrological pathways described above, adversely impacting the aquatic influenced QI habitats and species within these SACs, and supporting aquatic and Wetland habitats for SCI within the SPA, via the deterioration of water quality, in the absence of mitigation.

As such, the following mitigation measures as detailed in the **Construction and Environmental Management Plan (CEMP**) submitted as part of this application have been incorporated into the design of the proposed works.

6.2.1.1 Preventative Measures to Avoid Impact on Water Quality During the Construction Phase

The mitigation measures described below in subsections **6.2.1.1.1.- 6.2.1.1.4,** ensure that the proposed works do not prevent or obstruct any of the Qualifying Interests (QIs) from reaching favourable conservation status as per Article 1 of the EU Habitats Directive, ensuring that the proposed development does not adversely affect the integrity of any Designated European sites.

Prior to the commencement of any construction activities, the necessary mitigation measures will be put in place to ensure that no silt laden water runoff generated at the site will flow to nearby watercourses; thus, ensuring the protection of surface water during the works. Surface waters will be managed to ensure the prevention of runoff from the site work areas. Stockpiling of soil during construction, should it be required, will take place in designated areas within the site boundary away from any watercourses or waterbodies.

Particular emphasis will also be placed on hazardous materials entering the surface water management system as well as spill or leaks of fuel oils. Section 4 provides an Emergency Response Plan for dealing with spillages which may result in adverse environmental effects.

Excavation works have the potential to encounter sub-surface and groundwater. If groundwater is encountered during excavations, waters will be pumped from excavation and discharged through a pipe with a silt bag attached onto an area of overland vegetation within the site boundary.

6.2.1.1.1 Prevention Pollution Control Measures

The Proposed Development site does not contain any mapped watercourses, and no watercourses were identified within the site boundary during site visits. However, the River Corrib, which is designated as part of the Lough Corrib SAC, is located directly adjacent to northern margin of the Proposed Development boundary. The following measures will be put in place to prevent the transportation of silt laden water or pollutants from entering the wider environment.

- Prior to the commencement of earthworks, silt fencing will be erected around the northern boundary of the Proposed Development site, along the River Corrib. This will be embedded into the ground adjacent to the perimeter boundary. The silt fences will be left in place throughout construction until all exposed soil has revegetated.
- The appointed contactor will be fully briefed by an ecologist as to the sensitive nature of the site (i.e., proximity to the River Corrib and Lough Corrib SAC), and the required mitigation measures.
- The majority of excavated spoil will be transported off-site for appropriate treatment or disposal. Some spoil may be retained onsite for infilling and landscaping. Stockpiles will be covered in polyethylene sheeting and if required, surrounded by a layer of silt fencing.
- All excavated material which is not required for future landscaping works or for backfill of excavations will be removed to an authorised waste recovery facility. This will also apply to material which is not suitable for reuse on site.
- Earthworks will not take place during periods of high rainfall to reduce runoff and potential siltation of watercourses. 'High rainfall' is defined as follows:
- >10 mm/hr (i.e. high intensity local rainfall events); or
- >25 mm in a 24-hour period (heavy frontal rainfall lasting most of the day); or,
- Rainfall total greater than monthly average recorded in 7 consecutive days (prolonged heavy rainfall over a week).
- If ground water is encountered during excavations, water will be pumped from the excavation and discharged through a pipe with a silt bag attached onto an area of overland vegetation within the site boundary.
- Good construction practices will be implemented at the site. This will ensure minimal risk. The Construction Industry Research and Information Association (CIRIA) provide guidance on the control and management of water pollution from construction sites, *Control of Water Pollution from Construction Sites, guidance for consultants and contractors* (CIRlA, 2001), which provides information on these issues. This will ensure that surface water arising during the course of construction activities will contain minimum sediment.

6.2.1.1.2 Cement Based Product Control Measures

The following mitigation measures are proposed to avoid release of cement leachate from the site:

- No batching of wet-cement products will occur on site.
- Ready-mixed supply of wet concrete products and where possible, emplacement of pre-cast elements will take place.
- Where possible, pre-cast elements for concrete works will be used.
- No washing out of any plant used in concrete transport or concreting operations will be allowed on-site.
- Where concrete is delivered on site, only chute cleaning will be permitted, using the smallest volume of water possible.
- No discharge of cement contaminated waters to any watercourse will be allowed.
- Use weather forecasting to plan dry days for pouring concrete.
- Ensure pour site is free of standing water and plastic covers will be ready in case of sudden rainfall event.

6.2.1.1.3 Refuelling, Fuel and Hazardous Materials Storage

The following measures are proposed to avoid release of hydrocarbons at the site:

- Storage/refuelling will be located in and carried out in a designated area of the construction site, located a suitable distance from excavation works. This area should be underlain by impermeable hard standing, and tanks should be inspected for leaks regularly. Spill kits should be supplied at these stations and staff should be trained in their use and in spill control. Drainage from these areas shall be diverted for collection and not discharged into waterbodies or municipal drains without treatment and other best management practices.
- Fuels, lubricants and hydraulic fluids for equipment used on the site will be carefully handled to avoid spillage, properly secured against unauthorised access or vandalism, and provided with spill containment.
- Minimal refuelling or maintenance of construction vehicles or plant will take place on site.
- Onsite refuelling will take place by direct refuelling from the delivery truck or from fuel stored within a bunded fuel tank. Mobile measures such as drip trays and fuel absorbent mats will be used during all refuelling operations.
- Vehicles will never be left unattended during refuelling. Only dedicated trained and competent personnel will carry out refuelling operations and plant refuelling procedures shall be detailed in the contractor's method statements.
- The small volume of fuels, lubricants and hydraulic fluids that will be stored at the site will be placed within an appropriately bunded storage area within the boundaries of the Proposed Development site.
- Storage bunds/trays, if required will be constructed of an impermeable membrane (High density polyethylene (HDPC) Plastic) and will have the adequate capacity to contain the volume of the liquids contained therein, if a leak/spillage does occur from one of the storage vessels.
- All site plant will be inspected at the beginning of each day prior to use. Defective plant shall not be used until the defect is satisfactorily fixed. All major repair and maintenance operations will take place off site.
- Potential impacts caused by spillage etc. during the construction phase will be reduced by keeping spill kits and other appropriate equipment on-site.
- Spill kits will be used to deal with any accidental spillage in and outside the refuelling area.

6.2.1.1.4 Dust Control

Construction dust can be generated from many on-site activities such as soil stripping and backfilling. The extent of dust generation will depend on the type of activity undertaken, the location, the nature of the dust, i.e., soil, sand, etc and the weather. In addition, dust dispersion is influenced by external factors such as wind speed and direction and/or, periods of dry weather. Construction traffic movements also have the potential to generate dust as they travel along the public road. The measures below will also prevent construction debris arising on the public road network.
Proposed measures to control dust include:

- The designated public roads outside the site and along the main transport routes to the site will be regularly inspected by Site Management for cleanliness and cleaned as necessary.
- Material handling systems and material storage areas, if required will be designed and laid out to minimise exposure to wind.
- Water misting will be utilised on-site as required to mitigate dust in dry weather conditions, if required.

- The transport of soils, aggregates or other material, which has the potential to generate dust, will be undertaken in tarpaulin-covered vehicles where necessary.
- Daily inspection of construction sites to examine dust measures and their effectiveness.
- All construction related traffic will have speed restrictions on un-surfaced areas within the site to 15 km/h.

6.2.1.2 Operational Phase Control Measures and Assessment

The proposed works will result in the generation of additional surface water. However, due to the project design, described fully in **Section 2.2 of this report,** there is no potential for deterioration of water quality during the operational phase of the proposed works.

6.2.2 Ex- Situ Disturbance and Displacement Related Impacts to Otter During the Construction Phase

During the ecological surveys conducted by MKO on the 25/06/2023 and 19/06/2024, no signs of Otters were recorded along the section of the River Corrib, located directly adjacent to the northern margin of Woodquay Park (ITM Co Ordinates: 529706, 725709) or within Woodquay Park However, taking a precautionary approach, the River Corrib, Corrib Estuary and Inner Galway Bay may provide ex-situ supporting foraging, commuting and breeding habitat for the aquatic QI Species: Otters (*Lutra lutra*) associated with Lough Corrib SAC and Galway Bay Complex SAC. As such, a potential pathway for effect to this aquatic QI Species was identified in the form of ex-situ disturbance and displacement during the construction phase of the proposed works, in the absence of mitigation.

Otters are crepuscular in nature and are unlikely to be adversely impacted by the proposed works. The NPWS Threat Response Plan for Otter acknowledges that "Little evidence has come to light in recent studies to suggest that disturbance by recreation is a significant pressure." It also identifies that Otter are known to travel significant distances from streams and lakes in search of new territory and feeding areas.

Channin P. (2003) provides a literary review with regard to anthropogenic disturbance and refers to several reports which have found that disturbance is not detrimental to Otters (Jefferies (1987), (Durbin 1993), (Green & Green 1997). The report also describes successful breeding in towns, under ferry terminals and under the jetties of one of Europe's largest oil and gas terminals at Sullom Voe in North Scotland.

Irish Wildlife Manual No. 23 (National Otter Survey of Ireland 2004/2005) found no significant relationship between disturbance and otter occurrence. In addition, no significant difference in otter presence was found between sites with and without recreational activity. It also states, "the lowest percentage occurrence was found at the sites with the lowest recorded disturbance!"

Irish Wildlife Manual No. 76 (National Otter Survey of Ireland 2010/2012) notes that the occurrence of Otter was unaffected by perceived levels of disturbance at the survey sites. It also notes that there is little published evidence demonstrating any consistent relationship between Otter occurrence and human disturbance (Mason & Macdonald 1986, Delibes et al. 1991; Bailey &Rochford, 2006).

Based on the above review of scientific literature, given that no other evidence of Otters was recorded during the ecological surveys conducted by MKO on the 25/06/2023 and 19/06/2024 and based on the implementation of the best practice disturbance limitation measures to reduce noise and vibration during construction, as set out in the **Construction and Environmental Management Plan (CEMP)** submitted as part of this application, there is no potential for adverse impact on the integrity of the otter population associated with Lough Corrib SAC and Galway Bay Complex SAC as a result of the proposed works.

6.2.2.1 Noise & Vibration Control Mitigation Measures to Reduce Disturbance to Otters

The following mitigation measures to limit noise and vibration disturbance during the construction phase of the proposed works is set out in the **Construction and Environmental Management Plan (CEMP)** prepared by MKO submitted as part of this application.

6.2.2.1.1 *Noise Control*

The operation of plant and machinery, including construction vehicles, is a source of potential noise impacts. Construction phase noise is typically assessed in light of guidance set out in British Standard BS 5228-1:2009+A1:2014 *Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 1: Noise* (2014), as well as the National Roads Authority (NRA) (now TII) document *Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes* (NRA 2014). Although the NRA document is not directly relevant to the Proposed Development, it has seen increasing application to non-road projects in recent years in the absence of any specific Irish guidance.
Proposed measures to control noise include:

- All plant will be maintained in satisfactory condition, and in accordance with manufacturer requirements. Maintenance and lubrication of bearings and other moving parts will be undertaken as specified by the manufacturer.
- Exhaust and silencer systems on plant will be maintained in a satisfactory condition and operating correctly at all times. Defective silencers will be immediately replaced.
- Plant and machinery with low inherent potential for generation of noise and/or vibration will be selected.
- Where practical, separation distances to receptors will be maximised through appropriate on-site positioning of plant.
- The requirement to house continuously operating plant in sound-attenuating enclosures or casings will be assessed on-site.
- Equipment not in active use will be shut down.
- Use of horns will be prohibited on-site. Communication between operators (e.g. between excavator and dumper operators) will be by visual methods only.
- Training will be provided by the Site Management to drivers to ensure smooth machinery operation/driving, and to minimise unnecessary noise generation. Heavy Goods Vehicle (HGV) drivers will be instructed to extend care and courtesy to other road users, and to avoid unnecessary revving of engines.
- Offsite queuing of HGVs will be prohibited.
- All construction plant used on-site will be required to comply with maximum sound power levels set out in Directive 2000/14/EC of the European Parliament and of the Council of 8 May 2000 on the approximation of the laws of the Member States relating to the noise emission in the environment by equipment for use outdoors, implemented in Ireland by the European Communities (Noise Emission by Equipment For Use Outdoors) Regulations, 2001 (S.I. 632 of 2001), as amended by the European Communities (Noise Emission by Equipment for Use Outdoors) (Amendment) Regulations, 2006 (S.I. 241 of 2006).

The hours of working should be planned, and account should be taken of the effects of noise upon persons in areas surrounding site operations and upon persons working on site, taking into account the nature of land use in the areas concerned, the duration of work and the likely consequence of any lengthening of work periods.
The proposed construction working hours will be 08:00 to 18:00 Monday to Friday and 09.00 to 13.00hrs on Saturday. Construction will not take place at the site on Sundays or Public Holidays.

6.2.2.1.2 Vibration Control

Vibration standards can be considered in two varieties: those dealing with human comfort and those dealing with cosmetic or structural damage to buildings. For example, vibration is perceptible at around 0.5 mm/s in the case of road traffic, however at higher magnitudes, this vibration may become an annoyance. Guidance relevant to the protection of building structures is contained in the following documents:

- British Standard BS 7385: 1993: *Evaluation and Measurement for Vibration in Buildings Part 2: Guide to Damage Levels from Ground Borne Vibration.*
- British Standard BS 5228: 2009+A1 2014: *Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 2: Vibration.*

Vibration can be more difficult to control than noise, and there are few generalisations which can be made about its control. It should be borne in mind that vibration can cause disturbance by causing structures to vibrate and radiate noise in addition to perceptible movement. The following mitigation measures will be implemented at the site during the construction phase to control vibration levels:

- The hours of working should be planned, and account should be taken of the effects of vibration upon persons in areas surrounding site operations and upon persons working on site, taking into account the nature of land use in the areas concerned and the duration of work.
- Where reasonably practicable, low vibration working methods should be employed. Consideration should be given to use of the most suitable plant, reasonable hours of working for operations which might give rise to perceptible vibrations, and economy and speed of operations.
- Vibration should be controlled at source and the spread of vibration should be limited.
- Where reasonably practicable, plant and/or methods of work causing significant levels of vibration at sensitive premises should be replaced by other less intrusive plant and/or methods of working.
- Where processes could potentially give rise to significant levels of vibration, on-site vibration levels should be monitored regularly by a suitably qualified person appointed specifically for the purpose, particularly if changes in machinery or project designs are introduced. A method of vibration measurement should be agreed prior to commencement of site works.
- On those parts of a site where high levels of vibration are likely to be a hazard to persons working on the site, prominent warning notices should be displayed.
- Equipment is to be task specific.
- Best practice vibration control measures will be employed by the contractor.
- A designated member of staff will be appointed as the point of contact for any queries or complaints from nearby local residents.

7. ASSESSMENT OF RESIDUAL ADVERSE EFFECTS

The potential for residual adverse effects on each of the individual relevant Qualifying Features of the Screened in European Sites following the implementation of mitigation, is assessed in this section of the report.

Based on the above, in view of best scientific knowledge, on the basis of objective information, there is no potential for adverse effect on the identified QIs/SCIs and their associated targets and attributes, or on any European Site Potential pathways for effect have been robustly blocked through measures to avoid impacts and the incorporation of best practice/mitigation measures into the project design.

Taking cognisance of measures to avoid impacts and best practice/mitigation measures incorporated into the project design which are considered in the preceding section, the Proposed project will not have an adverse effect on the integrity of any European Site.

The proposed project will not prevent the QIs/SCIs of European Sites from achieving/maintaining favourable conservation status in the future as defined in Article 1 of the EU Habitats Directive. A definition of Favourable Conservation Status is provided below:

> *'Conservation status of a species means the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within the territory referred to in Article 2; The conservation status will be taken as 'favourable' 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.'

Based on the above, it can be concluded in view of best scientific knowledge, on the basis of objective information that the Proposed project will not adversely affect the Qualifying Interests/Special Conservation Interests associated with any European Site.

8. ASSESSMENT OF CUMULATIVE EFFECTS

A search and review in relation to plans and projects that may have the potential to result in cumulative and/or in-combination impacts on European Sites was conducted. This assessment focuses on the potential for cumulative in-combination effects on the European Sites where potential for adverse effects was identified in **Section 4** of this report. This included a review of online Planning Registers, development plans and other available information and served to identify past and future plans and projects, their activities and their predicted environmental effects. A list of the plans and projects considered is provided in **Appendix 1** of this NIS.

Assessment material for this in-combination impact assessment was compiled on the relevant developments within the vicinity of the Proposed Development and was verified on the 26/09/2024 The material was gathered through a search of relevant online Planning Registers, reviews of relevant documents, planning application details and planning drawings, and served to identify past and future projects, their activities and their environmental impacts. All relevant projects were considered in relation to the potential for in-combination effects. All relevant data was reviewed (e.g. individual EISs/EIARs, layouts, drawings etc.) for all relevant projects where available. The plans and projects considered include those listed in **Appendix 1.** These consisted mainly of small to medium scale domestic, residential, and public developments.

The dominant land uses in the area were also considered in the assessment, these included residential, and urban developments, and urban amenity.

Following the detailed assessment provided in the preceding sections, it is concluded that, the proposed development will not result in any residual adverse effects on any of the European Sites, their integrity or their conservation objectives when considered on its own. There is therefore no potential for the proposed development to contribute to any cumulative adverse effects on any European Site when considered in-combination with other plans and projects.

In the review of the projects that was undertaken, no connection, that could potentially result in additional or cumulative impacts was identified. Neither was any potential for different (new) impacts resulting from the combination of the various projects and plans in association with the proposed development.

Taking into consideration the reported residual impacts from other plans and projects in the area and the predicted impacts with the current proposal, no residual cumulative impacts have been identified with regard to any European Site.

9. CONCLUDING STATEMENT

This NIS has provided an assessment of all potential direct or indirect adverse effects on European Sites.

Where the potential for any adverse effect on any European Site has been identified, the pathway by which any such effect may occur has been robustly blocked through the use of avoidance, appropriate design and mitigation measures as set out within this report and its appendices. The measures ensure that the construction and operation of the proposed development does not adversely affect the integrity of European sites.

Therefore, it can be objectively concluded that the Proposed Development, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site.

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APPENDIX 1

CUMULATIVE IMPACT ASSESSMNET- PLANS AND PROJECTS

1. ASSESSMENT OF CUMULATIVE EFFECTS

A search and review in relation to plans and projects that may have the potential to result in cumulative and/or in-combination impacts on European Sites was conducted. This assessment focuses on the potential for cumulative in-combination effects on the European Sites considered in **Table 4.1.** This included a review of online Planning Registers, development plans and other available information and served to identify past and future plans and projects, their activities and their predicted environmental effects.

1.1 Plans

The following development plans have been reviewed and taken into consideration as part of this assessment:

- Galway County Council Development Plan 2022-2028
- Ireland's 4th National Biodiversity Action Plan 2024-2030

The review focused on policies and objectives that relate to Natura 2000 sites and natural heritage.

Table 1-1 Review of plans

Plans	Key Policies/Issues/Objectives Directly Related to European Sites in The Zone of Influence	Assessment of Potential Effects on European Sites
Galway County Council Development Plan 2022-2028	**NHB 1 Natural Heritage and Biodiversity of Designated Sites, Habitats and Species** Protect and where possible enhance the natural heritage sites designated under EU Legislation and National Legislation (Habitats Directive, Birds Directive, European Communities (Birds and Natural Habitats) Regulations 2011 and Wildlife Acts) and extend to any additions or alterations to sites that may occur during the lifetime of this plan. Protect and, where possible, enhance the plant and animal species and their habitats that have been identified under European legislation (Habitats and Birds Directive) and protected under national Legislation (European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011), Wildlife Acts 1976-2010 and the Flora Protection Order (SI 94 of 1999). Support the protection, conservation and enhancement of natural heritage and biodiversity, including the protection of the integrity of European sites, that form part of the Natura 2000 network, the protection of Natural Heritage Areas, proposed Natural Heritage Areas, Ramsar Sites, Nature Reserves, Wild Fowl Sanctuaries (and other designated sites including any future designations) and the promotion of the development of a green/ ecological network. **NHB 2 European Sites and Appropriate Assessment** To implement Article 6 of the Habitats Directive and to ensure that Appropriate Assessment is carried out in relation to works, plans and projects likely to impact on European sites (SACs and SPAs), whether directly or indirectly or in combination with any other plan(s) or project(s). All assessments must be in compliance with the European Communities (Birds and Natural Habitats) Regulations 2011. All such projects and plans will also be required to comply with statutory Environmental Impact Assessment requirements where relevant. **NHB 3 Protection of European Sites** No plans, programmes, or projects etc. 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.* **NHB 4 Ecological Appraisal of Biodiversity** Ensure, where appropriate, the protection and conservation of areas, sites, species and ecological/networks of biodiversity value outside designated sites. Where appropriate require an ecological appraisal, for development not directly connected with or necessary to the management of European Sites, or a proposed European Site and which are likely to have significant effects on that site either individually or cumulatively.	The Development plan was comprehensively reviewed, with particular reference to Policies and Objectives that relate to the Natura 2000 network and other natural heritage interests. No potential for cumulative impacts when considered in conjunction with the current proposal were identified. There will be no impact on designated sites or biodiversity as a result of the Proposed Works.

	NHB 5 Ecological Connectivity and Corridors Support the protection and enhancement of biodiversity and ecological connectivity in non-designated sites, including woodlands, trees, hedgerows, semi-natural grasslands, rivers, streams, natural springs, wetlands, stonewalls, geological and geo-morphological systems, other landscape features and associated wildlife areas where these form part of the ecological network and/or may be considered as ecological corridors in the context of Article 10 of the Habitats Directive. **NHB 6 Implementation of Plans and Strategies** Support the implementation of any relevant recommendations contained in the National Heritage Plan 2030, the National Biodiversity Plan, the All-Ireland Pollinator Plan and the National Peatlands Strategy and any such plans and strategies during the lifetime of this plan. **NHB 7 Mitigation Measures** Require mitigating measures in certain cases where it is evident that biodiversity is likely to be affected. These measures may, in association with other specified requirements, include establishment of wildlife areas/corridors/parks, hedgerow, tree planting, wildflower meadows/marshes and other areas. With regard to residential development, in certain cases, these measures may be carried out in conjunction with the provision of open space and/or play areas. **NHB 8 Increased Awareness of the County's Biodiversity and Natural Heritage** Facilitate increased awareness of the County's biodiversity and natural heritage through the provision of information to landowners and the community generally, in cooperation with statutory and other partners. NHB 9 Protection of Bats and Bats Habitats Seek to protect bats and their roosts, their feeding areas, flight paths and commuting routes. Ensure that development proposals in areas which are potentially important for bats, including areas of woodland, linear features such as hedgerows, stonewalls, watercourses and associated riparian vegetation which may provide migratory/foraging uses shall be subject to suitable assessment for potential impacts on bats. This will include an assessment of the cumulative loss of habitat or the impact on bat populations and activity in the area and may include a specific bat survey. Assessments shall be carried out by a suitably qualified professional and where development is likely to result in significant adverse effects on bat populations or activity in the area, development will be prohibited or require mitigation and/or compensatory measures, as appropriate. The impact of lighting on bats and their roosts and the lighting up of objects of cultural heritage must be adequately assessed in relation to new developments and the upgrading of existing lighting systems. **WR 1 Water Resources** Protect the water resources in the plan area, including rivers, streams, lakes, wetlands, springs, turloughs, surface water and groundwater quality, as well as surface waters, aquatic and wetland habitats and freshwater	

	and water dependant species in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended), the River Basin District Management Plan 2018 – 2021 and other relevant EU Directives, including associated national legislation and policy guidance (including any superseding versions of same) and also have regard to the Freshwater Pearl Mussel Sub-Basin Management Plans. **TWHS 1 Trees, Hedgerows, Natural Boundaries and Stone Walls** Protect and seek to retain important trees, tree clusters and tree boundaries, ancient woodland, natural boundaries including stonewalls, existing hedgerows particularly species rich roadside and townland boundary hedgerows, where possible and replace with a boundary type similar to the existing boundary. Ensure that new development proposals take cognisance of significant trees/tree stands and that all planting schemes developed are suitable for the specific site and use suitable native variety of trees of Irish provenance and hedgerows of native species. Seek Tree Management Plans to ensure that trees are adequately protected during development and incorporated into the design of new developments.	

Ireland's 4th National Biodiversity Action Plan 2024-2030	**Objective 1: Adopt a Whole-of Government, Whole of-Society Approach to Biodiversity.** Proposed actions include capacity and resource reviews across Government; determining responsibilities for the expanding biodiversity agenda providing support for communities, citizen scientists and business; and mechanisms for the governance and review of this National Biodiversity Action Plan. **Objective 2: Meet Urgent Conservation and Restoration Needs. Supporting actions will build on existing conservation measures.** Efforts to tackle Invasive Alien Species will be elevated. The protected area network will be expanded to include the Marine Protected Areas. The ambition of the EU Biodiversity Strategy will be considered as part of an evolving work programme across Government. **Objective 3: Secure Nature's Contribution to People. Actions highlight the relationship between nature and people in Ireland.** These include recognising the tangible and intangible values of biodiversity, promoting nature's importance to our culture and heritage, and recognising how biodiversity supports our society and our economy. **Objective 4: Enhance the Evidence Base for Action on Biodiversity.** This objective focuses on biodiversity research needs, as well as the development and strengthening of long-term monitoring programmes that will underpin and strengthen future decision-making. Action will also focus on collaboration to advance ecosystem accounting that will contribute towards natural capital accounts. **Objective 5: Strengthen Ireland's Contribution to International Biodiversity Initiatives.** Collaboration with other countries and across the island of Ireland will play a key role in the realisation of this Objective. Ireland will strengthen its contribution to international biodiversity initiatives and international governance processes, such as the United Nations Convention on Biological Diversity	The Development plan was comprehensively reviewed, with particular reference to Policies and Objectives that relate to the Natura 2000 network and other natural heritage interests. No potential for cumulative impacts when considered in conjunction with the current proposal were identified. There will be no impact on designated sites or biodiversity as a result of the Proposed Works

1.2 Other Projects

Assessment material for this in-combination impact assessment was compiled on the relevant developments within the vicinity of the Proposed Works and was verified on the 26/09/2024. The material was gathered through a search of relevant online Planning Registers, reviews of relevant documents, planning application details and planning drawings, and served to identify past and future projects, their activities, and their environmental impacts. All relevant projects were considered in relation to the potential for in-combination effects. All relevant data was reviewed (e.g., individual EISs/EIARs, layouts, drawings etc.) for all relevant projects where available. These consisted mainly of small-scale domestic developments and upgrades.

- Permission for development which will consist of construction of a vehicle entrance to the back of site accessing from The Plots Road. (Planning Ref:21334).
- Permission for development which consists of construct a single storey extension to the back of existing dwelling house. (Planning Ref: 2360062).
- Permission for alterations and extension to existing house to include retention of existing two storey extension to rear, relocation of front door, demolition and reconstruction of existing sunroom, single storey extension to rear, re-positioning and enlargement of access gate at rear of property and all associated site works and services. (Planning Ref: 1732).
- Permission for retention which will consist of retention of demolition to rear wall of house and existing rear extension. Construction of new rear single and two storey extension. Modifications to existing house and all associated site works to house. (Planning Ref: 2267).
- Permission for retention which will consist of retention of first floor level rear extension. (Planning Ref:2266).
- Retention is sought for (1) single storey extension to the rear and renovations to existing dwelling house (2) renovations to old shed to rear of the house, along with all associated works. (Planning Ref: 19229).
- Permission for development which will consist of the subdivision of the existing ground floor retail area into two separate retail units of approximately 863sqm and 217sqm to include an approximate 17sqm rear extension, and alteration to western façade. There is a protected structure on site in the form of an inscribed stone (RPS Ref No. 7202). (Planning Ref: 20290).
- Permission for development which will consist of a change of use of the former Carbon Nightclub to provide for a licenced premise and restaurant. The development will consist of demolition and refurbishment works at ground floor level including the front elevation at Eglinton Street. and extension to first floor level to include a roof terrace, customer toilets and staff facilities. The works include internal modifications to provide for public house and restaurant uses; the modifications to existing beer garden area at ground floor level; the provision of a roof terrace/outdoor beer garden at first floor level; all associated landscaping, boundary treatments and all other ancillary site development works necessary to facilitate the development on site. (Planning Ref: 22206).
- Permission for development which will consist of new shop front on to Eglinton Street retention of rear emergency escape stairs and smoking area and the provision of a new external smoking area at ground floor level. (Planning Ref: 17229).
- Permission at the former Connacht Tribune site (part of a protected structure) consisting of change of use of former printworks, paper store and associated areas to indoor licenced food hall/market and dining space, with associated ancillary outdoor space/use with ancillary use as an occasional event space, along with all associated and ancillary works and development. (Planning Ref: 18337).
- Permission is sought for the development which will consist of Change of Use of Paper Store (ground and first floor level) area to Co-Working Office Space use; Reconfiguration of internal layout of existing two storey office area as a Co-Working Office Space; Partial demolition of two storey projection to rear and side, and replacement with new enlarged projection over four floors; Construction of additional (second floor) flat roofed floor above part of the existing two storey building; Construction of roof garden/deck area above part of second floor area; Alteration of front and side elevations including replacement façade along Market Street; Installation of external plant and equipment, revised boundary treatments, hard and soft landscaping, cycle parking, signage and branding, connections to services and utilities; Consequential superseding of Reg. Ref: 18/337 relating to provision of a Food Market, insofar as it relates to the ground level Paper Store, and associated and ancillary revisions to

northern and southern laneway serving the printworks/permitted Food Market area; and All associated and ancillary work and development above and below ground level. All part of a protected structure. (Planning Ref: 20108).

- Permission for development which will consist of: (a) demolition and replacement of existing single storey storage building (23m2) with new purpose built single storey building including infill of the space between the existing building and the building to be demolished (9m2) all to match existing at rear of AIB bank and (b) internal modifications and non-structural remodelling of the banking hall adjacent to but not including the Lynch's Castle structure (a protected structure - Ref No. 9313). (Planning Ref: 22150).
- Permission for development which will consist of the change of use of existing two storey warehouse to co-working office space use, associated two storey extension, demolition of existing arched concrete gateway, internal reconfiguration, alteration of elevations, roof replacement (and removal of chimney), installation of external plant and equipment, revised boundary treatments, hard and soft landscaping, cycle parking, signage and branding, connections to services and utilities, creation of pedestrian and cycle access to Market Street (through Market Street car park, a protected structure), and all associated and ancillary works and development above and below ground level. (Planning Ref: 2089).
- Planning permission for the development will consist of(Protected Structure RPS Ref 3801) (1) Amendments to the ground floor layout including reconfiguration of the bathrooms and creation of a fire escape corridor, (2) Alterations to the existing fenestration and conversion of a window into a doorway at ground floor level on the south-western elevations, (3) Alterations to the layout at fourth floor level including the insertion of alternative fire escape corridor, (4) Change of use at 5th floor from an existing leisure centre to 13 no. bedrooms. (5) The construction of an additional 6th floor containing 6 no. bedrooms, fire escape corridor, and plant areas and (6) All other associated site development and servicing works. (Planning Ref:19221).
- Permission for development which will consist of 1) internal alterations/revisions to amalgamate Forster Court Hotel & the adjoining building formally known as 'Aras Failte Tourist Information Office' at basement, ground and first floor levels 2) Change of use of the adjoining building formally known as 'Aras Failte Tourist Information Office' from Tourist information centre including ancillary offices and retail space to a Hotel / Conference centre. Changes to include - a) 11 no. hotel sites at first floor level, b) Alterations at ground floor level to facilitate the enlargement of the existing Forster Court Hotel restaurant bar area and new conference centre reception with ancillary refreshment area, meeting room & toilet facilities, c) New stairs & lift to conference centre at basement level to include conference/function room(s), meeting rooms, kitchen, and toilets. 3) Associated external signage, together with all associated site works. (Planning Ref: 2112).
- Permission for development which will consist of 1. Construct a new porch to front elevation of terrace house (3.02m2) 2. Demolish the existing rear extension (2.93m2) 3. Construct a new extension to ground floor and first floor levels to rear of dwelling (81.95m2) 4. And all associated site works. (Planning Ref: 21366).
- Permission for development which consists of minor amendments to previously approved development (PL 20/184, ABP-309673-21). The proposed amendments consist of the following: - Relocation of internal bin store to standalone external store to rear of the building. - Minor modifications to building footprint, elevations, landscaping, external surface treatments and site boundary treatments, - Minor modification and increased provision of bicycle parking, - Removal of previously granted mezzanine area between ground and second level, - Repositioning of firefighting emergency generator at ground level - Minor adjustments to Retail Units 1, 2, 3 and 4 with change of previous first floor of retail unit 1 to an office area with standalone entrance at street level. - Minor adjustments to student accommodation entrance. - Conversion of previously approved second floor gym to student accommodation communal areas - Minor amendments to second floor roof garden layout , - Minor amendments to second, third, fourth, fifth and sixth floor layouts to increase total number of bed spaces from 223 (68 units) to 272 bed spaces (69 units) - Minor amendments to plantroom at roof level (increased area by 7.2sqm) - Permission for proposed mechanical and electrical external plant concealed behind acoustic louvres at roof levels. (Planning Ref: 22259).
- Permission for development which consists of: - Partial amalgamation of the existing licensed discount food store (Unit 1) and adjoining retail unit (Unit 2) on the ground floor and associated change of use of extended Unit 1 area to convenience retail. Amended floor areas as follows: Increase in Unit 1 floor area by 618m2 to provide a gross floor area of 1832m2 and Decrease in Unit 2 floor area by584m2 to

provide a gross floor area by 629m2. Demolition of existing Unit 1 Entrance Pod (20 sq.m). Relocation of existing permitted signage on the front elevation. Provision of freestanding trolley bay. Alterations to external fenestration of Unit's 1 & 2. Reconfiguration and realignment of existing carpark. Relocation of the existing Unit 1 store entrance; and All associated site development works. (Planning Ref: 23248).

- Permission for development which will consist of: Provision of 73 sq.m (gross) single storey extension to south-eastern façade of existing building. Provision of trolley bay and associated amendments to car parking layout. Provision of pedestrian crossing. Provision of 3 no. internally illuminated 3.02 sq.m gable signs and provision of 1 no. non illuminated 1.78 sq.m glass entrance sign. External amendments to façade of building and alterations to internal layout. (Planning Ref: 21205).
- Permission for development which consists of development in the curtilage of the Quadrangle Building, University of Galway Campus, University Road, Galway. The development will consist of a university accessible footpath along the front façade (east side) of the Quadrangle Building and a universally accessible footpath in College Park, also on the east side of the Quadrangle Building running north south and linking up with existing foothpaths on campus. The Quadrangle Building is a protected structure Ref. no. 10303. (Planning Ref: 23247).
- Permission for development which consists of alterations to a previously granted two storey convent development (Pl. Ref: 21/238) to include the construction of a new internal boundary wall, railings and gates and associated site works including internal road and path alterations located at the Presentation Convent a Protected Structure (Galway City Council Ref. No. 7702) and in proximity to St. Joseph's Church a Protected Structure (Galway City Council Ref No. 7701), the Presentation National School a Protected Structure (Galway City Council Ref. No. 7703) and the Rivers & Waterways a Protected Structure (Galway City Council Ref. No. 8501). (Planning Ref: 2360031).
- Permission for development which consists of the demolition of 5 no. existing buildings on the proposed site, including No. 14 Distillery Road, Block T, the Storage Facility, the former Pharmacology building and the adjacent car parking area together with associated boundary walls and ancillary structures: to facilitate the development of a new Learning Commons facility on a site extending to 0.4396 ha. The development will consist of: i. The development of a stepped building which extends to 10,133 sqm metres and ranges in height from 4 to 6 storeys, at an overall maximum height of c. 28.350m and at an overall height of 36.15m OD (Ground Level at 7.80m OD) ii. The proposed Learning Commons features an automated book storage and retrieval system known as a "Book Bot" facility. iii. 2 no. covered entrance plazas are provided on both the north-east and south-east elevations of the building. iv. The ground floor incorporates a catering area, an exhibition space and a Learning Success Hub; upper floors contain individual and group study areas, seating areas, a book pickup station, book collection areas, a teaching and learning space and office space and ancillary spaces. v. An external roof-top amenity space is proposed on the four-storey element of the southern elevation. vi. Plant and photovoltaics proposed at roof level. vii. Provision of 2 no. disabled car parking spaces for the building with an additional 2 no. spaces to support the Sports Centre Building in the vicinity. viii. New soft and hard landscaping, including a new external amenity space located in the northern western portion of the site. ix. An ESB substation located in the south-western portion of the site. x. All associated site engineering works which includes nature-based drainage proposals and all ancillary work. The proposed site is located immediately west of Protected Structure Ref 8501 (rivers & waterways), circa 40 meters north-west of Protected Structure Ref 7003 (Arts Science Building) and circa 155 metres north-west of Protected Structure 7001 (James Hardiman Library). The planning application is supported by a Natura Impact Statement. (Planning Ref: 23104).
- Permission for development which consists of 1) the retention and completion of the slipway, 2) the demolition of the substandard boat house and its replacement with, 3) the construction of a two storey boat house building accommodating a repair/working dry dock inlet at the ground floor and the club house meeting room kitchenette, W.C and changing areas at the first floor, a cantilevered quayside boardwalk with floating pontoons at ground level and viewing deck to the water front at first floor and 4) all associated site works at Corrib Village, Newcastle, Galway on behalf of Galway Hooker Club. A Natura Impact Statement (NIS) will be submitted to the Planning Authority with the application. (Planning Ref: 23178).
- Permission for development which will consist of the extension of an existing dwelling house at No.3 Courthouse Square, a protected structure (RPS Ref.No.2605). The extension will be three storey and to the rear of 3 Courthouse Square. The development once complete will consist of 6 bedrooms with a

total of three bathrooms and a separate living kitchen and dining area at No. 3 Courthouse Square, Woodquay, Galway City. (Planning Ref: 21388).

1.2.1 Conclusion of Cumulative Assessment

In the review of the projects that was undertaken, no connection, that could potentially result in additional or cumulative impacts was identified. Neither was any potential for different (new) impacts resulting from the combination of the various projects and plans in association with the proposed works.

Taking into consideration the reported residual impacts from other plans and projects in the area and the predicted impacts with the current proposal, no residual cumulative impacts have been identified