

6. BIODIVERSITY

6.1 Introduction

This chapter assesses the likely significant effects (both alone and cumulatively with other projects) that the Proposed Development may have on Biodiversity. Mitigation by design was applied to the finalised Proposed Development layout wherever possible to avoid impacts on Biodiversity. This chapter sets out the mitigation measures proposed to avoid, reduce or offset any potential significant effects that are identified. The residual impacts on biodiversity are then assessed. Particular attention has been paid to species and habitats of ecological importance. These include species and habitats with national and international protection under the Wildlife Acts 1976 (as amended, S.I. No. 166/2017), EU Habitats Directive 92/43/EEC. Impacts on avian receptors are also considered within this chapter of the Environmental Impact Assessment Report (EIAR). The full description of the Proposed Development is provided in Chapter 4 of this EIAR.

The chapter is structured as follows:

- The Introduction provides a description of the legislation, guidance and policy context applicable to Biodiversity.
- This is followed by a comprehensive description of the ecological survey and impact assessment methodologies that were followed to inform the robust assessment of likely significant effects on ecological receptors.
- A description of the Baseline Ecological Conditions and Receptor Valuation is then provided.
- This is followed by an Assessment of Effects which are described with regard to each phase of the Proposed Development: construction phase and operational phase. Potential Cumulative effects in combination with other projects are fully assessed. Proposed mitigation and best practice measures to avoid, reduce or offset the
- identified effects are described and discussed. This is followed by an assessment of residual effects taking into consideration the effect of the proposed mitigation and best practice measures.
- The conclusion provides a summary statement on the overall significance of predicted effects on Biodiversity.

For the purposes of this EIAR, where the 'Proposed Development' is referred to, this relates to all the project components described in detail in Chapter 4 of this EIAR. The Proposed Development aligns with the EIAR Study Area as shown in Figure 6-1.

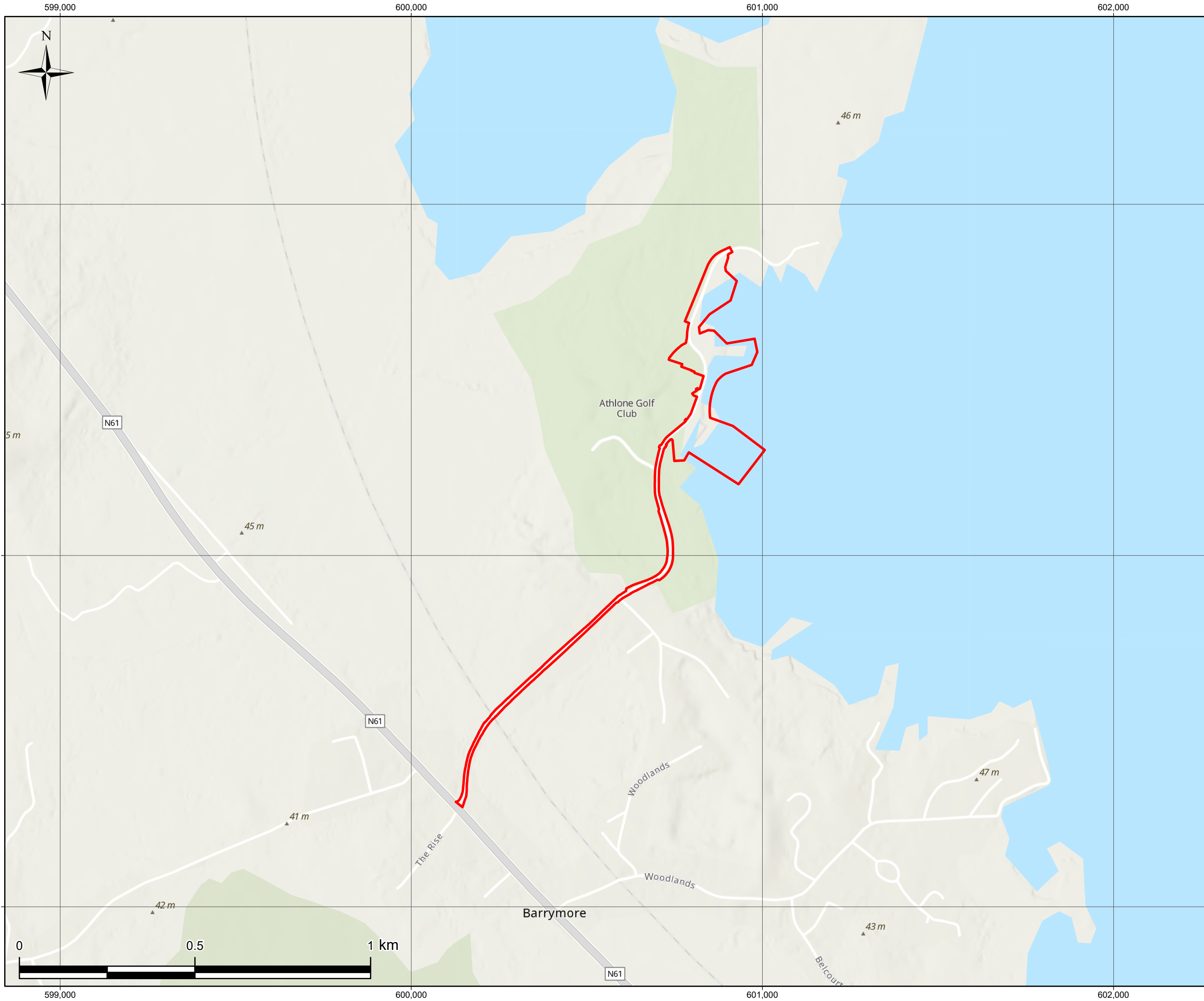
To note, Proposed Development and Proposed Development Site are used interchangeably within this chapter. Ecological surveys undertaken to inform this chapter extended beyond the EIAR Study Area for some receptors. The extents of these survey areas are defined in Section 6.4.3 (Field Surveys).

For assessment purposes, the EIAR Study Area represents the primary area of study and not necessarily areas where proposed works will occur as part of the Proposed Development.

In addition:

- 'Key Ecological Receptor' (KER) is defined as a species or habitat occurring within the zone of influence of the Proposed Development upon which likely significant effects are anticipated.
- "Zones of Influence" (ZoI) for individual ecological receptors refers to the zone within which potential effects are anticipated. ZoIs differ depending on the

sensitivities of particular habitats and species and were assigned in accordance with best available guidance and through adoption of a precautionary approach.



Map Legend

Proposed Development Site

Spatial Reference
Name: IRENET95 Irish Transverse Mercator
Datum: IRENET95
Projection: Transverse Mercator

SITE LOCATION - NOT TO SCALE

Drawing Title

EIAR Site Boundary

Project Title

Hodson Bay Waterfront Park

Project No.	Drawing No.	Scale
241220	Figure 6-1	1:10,000
Drawn By	Checked By	Date
TS	AvdGM	10/08/2026

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Requirements for Ecological Impact Assessment

National Legislation

The Wildlife Act, 1976 (as amended, S.I. No. 166/2017), is the principal piece of legislation governing protection of wildlife in Ireland. The Wildlife Act provides strict protection for species of conservation value. The Wildlife Act conserves wildlife (including game) and protects certain wild animals and flora. These species are therefore considered in this report as ecological receptors.

Natural Heritage Areas (NHAs) and Proposed Natural Heritage Areas (pNHAs) are heritage sites that are designated for the protection of flora, fauna, habitats and geological sites. Only NHAs are designated under the Wildlife Act, 1976 (as amended, S.I. No. 166/2017). NHAs are legally protected from damage from the date they are formally proposed for designation¹. A list of pNHAs were published on a non-statutory basis in 1995 but have not since been statutorily proposed or designated. However, these sites are considered to be of significance for wildlife and habitats as they may form statutory designated sites in the future.

The Flora (Protection) Order 2022 (S.I. No. 235) lists the species, hybrids and/or subspecies of flora protected under Section 21 of the Wildlife Acts. It provides protection to a wide variety of protected plant species in Ireland including vascular plants, mosses, liverworts, lichens and stoneworts. Under the Flora Protection Order it is illegal to cut, pick, collect, uproot or damage, injure or destroy species listed or their flowers, fruits, seeds or spores or wilfully damage, alter, destroy or interfere with their habitat (unless under licence).

National Policy

Ireland's 4th National Biodiversity Action Plan 2023-2030 (Department of Housing, Local Government and Heritage, 2024) (the "NBAP"). The NBAP strives for a "whole of government, whole of society" approach to the governance and conservation of biodiversity. It demonstrates Ireland's continuing commitment to meeting and acting on its obligations to protect Ireland's biodiversity for the benefit of future generations and will implement this through a number of key targets, actions and objectives.

The Wildlife (Amendment) Act 2023 introduced a new public sector duty on biodiversity. The legislation provides that every public body, as listed in the Act, is obliged to have regard to the objectives and targets in the NBAP. The NBAP sets out five key objectives as follows:

- 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

¹ <https://www.npws.ie/protected-sites/nha> (accessed January 2024).

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.

Such policies have informed the evaluation of ecological receptors recorded within the site and the ecological assessment process.

European Legislation

Habitats and species of European importance are provided legal protection under the EU Habitats Directive 92/43/EEC (the Habitats Directive) and the EU Birds Directive 2009/147/EC (the Birds Directive) this legislation forms the cornerstone of Europe's nature conservation within the EU. It is built around two pillars: the Natura 2000 network of protected sites (hereafter referred to as European sites²) and the strict system of species protection. Both the Habitats and Bird Directives have been transposed into Irish law by Part XAB of the Planning and Development Acts 2000 (as amended) (from a land use planning perspective) and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477/2011).

Annex I of the Habitats Directive lists habitat types whose conservation requires the designation of Special Areas of Conservation (SAC). Priority habitats, such as Turloughs, which are in danger of disappearing within the EU territory are also listed in Annex I. Annex II of the Directive lists animal and plant species (e.g. marsh fritillary, Atlantic salmon, and Killarney fern) whose conservation also requires the designation of SAC. Annex IV lists animal and plant species in need of strict protection such as lesser horseshoe bat and otter, and Annex V lists animal and plant species whose taking in the wild and exploitation may be subject to management measures. In Ireland, species listed under Annex V include Irish hare, common frog and pine marten. Species can be listed in more than one Annex, as is the case with otter and lesser horseshoe bat which are listed on both Annex II and Annex IV. The disturbance of species under Article 12 of the Habitats Directive (and in particular avoidance of deliberate disturbance of Annex IV species, particularly during the period of breeding, rearing, hibernation and migration and avoidance of deterioration or destruction of breeding sites or resting places) has been specifically assessed in this EIAR.

The Birds Directive instructs Member States to take measures to maintain populations of all bird species naturally occurring in the wild state in the EU (Article 2). According to Recital 1 of the Birds Directive, Council Directive 79/409/EEC on the conservation of wild birds was substantially amended several times and in the interests of clarity and rationality, the Birds Directive codifies Council Directive 79/409/EEC. Such measures may include the maintenance and/or re-establishment of habitats in order to sustain these bird populations (Article 3). A subset of bird species has been identified in the Directive and are listed in Annex I as requiring special conservation measures in relation to their habitats. These species have been listed on account of inter alia: their risk of extinction; vulnerability to specific changes in their habitat; and/or due to their relatively small population size or restricted distribution. Special Protection Areas (SPAs) are to be identified and classified for these Annex I listed species and for

² The term Natura 2000 network was replaced by 'European site' under the EU (Environmental Impact Assessment and Habitats) Regulations 2011 S.I. No. 473 of 2011.

regularly occurring migratory species, paying particular attention to the protection of wetlands (Article 4).

In summary, the species and habitats provided National and International protection under these legislative and policy documents have been considered in this Ecological Impact Assessment. A detailed assessment of the likelihood of the Proposed Development having either a significant effect or an adverse impact on any relevant European Sites (i.e. SACs, cSACs³, SPAs or cSPAs) has been carried out in the Appropriate Assessment (AA) Screening Report and Natura Impact Statement (NIS). A separate assessment has not been carried out in this chapter, to avoid duplication of assessments. However, the relevant conclusions have been cross-referenced and incorporated.

In addition to the above, the following legislation applies with respect to habitats, fauna, invasive species and water quality in Ireland and has been considered in the preparation of this chapter:

- The International Convention on Wetlands of International Importance especially Waterfowl Habitat (Concluded at Ramsar, Iran on 2 February 1971)
- S.I. No. 272 of 2009: European Communities Environmental Objectives (Surface Waters) Regulations 2009 and S.I. No. 722 of 2003 European Communities (Water Policy) Regulations 2003 which give further effect to EU Water Framework Directive (2000/60/EC).
- The following legislation applies with respect to non-native species - Regulation 49 and 50 of European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011).

6.3

Review of Relevant Guidance and Sources of Consultation

The assessment methodology is based primarily upon the Transport Infrastructure Ireland (TII)'s *Guidelines for Assessment of Ecological Impacts of National Road Schemes, PE-ENV-01112* (TII, 2009) and the survey methodology is based on the TII *Guidelines on Ecological Surveying Techniques for Protected Flora and Fauna on National Road Schemes, PE-ENV-01113* (TII, 2008). Although these survey methodologies relate to road schemes, these standard guidelines are recognised survey methodologies that ensure good practice regardless of the development type.

In addition, the following guidelines were consulted in the preparation of this document to provide the scope, structure and content of the assessment:

- Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater and Coastal (CIEEM, 2018).

This assessment has been carried out in accordance with the Environmental Impact Assessment guidance as outlined in Chapter 1 of the EIAR.

This assessment has been prepared with respect to the various planning policies and strategy guidance documents listed below:

- Roscommon County Development Plan 2022-2028.
- Regional Spatial and Economic Strategy for the Northern and Western Regional Assembly (2020-2032)
- National Planning Framework. Ireland 2040 Our Plan.

³ Candidate SAC (cSAC) are afforded the same protection as SACs. The process of making cSAC into SACs by means of Statutory instrument has begun and while the process is ongoing the term SAC will be used to conform with nomenclature used in the National Parks and Wildlife Services (NPWS) databased. The name applies to candidate SPAs.

➤ National Development Plan 2021-2030.

6.3.1 Statement of Authority

This report has been prepared by Niamh Rowan (B.Sc. Biological Sciences) and Kieran Sugrue (B.Sc. Zoology). Niamh and Kieran are Ecologists at MKO with over 2 years' experience in ecological consultancy. This report has been reviewed by Aran von der Geest Moroney (B.Sc.) and Corey Cannon (B.Sc., M.Sc.). Aran is a Senior Ecologist at MKO and holds a B.Sc. in Ecology and Environmental Biology from University Cork, with over 5 years' experience in ecological consultancy, ecological management and assessment. Corey is a Project Director (Ecology) at MKO and holds a BSc in Zoology and an MSc in Biodiversity Survey. Corey has over 12 years' consultancy experience. Kieran, Niamh, Aran and Corey have undertaken numerous Ecological Impact Assessment and AA assessments for public and private sector clients.

The baseline ecological surveys for the Proposed Development were conducted by MKO ecologists; Aran von der Geest Moroney (B.Sc.), Kieran Sugrue (B.Sc.), Niamh Rowan (B.Sc.), Timothy O'Ceallaigh (B.Sc.), Matthew Kieran (B.Sc.) Juliane Kohlstruck (B.Sc., M.Sc.), Pat Roberts (B.Sc. Env., MCIEEM), Orla Killeen (B.Sc., M.Sc.) and Cuan Feely (B.Sc.), and by bat ecologists David Culleton (B.Sc.), Emma Fitzgerald (B.Sc.), Noel Fahy (B.Sc.), Kate Leahy (B.Sc.) and Saoirse Fitzsimmons (B.A, M.Sc.). All surveyors have relevant academic qualifications and are competent in undertaking habitat and ecological assessments.

6.4 Methodology

The following sections describe the methodologies followed to establish the baseline ecological condition of the site and surrounding area. Assessing the impacts of any development and associated activities requires an understanding of the ecological baseline conditions prior to and at the time of the development proceeding. Ecological Baseline conditions are those existing in the absence of proposed activities (CIEEM, 2018).

6.4.1 Desk Study

The desk study undertaken for this assessment included a thorough review of available ecological data including the following:

- Review of National Parks and Wildlife Service (NPWS) Article 17 maps 2019, 2013 and 2007.
- Review of online web-mappers: NPWS⁴ EPA maps⁵, Water Framework Directive (WFD) and Inland Fisheries Ireland (IFI)⁶
- Inland Fisheries Ireland (IFI) Reports.
- Data on potential occurrence of rare plant and bryophytes – as per NPWS online map viewers; Flora Protection Order 2022 Map Viewer⁷.
- Review of the Bat Conservation Ireland (BCI) Private Database.
- Review of the publicly available National Biodiversity Data Centre (NBDC) web-mapper.
- Review of specially requested records from the NPWS Rare and Protected Species Database for the hectads in which the Proposed Development is located.

⁴ <https://dahg.maps.arcgis.com/apps/webappviewer/index.html?id=8f7060450de3485fa1c1085536d477ba> Accessed 31/01/2024

⁵ <https://gis.epa.ie/EPAMaps/> Accessed: 31/01/2024

⁶ <https://ifigis.maps.arcgis.com/apps/webappviewer/index.html?id=9a31fedb077c4fb2991184842b7ef025> Accessed 06/01/2024

⁷ <https://heritagedata.maps.arcgis.com/apps/webappviewer/index.html?id=a41ef4e10227499d8de17a8abe42bd1e> Accessed: 06/01/2024

- Potential for in-combination effects have been considered in Chapter 2 of this EIAR and Section 6.9 of this chapter. This was informed by a review of the EIARs/NISs prepared for other plans and developments occurring in the wider area.

6.4.1.1 Designated Sites

6.4.1.1.1 Identification of the Designated Sites within the Likely Zone of Influence (ZOI) of the Proposed Development

The potential for the Proposed Development to impact on sites that are designated for nature conservation was considered in this Biodiversity Chapter.

SACs and SPAs are designated under the EU Habitats Directive and EU Birds Directive, respectively and are collectively known as 'European Sites'. The potential for significant effects and/or adverse impacts on the integrity of European Sites is fully assessed in the AA Screening Report and NIS that accompanies this application. As per EPA Guidance 2022, *"a biodiversity section of an EIAR, should not repeat the detailed assessment of potential effects on European sites contained in a Natura Impact Statement"* but should *"incorporate their key findings as available and appropriate"*. Section 6.5.1.1 of this EIAR provides a summary of the key assessment findings with regard to European Designated Sites.

NHAs are designated under Section 18 the Wildlife (Amendment) Act 2000 and their management and protection is provided for by this legislation and planning policy. The potential for effects on these designated sites is fully considered in this Biodiversity Chapter.

pNHAs were designated on a non-statutory basis in 1995 but have not since been statutorily proposed or designated. However, the potential for effects on these designated sites is fully considered in this Biodiversity Chapter.

The following methodology was used to establish which sites that are designated for nature conservation have the potential to be impacted by the Proposed Development:

- All designated sites within the vicinity of the Proposed Development Site were identified. In addition, the potential for connectivity with European or Nationally designated sites at greater distances from the Proposed Development was also considered in this initial assessment.
- The designation features of these sites, as per the NPWS website (www.npws.ie), were consulted and reviewed at the time of preparing this report.
- Where potential pathways for Significant Effect are identified, the site is included within the Likely Zone of Influence (ZOI) and further assessment is required.

6.4.1.2 NPWS Article 17 Reporting

A review of the Irish Reports for Article 17 of the Habitats Directive (92/42/EEC), including the Heath, Bogs and Mires, Irish Semi-Natural Grassland Survey datasets, National Survey of Native Woodlands and Ancient and Long-Established Woodland datasets was carried out as part of this assessment.

6.4.2 Scoping and Consultation

MKO undertook a scoping exercise during preparation of this EIAR, as described in Section 2.5 of Chapter 2.

Copies of all scoping responses are included in Appendix 2-2 of this EIAR. The recommendations of the consultees have informed the EIAR preparation process and the contents of this chapter. Table 2-6

in Chapter 2 of this EIAR describes where the comments raised in the scoping responses received have been addressed in this assessment.

6.4.2.1.1 **Results of Consultation**

Table 6-1 lists the biodiversity relevant bodies consulted regarding the Proposed Development, as well as a summary of the responses received to the scoping document circulated on 27th June 2025.

A consultation meeting took place with the NPWS on 23rd June 2026, in which the NPWS were presented with an overview of the Proposed Development, its context in relation to European Designated Sites, National Designated Sites, and biodiversity, and the findings of ecological surveys conducted to inform the Proposed Development.

Table 6-1. Results of Consultation

Consultee	Response
An Taisce	No Response
Bat Conservation Ireland	No Response
Bird Watch Ireland	No Response
Department of Environment, Climate and Communications	No Response
Department of Housing, Local Government and Heritage Development Applications Unit (DAU)	Site Specific considerations were provided with regards to nature conservation, in particular regarding European and National nature conservation sites. General ecological requirements were set out for both Environmental Impact Assessment and Appropriate Assessment and NIS.
Geological Survey of Ireland	No Response
Inland Fisheries Ireland	No Response
Uisce Éireann	The response outlined that Uisce Éireann (UÉ) operate numerous downstream abstractions points that serves much of the country, and as such these proposals cannot give rise to any deterioration of Lough Ree or River Shannon water sources. Uisce Éireann operates several assets within and around the project area of this proposal. A 150mm UPVC (Unplasticized Polyvinyl Chloride) watermain runs parallel to the L2020 road, which feeds a number of subsidiary pipes throughout the redevelopment area and there is a wastewater pump station serving the area is in operation north of Cushlea Estate.
Irish Wildlife Trust	No Response
Office of Public Works	No Response
The Heritage Council	The response sets out recommendations to provide general guidance for the preparation of an EIAR which may affect the national road network.
National Parks and Wildlife Service (NPWS)	See response from the Department of Housing, Local Government and Heritage (DAU) above.
Local Authorities Waters Programme (LAWPRO)	No Response

Consultee	Response
Breeding Waders EIP Project	No Response
Friends of the Earth	No Response
Westmeath County Council – Environment	No Response
Longford County Council - Environment	Longford County Council set out general ecological considerations for both Environmental Impact Assessment and Appropriate Assessment and NIS, including QI species to consider. General suggestions for best practice construction methodology and mitigation measures were also suggested.

6.4.3 Field Surveys

A comprehensive survey of the biodiversity within the Proposed Development Site was undertaken to inform this Biodiversity Chapter. The following sections fully describe the ecological surveys that have been undertaken and provide details of the methodologies and guidance followed. Surveys were carried out between March 2025 and May 2026 and are summarised in

Table 6-2 below.

Table 6-2: Ecology Surveys Informing the EIAR

Survey Type	Dates	Section/ Appendix	Study Area
Initial Site Walkover	26th March 2025	N/A	EIAR Study Area.
Dedicated Mammal Survey (including dedicated Otter Survey)	26th March 2025	6.6.3.4 and 6.6.3.5	EIAR Study Area, 150m buffer of the EIAR Study Area including along the shores of Lough Ree and Temple Island.
Breeding Bird Surveys	16th April 2025 15th May 2025 27th June 2025 25th July 2025	6.6.3.1	EIAR Study Area, 250 m buffer of the EIAR Study Area, 500 m length along the shore of Lough Ree (North and South) from the edges of where the EIAR Study Area meets Lough Ree.
Bat roost suitability assessments	4th April 2025 3rd March 2026 10th March 2026	6.6.3.6.2 and 6.6.3.6.3	EIAR Study Area, Derelict railway building adjacent to the Proposed Development Site, Hodson's Pillar on Temple Island.
Bat Dusk Emergence Surveys	13th May 2025 23rd June 2025 16th July 2025 9th September 2025	6.6.3.6.6	Identified potential bat roost within the EIAR Study Area.

Survey Type		Dates	Section/ Appendix	Study Area
Bat Dusk Walkover Surveys		15th May 2025 24th June 2025 15th July 2025 24th September 2025	6.6.3.6.4 and 6.6.3.6.5	EIAR Study Area.
Static Bat Detector Surveys		- Deployed: 15.05.2025, Collected: 29.05.2025 - Deployed: 15.07.2025, Collected: 25.07.2025 - Deployed: 09.09.2025, Collected: 24.09.2025	6.6.3.6.7	EIAR Study Area.
Multi-disciplinary walkover (incl. habitats)		29th May 2025	6.6.1 for habitats	EIAR Study Area.
Detailed Botanical Surveys	Narrow-leaved Helleborine surveys	11th June 2025	6.6.1.14	EIAR Study Area.
	Alluvial woodland Annex I habitat assessment	28th July 2025	Appendix 6-1	Areas of woodland within and adjoining the EIAR Study Area identified during habitat surveys as having the potential to conform to Annex I habitat.
Aquatic macrophyte surveys		16th July 2025 28th July 2025	Appendix 6-2	EIAR Study Area and approx. 100 m buffer of Lough Ree shoreline within the Proposed Development Site.
Wintering Bird Surveys		21st October 2025 4th November 2025 18th November 2025 5th December 2025 16th December 2025 13th January 2026 27th January 2026 10th February 2026 24th February 2026 10th March 2026 24th March 2026	6.6.3.2 and its subsections	EIAR Study Area, 250 m buffer of the EIAR Study Area, 500 m buffer of the EIAR Study Area within the waters of Lough Ree, 500 m length along the shore of Lough Ree (North and South) from the edges of where the EIAR Study Area meets Lough Ree.
eDNA Amphibian Survey		24th March 2026	Appendix 6-3	EIAR Study Area and adjoining suitable amphibian habitat (i.e. pond within Athlone Golf Club).
PRF Tree Inspection Surveys		28th May 2026	6.6.3.6.5	EIAR Study Area.

6.4.3.1 Multi-disciplinary Walkover Surveys (as per TII Guidelines)

A multidisciplinary walkover survey was undertaken within and in the vicinity of the Proposed Development Site. Surveys were undertaken within the recognised optimum period for vegetation surveys/habitat mapping, i.e. April to September (Smith *et al.*, 2011). A comprehensive walkover of the entire Proposed Development Site was completed with incidental records also incorporated from other dedicated species/habitat specific surveys. During the multidisciplinary surveys, a search for Invasive Alien Species (IAS) listed on the First Schedule of the European Union (Invasive Alien Species) Regulations 2024 (S.I. No. 374 of 2024) and Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011) was conducted.

The walkover surveys were also designed to detect the presence, or likely presence, of a range of protected species. The survey included a search for mammal signs (bats, badger, red squirrel etc.) and areas of suitable habitat to support these species, potential features likely to be of significance to bats and additional habitat features for the full range of other protected species that are likely to occur in the vicinity of the Proposed Development (e.g. otter etc.). Bird species observed during the multi-disciplinary surveys were also recorded.

The multi-disciplinary walkover surveys comprehensively covered the entire Study Area and based on the survey findings, further detailed targeted surveys were carried out for features and locations of ecological significance. Other targeted surveys undertaken within the Proposed Development Site are described in the following subsections.

6.4.3.2 Dedicated Habitat and Vegetation Composition Surveys

All habitats recorded on site and described in this Biodiversity chapter have been classified in accordance with Fossitt (2000). Full details of dedicated alluvial forest relevés and dedicated macrophyte surveys results are provided in Appendix 6-1 and Appendix 6-2, respectively.

Detailed botanical surveys for specific habitats (e.g., Alluvial woodland) within the Proposed Development Site were also undertaken throughout multidisciplinary walkover surveys carried out in 2025. These surveys provided an understanding of the baseline and informed further survey work following finalisation of the Proposed Development layout. Plant nomenclature for vascular plants follows *'New Flora of the British Isles'* (Stace, 2010).

The habitat assessment surveys described in this report have been undertaken with reference to the following guidelines and interpretation documents:

- Commission of the European Communities (2013) Interpretation manual of European Union habitats. Eur 27. European Commission DG Environment.
- Daly, O.H., O'Neill, F.H., & Barron, S.J. (2023). The monitoring and assessment of four EU Habitats Directive Annex I woodland habitats. Irish Wildlife Manuals, No. 146. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland.
- NPWS (2025). The Status of EU Protected Habitats and Species in Ireland. Volume 1: Summary Overview. Unpublished NPWS report. Edited by: Domhnall Finch, Aoife Delaney, Fionnuala O'Neill and Deirdre Lynn Cover photo: Hard Water Lakes: Ferdia Marnell.

6.4.3.2.1 Alluvial Forest Condition Assessment

Detailed habitat classification and assessment was undertaken by MKO at targeted locations identified as areas of potential Annex I alluvial forest both within the Proposed Development Site and within Lough Ree SAC [Site code: 000440], with relevés and condition habitat assessment undertaken at each of the identified survey sites to assess habitat conformity to the 91E0 alluvial forest Annex I habitat.

Botanical assessment was carried out using methods detailed in Ó' Neill and Barron (2013). This included species composition including target species, indicator species (woody, ferns, herbs and bryophytes) and negative indicator species, as well as woodland structure and function, including grazing pressure, tree regeneration, tree size class and the presence of deadwood.

Condition assessment was conducted at 5 no. monitoring plots. Where possible, condition assessment was carried out in 20 m x 20 m plots. Where this was not possible due to insufficient overall area of the identified woodland habitats, 10 m x 10 m plots, as well as linear 10 m x 2 m (along the lake margins) were carried out. Due to the fragmented, non-continuous nature of alluvial woodland habitat within and adjacent to the Proposed Development Site, plot sizes were variable. For the individual plot assessment, eight out of ten criteria needed to pass to achieve an overall pass.

The results of these condition assessments are presented in Appendix 6-1.

6.4.3.2.2 **Macrophyte surveys**

Dedicated macrophyte surveys were undertaken by MKO along transects extending from the shore of Lough Ree within the Proposed Development Site. Methodology to conduct both qualitative manual wading surveys and qualitative aquatic drone surveys was based on standard methodology used by the Environmental Protection Agency (EPA) to assess the status of water bodies in relation to the EU Water Framework Directive (EPA, 2020). Transects were waded or surveyed using a FIFISH aquatic drone.

4 no. transects from the shoreline were waded, 1 no. transect was surveyed via grapnel throw, while 9 no. transects were surveyed using an aquatic drone. The length of wading transects were determined by the wadable depth of water at each location. While the tether of the drone measures 100m, the length of drone transects conducted was approx. 90m from the starting point, taking into account the effect of currents within Lough Ree. Using the robotic arm attachment on the aquatic drone, grab samples were taken along each of the aquatic drone transects. Locations of both manual wading surveys and aquatic drone surveys, as well as all macrophyte survey results are shown in Appendix 6-2.

Plants were viewed using a bathyscope or drone camera along respective wading and drone transects. Along wading transects, plants were sampled periodically using grapnel throw, while samples were obtained via the robotic arm of the aquatic drone periodically throughout deeper water transects. Species were noted along each transect, with an assessment of their abundance on a five-point DAFOR scale (Dominant, Abundant, Frequent, Occasional, Rare).

Initial wading and grapnel trawl surveys conducted on 16th July 2025 provided an understanding of the baseline and informed further aquatic drone survey transects on 28th July 2025.

The habitat assessment surveys described in this report have been undertaken with reference to the following guidelines:

- Commission of the European Communities (2013) Interpretation manual of European Union habitats. Eur 28. European Commission DG Environment.
- NPWS (2025). The Status of EU Protected Habitats and Species in Ireland. Volume 1: Summary Overview. Unpublished NPWS report. Edited by: Domhnall Finch, Aoife Delaney, Fionnuala O'Neill and Deirdre Lynn.
- Aquatic plants in Ireland (Caffrey, Matson & O'Briain, 2023)
- Plant nomenclature for vascular plants follows 'New Flora of the British Isles' (Stace, 2010).

6.4.3.2.3 **Narrow-leaved Helleborine surveys**

Narrow-leaved Helleborine were identified as a species of interest for nearby developments due to its known presence in the area. Narrow-leave Helleborine is not known to occur within the Proposed Development Site. However, in order to capture all potential Key Ecological Receptors with the

potential to be affected by the Proposed Development, dedicated surveys to search for narrow-leaved Helleborine were conducted throughout the Proposed Development Site on 11th June 2025, following guidelines for the survey of this species as outlined in TII (2008) *Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes*.

6.4.3.3 Faunal Surveys

The results of the desk study, scoping replies, incidental records of protected species during ecological survey work and multidisciplinary walkover surveys were used to inform the scope of targeted ecological surveys required. During the multidisciplinary walkover surveys, where observed, incidental records of faunal species were recorded.

6.4.3.3.1 Otter Survey

Prior to conducting surveys, all sections of the shore of Lough Ree within and in the vicinity of the Proposed Development were identified as providing potential habitat for otter and as such were subject to targeted surveys for this species. The otter surveys were conducted as per TII (2008) guidelines (*Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes*) and CIEEM best practice competencies for species surveys⁸. This involved a search for all otter signs e.g., spraints, scat, prints, slides, trails, couches and holts. In addition to the shoreline of Lough Ree within and in the vicinity of the Proposed Development Site, a 10m riparian buffer was considered to comprise part of the otter habitat (NPWS 2009). The dedicated otter surveys also followed the guidance as set out in TII (2006) '*Guidelines for the Treatment of Otters Prior to the Construction of National Roads Schemes*' CC-ENV-01104. Where otter signs were observed these were mapped.

6.4.3.3.2 Non-volant Mammal Surveys

Non-volant mammal surveys were conducted adhering to best practice guidance (TII, 2008) and CIEEM best practice competencies for species surveys⁹. Areas identified as providing potential habitat for badger and other mammals were subject to specialist targeted survey. The survey aimed to determine the presence or absence of mammals (e.g. badger) within Proposed Development Site and wider survey area. This involved a search for all potential mammal signs (prints, droppings, mammal tracks, latrines (badger), and setts or other mammal holes). The mammal survey was not constrained by vegetation given the nature of the habitats within and in the vicinity of the site and the timing of the surveys.

6.4.3.3.3 Amphibian Survey (including eDNA)

During the multidisciplinary walkover survey of the Proposed Development Site, amphibian habitat suitability surveys were conducted to identify any areas of significance for amphibian species (Common frog, smooth newt).

In addition, due to the presence of a pond located within the Athlone Golf Club (outside of, but in close proximity to the Proposed Development), an environmental DNA (eDNA) survey was undertaken within this pond in order to determine its use by amphibians.

6.4.3.3.4 Bat Surveys

⁸ CIEEM, 2013, Technical Guidance Series – Competencies for Species Survey: Otter, Online, Available at: <https://cieem.net/wp-content/uploads/2019/02/CSS-EURASIAN-OTTER-April-2013.pdf>

⁹ CIEEM, 2013, Technical Guidance Series – Competencies for Species Survey: Badger, Online, Available at: <https://cieem.net/wp-content/uploads/2019/02/CSS-BADGER-April-2013.pdf>

Dedicated bat surveys of the site, including a bat habitat appraisal, preliminary roost assessment and bat activity surveys, including manual and static detector surveys, were undertaken. Habitat Suitability for bats and bat activity were assessed according to BCT Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn.) (Collins, 2023), which provides a grading protocol for roosting habitats and for commuting and foraging habitats. This is in line with standard best practice industry guidelines.

Bat Habitat Appraisal

A walkover survey of the Study Area was carried out during daylight hours on the 4th April 2025. The landscape features on the site were visually assessed for potential use as bat roosting habitats and commuting/foraging habitats using a protocol set out in Bat Conservation Trust (BCT) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edn.) (Collins, 2023). The aim of the survey was to identify suitable bat habitats within the site for roosting, foraging and commuting bats to guide further survey efforts.

Table 4.1 of the 2023 BCT Guidelines identifies a grading protocol for assessing structures, as well as commuting/foraging habitat for bats, which is summarised in Table 6-3. The protocol is divided into five Suitability Categories: *High, Moderate, Low, Negligible and None*.

Table 4.2 of the 2023 BCT Guidelines identifies a grading protocol to assess trees, which is divided into three Suitability Categories: No suitability (NONE), Further Assessment Required (FAR), and Potential Roosting Feature present (PRF). This initial tree grading protocol can inform a preliminary roost assessment (PRA) to determine the available tree-roosting resource within the Proposed Development Site, depending on whether a PRF could accommodate a small number of bats (PRF-I) or a larger roost, including maternity roosts (PRF-M). More information on PRAs is provided below.

Table 6-3. BCT protocol for bat habitat appraisals (Collins, 2023)

Assessment	Rationale
High	Structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions, and surrounding habitat. Continuous, high-quality, well-connected habitats, connected to known roosts.
Moderate	A structure used by bats due to their size, shelter, protection, conditions and surrounding habitat, but are unlikely to support a roost of high conservation status, and suitable, connected habitats.
Low	Structures with one or more potential roost sites that could be used by an individual bat opportunistically, and suitable but isolated habitats that could be used by a small number of bats.
Negligible	No obvious features present, but a level of uncertainty remains.
None	No habitat features likely to be used by roosting, foraging or commuting bats.

Roost Assessment

A search for roosts was undertaken within the Proposed Development Site by two ecologists to identify any PRFs. The aim of the survey was to determine the presence of roosting bats, potential access points, roosting locations and the potential need for further survey work or mitigation.

The site was visited on the 4th April 2025 for the assessment of the Baysports building, Public Toilet Block Building, Baysports marquee's, the derelict railway building to the southwest of the site, and the tower located on Temple Island approximately 135m from the nearest point of the shoreline.

Trees present within the site/within the Proposed Development Site were examined on 3rd March 2026 from ground level or with a ladder and endoscope 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).

Bat Activity Surveys

Night-time Bat Walkover Surveys and Dusk Emergence Surveys

Night-time bat walkovers (NBW) were carried out by two surveyors, recording bats in real time. For each of the surveys, surveyors were equipped with active full spectrum bat detectors, Batlogger M (Elekon AG, Lucerne, Switzerland). Where possible, species identification was made in the field and any other relevant information was also noted, e.g., numbers, behaviour, features used, etc. All bat echolocation was recorded for subsequent analysis to confirm species identifications.

The aim of this survey was to observe bat species using the site and visually assess bat behaviour and important features used by bats within the site. The transect route was prepared with reference to the proposed layout, desktop and walkover survey results, as well as any health and safety considerations and access limitations. As such, it generally followed existing roads and tracks. Five-minute point counts were performed along the route to sample different habitats for the presence of bats. Surveys were carried out seasonally (Spring, Summer, Autumn).

Based on the information gathered during roost assessments, and the specifics of the Proposed Development, dusk emergence surveys of structures to be removed with roosting potential were undertaken as outlined within Table 6-4. Surveys were carried out seasonally (Spring, Summer, Autumn). Surveyors were positioned to achieve the best coverage of the structures being surveyed on the site to monitor potential access points. One to two surveyors were equipped with thermal camera to aid the survey work.

Table 6-4 Bat Activity survey effort

Date	Survey Type	Sunset	Start	End	Weather
13/05/2025	Dusk emergence survey	21:22	21:18	22:48	14-18°C, Dry, Light Breeze, 0% cloud cover, moon 97-97% visible
15/05/2025	Dusk transect survey	21:19	21:15	23:15	19°C, Dry, Calm, 0% cloud cover
23/06/2025	Dusk Emergence survey	22:04	21:50	23:34	16-17°C, initially dry and calm with 100% cloud cover, ending with drizzle and a light breeze
24/06/2025	Dusk transect survey	22:08	21:44	23:42	16°C, Dry, Calm, 100% cloud cover
15/07/2025	Dusk transect survey	21:58	21:50	23:42	14-17°C, Dry, Calm, 40-50% cloud cover
16/07/2025	Dusk Emergence survey	21:51	21:45	23:40	17-20°C, Dry, Calm, 90-100% cloud cover
09/09/2025	Dusk Emergence survey	20:01	20:05	21:52	16-18°C, Dry, light-moderate winds, 50-60% cloud cover
24/09/2025	Dusk transect survey	19:24	19:20	21:20	13-14°C, Dry, calm, 20% cloud cover

Static Detector Surveys

Five full spectrum SM4 bat detectors (Wildlife Acoustics, Maynard, MA, USA), were deployed during static surveys to record bat activity seasonally (spring, summer and autumn). The five locations of static detectors were selected to represent the range of habitats present within the site, including favourable bat habitats.

Settings used were those recommended by the manufacturer for bats, with minor adjustments in gain settings and band pass filters to reduce background noise when recording. Detectors were set to record from 30 minutes before sunset until 30 minutes after sunrise. The Song Meter automatically adjusts sunset and sunrise times using the Solar Calculation Method when provided with GPS coordinates. Static detector locations are shown in Table 6-5.

Table 6-5. Static Detector Locations

Detector ID	IG Reference	Nearest Habitat Feature
D01	N 00218 45333 (Spring), N 00211 45348 (Summer), N 00211 45344 (Autumn)	Treeline along Southern side of L2020 road
D02	N 00673 45891(Spring), N 00672 45888 (Summer), N 00675 45889 (Autumn)	Scrub next to woodland
D03	53.466059, -7.988559 (Spring), N 00809 46198 (Summer), N 00811 46198 (Autumn)	Willow woodland
D04	N 00862 46601 (Spring), N 00867 46601 (Summer), N 00864 46603 (Autumn)	Willow woodland adjacent to Baysports Building
D05	N 00976 46868 (Spring, Summer), N 00964 46862 (Autumn)	Treeline along eastern side of Athlone Golf Club

Table 6-6. Static detector deployment periods 2025

Season	Date of Deployment	Date of Collection
Spring	15/05/2025	11/06/2025
Summer	15/07/2025	26/07/2025
Autumn	09/09/2025	24/09/2025

Bat Call Analysis

All acoustic recordings were analysed using Kaleidoscope Pro v.5.7.0 (Wildlife Acoustics, MA, USA) to determine the bat species or species groups present at the Proposed Development Site. Initial species identification was carried out using Kaleidoscope's automated classifier, after which all identifications were manually verified.

Manual verification involved comparing echolocation call characteristics—such as signal shape, peak frequency of maximum energy, slope, pulse duration, start and end frequencies, bandwidth, inter-pulse interval, and power spectrum—to published reference data for Irish bat species (Russ, 2012). Due to the similarity in their echolocation calls, *Myotis* species (e.g., Daubenton's bat (*Myotis daubentonii*), Whiskered bat (*Myotis mystacinus*), and Natterer's bat (*Myotis nattereri*)) were grouped together and reported as *Myotis spp.*

Common pipistrelle (*Pipistrellus pipistrellus*) and Soprano pipistrelle (*Pipistrellus pygmaeus*) were distinguished primarily by their peak frequencies in search-phase calls (~46 kHz and ~55 kHz respectively; Jones & van Parijs, 1993). In instances where species-level identification was not confidently possible due to call overlap or low quality, calls were assigned at the genus level.

Brown long-eared bat (*Plecotus auritus*) produces very quiet echolocation calls that are often not detected by static detectors. As such, all recordings—including those labelled as 'noise' by the software—were manually checked to ensure potential *Plecotus* calls were not overlooked.

Individual bats cannot be distinguished by echolocation alone; therefore, bat activity was measured using the number of 'bat passes.' A bat pass was defined as a recording containing at least two echolocation pulses of a single species or species group, within a maximum 15-second window (Collins, 2023).

To ensure consistency and allow for valid comparisons across datasets, each registration (i.e., continuous audio file) was treated as a single bat pass event. Where more than one species was detected within the same registration, the rarer or more conservation-significant species was assigned. This approach reduces the risk of overestimating bat activity while ensuring that important records of less common species are captured—particularly in periods of high activity where call overlap is common. Following manual verification of species identifications, bat activity data were compiled by species, detector location, date, and time. Microsoft Excel was used to summarise this information using pivot tables, allowing for analysis of species composition both across the entire site and at individual detector locations. Charts and graphs were generated to visualise patterns in bat activity over time and space.

6.4.3.3.5 Bird Surveys

An initial site visit was undertaken on the 26th of March 2025, during which the habitats on site were assessed and suitable transects for undertaking surveys were identified. Transects were chosen to have as large as possible a view of identified potential suitable habitat for wintering and breeding bird species. The transects were located along the western and eastern sides of the Proposed Development Site and ran parallel to the Proposed Development in a north-south direction. Where it was not possible to carry out the transect to the east of the Proposed Development due to the presence of Lough Ree, the shoreline of the lake was walked.

Dedicated breeding bird surveys were undertaken on the 16th of April 2025, 2nd May 2025, 15th of May 2025, 27th of June 2025 & 25th of July 2025 by Kieran Sugrue (B.Sc.) and Susan Doyle (B.A., M.Sc., Ph.D.). Wintering bird surveys were undertaken on the 7th October 2025, 21st October 2025, 4th November 2025, 18th November 2025, 5th December 2025, 16th December 2025, 13th January 2026, 27th January 2026, 10th February 2026, 24th February 2026, 10th March 2026 and 24th March 2026 by Niamh Rowan (B.Sc.) and Juliane Kohlstruck (B.Sc., M.Sc.). These dedicated breeding and wintering bird surveys followed the methodologies outlined below.

Surveys covered the Proposed Development Site, and areas of potentially suitable supporting habitat in proximity to the Proposed Development Site including sections of the shore of Lough Ree located to the north and south of the Proposed Development Site, and areas of both woodland and agricultural grassland. Surrounding lands were also scanned from vantage points within the site.

The route of the walked transects aimed to provide full coverage over the Study Area. This follows the adapted Brown and Shepard methodology (1993) and was applied to both wintering and breeding bird surveys. Disturbance to birds was avoided when carrying out the walked transect surveys. During each bird survey, all observations of bird species were recorded, and detailed point data was gathered for each species observation, with all bird species denoted using standard British Trust for Ornithology (BTO) codes and with the number of each species recorded next to each registration. All bird species observed within and adjacent to the Proposed Development Site, including all common and widespread passerines, were recorded.

Weather conditions recorded during each of the breeding bird and wintering bird surveys are shown in Table 6-7.

Table 6-7. Survey Conditions for Breeding and Wintering Bird Surveys

Survey type	Date	Temp (°C)	Rain	Cloud Cover (%)	Fog	Wind (Beaufort scale)
Breeding Bird Survey	16/04/2025	6.3	Light drizzle	80	No	Moderate breeze (4)
	02/05/2025	7.5	Light drizzle	0-33	No	Light breeze (2)
	15/05/2025	13.5	None	5	No	Gentle breeze (3)
	27/06/2025	15.8	None	100, overcast	No	Moderate breeze (4)
	25/07/2025	16.1	None	95	No	Gentle breeze (3)
Wintering Bird Survey	07/10/2025	13.1	No	95	No	Gentle breeze (3)
	21/10/2025	10.1	No	80	No	Gentle breeze (3)
	04/11/2025	10.6	Light drizzle	95	Intermittent, passing fog, visibility still good	Light Breeze (2)
	18/11/2025	5.3	No	30	No	Gentle breeze (3)
	05/12/2025	4.9	Moderate rain	100, overcast	Slight in the distance	Fresh breeze (5)
	16/12/2025	3.2	No	2	No	Light breeze (2)
	13/01/2026	3.7	No	10	No	Light breeze (2)
	27/01/2026	5.3	Light rain	85	No	Fresh breeze (5)
	10/02/2026	6.6	Moderate rain	100, overcast	Slight in the distance	Moderate breeze (4)
	24/02/2026	9.8	No	70	No	Gentle breeze (3)
	10/03/2026	8.2	Light drizzle	90	Slight in the distance	Moderate breeze (4)
	24/03/2026	9.3	Light drizzle	70	Moderately	Moderate breeze (4)

Breeding Bird Surveys

For the purposes of breeding bird surveys undertaken for the Proposed Development, target species included waterbirds, which comprised all species of the following taxa: swans, geese, and ducks; cormorant, shag, divers and grebes; auks; seabirds; gulls, terns and skuas; herons, egrets and crane; rails and crakes; waders; and kingfisher.

Target species also included Special Conservation Interests (SCIs) of SPAs within the likely ZOI, as well as those on the Birds of Conservation Concern in Ireland (BoCCI) Red List and Annex I of the EU Birds Directive. All other bird species observed within and adjacent to the Study Area, including all common and widespread passerines, were recorded as incidentals.

During transect surveys, birds were counted using the 'look-see' method, whereby all birds present within a predefined area are counted (Bibby *et al.*, 2000). Suitable vantage points were selected throughout the transect, at which the surveyor could overlook sections of the Study Area. Vantage points were chosen to have as large as possible a view of the Study Area and potential adjacent daytime feeding habitat in the vicinity of the Study Area.

For each observation, the date, species, number of birds, activity and any other notes of interest were recorded. Birds actively using the Study Area (i.e. for foraging, roosting and maintenance behaviours) as well as flyovers of target species were recorded.

Wintering Bird Surveys

Survey methodology followed the Irish Wetland Bird Survey (2021) and Lewis and Tierney (2014). For the purposes of the survey, target species included waterbirds, which comprised all species of the following taxa: swans, geese, and ducks; cormorant, shag, divers and grebes; auks; seabirds; gulls, terns and skuas; herons, egrets and crane; rails and crakes; waders; and kingfisher.

Target species also included SCIs of SPAs within the likely ZOI (Lough Ree SPA), as well as those on the Birds of Conservation Concern in Ireland (BoCCI) Red List and Annex I of the EU Birds Directive. All other bird species observed within and adjacent to the Study Area, including all common and widespread passerines, were recorded as incidentals.

Wintering birds were counted using the 'look-see' method, whereby all birds present within a predefined area are counted (Bibby *et al.*, 2000). The surveys were carried out at 6 no. suitable vantage points, located overlooking sections of the Study Area. Vantage points were chosen to have as large as possible a view of the Study Area and potential adjacent daytime feeding habitat in the vicinity of the Study Area. Transects through the Study Area were also used to cover larger areas of ground while recording all birds in sight, including along the L2020 Local Road, which joins the N61 National Road to the south.

For each observation, the date, species, number of birds, activity and any other notes of interest were recorded. Birds actively using the Study Area (i.e. for foraging, roosting and maintenance behaviours) as well as flyovers of target species were recorded.

6.4.4 Methodology for Assessment of Impacts and Effects

6.4.4.1 Identification of Target Receptors and Key Ecological Receptors

The methodology for assessment followed the precautionary principle (CIEEM 2018) with regard to the identification of KERs. Following a comprehensive desk study, initial site visits and stakeholder

consultation; “Target Receptors” likely to occur in the ZOI of the Proposed Development were identified.

The Target Receptors included habitats and species that were protected under the following legislation:

- Annexes of the EU Habitats Directive and EU Birds Directive.
- Qualifying Interests (QI) of SACs, and Special Conservation Interests (SCI) of SPAs, within the likely ZOI.
- Bird species listed on the red list of the Birds of Conservation Concern (BoCCI)
- Designated Sites and Species protected under the Wildlife Act, as amended.
- Species protected under the Flora (Protection) Order 2022 S.I. No. 235.

6.4.4.2 Determining the Importance of Ecological Receptors

The importance of the ecological features identified within the site was determined with reference to a defined geographical context. This was undertaken following a methodology that is set out in Chapter 3 of the TII Ecological Impact Assessment Guidelines (TII 2009). These guidelines set out the context for the determination of value on a geographic basis with a hierarchy assigned in relation to the importance of any particular receptor. These guidelines provide a basis for determination of whether any particular receptor is of importance on the following scales:

- International
- National
- County
- Local Importance (Higher Value)
- Local Importance (Lower Value)

The guidelines clearly set out the criteria by which each geographic level of importance can be assigned. Locally Important (lower value) receptors contain habitats and species that are widespread and of low ecological significance and of any importance only in the local area. Internationally Important sites are either designated for conservation as part of the Natura 2000 Network (SAC or SPA) or provide the best examples of habitats or internationally important populations of protected flora and fauna. Specific criteria for assigning each of the other levels of importance are set out in the TII Ecological Impact Assessment Guidelines and have been followed in this assessment. Where appropriate, the geographic frame of reference set out above was adapted to suit local circumstances. In addition, and where appropriate, the conservation status of habitats and species is considered when determining the significance of ecological receptors.

Any ecological receptors that are determined to be of National or International, County or Local importance (Higher Value) following the criteria set out in the TII Ecological Impact Assessment Guidelines are considered to be KERs for the purposes of ecological impact assessment if there is a pathway for effects thereon. Any receptors that are determined to be of Local Importance (Lower Value) are not considered to be KERs. This is not to say that they are of no biodiversity value, but that impacts on these habitat types in their local context are not likely to result in a significant effect on biodiversity. It should be noted that this relates to the impact on the habitat itself as distinct from considering the role these habitat types play in supporting KER fauna species.

6.4.4.3 Characterisation of Impacts and Effects

The ecological effects of impacts arising from the Proposed Development are characterised as per the CIEEM ‘Guidelines for Ecological Impact Assessment in the UK and Ireland’ (2018). The CIEEM (2018) Guidelines are the industry standard for the completion of Ecological Impact Assessment (EcIA)

in the UK and Ireland. This chapter has also been prepared in cognisance of the EPA Guidelines (EPA 2022)¹⁰.

A summary of the impact characteristics considered in the assessment is provided below:

- **Positive or Negative.** Assessment of whether the Proposed Development results in a positive or negative effect on the ecological receptor.
- **Extent.** Description of the spatial area over which the effect has the potential to occur.
- **Magnitude** Refers to size, amount, intensity and volume. It should be quantified if possible and expressed in absolute or relative terms e.g. the amount of habitat lost, percentage change to habitat area, percentage decline in a species population.
- **Duration** is defined in relation to ecological characteristics (such as the lifecycle of a species) as well as human timeframes. For example, five years, which might seem short-term in the human context or that of other long-lived species, would span at least five generations of some invertebrate species.
- **Frequency and Timing.** This relates to the number of times that an impact occurs and its frequency. A small-scale impact can have a significant effect if it is repeated on numerous occasions over a long period.
- **Reversibility.** This is a consideration of whether an effect is reversible within a 'reasonable' timescale. What is considered to be a reasonable timescale can vary between receptors and is justified where appropriate in the impact assessment section of this report.

6.4.4.4 Determining the Significance of Effects

The ecological significance of the effects of the Proposed Development are determined following the precautionary principle and in accordance with the methodology set out in Section 5 of the CIEEM 2018 Guidelines.

For the purpose of this assessment, 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site) or broad (e.g. national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local (CIEEM, 2018).

When determining significance, consideration is given to whether:

- Any processes or key characteristics of KERs will be removed or changed.
- There will be an effect on the nature, extent, structure and function of important ecological features.
- There is an effect on the average population size and viability of ecologically important species.
- There is an effect on the conservation status of important ecological habitats and species.

Integrity

In the context of EcIA, 'integrity' refers to the coherence of the ecological structure and function, across the entirety of a site, that enables it to sustain all of the ecological resources for which it has been valued (TII, 2009). Impacts resulting in adverse changes to the nature, extent, structure and function of

¹⁰ There are seven generalised degrees of effect significance that are commonly used in EIA. Imperceptible, Not Significant, Slight, Moderate, Significant, Very Significant and Profound. Generalised definitions of each of these are provided in Table 3.4 of the EPA guidelines (2022). As stated in the guidelines, when more specific definitions exist within a specialised factor or topic, e.g. biodiversity, these should be used in preference to these generalised definitions (i.e. CIEEM 2018).

component habitats and effects on the average population size and viability of component species, would affect the integrity of a site, if it changes the condition of the ecosystem to unfavourable.

Conservation status

An impact on the conservation status of a habitat or species is considered to be significant if it will result in a change in conservation status. According to CIEEM (2018) guidelines the definition for conservation status in relation to habitats and species are as follows:

- Habitats – conservation status is determined by the sum of the influences acting on the habitat that may affect its extent, structure and functions as well as its distribution and its typical species within a given geographical area.
- Species – conservation status is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area.

As defined in the EU Habitats Directive 92/43/EEC, the conservation of a habitat is favourable when:

- Its natural range, and areas it covers within that range, are stable or increasing.
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future.
- The conservation status of its typical species is favourable.

The conservation of a species is 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.
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future.
- There is and will probably continue to be, a sufficiently large habitat to maintain its population on a long-term basis.

According to the TII (2009) and CIEEM (2018) Guidelines, if it is determined that the integrity and/or conservation status of an ecological feature will be impacted on, then the level of significance of that impact is related to the geographical scale at which the impact will occur (i.e. local, county, national, international).

6.4.4.5 Incorporation of Mitigation

Section 6.8 of this chapter assesses the potential effects of the Proposed Development to ensure that all effects on sensitive ecological receptors are adequately addressed. Where significant effects on KERs are predicted, mitigation is incorporated into the project design or layout to address such effects, as is the case with the Proposed Development. The implemented mitigation measures avoid or reduce or offset potential significant residual effects, post mitigation.

6.4.4.6 Limitations

The information provided in this document accurately and comprehensively describes the baseline ecological environment; provides an accurate prediction of the likely ecological effects of the Proposed Development; prescribes mitigation as necessary; and describes the residual ecological impacts. The specialist studies, analysis and reporting have been undertaken in accordance with the appropriate guidelines. No significant limitations in the scope, scale or context of the assessment have been identified.

6.5 Establishing the Ecological Baseline

6.5.1 Desk Study

The following sections describe the findings of the desk study. It provides a baseline of the ecology known to occur in the existing environment based on data sources reviewed to inform the ecological impact assessment.

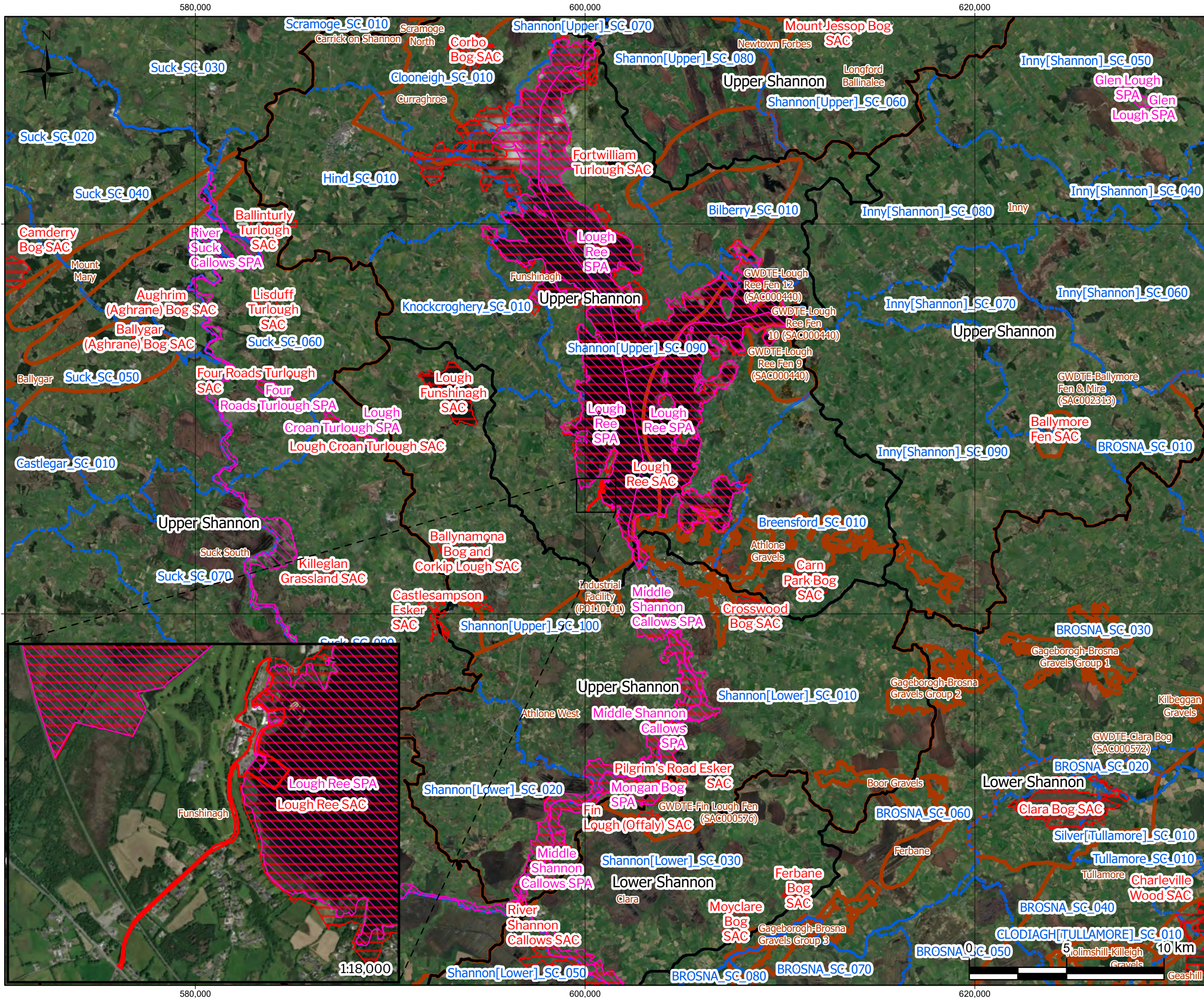
6.5.1.1 Designated Sites

SACs and SPAs for birds are designated under the Habitats Directive and the Birds Directive, respectively and are collectively known as 'European Sites'. The potential for significant effects and/or adverse impacts on the integrity of European Sites is fully assessed in the AA Screening Report and NIS that accompanies this application. As per EPA 2022 Guidance, *"a biodiversity section of an EIAR, should not repeat the detailed assessment of potential effects on European sites contained in a Natura Impact Statement"* but should *"incorporate their key findings as available and appropriate"*. Section 6.8.4 of this chapter provides a summary of the key assessment findings with regard to European Designated Sites.

NHAs are designated under Section 18 the Wildlife (Amendment) Act 2000, and their management and protection is provided for by this legislation and planning policy. The potential for effects on these designated sites is fully considered in this Biodiversity Chapter. pNHAs were designated on a non-statutory basis in 1995 but have not since been statutorily proposed or designated. However, the potential for effects on these designated sites is fully considered in this Biodiversity Chapter. NHAs and pNHAs are collectively known as 'Nationally Designated Sites'.

The following methodology was used to establish which sites that are designated for nature conservation have the potential to be impacted by the Proposed Development:

- Initially the most up to date Geographical Information Systems (GIS) spatial datasets for European and Nationally designated sites and water catchments were downloaded from the NPWS website (www.npws.ie) and the EPA website (www.epa.ie). The datasets were utilised to identify designated sites which could feasibly be affected by the Proposed Development.
- All European and Nationally designated sites within the vicinity of the Proposed Development were identified. In addition, the potential for connectivity with European or Nationally designated sites at greater distances from the Proposed Development was also considered in this initial assessment.
- A map of all the European Sites within the vicinity of the Proposed Development is provided in Figure 6-2 with all Nationally Designated Sites shown in Figure 6-3. These figures also display Water Framework Directive hydrological catchments and groundwater bodies.
- Table 6-8 provides details of all relevant Nationally Designated Sites as identified in the preceding steps and assesses which are within the likely ZOI. All European Sites are fully described and assessed in the AA Screening and NIS reports submitted as part of this planning application.
- The designation features of these sites, as per the NPWS website (www.npws.ie), were consulted and reviewed at the time of preparing this report.
- Where potential pathways for Significant Effect are identified, the site is included within the Likely ZOI, and further assessment is required.



Map Legend

- Proposed Development Site
- Special Protection Areas (SPA)
- Special Area of Conservation (SAC)
- WFD Hydrological Catchments
- WFD Hydrological Subcatchments
- WFD Groundwater Bodies

Spatial Reference Name: IRENET95 Irish Transverse Mercator
Datum: IRENET95
Projection: Transverse Mercator

SITE LOCATION - NOT TO SCALE

Drawing Title
European Designated Sites within the Likely Zone of Influence

Project Title
Hodson Bay Waterfront Park and Marina Redevelopment, Co. Roscommon

Project No. 241220	Drawing No. Figure 6-2	Scale 1:180,000
Drawn By TS	Checked By AvdGM	Date 10/08/2026

Email: info@mkofireland.ie Website: www.mkofireland.ie

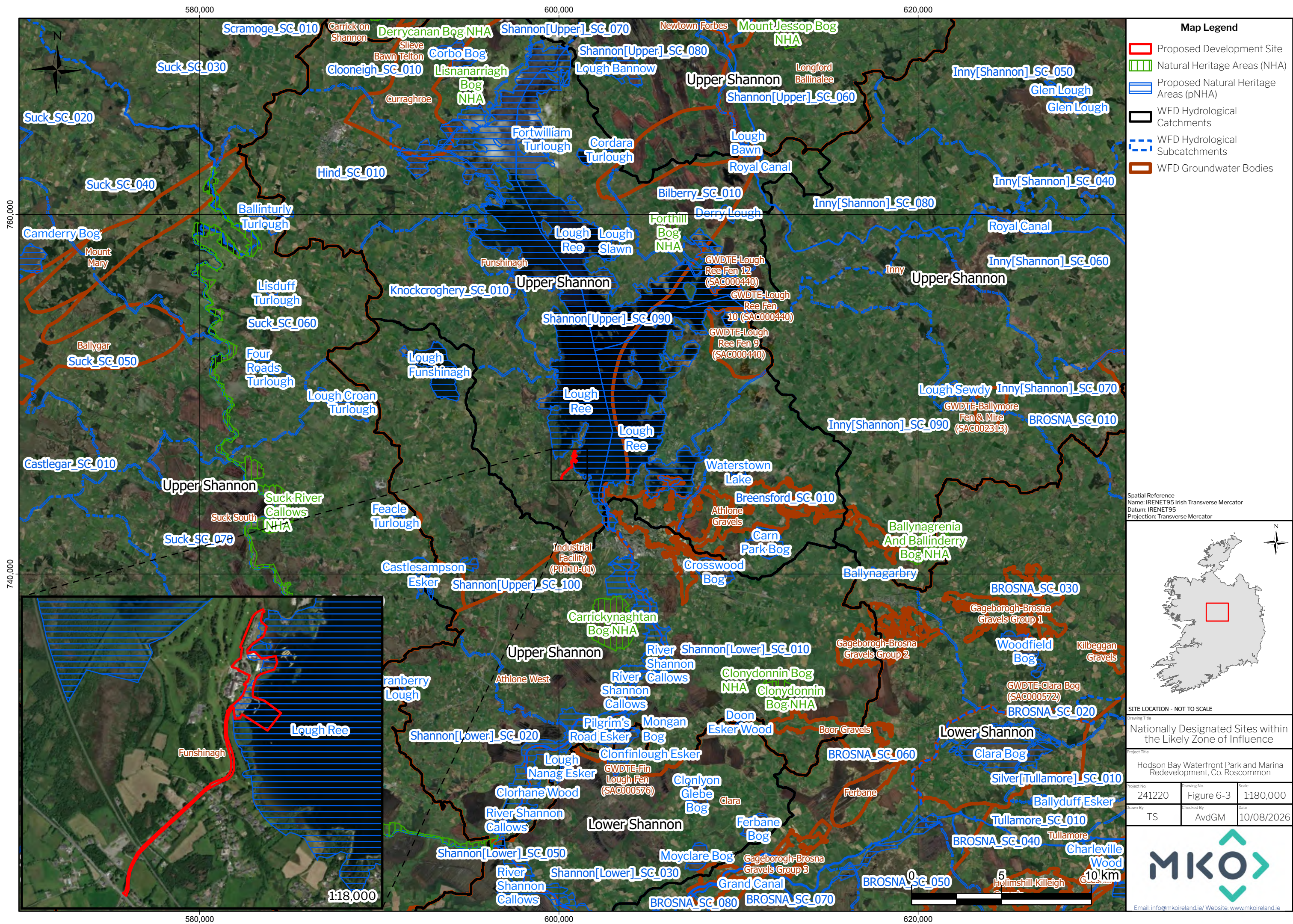


Table 6-8 - Identification of nationally Designated Sites within the likely zone of influence

Designated Site	Distance from Proposed Development (km)	Zone of Likely Influence Determination
Natural Heritage Areas (NHA)		
Carrickynaghtan Bog NHA [001623]	6.9 km	There will be no direct effects as the Proposed Development is located entirely outside the designated site. The NHA is located 6.9 km from the Proposed Development Site. There is no hydrological link between the NHA and Proposed Development. Given the distance between the Proposed Development Site and this designated site and that the features of interest are terrestrial in nature, there is no potential for indirect effects to the features of interest for Carrickynaghtan Bog NHA. The NHA is considered to be outside the ZoI and no further assessment is required.
Forthill Bog NHA [001448]	12.4 km	There will be no direct effects as the Proposed Development is located entirely outside the designated site. The NHA is located 12.4 km from the Proposed Development Site. There is no hydrological link between the NHA and Proposed Development. Given the distance between the Proposed Development Site and this designated site and that the features of interest are terrestrial in nature, there is no potential for indirect effects to the features of interest for Forthill Bog NHA. The NHA is considered to be outside the ZoI and no further assessment is required.
Proposed Natural Heritage Area (pNHA)		
Lough Ree pNHA [000440]	The Proposed Development is located within and adjacent to the pNHA.	As the Proposed Development is located partially within and adjacent to Lough Ree, there is potential for direct effects upon the designated site. Potential for direct effects on features of interest of the pNHA were identified in the form of habitat disturbance arising from the Proposed Development. The potential for disturbance and displacement of species associated with the pNHA has been identified as a result of the Proposed Development. Additionally, the potential for indirect effects on aquatically influenced features of interest were identified in the form of surface water and groundwater quality deterioration arising from the construction and operational phases of the Proposed Development

Designated Site	Distance from Proposed Development (km)	Zone of Likely Influence Determination
		A pathway for effect on this pNHA was identified. The site is considered to be within the ZoI of the Proposed Development and is therefore considered further in this assessment.
River Shannon Callows pNHA [000216]	5.2 km Hydrological distance: approx. 6.5 km	There will be no direct effects as the Proposed Development is located entirely outside the pNHA. As there is direct hydrological connectivity between the Proposed Development Site and the River Shannon Callows pNHA via Lough Ree and the River Shannon (approx. 6.5 km downstream), there is potential for indirect effects upon the aquatic and aquatically influenced features of interest of the pNHA via deterioration in surface water quality. Taking a precautionary approach, there is also the potential for indirect effects on the feature of interest fauna of Lough Ree pNHA as a result of ex-situ disturbance resulting from the Proposed Development. A pathway for effect on this pNHA was identified. The site is considered to be within the ZoI of the Proposed Development and is therefore considered further in this assessment.
Castlesampson Esker pNHA [001625]	6.4 km	There is no potential for direct effects as the Proposed Development is located entirely outside of the pNHA. Indirect effects on the terrestrial habitats of the Castlesampson Esker pNHA can be ruled out due to the terrestrial nature of the habitat, the distance from the proposed works (6.4 km). There is no hydrological link between the pNHA and Proposed Development. Given the distance between the Proposed Development Site and this designated site and that the features of interest are terrestrial in nature, there is no potential for indirect effects on Castlesampson Esker pNHA. The pNHA is considered to be outside the ZoI for the Proposed Development and no further assessment is required.
Lough Funshinagh pNHA [000611]	7 km	There is no potential for direct effects as the Proposed Development is located entirely outside of this designated site.

Designated Site	Distance from Proposed Development (km)	Zone of Likely Influence Determination
		While a section of this pNHA is located within the same hydrological subcatchment as the site of the proposed works, there is no connectivity between the two via surface water pathways. Therefore, there is no potential for indirect effects on the features of interest of the pNHA via surface water pathways. While the site of the proposed works and the pNHA are located within the same groundwater body (Funshinagh GWB), as the pNHA is located 7 km away, and topographically upgradient of the Site, there is no potential for indirect effects of the features of interest of the pNHA via deterioration in groundwater quality. The pNHA is considered to be outside the ZoI for the Proposed Development and no further assessment is required.
Waterstown Lake pNHA [001732]	8.5 km	There is no potential for direct effects as the Proposed Development is located entirely outside of this designated site. Indirect effects on the terrestrial features of interest of the Waterstown Lake pNHA can be ruled out due to the terrestrial nature of the habitats, the distance from the proposed works (8.5 km), and the absence of a complete source-pathway receptor chain for effect. There is no downstream connectivity of surface waters from the Proposed Development to the pNHA. The pNHA is located upstream of the Proposed Development and as such there is no potential for significant indirect effects upon the aquatic habitats of the pNHA via surface water pathways. Additionally, the pNHA and the site of the Proposed Development are located within separate groundwater bodies. Therefore, there is no potential for significant indirect effects upon the pNHA via deterioration in groundwater quality. The pNHA is considered to be outside the ZoI for the Proposed Development and no further assessment is required.
Crosswood Bog pNHA [000678]	8.7 km	There is no potential for direct effects as the Proposed Development is located entirely outside of this designated site.

Designated Site	Distance from Proposed Development (km)	Zone of Likely Influence Determination
		Indirect effects on the terrestrial habitats of the Crosswood Bog pNHA can be ruled out due to the terrestrial nature of the habitat, and the distance from the proposed works (8.7km). The pNHA is considered to be outside the ZoI for the Proposed Development and no further assessment is required.
Feacle Turlough pNHA [001634]	8.9 km	There is no potential for direct effects as the Proposed Development is located entirely outside of this designated site. Indirect effects on the terrestrial features of interest of the pNHA can be ruled out due to the terrestrial nature of the habitats, the distance from the proposed works (8.9 km), and the absence of a complete source-pathway receptor chain for effect. As the site of the Proposed Development and the Feacle Turlough pNHA are located within separate hydrological catchments, there is no potential for significant indirect effects upon the aquatic habitats of the pNHA via surface water pathways. Additionally, the pNHA and the site of the Proposed Development are located within separate groundwater bodies. Therefore, there is no potential for significant indirect effects upon the pNHA via deterioration in groundwater quality. The pNHA is considered to be outside the ZoI for the Proposed Development and no further assessment is required.
Carn Park Bog pNHA [000676]	10.2 km	There is no potential for direct effects as the Proposed Development is located entirely outside of this designated site. Indirect effects on the terrestrial habitats of the Carn Park Bog pNHA can be ruled out due to the terrestrial nature of the habitat, and the distance from the proposed works (10.2 km). The pNHA is considered to be outside the ZoI for the Proposed Development and no further assessment is required.
Lough Slawn pNHA [001443]	10.6 km	There is no potential for direct effects as the Proposed Development is located entirely outside of this designated site.

Designated Site	Distance from Proposed Development (km)	Zone of Likely Influence Determination
		Indirect effects on the terrestrial features of interest of the Lough Slawn pNHA can be ruled out due to the terrestrial nature of the habitat, and the distance from the proposed works (10.6 km). Lough Slawn pNHA is located 10.6 km north-east of the Proposed Development. There is no mapped surface water connectivity between Lough Slawn pNHA and the pNHA is located hydrologically up-lake of the Proposed Development. Lough Slawn pNHA and the Proposed Development are located within the same groundwater body, however they are separated by 10.6 km and the surface water body of Lough Ree. Therefore, due to the above, there is no potential for indirect effect on Lough Slawn pNHA as a result of the Proposed Development. The pNHA is considered to be outside the ZoI for the Proposed Development and no further assessment is required.
Lough Croan Turlough pNHA [000610]	11.1 km	There is no potential for direct effects as the Proposed Development is located entirely outside of this designated site. Lough Croan Turlough pNHA is located a distance of 11.1 km and upgradient from the proposed site, within both a separate hydrological catchment and groundwater body. Therefore, there is no potential for indirect effects on the groundwater dependent habitats via surface water pathways, or through deterioration of groundwater quality. The pNHA is considered to be outside the ZoI for the Proposed Development and no further assessment is required.
Pilgrim's Road Esker pNHA [001776]	13.8 km	There is no potential for direct effects as the Proposed Development is located entirely outside of this designated site. Indirect effects on the terrestrial habitats of the Pilgrim's Road Esker pNHA can be ruled out due to the terrestrial nature of the habitat and the distance from the proposed works (13.8 km). The pNHA is considered to be outside the ZoI for the Proposed Development and no further assessment is required.

Designated Site	Distance from Proposed Development (km)	Zone of Likely Influence Determination
Mongan Bog pNHA [000580]	14.1 km	There is no potential for direct effects as the Proposed Development is located entirely outside of this designated site. Indirect effects on the terrestrial habitats of the Mongan Bog pNHA can be ruled out due to the terrestrial nature of the habitat and the distance from the proposed works (14.1km). The pNHA is considered to be outside the ZoI for the Proposed Development and no further assessment is required.
Cranberry Lough pNHA [001630]	14.4 km	There is no potential for direct effects as the Proposed Development is located entirely outside of this designated site. There is no downstream connectivity from the Proposed Development to Cranberry Lough pNHA. Additionally, the pNHA and the site of the Proposed Development are located within separate groundwater bodies and over 14.4 km from each other. Therefore, there is no potential for significant indirect effects upon the pNHA via deterioration in water quality. The pNHA is considered to be outside the ZoI for the Proposed Development and no further assessment is required.
Lough Derg pNHA [000011]	Distance: 43.2 km Hydrological distance: approx. 65 km	The pNHA is located approx. 43.2km from the Proposed Development Site. As such, there is no potential for direct effects on this pNHA. The sites are underlain by separate ground water bodies. Potential downstream hydrological connectivity exists between the sites. Given the intervening hydrological distance (65 km) between the Proposed Development Site and this pNHA and the assimilative capacity of Lough Ree, and the River Shannon, there is no potential for deterioration of water quality in this pNHA associated with the Proposed Development. The pNHA is considered to be outside the ZoI for the Proposed Development and no further assessment is required.
Fergus Estuary and Inner Shannon, North Shore pNHA [002048]	Distance: approx. 96.3 km Hydrological distance: approx. 135 km	The pNHA is located approx. 96.3 km from the Proposed Development Site. As such, there is no potential for direct effects on this pNHA.

Designated Site	Distance from Proposed Development (km)	Zone of Likely Influence Determination
		The sites are underlain by separate ground water bodies. Potential surface water connectivity exists between the Proposed Development and the pNHA via Lough Ree, Upper River Shanno, Lough Derg, Lower River Shannon, and the upper extents of the River Shannon estuarine waters. However, the pNHA is located approximately 135 km downstream from the Proposed Development. Given the intervening hydrological distance (approx. 135 km) between the Proposed Development Site and this pNHA and the assimilative capacity of the above outlined intervening waterbodies, there is no potential for deterioration of surface water quality in this pNHA associated with the Proposed Development. The pNHA is considered to be outside the ZoI for the Proposed Development and no further assessment is required.

The following European designated sites were identified as being within the Likely ZOI and are assessed further in the accompanying NIS:

- Lough Ree SAC [000440]
- River Shannon Callows SAC [000216]
- Lough Ree SPA [004064]
- Middle Shannon Callows SPA [004096]

The following nationally designated sites were identified as being within the likely ZoI of the Proposed Development:

- Lough Ree pNHA [000440]
- River Shannon Callows pNHA [000216]

6.5.1.2 NPWS Article 17 Reporting

Available NPWS datasets were downloaded and overlain on the Proposed Development Site. The 10 km hectad N04 (within which the Proposed Development Site is located) is mapped for the Article 17 habitats *91E0 Alluvial woodland* and *3150 Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation*, both of which are Qualifying Interest (QI) habitats for Lough Ree SAC [000440].

No other polygon or point data contained within datasets were identified within the Proposed Development Site. A review of the Irish Semi-natural Grasslands Survey (ISGS) showed that no areas of lands within the Proposed Development Site have been surveyed as part of the ISGS.

6.5.1.3 Vascular Plants and Bryophytes

A search was made in the New Atlas of the British and Irish Flora (Preston *et al*, 2002) to investigate whether any rare or unusual plant species listed under Annex II of the EU Habitats Directive, The Irish Red Data Book – 1 Vascular Plants (Curtis, 1988), the Irish Red List of Bryophytes (Mosses, Liverworts & Hornworts, NPWS, 2025) or the Flora (Protection) Order 2022 had been recorded in the relevant

10km square in which the Proposed Development Site is situated (N04). Species of conservation concern recorded in the 10 km hectad N04 is shown in Table 6-9.

Table 6-9. Species listed designated under the Flora Protection Order or the Irish Red Data Book within 10 km hectad N04.

Common Name	Scientific Name	Status
Basil Thyme	<i>Clinopodium acinos</i>	NT
Fragrant Agrimony	<i>Agrimonia procera</i>	NT
Green-winged Orchid	<i>Orchis morio</i>	VU
Narrow-leaved Helleborine	<i>Cephalanthera longifolia</i>	FPO, NT
Prickly Poppy	<i>Papaver argemone</i>	VU
Red Hemp-nettle	<i>Galeopsis angustifolia</i>	FPO, VU
Red-neck Forklet-moss	<i>Dicranella cerviculata</i>	NT
Short-leaved Water-starwort	<i>Callitriche truncata</i>	FPO, NT
Upright Brome	<i>Bromopsis erecta</i>	NT

Near Threatened (NT), Vulnerable (VU), Critically Endangered (CR), Regionally Extinct (RE), FPO (Flora Protection Order)

6.5.1.4 National Biodiversity Data Centre (NBDC) Records

6.5.1.4.1 Fauna

The NBDC database was accessed, most recently on 17th February 2026, to inform the survey effort and provide a baseline of likely species composition in the area. Records of protected fauna, including bats species, recorded from hectad N04 are provided in in Table 6-10.

Table 6-11 lists all the protected bird species recorded within the hectad which pertains to the Proposed Development Site.

Table 6-10. NBDC records for protected species and species of conservation interest (excl. birds) in hectad N04

Common name	Scientific name	Designation
Badger	<i>Meles meles</i>	WA
Brown Long-eared Bat	<i>Plecotus auritus</i>	Annex IV, WA
Common Frog	<i>Rana temporaria</i>	Annex V, WA
Common Lizard	<i>Zootoca vivipara</i>	WA
Common Newt	<i>Lissotriton vulgaris</i>	WA
Common Pipistrelle	<i>Pipistrellus pipistrellus sensu stricto</i>	Annex IV, WA
Daubenton's Bat	<i>Myotis daubentonii</i>	Annex IV, WA
Hedgehog	<i>Erinaceus europaeus</i>	WA
Irish Hare	<i>Lepus timidus subsp. hibernicus</i>	Annex V, WA

Common name	Scientific name	Designation
Leisler's Bat	<i>Nyctalus leisleri</i>	Annex IV, WA
Marsh Fritillary	<i>Euphydryas aurinia</i>	Annex II
Natterer's Bat	<i>Myotis nattereri</i>	Annex IV, WA
Otter	<i>Lutra lutra</i>	Annex II, IV, WA
Pine Marten	<i>Martes martes</i>	Annex V, WA
Pipistrelle spp.	<i>Pipistrellus pipistrellus sensu lato</i>	Annex IV, WA
Pygmy Shrew	<i>Sorex minutus</i>	WA
Red Squirrel	<i>Sciurus vulgaris</i>	WA
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	Annex IV, WA
Whiskered Bat	<i>Myotis mystacinus</i>	Annex IV, WA
White-clawed Crayfish	<i>Austropotamobius pallipes</i>	Annex II, V, WA

Annex II, Annex IV, Annex V – Of EU Habitats Directive, Annex I – Of EU Birds Directive, WA – Irish Wildlife Acts (1976 as amended)

Table 6-11. NBDC Records for Birds for hectad N04

Common Name	Scientific Name	Status
Arctic Tern	<i>Sterna paradisaea</i>	Annex I
Common Tern	<i>Sterna hirundo</i>	
Great Northern Diver	<i>Gavia immer</i>	
Hen Harrier	<i>Circus cyaneus</i>	
Kingfisher	<i>Alcedo atthis</i>	
Corncrake	<i>Crex crex</i>	Annex I, BoCCI Red List
Dunlin	<i>Calidris alpina</i>	
Golden Plover	<i>Pluvialis apricaria</i>	
Barn Owl	<i>Tyto alba</i>	BoCCI Red List
Black-tailed Godwit	<i>Limosa limosa</i>	
Common Scoter	<i>Melanitta nigra</i>	
Curlew	<i>Numenius arquata</i>	

Common Name	Scientific Name	Status
Eider	<i>Somateria mollissima</i>	
Goldeneye	<i>Bucephala clangula</i>	
Grey Plover	<i>Pluvialis squatarola</i>	
Grey Wagtail	<i>Motacilla cinerea</i>	
Kestrel	<i>Falco tinnunculus</i>	
Lapwing	<i>Vanellus vanellus</i>	

Annex I – Of EU Birds Directive, Red List – Birds of Conservation Concern in Ireland (Population for which the species is red listed in brackets).

6.5.1.4.2 Invasive Species

The NBDC database also contains records of invasive species identified within the relevant 10 km hectad (N04). A number of species subject to restrictions under Regulations 49 and 50 and included in the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 were found to be present in hectad N04. The database was also searched for records of IAS listed on the First Schedule of the European Union (Invasive Alien Species) Regulations 2024 (S.I. No. 374 of 2024) within the hectad.

Table 6-12. NBDC records for invasive species within hectad N04

Common Name	Scientific Name	Classification
Crayfish plague	<i>Aphanomyces astaci</i>	High Risk Invasive Species (2013 Report)
Canadian Waterweed	<i>Elodea canadensis</i>	Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011
Demon Shrimp	<i>Dikerogammarus haemobaphes</i>	—
<i>Hemimysis anomala</i>		High Risk Invasive Species (2013 Report)
Himalayan Balsam	<i>Impatiens glandulifera</i>	First Schedule of the European Union (Invasive Alien Species) Regulations 2024 (S.I. No. 374 of 2024) Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011
Japanese Knotweed	<i>Fallopia japonica</i>	
Nuttall's waterweed	<i>Elodea nuttallii</i>	
Quagga Mussel	<i>Dreissena rostriformis bugensis</i>	
Zebra Mussel	<i>Dreissena polymorpha</i>	
Starry Stonewort	<i>Nitellopsis obtusa</i>	—

6.5.1.5 NPWS Protected Species Records

NPWS) online records were searched to see if any rare or protected species of flora or fauna have been recorded from the 10 km hectad N04. An information request was also sent to the NPWS scientific data unit requesting records from the Rare and Protected Species Database on the 28th of January 2026. A response was received on the 3rd of June 2026. Table 6-13 lists rare and protected species records obtained from NPWS.

Table 6-13. NPWS records for rare and protected species

Common name	Scientific name	Designation	Hectad
Basil Thyme	<i>Clinopodium acinos</i>	NT	N04
Common Frog	<i>Rana temporaria</i>	Annex V, WA	N04
Common Lizard	<i>Zootoca vivipara</i>	WA	N04
Desmoulin's Whorl Snail	<i>Vertigo moulinsiana</i>	Annex II	N04
Eurasian Badger	<i>Meles meles</i>	WA	N04
Eurasian Otter	<i>Lutra lutra</i>	Annex II, IV, WA	N04
Fragrant Agrimony	<i>Agrimonia procera</i>	NT	N04
Greenland white fronted goose	<i>Anser albifrons flavirostris</i>	BoCCI Amber List	N04
Green-winged Orchid	<i>Orchis morio</i>	VU	N04
Golden Bog-moss	<i>Sphagnum pulchrum</i>	Annex V	N04
Irish Hare	<i>Lepus timidus subsp. hibernicus</i>	Annex V, WA	N04
Irish Stoat	<i>Mustela erminea subsp. hibernica</i>	WA	N04
Irish Whitebeam	<i>Sorbus hibernica</i>	Vulnerable, IUCN Redlist	N04
Marsh Fern	<i>Thelypteris palustris</i>	NT	N04
Narrow-leaved Helleborine	<i>Cephalanthera longifolia</i>	FPO, NT	N04
Pine Marten	<i>Martes martes</i>	WA	N04
Prickly Poppy	<i>Papaver argemone</i>	VU	N04
Red Hemp-nettle	<i>Galeopsis angustifolia</i>	FPO, VU	N04
Red-neck Forklet-moss	<i>Dicranella cerviculata</i>	NT	N04
Short-leaved Water-starwort	<i>Callitriche truncata</i>	FPO, NT	N04
Smooth Newt	<i>Lissotriton vulgaris</i>	WA	N04
Stoat	<i>Mustela erminea</i>	WA	N04

Common name	Scientific name	Designation	Hectad
Tufted Duck	<i>Aythya fuligula</i>	BoCCI Amber List, SCI of Lough Ree SPA	N04
Upright Brome	<i>Bromopsis erecta</i>	NT	N04
West European Hedgehog	<i>Erinaceus europaeus</i>	WA	N04
White-clawed Crayfish	<i>Austropotamobius pallipes</i>	Annex II, V, WA	N04

Annex II and V of EU Habitats Directive; FPO = Flora Protection Order; Annex II Red List Species, VU = Vulnerable, NT = Near Threatened, WA = Wildlife Act

6.5.1.6 Irish Wetland Bird Survey (I-WeBS) Records

A data request was placed under I-WeBS data requests for wintering waterbird and wetland bird data for the Hodson Bay area of Lough Ree. The below table outlines the received I-WeBS records for the Hodson Bay subsite (0E528) between the survey seasons 2018/2019 – 2023/2024. Counts of each species varied widely between year, with some species only being recorded within one season out of the five presented below. Some species such as Coot and tufted Duck were present across every season provided below, but in some cases counts still varied significantly e.g. the highest count of Coot being 541 in 2018/2019 and the lowest count being 12 in 2020/2021.

Table 6-14. Hodson Bay I-WeBS Data

Common name	Scientific Name	2018/2019	2019/2020	2020/2021	2022/2023	2023/2024	Peak Count
Mute Swan	<i>Cygnus olor</i>	30	17	4	8	18	30
Whooper Swan	<i>Cygnus cygnus</i>	-	-	-	-	4	4
Wigeon	<i>Mareca penelope</i>	43	-	19	-	-	43
Teal	<i>Anas crecca</i>	-	-	-	2	2	2
Mallard	<i>Anas platyrhynchos</i>	2	5	-	14	15	15
Pochard	<i>Aythya ferina</i>	-	-	-	-	5	5
Tufted Duck	<i>Aythya fuligula</i>	36	52	4	66	65	66
Goldeneye	<i>Bucephala clangula</i>	-	-	12	-	-	12
Little Grebe	<i>Tachybaptus ruficollis</i>	3	2	-	9	3	9
Great Crested Grebe	<i>Podiceps cristatus</i>	4	5	3	6	5	6
Cormorant	<i>Phalacrocorax carbo</i>	15	6	2	5	4	15

Common name	Scientific Name	2018/2019	2019/2020	2020/2021	2022/2023	2023/2024	Peak Count
Little Egret	<i>Egretta garzetta</i>	-	1	-	-	-	1
Grey Heron	<i>Ardea cinerea</i>	1	1	2	1	1	2
Water Rail	<i>Rallus aquaticus</i>	-	-	-	1	-	1
Moorhen	<i>Gallinula chloropus</i>	1	2	-	3	-	3
Coot	<i>Fulica atra</i>	541	86	12	154	19	541
Golden Plover	<i>Pluvialis apricaria</i>	-	-	100	-	-	100
Lapwing	<i>Vanellus vanellus</i>	119	-	150	50	300	300
Snipe	<i>Gallinago gallinago</i>	-	-	-	-	2	2
Kingfisher	<i>Alcedo atthis</i>	-	-	-	1	1	1
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	36	3	21	3	-	36
Common Gull	<i>Larus canus</i>	-	-	-	-	1	1
Lesser Black-backed Gull	<i>Larus fuscus</i>	5	5	-	-	-	5
Great Black-backed Gull	<i>Larus marinus</i>	-	-	-	1	-	1
Unidentified duck	<i>Anatinae sp</i>	-	-	-	-	5	5

6.5.1.7 Inland Fisheries Ireland Data

The IFI online database¹¹ was reviewed for fish species records within Lough Ree, recorded during surveys conducted in June 2022 (McLoone et al., 2022), as well as downstream of the Proposed Development. The Proposed Development is located on the southwest shore of Lough Ree

A summary of results of netting surveys conducted within Lough Ree in 2022, as well as results of electrofishing surveys within the Upper River Shannon, downstream of the Proposed Development Site, are provided in Table 6-15.

¹¹ <https://opendata-ifgeo.hub.arcgis.com/apps/6f48cedf09b84d2e8b40100d85743c5b/explore>

Table 6-15. Inland Fisheries Ireland Data

Site Name	Species	Fish Ecological Status	Assessment Year
Lough Ree	Bream; Brown trout; European eel; Gudgeon; Perch; Pike; Pollan; Roach; Roach x bream hybrid; Tench	Moderate	2022
Ballyleague Br. Lanesboro_A	Roach; Pike	Moderate	2022
Hillquarter_A	Roach; Pike	Moderate	2022
Athlone Canal_A	Roach; Gudgeon; Perch; Pike	N/A	2022
Bogganfin_A	Roach; Perch; Pike	Moderate	2022
Bunaribba_A	European eel; Perch; Pike; Roach	Moderate	2010
Br. u/s Shannon River_A	Roach; Perch; Pike; Brown trout	Moderate	2022
Carrickynaghtan_A	Roach; Pike	Moderate	2022

6.5.1.8 Freshwater Pearl Mussel (*Margaritifera margaritifera*)

The Proposed Development Site is not located within a *Margaritifera* sensitive area. No point records for freshwater pearl mussel are located within or downstream of the Proposed Development Site, or within Lough Ree.

6.5.1.9 Regional & Local Hydrology

On a regional scale, the Proposed Development Site is located within Hydrometric Area 26, Upper Shannon, and the WFD Upper Shannon Catchment. It lies within the Shannon[Upper]_SC_090 subcatchment, as defined under the WFD. A regional hydrology map is provided in Figure 8-1 of Chapter 8 of this EIAR.

At the local scale, the majority of the Proposed Development Site is situated within the SHANNON (Upper)_110 sub basin and a section of the road to the south lies within the BALLYBAY_010 sub basin. There are currently no open surface watercourses or drains present within the Proposed Development Site. The closest river to the Proposed Development Site has been temporarily named 'TEMP_26N58' by EPA (WFD code: IE_SH_26S021660), which originates to the west of the Proposed Development Site and flows northward for approximately 0.8 km before discharging to Lough Ree; this river is upstream of the Proposed Development Site, via Lough Ree.

The Lough 'Ree' lake waterbody (WFD code: IE_SH_26_750a, Lough Ree, overlies and bounds the northern section of the Proposed Development Site. The lake covers approximately 100 km². The continuation of the River Shannon [Upper] is mapped by EPA approximately 3.6 km southeast of the Proposed Development Site, draining Lough Ree towards Athlone.

A regional hydrology map is shown in Figure 8-1 of Chapter 8 of this EIAR, and a local hydrology map is shown in Figure 8-2 of Chapter 8 of this EIAR.

6.5.1.10 Hydrogeology

The Proposed Development Site is underlain by Visean Limestones (undifferentiated) (Figure 7-3 of Chapter 7), and the bedrock aquifer has been classified by GSI as a regionally important karstified aquifer which is conduit driven (Rkc). This aquifer type is capable of supplying regionally important supplies (e.g., large public water supplies). A bedrock aquifer map is presented in Figure 8-3 of Chapter 8 of this EIAR. The Proposed Development Site lies within the Funshinagh groundwater body (GWB) (WFD code: IE_SH_G_091).

6.5.1.10.1 Groundwater Vulnerability

Groundwater vulnerability across most of the Proposed Development Site is classified as 'Moderate', with an area of 'High' vulnerability identified in a central portion along the L2020 Local Road, where sands and gravels are present (Figure 8-5 of Chapter 8 of this EIAR).

6.5.1.11 Site Drainage

There is no surface watercourse on the Proposed Development Site. Much of the rainfall that falls on permeable areas across the Proposed Development Site percolates to ground and likely travels via subsurface flow to Lough Ree which is located at the western boundary of the Proposed Development Site. There is also likely some infiltration through the moderately permeable subsoils to the limestone bedrock. As the overall local topography gently slopes from west to east, any overland runoff will generally flow eastward.

The majority of the Proposed Development Site is urban fabric with artificial surfaces that are served with a stormwater network. A substantial amount of rainfall is collected through gullies and the stormwater network, with likely outfall to Lough Ree. Some ponding of water has been observed at the gullies and car parking spaces in the northern area of the Proposed Development Site, which is likely due to blocked drainages or high lake water levels in winter. The existing roadway is served by gullies which are assumed to outfall to Lough Ree.

The existing stormwater network for the Hodson Bay Hotel is included in Appendix 4-4 of this EIAR. There is one observed existing stormwater outflow which passes through an oil interceptor before discharging into Lough Ree along the marina wall to the north (local authority reference number: WP-16-11, ID 2023_983).

6.5.1.12 Water Quality

Q-rating status data for EPA monitoring points downstream of the Proposed Development Site, along the Upper River Shannon (EPA Code: 26S02), are shown in Table 6-16. The Q-Rating is a water quality rating system based on both the habitat and the invertebrate community assessment and is divided into status categories ranging from 0-1 (Poor) to 4-5 (Good/High). Q-values are assigned using a combination of habitat characteristics and structure of the macro-invertebrate community within the waterbody. Individual macro-invertebrate families are classified according to their sensitivity to organic pollution, and the Q-value is assessed based primarily on their relative abundance within a sample.

Most recent data available (1990 to 2024) show that the Q-rating for the Upper River Shannon downstream of the Proposed Development site is of 'Poor' status, as per the River Waterbody WFD Status for 2019-2024.

Table 6-16. Water quality status of watercourses downstream of the Proposed Development Site

Waterbody	Location	Station code	Year	Easting	Northing	EPA Q-Rating Status
SHANNON (Upper)_120	SHANNON (Upper) - Athlone- just d/s Lock (RHS)	RS26S021705	1990	204097	241177	Q3 - Poor
SHANNON (Upper)_120	SHANNON (Upper) - Athlone - 400m d/s Lock (RHS)	RS26S021706	2024	204112	240975	Q3 - Poor
SHANNON (Upper)_120	Athlone: Burgess Park (LHS)	RS26S021720	2023	204117	240948	Q4 - Good
SHANNON (Upper)_120	SHANNON (Upper) - Athlone- d/s Old Canal	RS26S021730	1990	203867	240106	Q 3-4 - Moderate

6.5.2 Conclusions of the Desktop Study

The desktop study has provided information about the existing environment in hectad N04, within which the Proposed Development is located. The Proposed Development Site is located within the Upper Shannon (Catchment ID: 26E) and within the Shannon[Upper]_SC_090 sub-catchment (Sub-catchment ID: 26E_6).

Lough Ree, in which the Proposed Development is partially located, drains to the Upper River Shannon, approx. 3.6 km from the Proposed Development Site. The Proposed Development Site is located within the following European Designated and Nationally Designated Sites. Consequently, these sites were identified as being within the Likely ZoI,

- Lough Ree SAC [000440]
- Lough Ree SPA [004064]
- Lough Ree pNHA [000440]

The following European Designated and Nationally Designated Sites are located hydrologically downstream of the Proposed Development and consequently, were identified within the Likely ZoI:

- River Shannon Callows SAC [000216]
- Middle Shannon Callows SPA [004096]
- River Shannon Callows pNHA [000216]

The desk study identified that a variety of protected faunal species are known to occur within the wider area of the Proposed Development Site, including bats, otter, badger, red squirrel etc. The mammal species recorded during the desk study informed the survey methodologies undertaken during the site visits. The mammal species recorded within the relevant hectad have widespread range and distributions in Ireland and are likely to be recorded frequently throughout Ireland (Marnell et al, 2009). The Proposed Development Site is not located within a freshwater pearl mussel 'sensitive area', and is not hydrologically linked to any known freshwater pearl mussel point records.

The desk study revealed that the 10 km hectad N04 (within which the Proposed Development Site is located) has mapped instances of the Article 17 habitats *91E0 Alluvial woodland* and *3150 Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation*, both of which are QI habitats for Lough Ree SAC [000440].

Rare or protected vascular and bryophyte flora recorded within the 10 km hectad N04 include: Basil Thyme, Fragrant Agrimony, Green-winged Orchid, Narrow-leaved Helleborine, Prickly Poppy, Red

Hemp-nettle, Red-neck Forklet-moss, Short-leaved Water-starwort, Upright Brome. Narrow-leaved Helleborine is known to occur within the surrounding area of the Proposed Development Site.

NBDC and NPWS data provides a baseline understanding of Bird species utilising the hectad in which the Proposed Development is located. I-WeBS data for the Hodson Bay subsite between the survey seasons 2018/2019 – 2023/2024 highlighted the bird species which consistently utilise the Hodson Bay general area, and which species are infrequently found.

The desk study provided useful information to inform the ecological surveys undertaken on site as well as the identification of pathways for potential impact on sensitive ecological receptors.

6.6 Baseline Ecological Survey Results

6.6.1 Description of Habitats and Flora

A total of 13 habitats were recorded within the Proposed Development Site, summarised in Table 6-17 below. The majority of habitats within the Proposed Development are artificial or heavily modified/managed in nature, in character with the urbanised baseline condition of the Proposed Development.

Habitat mapping of the existing environment is provided within Figure 6-4, Figure 6-5, and Figure 6-6.

An overlay of the Proposed Development Site over the habitat mapping is shown in Figure 6-7, Figure 6-8, and Figure 6-9.

Table 6-17. Habitats recorded at the Proposed Development Site

Habitat	Fossitt Code
Eutrophic lakes	FL5
Exposed sand, gravel, or till	ED1
Reed and large sedge swamps	FS1
Drainage Ditches (<i>In the form of gullies adjacent to the Proposed Development</i>)	FW4
Amenity grassland	GA2
Scattered trees and parkland	WD5
Treelines	WL2
Wet willow-alder-ash woodland	WN6
Scrub	WS1
Recolonising bare ground	ED3
Buildings and artificial surfaces	BL3
Spoil and bare ground	ED2
Hedgerow	WL1



Map Legend	
	Proposed Development Site
	Buildings and artificial surfaces (BL3)
	Eutrophic lakes (FL5)
	Reed and large sedge swamps (FS1)
	Amenity grassland (improved) (GA2)
	Scattered trees and parkland (WD5)
	Wet willow-alder-ash woodland (WN6)
	Scrub (WS1)
	Exposed sand, gravel or till (ED1)
	Hedgerows (WL1)
	Treelines (WL2)



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Drawing Title	
Habitat Mapping within the Proposed Development Site (1/3)	
Project Title	
Hodson Bay Waterfront Park and Marina Redevelopment, Co. Roscommon	
Drawn By	Checked By
NR	AvdGM
Project No.	Drawing No.
241220	Figure 6-4
Scale	Date
1:3,500	28.07.2026



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Map Legend

- Proposed Development Site
- Buildings and artificial surfaces (BL3)
- Spoil and bare ground (ED2)
- Recolonising bare ground (ED3)
- Eutrophic lakes (FL5)
- Reed and large sedge swamps (FS1)
- Amenity grassland (improved) (GA2)
- Scattered trees and parkland (WD5)
- Hedgerows (WL1)
- Treelines (WL2)



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Drawing Title
Habitat mapping within the Proposed Development Site (2/3)

Project Title
Hodson Bay Waterfront Park and Marina Redevelopment, Co. Roscommon

Drawn By	Checked By
NR	AvdGM
Project No.	Drawing No.
241220	Figure 6-5
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Map Legend

- Proposed Development Site
- Buildings and artificial surfaces (BL3)
- Recolonising bare ground (ED3)

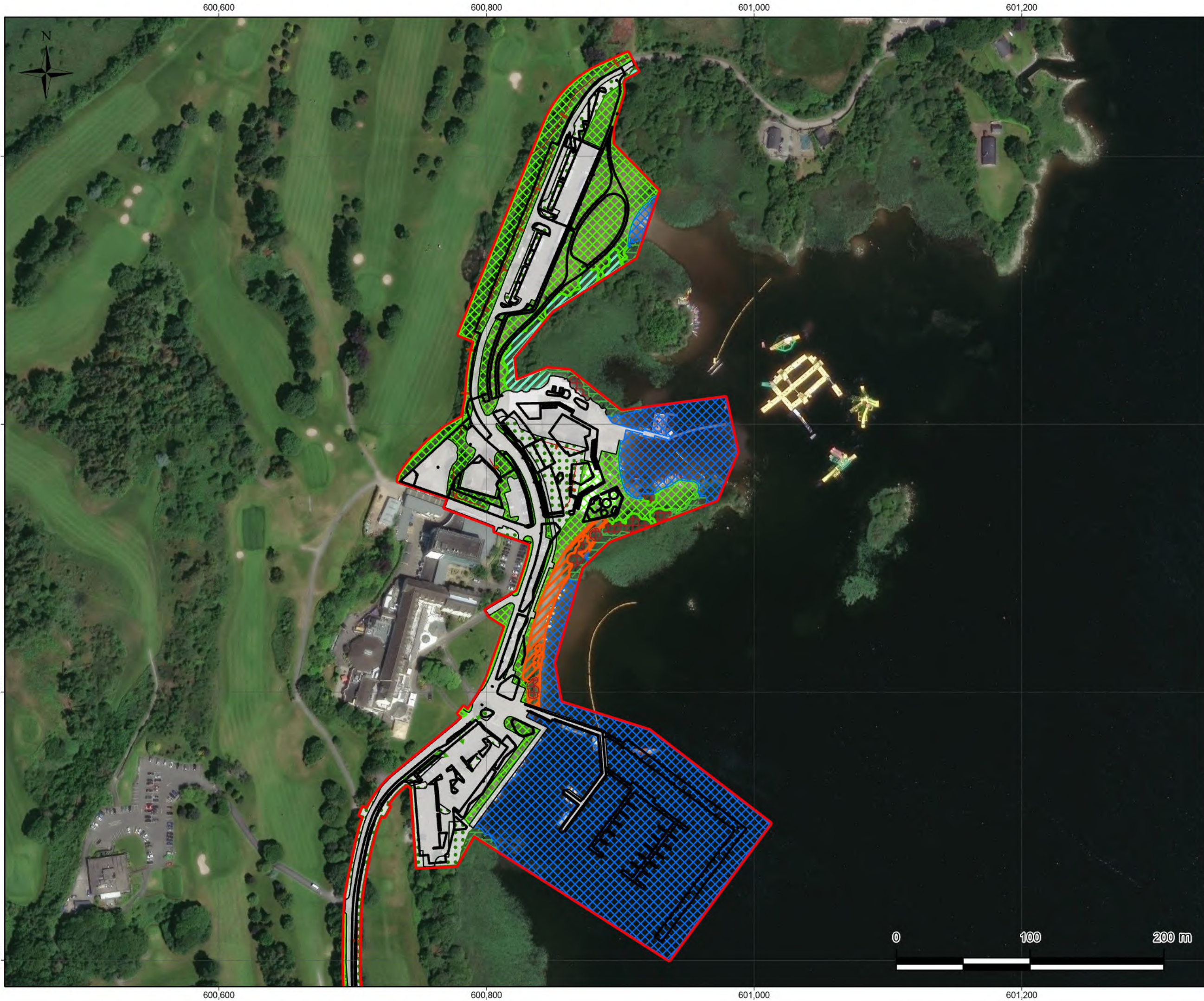


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Drawing Title	
Habitat mapping within the Proposed Development Site (3/3)	
Project Title	
Hodson Bay Waterfront Park and Marina Redevelopment, Co. Roscommon	
Drawn By	Checked By
NR	AvdGM
Project No.	Drawing No.
241220	Figure 6-6
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Map Legend

- Proposed Development Site
- Simplified Hodson Bay Design Layout
- Buildings and artificial surfaces (BL3)
- Reed and large sedge swamps
- Scrub (WS1)
- Exposed sand, gravel or till (ED1)
- Eutrophic Lakes (FL5)
- Amenity Grassland (GA2)
- Scattered trees and parkland (WD5)
- Wet willow-alder-ash woodland (WN6)
- Hedgerows (WL1)
- Treelines (WL2)

Spatial Reference
Name: IRENET95 Irish Transverse Mercator
Datum: IRENET95
Projection: Transverse Mercator

SITE LOCATION - NOT TO SCALE

Drawing Title
Habitat Mapping overlain on the Proposed Development Site Layout Overview (1/3)

Project Title
Hodson Bay Waterfront Park

Project No. 241220	Drawing No. Figure 6-7	Scale 1:3,000
Drawn By BOC	Checked By AvdGM	Date 04/08/2026

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Map Legend

- Proposed Development Site
- Treelines (WL2)
- Buildings and artificial surfaces (BL3)
- Spoil and bare ground (ED2)
- Recolonising bare ground
- Reed and large sedge swamps
- Eutrophic Lakes (FL5)
- Amenity Grassland (GA2)
- Scattered trees and parkland (WD5)
- Simplified Hodson Bay Design Layout

Spatial Reference
Name: IRENET95 Irish Transverse Mercator
Datum: IRENET95
Projection: Transverse Mercator

SITE LOCATION - NOT TO SCALE

Drawing Title
Habitat Mapping overlain on the Proposed Site Layout Overview (2/3)

Project Title
Hodson Bay Waterfront Park

Project No.	Drawing No.	Scale
241220	Figure 6-8	1:2,000

Drawn By	Checked By	Date
BOC	AvdGM	04/08/2026

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600,000



Map Legend

- Proposed Development Site
- Buildings and artificial surfaces (BL3)
- Recolonising bare ground
- Simplified Hodson Bay Design Layout

Spatial Reference
Name: IRENET95 Irish Transverse Mercator
Datum: IRENET95
Projection: Transverse Mercator



SITE LOCATION - NOT TO SCALE

Drawing Title
**Habitat Mapping within the
Proposed Development
Site Overview (3/3)**

Project Title
Hodson Bay Waterfront Park

Project No.	Drawing No.	Scale
241220	Figure 6-9	1:3,000
Drawn By:	Checked By:	Date
BOC	AvdGM	04/08/2026



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745,000

600,000

6.6.1.1 Eutrophic lakes (FL5)

The areas of Lough Ree located within the Proposed Development Site were assessed as **Eutrophic Lake (FL5)**. Aquatic plants identified throughout wading and aquatic drone transects included yellow water lily (*Nuphar lutea*), fennel pondweed (*Stuckenia pectinata*), Nuttall's waterweed (*Elodea nuttalli*), Canadian waterweed (*Elodea canadensis*), ivy-leaved duckweed (*Lemna triscula*), greater water moss (*Fontinalis antipyretica*), perfoliate pondweed (*Potamogeton perfoliatus*), arrowhead (*Sagittaria sagittifolia*), long-leaved pondweed (*Potamogeton lucens* x *gramineus* = *angustifolius*) and Berchtold's pondweed (*Potamogeton bertcholdii*), with semi-continuous, dense charophyte (*Chara spp.*) beds with filamentous green algae throughout.

Reed beds, classified as **Reed and large sedge swamp (FS1)** were commonly found along the margins of lake habitat, with species present including common club-rush (*Schoenoplectus lacustris*), reed canary-grass (*Phalaris arundinacea*), common reed (*Phragmites australis*), common spike-rush (*Eleocharis palustris*), willowherb (*Epilobium sp.*), water mint (*Mentha aquatica*), and water horsetail (*Equisetum fluviatile*).

Macrophyte communities identified throughout wading and aquatic drone transect surveys showed affinities for Annex I 'Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [3150]'.

Starry stonewort (*Nitellopsis obtuse*), an invasive charophyte, was found throughout transects within the current marina, often in conjunction with Quagga mussel (*Dreissena rostriformis bugensis*).

Results of macrophyte surveys can be found in Appendix 6-2 of this EIAR.



Plate 6-1 Eutrophic Lake habitat within and adjacent to the Proposed Development.

6.6.1.2 Reed and large sedge swamps (FS1)

Areas of the shoreline of Lough Ree located within the Proposed Development Site featured dense reedbeds, dominated by common reed grass and common club-rush, which were classified as **Reed and large sedge swamps (FS1)**. Other species commonly recorded within these reedbeds included canary reed grass, willowherb (*Epilobium sp.*), water mint, common spike-rush and water horsetail.

Closer to the lakeshore margins, where reedbeds met areas of **Wet willow-alder-ash woodland (WN6)** and grassland habitats, species such as goat and basket willow were common, in addition to tufted sedge (*Carex acuta*), yellow flag, bottle sedge (*Carex rostrata*), silverweed, common spike-rush, common vetch (*Vicia sativa*), common club-rush, lesser spearwort (*Ranunculus flammula*), narrow-leaved water-plantain (*Alisma gramineum*), marsh pennywort (*Hydrocotyle vulgaris*), jointed rush (*Juncus articulatus*), common sedge (*Carex nigra*), shoreweed (*Littorella uniflora*) and water germander (*Teucrium scordium*).

Further from the shoreline, submerged unbranched bur-reed (*Sparganium emersum*) and yellow water-lily (*Nuphar lutea*) were also present in conjunction with the reed beds. Areas of reedbed habitat mapped via ecological walkover survey and aerial drone survey are shown in Figure 6-10.



Plate 6-2. A representative photo of a section of the Lough Ree shore located within the centre of the Site, classified as **Reed and large sedge swamps (FS1)**.



Plate 6-3. A representative photo of **Reed and large sedge swamps (FS1)** habitat located along the shoreline of Lough Ree in the northern area of the Proposed Development Site



Plate 6-4. A representative photo of a section of common club-rush-dominant **Reed and large sedge swamps (FS1)** located along the shoreline of Lough Ree in the northern area of the Proposed Development Site.



Map Legend

- Proposed Development Site
- Reed and large sedge swamp (FS1)



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Drawing Title
Location of reedbed habitat mapped via
ecological walkover survey and aerial
drone survey

Project Title
Hodson Bay Waterfront Park and Marina
Redevelopment, Co. Roscommon

Drawn By	Checked By
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6.6.1.3 Wet willow-alder-ash woodland (WN6)

Fragmented, fringing areas of woodland present along the shoreline of Lough Ree which were regularly inundated with water were classified as **Wet willow-alder-ash woodland (WN6)**. Tree species commonly recorded within these areas of woodland included grey willow, goat willow, basket willow (*Salix viminalis*), alder and ash, with sycamore and black poplar (*Populus nigra*) also present at the edges of an area of woodland located to the north of the Proposed Development Site, as well as pedunculate oak (*Quercus robur*) in drier areas. A mix of tree sizes and varying degrees of deadwood were recorded throughout areas of lakeshore woodland within the Proposed Development Site. The shrub layer throughout areas of this woodland consisted of hawthorn, guelder rose (*Viburnum opulus*), alder buckthorn (*Frangula alnus*) and crab apple (*Malus sylvestris*).

The field layer throughout areas of wet willow-alder-ash woodland consisted of creeping bent (*Agrostis stolonifera*), remote sedge (*Carex remota*), wild angelica (*Anglica sylvestris*), meadowsweet (*Filipendula ulmaria*), water mint (*Mentha aquatica*), reed-canary grass (*Phalaris arundinacea*), common reed (*Phragmites australis*), purple loosestrife, (*Lythrum salicaria*), yellow loosestrife (*Lysimachia vulgaris*), yellow flag iris (*Iris pseudacorus*), marsh ragwort (*Jacobaea aquatica*), bogbean (*Mentha trifoliata*), gipsywort (*Lycopus europaeus*), lesser skullcap (*Scutellaria minor*), water horsetail (*Equisetum fluviatile*), marsh horsetail (*Equisetum palustre*), field horsetail (*Equisetum arvense*), greater willow-herb (*Epilobium hirsutum*), water forget-me-not (*Myosotis scorpioides*), marsh bedstraw (*Galium palustre*), cleaver, nettle, marsh-marigold (*Caltha palustris*), creeping jenny (*Lysimachia nummularia*), common sedge (*Carex nigra*), glaucous sedge (*Carex flacca*) and bladder sedge (*Carex vesicaria*), stone bramble (*Rubus saxatilis*), and bramble were recorded.

The moss *Thamnobryum alopecurum* occurred frequently in the rockier areas as well as scattered *Kindbergia praelonga* and *Plagionium* sp. Trees contained abundant moss epiphytes such as *Neckera complanata*, *Uloa* sp., and *Orthotrichum* sp.

Following condition assessment, small areas of fragmented woodland set back from the margins of Lough Ree conformed to 91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*), listed in Annex I of the EU Habitats Directive and included as a Qualifying Interest of Lough Ree SAC [Site code: 000440]. Areas of habitat conforming to 91E0 habitat lie largely outside of the Proposed Development Site, with the exception of fringing areas of woodland located to the north of the Proposed Water Sports Pavilion.

Annex I alluvial forest habitat, a QI habitat associated with Lough Ree SAC, is mapped along the lakeshore at St John's wood, approx. 8.8 km north of the Proposed Development Site. There is likely to be additional alluvial woodland habitat present along the shoreline of Lough Ree within the wider vicinity.

Results of alluvial forest condition assessments are provided in Appendix 6-1 of this report. Location of alluvial forest relevés and habitat mapped as conforming to alluvial forest are shown in Figure 6-11.



Plate 6-5. A representative image of **Wet willow-alder-ash woodland (WN6)** located to the north of the Study Area, outside of the Proposed Development Site.



Plate 6-6. A representative image of **Wet willow-alder-ash woodland (WN6)** located to the north of the existing Baysports facility, with the outer margins of this habitat located within the Proposed Development Site.



Plate 6-7. A representative image of an area of **Wet willow-alder-ash woodland (WN6)** located north of (and outside of) the Proposed Development Site during a period of inundation from Lough Ree.



Plate 6-8. A representative image of **Wet willow-alder-ash woodland (WN6)** located north of (and outside of) the Proposed Development Site during a period of inundation from Lough Ree.



Map Legend

- Proposed Development Site
- Alluvial forest condition assessment survey locations
- Wet willow-alder-ash woodland (WN6)
- Scrub (WS1)



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Drawing Title

Location of alluvial forest relevés

Project Title

Hodson Bay Waterfront Park and Marina Redevelopment, Co. Roscommon

Drawn By	Checked By
NR	AvdGM
Project No.	Drawing No.
241220	Figure 6-11
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6.6.1.4 Amenity grassland (GA2)

A number of areas of **Amenity grassland (GA2)** are present throughout the Proposed Development Site. These include areas of managed grassland located adjacent to the Hodson Bay Hotel and existing Lough Ree marina and pier (Plate 6-9) as well as grassland located within the north of the site adjacent to the existing carpark north of the Baysports facility.

Species recorded in these grasslands included Yorkshire fog (*Holcus lanatus*), creeping bent, dandelion (*Taraxacum officinale* agg.), ribwort plantain (*Plantago lanceolata*), silverweed (*Potentilla anserina*), creeping cinquefoil (*Potentilla reptans*), broadleaved dock (*Rumex obtusifolius*), daisy (*Bellis perennis*), and white clover (*Trifolium repens*).



Plate 6-9. A representative area of managed grassland, located adjacent to the Hodson Bay Hotel and the existing Lough Ree pier and marina, classified as Amenity grassland (GA2).

6.6.1.5 Buildings and artificial surfaces (BL3)

Buildings and artificial habitats (BL3) within the Proposed Development Site mainly consist of roadways, footpaths and car parking associated with the Hodson Bay Hotel (Plate 6-10 and Plate 6-11). Buildings from which the existing Baysports facility operates from (Plate 6-12, Plate 6-13), as well as public toilets (Plate 6-14), are also classed as buildings and artificial surfaces. Both the Baysports buildings and public toilets are proposed to be demolished, with marquees used by Baysports to be removed. Additionally, the existing marina and pier present along the shore of Lough Ree within the Proposed Development Site is classed as Buildings and artificial surfaces (Plate 6-15).



Plate 6-10. A representative photo of the existing L2020 road and footpaths, classified as **Buildings and artificial surfaces (BL3)**, located in the southern area of the Site.



Plate 6-11. A representative photo of a carpark classified as **Buildings and artificial surfaces (BL3)**, located adjacent to the Hodson Bay Hotel.



Plate 6-12. A representative photo of one of the Baysports buildings, classed as **Buildings and artificial surfaces (BL3)**, which is proposed for demolition.



Plate 6-13. A representative photo of one of the temporary marquees used by Baysports, classed as **Buildings and artificial surfaces (BL3)**, which is proposed for removal



Plate 6-14. A representative photo of the toilets classed as **Buildings and artificial surfaces (BL3)**, which are proposed for demolition

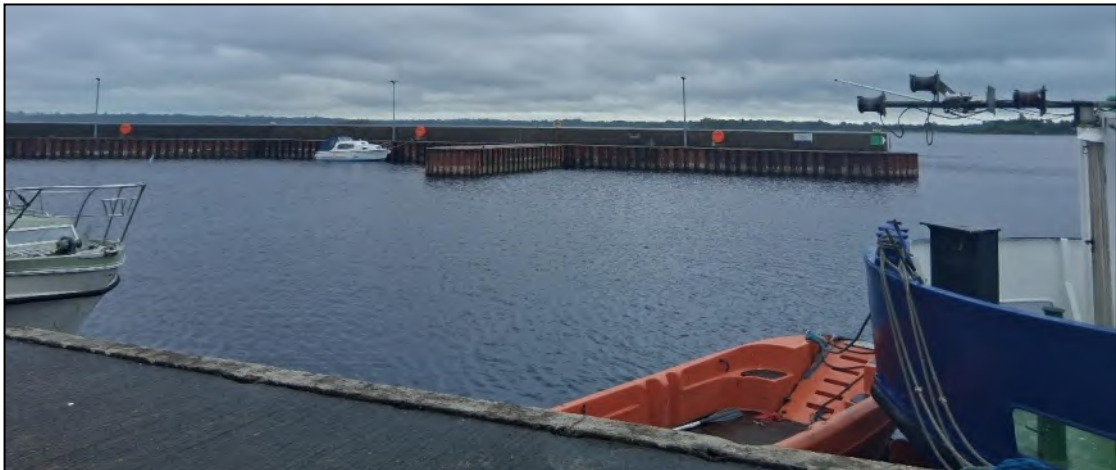


Plate 6-15. A representative picture of the pre-existing pier, classified as **Buildings and artificial surfaces (BL3)**, located within the Proposed Development Site.

6.6.1.6 Drainage Ditches (FW4)

Existing gullies which serve the southern end of the L2020 road lie outside of the Proposed Development Site and are classed as **Drainage Ditch (FW4)**. These run parallel to the existing active railway line and are assumed to outfall to Lough Ree. A representative photo of this habitat is shown in Plate 6-16.



Plate 6-16. A representative photo of a **Drainage Ditch (FW4)** located in the southern area of the Site.

6.6.1.7 Recolonising Bare Ground (ED3)

A small area of **Recolonising bare ground (ED3)** was recorded along the northern side of the L2020 road within the Proposed Development Site. Species recorded in this habitat included common ruderals as well as cleavers (*Galium aparine*), bramble, vipers' bugloss (*Echium vulgare*), cosmos (*Cosmos sp.*), cornflower (*Centaurea cyanus*), nipplewort (*Lapsana communis*), clover (*Trifolium sp.*), herb-robert (*Geranium robertianum*), and ivy (*Hedera helix*). A representative photo of this habitat is shown in Plate 6-17. Over the period of survey carried out for the Proposed Development (March 2025 – May 2026) this habitat was cleared and recolonised. Other minor areas of this habitat occurred throughout the Proposed Development Site often in transitional zones associated with areas of hardstand.



Plate 6-17. A representative photo of an area of **Recolonising bare ground (ED3)** located adjacent to the roadway within the Proposed Development Site.

6.6.1.8 Spoil and Bare Ground (ED2)

Small areas of spoil and bare ground occur within the Proposed Development Site. The most notable areas being segments of the gravel trackway within the Athlone Golf Club that overlap within the outer margins of the Proposed Development Site running along the L2020 road.



Plate 6-18. A segment of trackway within the Athlone Golf Club classified as **Spoil and Bare Ground habitat** on the outer margins of the Proposed Development Site located along the L2020 road.

6.6.1.9 Scrub (WS1)

Areas of grey willow (*Salix cinerea*) and crack willow (*Salix x fragilis*) dominant lakeshore **Scrub (WS1)** were located within the Proposed Development Site along the shoreline, north of the existing marina and pier (Plate 6-19 and Plate 6-20).

Common species throughout areas of willow scrub included meadowsweet (*Filipendula ulmaria*), common reed, water mint, guelder rose (*Viburnum opulus*), tufted vetch (*Vicia cracca*), creeping bent (*Agrostis stolonifera*), field horsetail (*Equisetum arvense*), hedge bindweed (*Calystegia sepium*) and great willowherb (*Epilobium hirsutum*).



Plate 6-19. An area of willow **Scrub (WS1)** south of the existing Baysports marquees



Plate 6-20. An area of willow **Scrub (WS1)** north of the existing marina and pier

6.6.1.10 Treelines (WL2)

Treelines (WL2) were recorded throughout the Proposed Development Site, along the L2020 roadway, within the outer boundaries of Athlone Golf Club and often bordering areas of **Scattered trees and parkland (WD5)**.

The following tree species were recorded within treeline habitat throughout the Proposed Development Site: ash (*Fraxinus excelsior*), Leyland cypress (*Cupressus leylandii*), beech (*Fagus sylvatica*), hawthorn (*Crataegus monogyna*), sycamore (*Acer pseudoplatanus*), willow (*Salix spp.*), Arizona cypress (*Hesperocyparis arizonica*), lime (*Tilia x europaea*), Norway maple (*Acer platanoides*), sitka spruce (*Picea sitchensis*), aspen (*Populus tremula*), horse chestnut (*Aesculus hippocastanum*), Silver birch (*Betula pendula*), Alder (*Alnus glutinosa*) sessile oak (*Quercus petraea*), cypress (*Cupressus sp.*), and rowan (*Sorbus aucuparia*).

The understories of these treelines were comprised of species such as elder (*Sambucus nigra*), ivy, bramble (*Rubus fruticosus*), nettle (*Urtica dioica*), cleavers (*Galium aparine*), bracken (*Pteridium aquilinum*), hogweed (*Heracleum sphondylium*) and lords and ladies (*Arum maculatum*).



Plate 6-21. A representative image of **Treeline (WL2)** located along the L2020 roadway within the Proposed Development Site.



Plate 6-22. A representative image of Leyland cypress **Treeline (WL2)** located between the northern carpark and Athlone Golf Club, within the Proposed Development Site

6.6.1.11 Hedgerow (WL1)

Low growing and heavily managed beech (*Fagus sylvatica*) **Hedgerow (WL1)** was recorded at the boundary of the marina car park and the L2020 roadway in a number of short segments.



Plate 6-23 Beech Hedgerow (WL1) located on the boundary of the marina car park and L2020 road.

6.6.1.12 Exposed sand, gravel or till (ED1)

An area of lake shore gravel, classified as **Exposed sand, gravel or till (ED1)**, was recorded along the shore of Lough Ree in front of the Hodson Bay Hotel.

Small sections of this exposed gravel area featured the growth of species such as dandelion, Yorkshire fog, ribwort plantain, silverweed (*Potentilla anserina*), canary reed-grass, horsetail (*Equisetum sp.*) cinquefoil (*Potentilla sp.*), and jointed rush.



Plate 6-24 Area of the shore of Lough Ree classified as **Exposed sand, gravel or till (ED1)**.

6.6.1.13 Scattered trees and parkland (WD5)

Areas within the Proposed Development Site classed as **Scattered trees and parkland (WD5)** featured grassland species outline in Section 6.6.1.4 such as Yorkshire fog and creeping bent, as well as perennial rye grass (*Lolium perenne*), broad-leaved dock (*Rumex obtusifolius*) and daisy (*Bellis perennis*). Tree species throughout this habitat included beech, lime, silver birch, ash, alder, sycamore and Norway maple. These areas of scattered trees and parkland were primarily recorded within the boundaries of the Athlone Golf Club along the L2020 Local Road (Plate 6-25), the area adjacent to the Baysports buildings, as well as associated with areas of amenity grassland and existing car parks within the Proposed Development Site (Plate 6-26).



Plate 6-25. A representative photo of **Scattered trees and parkland (WD5)** throughout Athlone Golf Club, on the southern side of the L2020 Local Road



Plate 6-26. A representative photo of **Scattered trees and parkland (WD5)** throughout existing carparks between Hodson Bay Hotel and Lough Ree, within the Proposed Development Site.

6.6.1.14 Protected Habitats/Flora

Eutrophic lake (FL5) habitat conforming to *Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [3150]* was recorded within the Proposed Development Site and **Wet willow-alder-ash woodland (WN6)** habitat conforming to *Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]* was recording partially with and adjacent to the Proposed Development Site.

No botanical species listed under the Flora (protection) Order or listed in the Irish Red Data Books were recorded on the site. No rare and protected plant species recorded in the desk study, including those obtained from NPWS data request were recorded within the Study Area.

6.6.1.15 Narrow-leaved Helleborine surveys

No narrow-leaved helleborine were identified during dedicated surveys conducted on 11th June 2025 throughout the Proposed Development Site.

6.6.2 Invasive species

Starry stonewort (*Nitellopsis obtusa*), an invasive charophyte, was found throughout aquatic drone transects and grapnel throws within the existing marina (Plate 6-27), often in conjunction with Quagga mussel (*Dreissena rostriformis bugensis*). Both Quagga mussel and Zebra mussel (*Dreissena polymorpha*), both listed on the First Schedule of the European Union (Invasive Alien Species) Regulations 2024 (S.I. No. 374 of 2024) and Third Schedule of the European Communities (Birds and Natural Habitats) Regulations (S.I. 477 of 2011), were identified colonising the concrete marina and were also found on substrate outcrops throughout wading transects within the Proposed Development Site (Plate 6-28, Plate 6-29, Plate 6-30). The First and Third Schedule Nuttall's waterweed (*Elodea nuttallii*) and Third Schedule Canadian waterweed (*Elodea canadensis*) were recorded in macrophyte transects within and adjacent to the Proposed Development Site (Plate 6-31). No other invasive species listed on the First or Third Schedule were recorded within the Proposed Development Site.

Invasive Species within the wider vicinity.

The medium impact species Butterfly bush (*Buddleia davidii*) was recorded outside of the Proposed Development Site, to the northwest of the southern end of L2020 Local Road (Plate 6-32). Snowberry (*Symphoricarpos albus*) was recorded in the northwestern corner of Wet grassland (GS4) to the south of the L2020 Local Road, also outside of the Proposed Development Site to the south (Plate 6-33). Spanish Blubell (*Hyacinthoides hispanica*), which is a First and Third Schedule listed species, was recorded outside the Proposed Development Site within Athlone Golf Club.



Plate 6-27. A representative photo of mats of non-native starry stonewort identified during macrophyte surveys within the Proposed Development Site

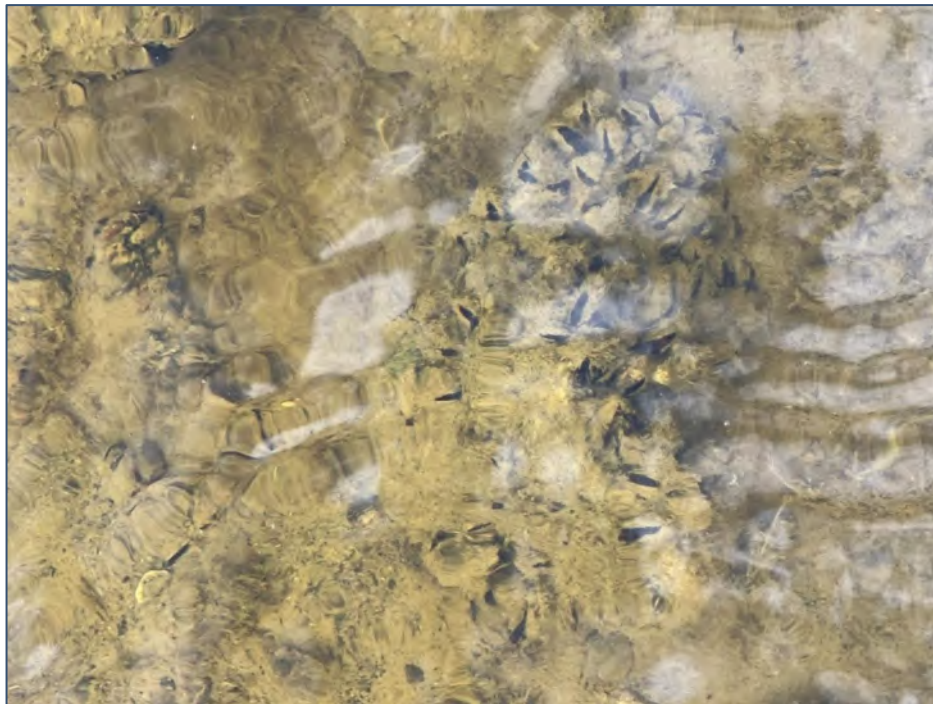


Plate 6-28. A representative photo of encrustations of quagga and zebra mussel throughout the Proposed Development Site



Plate 6-29. A representative photo of quagga and zebra mussel colonisation on the existing marina within the Proposed Development Site

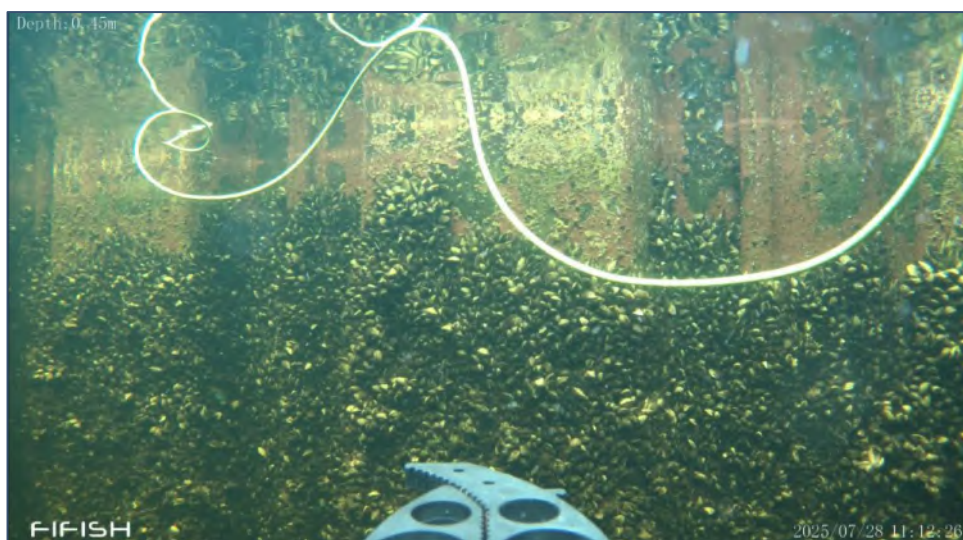


Plate 6-30. A representative photo of quagga and zebra mussel encrustations on the existing marina within the Proposed Development Site



Plate 6-31. A representative photo of Canadian and Nuttall's waterweed identified within the Proposed Development Site



Plate 6-32 Snowberry (*Symphoricarpos albus*) recorded along a field boundary along the southern side of the L2020, outside of the Proposed Development Site.



Plate 6-33 Spanish bluebell (*Hyacinthoides hispanica*) recorded within Athlone Golf Club, outside of the Proposed Development Site.

6.6.3 Fauna in the Existing Environment

The following subsections provide the results of the faunal surveys undertaken within and in the vicinity of the Proposed Development Site during the site visits and assessments as outlined in Section 6.4.3 (Field Surveys).

6.6.3.1 Breeding Bird Survey Results

A full suite of breeding bird and wintering bird surveys were undertaken to inform the assessment of the Proposed Development. Transect and vantage point locations for breeding bird surveys and wintering bird surveys are shown in Figure 6-12.

High levels of disturbance in the form of human activity were observed during the breeding bird surveys conducted within and adjacent to the Proposed Development Site. Disturbance included boating (fishing boats, cruisers and a tourist ferry), water sports activities, wild swimmers, walkers, runners and dog walkers, as well as ongoing traffic and vehicle disturbance along the main access road and throughout carparks. Therefore, it is likely that birds which utilise Lough Ree in the vicinity of the Proposed Development Site are accustomed to a high level of disturbance during the breeding season.

A total of 15 target species were recorded using habitats within or adjacent to the Proposed Development Site during breeding bird surveys (Table 6-18). Of these, 6 no. SCI species of SPAs within the vicinity of the Proposed Development were recorded, including; Black-headed gull, (*Chroicocephalus ridibundus*), Common tern (*Sterna hirundo*), Coot (*Fulica atra*), Goldeneye (*Bucephala clangula*) Little grebe (*Tachybaptus ruficollis*), and Mallard (*Anas platyrhynchos*). Two species recorded are listed on Annex I of the EU Birds Directive (common tern, little egret) and two are on the BoCCI Red List (redwing; wintering populations, snipe; breeding and wintering).

Black-headed gull were frequently observed flying over the Proposed Development Site, as well as perching on the existing marina, swimming on Lough Ree and foraging along the shoreline and throughout areas of Amenity grassland (GA2). Common tern were also similarly observed flying over the Proposed Development Site and foraging within the bays. While black-headed gull and common tern were observed foraging within the Proposed Development Site, no breeding activity for black-headed gull or common tern was observed during breeding bird surveys.

A small number of remnant wintering goldeneye were observed outside of the Proposed Development Site on one occasion (15/05/2025). Coot were frequently observed foraging around reed beds located to the north and south of the Proposed Development Site, with a possible breeding pair identified. Little grebe were heard calling from the reed beds on two occasions (16/04/2025 and 25/07/2025), with a possible breeding little grebe observed swimming and foraging adjacent to reed beds outside of the Proposed Development Site on 02/05/2025. Mallard were observed frequently on all breeding bird surveys foraging on the lake and flying overhead. One possible breeding pair and one probable breeding pair were identified adjacent to suitable nesting habitat within reed beds outside of the Proposed Development Site.

No waterbird nests were identified within the Proposed Development Site during Breeding Bird Surveys. No significant suitable potential breeding or nesting habitat was identified in the existing marina, existing Baysports facility or throughout existing carparks within the Proposed Development Site, though the reedbeds that are located within the vicinity of the Proposed Development likely provide some suitable breeding habitat for waterfowl. Any possible or probable breeding birds identified during surveys (coot, little grebe, great crested grebe, mallard, and mute swan) were frequently observed foraging or commuting alongside reedbeds, located to the north and south of the existing marina, outside of the Proposed Development Site.

Non-target species recorded over the course of the surveys which are listed on the BoCCI Amber List with respect to breeding populations are house martin (*Delichon urbicum*), barn swallow (*Hirundo rustica*), goldcrest (*Regulus regulus*), house sparrow (*Passer domesticus*), starling (*Sturnus vulgaris*) and willow warbler (*Phylloscopus trochilus*).

Other non-target species which are listed on the BoCCI Green List with respect to breeding populations included blackbird (*Turdus merula*), blue tit (*Cyanistes caeruleus*), chaffinch (*Fringilla coelebs*), chiffchaff (*Phylloscopus collybita*), dunnoek (*Prunella modularis*), great tit (*Parus major*), jackdaw (*Corvus monedula*), pied wagtail (*Motacilla alba*), reed bunting (*Emberiza schoeniclus*), robin

(*Erithacus rubecula*), rook (*Corvus frugilecus*), song thrush (*Turdus philomelos*), woodpigeon (*Columba palumbus*) and wren (*Troglodytes troglodytes*).

Table 6-18. Summary of bird records during the breeding season

Species	Status	Date	Total Count	Notes	SCI of SPA within the vicinity of the Proposed Development (Yes/No)
Black-headed gull (<i>Chroicocephalus ridibundus</i>)	BoCCI Amber List (Breeding/ Wintering)	16/04/2025	3 (non-flight) 11 (flight, eastern transect) 4 (flight, western transect)	Foraging and walking along lakeshore; flying over lake; flying northwest toward golf course	Yes - Middle Shannon Callows SPA
		02/05/2025	1	Flyover close to the shore; non-breeding	
		15/05/2025	7 (flight, western transect) 1 (flight, western transect) 12 (non-flight)	Flyover across the lake; foraging on golf course fairway and grass areas; flyover across fairway and golf course	
		27/06/2025	2 (non-flight) 3 (flight)	Resting on lake and on rocks; flyover across lake	
		25/07/2025	21 (non-flight, eastern transect) 16 (non-flight, western transect) 6 (flight, eastern transect) 2 (flight, western transect)	Foraging along shoreline, perched on marina and resting on rocks and boats along reedbeds within marina; foraging along areas of grass; flyover along Baysports facility and across water; circling over golf course fairway	
Common tern (<i>Sterna hirundo</i>)	Annex I, BoCCI Amber List	02/05/2025	2	Flyover low over the water; non-breeding	Yes – Lough Ree SPA
		15/05/2025	2 (non-flight) 3 (flight)	Resting on inflatable slide within Baysports area; flying south and over existing marina	
		27/06/2025	1 (flight)	Flying south	
		25/07/2025	5 (flight)	Flying north	
Coot (<i>Fulica atra</i>)	BoCCI Amber List (Breeding/ Wintering)	16/04/2025	7	Foraging on lake and along reedbeds, emerging from and retreating to reedbeds, calling from reedbeds	Yes – Lough Ree SPA

Species	Status	Date	Total Count	Notes	SCI of SPA within the vicinity of the Proposed Development (Yes/No)
		02/05/2025	3	Foraging in and out of reed bed, suitable nesting habitat; possible breeders	
		15/05/2025	3	Foraging along and retreating into reedbeds	
		27/06/2025	4	Foraging along reedbeds, calling from reedbeds	
		25/07/2025	5	Foraging along reedbeds, calling from reedbeds; 1 possible breeding pair	
Cormorant (<i>Phalacrocorax carbo</i>)	BoCCI Amber List (Breeding/W intering)	02/05/2025	3	Swimming and foraging, summering; non-breeding, flyover; 2 non-breeding, including last year's juvenile	No
		15/05/2025	2	Flying south over lake	
		27/06/2025	2 (non-flight) 2 (flight)	2 resting on rock in lake; 2 flying southeast over lake	
		25/07/2025	3	Foraging and basking on rocks at the edge of reedbed	
Great Crested Grebe (<i>Podiceps cristatus</i>)	BoCCI Amber List (Breeding/W intering)	16/04/2025	2	Foraging along reed bed	No
		02/05/2025	2	Courtship and display; probable breeding pair	
		15/05/2025	1	Swimming on lake	
		25/07/2025	4	2 adults and 2 juveniles; probable breeding pair, foraging	
Grey heron (<i>Ardea cinerea</i>)	BoCCI Green Conservation Status (Breeding/W intering)	16/04/2025	1	Flying south from shoreline	No
		02/05/2025	2	Summering; non-breeding hunting close to the shore, flyover; non-breeding	

Species	Status	Date	Total Count	Notes	SCI of SPA within the vicinity of the Proposed Development (Yes/No)
		15/05/2025	3	Flying east and west	
		27/06/2025	2 (non-flight) 2 (flight)	Foraging and roosting; resting on a pole; flying east and south	
Goldeneye (<i>Bucephala clangula</i>)	BoCCI Red List (Wintering)	15/05/2025	6	Swimming on water	Yes – Lough Ree SPA
Lesser black-backed gull (<i>Larus fuscus</i>)	BoCCI Amber List (Breeding/Wintering)	25/07/2025	1 (non-flight, eastern transect) 1 (flight, western transect)	Resting on quay; flying over main road, south of golf course	No
		27/06/2025	1	Flying east	
Little egret (<i>Egretta garzetta</i>)	Annex I, BoCCI Green Conservation Status (Breeding/Wintering)	27/06/2025	1	Flying south and landed on pier	No
Little grebe (<i>Tachybaptus ruficollis</i>)	BoCCI Green Conservation Status (Breeding/Wintering)	16/04/2025	1	Heard calling in reedbed	Yes – Lough Ree SPA
		02/05/2026	1	Swimming and foraging near reedbed, suitable nesting habitat; possible breeder	
		25/07/2025	2	Calling and foraging	
Mallard (<i>Anas platyrhynchos</i>)	BoCCI Amber List (Breeding/Wintering)	16/04/2025	6 (non-flight) 10 (flight)	Foraging on lake, including one potential breeding pair; flying from reedbeds and along lakeshore	Yes – Lough Ree SPA
		02/05/2026	5 (non-flight) 2 (flight)	1 probable breeding pair, 1 possible breeding pair and 1 possible breeding individual, within suitable nesting habitat; flying east and west	

Species	Status	Date	Total Count	Notes	SCI of SPA within the vicinity of the Proposed Development (Yes/No)
		15/05/2025	21 (non-flight) 2 (flight, western transect)	Swimming, foraging and resting on the lake, sitting on rocks Flushed and flying north from fields	
		27/06/2025	30 (non-flight) 6 (flight)	Swimming, foraging and resting on the lake, sitting on rocks Flying south from edge of reedbed	
		25/07/2025	22 (non-flight) 15 (flight)	Swimming, foraging and resting on the lake, sitting on rocks, flying across lake; flying north, northeast and east	
Moorhen (<i>Gallinula chloropus</i>)	BoCCI Green Conservation Status (Breeding/Wintering)	02/05/2026	2	2 separate possible breeders, audible within suitable nesting habitat amongst reedbeds	No
		15/05/2025	3	Seen emerging from reedbed, heard calling in reedbed	
		27/06/2025	1	Heard calling in reedbed	
Mute swan (<i>Cygnus olor</i>)	BoCCI Amber List (Breeding/Wintering)	16/04/2025	6	Foraging on lake	No
		02/05/2025	2	Probably breeding pair; swimming in open water	
		15/05/2025	5	Foraging and pruning on lake	
		27/06/2025	2	Foraging on lake	
		25/07/2025	7	Foraging and commuting, including 2 adult breeding pairs (with 2 signets and 1 signet, respectively)	

Species	Status	Date	Total Count	Notes	SCI of SPA within the vicinity of the Proposed Development (Yes/No)
Redwing (<i>Turdus iliacus</i>)	BoCCI Red List (Wintering)	16/04/2025	2	Calling in wooded area and foraging on golf course fairway	No
Snipe (<i>Gallinago gallinago</i>)	BoCCI Red List (Breeding/Wintering)	16/04/2025	1	Flushed and flying east	No
		15/05/2025	1	Flushed and flying northeast	
Water rail (<i>Rallus aquaticus</i>)	BoCCI Green Conservation Status (Breeding/Wintering)	16/04/2025	1	Heard calling in reedbed	No
		27/06/2025	1		
		25/07/2025	1		



- Map Legend
- Proposed Development Site
 - Wintering Bird Survey Vantage Points
 - Breeding Bird Survey Transect Routes
 - Wintering Bird Survey Transect Routes

Spatial Reference
Name: IRENET95 Irish Transverse Mercator
Datum: IRENET95
Projection: Transverse Mercator



SITE LOCATION - NOT TO SCALE

Drawing Title
Breeding and Wintering Bird Survey Transects and Vantage Points

Project Title
Hodson Bay Waterfront Park and Marina Redevelopment, Co. Roscommon

Project No.	Drawing No.	Scale
241220	Figure 6-12	1:8,000
Drawn By:	Checked By:	Date
BOC	AvdGM	04/08/2026


Email: info@mkofireland.ie / Website: www.mkofireland.ie

6.6.3.2 Wintering Bird Survey Results

The areas along the shoreline of Lough Ree, at the existing marina and areas of Lough Ree within the Proposed Development Site are subject to moderate-high levels of existing disturbance during the wintering season, as observed during surveys, with walkers, runners, dog walkers, lake swimmers and boating (cruisers and fishing boats).

The area is also subject to ongoing traffic disturbance along the main access road via the L2020 Local Road, as well as throughout carparks located in front of the existing marina and to the north of the site, the latter of which is utilised by camper vans. Therefore, birds utilising the lake within Hodson Bay are likely accustomed to existing levels of disturbance.

6.6.3.2.1 Vantage Point 1

A total of nine target species were recorded during surveys at VP 1 (Table 6-19). Of these, 5 no. SCI species of SPAs within the vicinity of the Proposed Development were observed utilising habitats within and in the wider vicinity of the Proposed Development Site from VP 1. These included; Black-headed gull (*Chroicocephalus ridibundus*), Coot (*Fulica atra*), Little grebe (*Tachybaptus ruficollis*), Tufted duck (*Aythya fuligula*) and Mallard (*Anas platyrhynchos*). No birds listed on Annex I of the EU Birds or on the BoCCI Red List with respect to wintering populations were observed at VP 1 during any of the surveys.

Most species were observed swimming, foraging and loafing on the Lough Ree, with coot and great crested grebe commonly foraging both within and in the wider vicinity of the existing marina. Coot and little grebe were also frequently heard and seen utilising the reed beds to the south of VP 1. Large rafts of a combination of tufted duck and coot were observed on Lough Ree outside of the Proposed Development Site, up to 525m from VP 1, indicating that existing human activity within the Proposed Development Site likely creates an existing disturbance buffer which already limits utilisation of the area by SCI species. A potential heronry was also identified approx. 1.4 km east of the shoreline from VP 1, outside of the Proposed Development. 2 no. mute swan were observed foraging in amenity grassland areas within the carpark adjacent to VP 1.

Table 6-19. Summary of target species recorded at VP 1 during the Wintering Season

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
Black-headed gull (<i>Chroicocephalus ridibundus</i>)	BoCCI Amber List (Breeding/Wintering)	21/10/2025	1	Flying southeast to northwest over lake	Yes - Middle Shannon Callows SPA
		27/01/2026	13	Flying above water and feeding, between 150–450 m from VP 1	
		24/02/2026	5	Flying over marina	
		10/03/2026	3	Flying overhead and perching on marina	
		24/03/2026	2	Flying overhead and perching on marina	

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
Coot (<i>Fulica atra</i>)	BoCCI Amber List (Breeding/Wintering)	07/10/2025	15	Loafing and feeding, up to 100 m from shoreline adjacent to reed beds	Yes – Lough Ree SPA
		21/10/2025	18	Loafing and foraging between 85–610 m from shoreline at VP 1	
		04/11/2025	36	Foraging, between 160–180 m from VP 1	
		18/11/2025	2	Foraging along reedbeds approx. 85 southeast from VP 1	
		16/12/2025	3	Swimming in reed beds, approx. 5–20 m from VP 1	
		13/01/2026	2	Swimming and foraging along reedbeds to the south of VP 1	
		27/01/2026	3	One heard calling from reedbeds and a further two swimming along reedbeds	
		10/02/2026	1	Heard within reedbeds	
		24/02/2026	2	Swimming and foraging within existing marina	
		10/03/2026	4	Foraging along reedbeds	
		24/03/2026	3	Swimming within existing marina and foraging along reedbeds	
Cormorant (<i>Phalacrocorax carbo</i>)	BoCCI Amber List (Breeding/Wintering)	18/11/2025	2	Perched on depth markers southwest of VP 1	No

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
		05/12/2025	2	Perched on depth markers southwest of VP 1	
		13/01/2026	3	One foraging within marina; two flying north to south and landing to perch on buoys	
		27/01/2026	1	Perched on depth marker pole	
		24/02/2026	4	Two flying south to northeast; one perched on depth marker pole; one swimming and feeding east of marina	
		10/03/2026	1	Flying south to north	
		24/03/2026	2	Perched on buoy and rock	
Great Crested Grebe (<i>Podiceps cristatus</i>)	BoCCI Amber List (Breeding/Wintering)	18/11/2025	1	Swimming approx. 75 m southeast of VP 1	No
		05/12/2025	1	Swimming within existing marina	
		16/12/2025	1	Swimming within existing marina	
		13/01/2026	1	Foraging and diving approx. 75 m southeast of VP 1	
		10/02/2026	3	Foraging within marina and up to approx. 150 m from VP 1	
		24/02/2026	2	Swimming and foraging within existing marina and along reedbeds	
		24/03/2026	1	Swimming in front of existing marina	
		07/10/2025	1	Flying over water	No

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
Grey heron (<i>Ardea cinerea</i>)	BoCCI Green Conservation Status (Breeding/Wintering)	05/12/2025	1	Heron perching within alluvial woodland to the south of VP 1	
		16/12/2025	1	Perched in reed bed and woodland to the south of VP 1	
		27/01/2026	1	Perched on rock within alluvial woodland south of VP 1	
		24/02/2026	22	22 perched in trees on island approx. 1.2 km east-southeast of VP 1	
		10/03/2026	1	Perched on rock on edge of alluvial woodland south of VP 1	
		24/03/2026	1	Flying over marina	
Little grebe (<i>Tachybaptus ruficollis</i>)	BoCCI Green Conservation Status (Breeding/Wintering)	07/10/2025	1	Foraging (diving)	Yes – Lough Ree SPA
		21/10/2025	1	Foraging	
		13/01/2026	1	Heard in reedbeds south of VP 1	
		27/01/2026	1	Heard in reed beds south of VP 1	
		10/02/2026	1	Heard in reed beds south of VP 1	
		24/02/2026	1	Heard in reed beds south of VP 1	
		10/03/2026	1	Heard in reed beds south of VP 1	
Tufted duck (<i>Aythya fuligula</i>)	BoCCI Amber List (Breeding/Wintering)	07/10/2025	108	Loafing and feeding, up to 500 m from the shoreline	Yes – Lough Ree SPA
		21/10/2025	51	Loafing and foraging, between 90–120 m from shoreline at VP 1	

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
		04/11/2025	103	Foraging and loading between 125–525 m from VP 1; flying northeast to southwest and landing on the lake	
		18/11/2025	2	Foraging and loafing approx. 500 m southeast from VP 1	
		16/12/2025	15	Foraging and loafing approx. 75 m from VP 1	
		13/01/2026	2	Loafing approx. 60 m southeast of VP 1	
		27/01/2026	11	Loafing between approx. 300–400 m from VP 1	
		10/03/2026	2	Flying southwest approx. 1.4 km from VP 1	
Mallard (<i>Anas platyrhynchos</i>)	BoCCI Amber List (Breeding/Wintering)	16/12/2025	2	Swimming within flooded alluvial woodland to the south of VP 1	Yes – Lough Ree SPA
		10/03/2026	3	Foraging along willows	
		24/03/2026	1	One female walking around carpark	
Mute swan (<i>Cygnus olor</i>)	BoCCI Amber List (Breeding/Wintering)	24/02/2026	4	Two foraging on grass adjacent to carpark beside VP 1; two foraging approx. 500–600 m southeast of VP 1	No
		10/03/2026	1	Swimming on lake	

6.6.3.2.2 Vantage Point 2

A total of 10 target species were recorded during surveys at VP 2 (Table 6-20). Of these, 4 no. SCI species of SPAs within the vicinity of the Proposed Development were observed utilising habitats within and in the wider vicinity of the Proposed Development Site from VP 2. These included; Black-headed gull, Coot, Tufted duck and Mallard. No birds listed on Annex I of the EU Birds or on the BoCCI Red List with respect to wintering populations were observed at VP 2 during any of the surveys.

Most species were observed swimming, foraging and loafing on the Lough Ree in the wider vicinity of the existing marina, often outside of the Proposed Development Site. Coot and little grebe were again frequently seen utilising the reed beds located within the bay to the southeast of VP 2. Large rafts of a combination of tufted duck and coot were observed up to 735m from VP 2, indicating that existing human activity within the Proposed Development Site likely creates an existing disturbance buffer which limits utilisation of the area to a degree. Cormorants were frequently perched on buoys, rocks and depth marker poles east and southeast of the existing marina. Both adult and juvenile mute swan were observed swimming on Lough Ree, as well as utilising reed beds visible from VP 2. Black-headed gulls were noted flying over or circling the lake on several dates.

Table 6-20. Summary of target species recorded at VP 2 during the Wintering Season

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
Black-headed gull (<i>Chroicocephalus ridibundus</i>)	BoCCI Amber List (Breeding/Wintering)	04/11/2025	1	Flying east to west over lake	Yes - Middle Shannon Callows SPA
		27/01/2026	1	Circling over lake approx. 400 m southeast of VP 2	
		24/02/2026	3	Flying north to south	
		10/03/2026	1	Flying north	
Coot (<i>Fulica atra</i>)	BoCCI Amber List (Breeding/Wintering)	07/10/2025	182	Loafing in a large raft, approx. 700 m from the marina in a southeast direction, foraging and feeding	Yes - Lough Ree SPA
		21/10/2025	54	Foraging and loafing, between 90–600 m from the marina at VP 2	
		05/12/2025	3	Swimming, approx. 700 m southeast from VP 2	
		13/01/2026	1	Swimming toward reedbeds	
		27/01/2026	1	Loafing by reed beds, approx. 600 m south of VP 2	
		10/02/2026	2	Foraging along reedbeds between 80–150 m from foot path	
		24/02/2026	1	Swimming by reedbeds	

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
		24/03/2026	1	Foraging in reedbeds approx. 300 m south of VP 2	
Cormorant (<i>Phalacrocorax carbo</i>)	BoCCI Amber List (Breeding/ Wintering)	07/10/2025	5	Basking on depth marker poles and rocks, between approx. 400–700 m from the marina at VP 2; one flying north to south	No
		21/10/2025	2	Perched on rock and buoy, approx. 500 m from marina at VP 2	
		04/11/2025	3	Two basking on a rock and depth marker post; one foraging	
		18/11/2025	4	Two diving approx. 575 m east of VP 2; perched on rock and on depth marker pole	
		16/12/2025	2	Perched on rocks to the east of VP 2	
		13/01/2026	2	Perched on buoy and depth marker southeast of VP 2	
		27/01/2026	2	One flying northwest to southeast; one swimming and foraging approx. 575 m southeast of VP 2	
		10/02/2026	1	Flying north to south, then east	
		24/02/2026	3	Two flying north to south; one perched on depth marker pole	
		10/03/2026	1	Flying northeast in front of island,	

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
				approx. 1.3 km from VP 2	
		24/03/2026	3	Perched on buoy, flying over lake	
Great Black-backed Gull (<i>Larus marinus</i>)	BoCCI Green Conservation Status (Wintering)	04/11/2025	1	Perched on buoy	No
Grey heron (<i>Ardea cinerea</i>)	BoCCI Green Conservation Status (Breeding/ Wintering)	13/01/2026	1	Flying northwest to southeast	No
		27/01/2026	1	Flying southwest to northeast	
		24/02/2026	1	Flying north to south and then west	
		10/03/2026	8	Six perched in trees on island approx. 1.4 km east-southeast of VP 2, two flying in the vicinity of possible heronry	
Great Crested Grebe (<i>Podiceps cristatus</i>)	BoCCI Amber List (Breeding/ Wintering)	04/11/2025	1	Flying north to south	No
		24/02/2026	3	Foraging and diving near reedbeds	
		10/03/2026	2	Swimming north of marina	
		24/03/2026	1	Resting on water approx. 500 m south of VP 2	
Mallard (<i>Anas platyrhynchos</i>)	BoCCI Amber List (Breeding/ Wintering)	10/02/2026	2	Flying northeast to southwest	Yes – Lough Ree SPA
		10/03/2026	16	Two foraging on shoreline north of VP 2; two perched on stone tower on island northeast of VP 2; seven flying in a general north-south direction during VP; five foraging along	

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
				reedbeds approx. 1.1 km southeast of VP 2	
		24/03/2026	3	Flying north to south approx. 1.4 km southeast of VP 2	
Moorhen (<i>Gallinula chloropus</i>)	BoCCI Green Conservation Status (Breeding/Wintering)	10/03/2026	1	Heard in reedbeds south of VP 2	No
Mute swan (<i>Cygnus olor</i>)	BoCCI Amber List (Breeding/Wintering)	21/10/2025	4	1 adult and 3 juveniles, swimming across lake	No
		27/01/2026	3	Sheltering in reed beds between 500–750 m southeast of VP 2	
		10/02/2026	2	Swimming along reedbeds approx. 800 m southeast of VP 2	
		24/02/2026	2	Feeding on shoreline	
		10/03/2026	7	Two flying south to north over Baysports; 5 swimming along reedbeds approx. 1.2 km southeast of VP 2	
Tufted duck (<i>Aythya fuligula</i>)	BoCCI Amber List (Breeding/Wintering)	07/10/2025	45	Loafing and feeding, between approx. 135–735 m from the marina at VP 2	Yes – Lough Ree SPA
		21/10/2025	12	Foraging and loafing, between 75–550 m from the marina at VP 2	
		18/11/2025	23	Loafing approx. 1.4 km southeast from VP 2	

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
		05/12/2025	2	Diving approx. 715 m southeast from VP 2	
		13/01/2026	72	Loafing approx. 400 m southeast of VP 2	
		27/01/2026	8	Loafing approx. 600 m southeast of VP 2 along reedbeds	
		10/02/2026	18	Loafing approx. 270 m northeast of VP 2	
		24/02/2026	10	Flying above marina; flying southeast to northwest	

6.6.3.2.3 Vantage Point 3

A total of 10 target species were recorded during surveys at VP 3 (Table 6-21). 5 no. SCI species of SPAs within the vicinity of the Proposed Development were observed utilising habitats within and in the wider vicinity of the Proposed Development Site from VP 3. No birds listed on Annex I of the EU Birds or on the BoCCI Red List with respect to wintering populations were observed at VP 3 during any of the surveys.

Most species were observed swimming, foraging and loafing on the Lough Ree in the wider vicinity of the existing marina, often outside of the Proposed Development Site. Coot were frequently seen utilising the reed beds located within the bay to north and northeast of VP 3. Several great crested grebe were observed swimming and foraging around the island northeast of Hodson Bay. Both Mallard and tufted duck were observed utilising the two bays to the north of VP 3 on several survey dates. A buzzard was observed flying over the lake on 24th February 2026.

Table 6-21. Summary of target species recorded at VP 3 during the Wintering Season

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
Black-headed gull (<i>Chroicocephalus ridibundus</i>)	BoCCI Amber List (Breeding/Wintering)	27/01/2026	4	Feeding on lake shoreline north of existing marina	Yes - Middle Shannon Callows SPA
		24/02/2026	2	Circling over lake	
		10/03/2026	3	Circling over lake	
		24/03/2026	3	Circling over lake	

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
Coot (<i>Fulica atra</i>)	BoCCI Amber List (Breeding/Wintering)	07/10/2025	1	Heard calling from reed beds	Yes - Lough Ree SPA
		21/10/2025	1	Loafing	
		16/12/2025	4	Swimming along reed beds and island to the north and northeast of VP 3, respectively	
		13/01/2026	4	Swimming from island toward reedbeds	
		27/01/2026	1	Swimming along northern-most reed beds	
Cormorant (<i>Phalacrocorax carbo</i>)	BoCCI Amber List (Breeding/Wintering)	18/11/2025	1	Flying south to north	No
		05/12/2025	1	Perched on marina	
		27/01/2026	1	Flying southeast to northwest	
		24/02/2026	1	Perched on rock	
		24/03/2026	1	Swimming around island northeast of VP 3	
Great Crested Grebe (<i>Podiceps cristatus</i>)	BoCCI Amber List (Breeding/Wintering)	07/10/2025	4	3 foraging around island; 1 flying toward island	No
		21/10/2025	1	Swimming and foraging, approx. 225 m east of the marina at VP 3	
		04/11/2025	1	Foraging approx. 175 m northeast of VP 3	
		18/11/2025	1	Foraging adjacent to island northwest of VP 3	
		13/01/2026	1	Foraging approx. 185 m northeast of VP 3	

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
		10/02/2026	1	Swimming and diving approx. 85m east of VP 3	
		24/02/2026	1	Swimming and foraging north of VP 3	
		24/03/2026	1	Swimming approx. 50 m north of VP 3	
Great northern diver (<i>Gavia immer</i>)	BoCCI Amber List (Wintering)	04/11/2025	1	Foraging approx. 125 m northeast of VP 3	No
Grey heron (<i>Ardea cinerea</i>)	BoCCI Green Conservation Status (Breeding/Wintering)	04/11/2025	1	Flying northeast to southwest, landing on the island northeast of VP 3	No
		10/03/2026	1	Flying southeast	
Lesser black-backed gull (<i>Larus fuscus</i>)	BoCCI Amber List (Breeding/Wintering)	07/10/2025	1	Flying over lake	No
Little grebe (<i>Tachybaptus ruficollis</i>)	BoCCI Green Conservation Status (Breeding/Wintering)	21/10/2025	2	Foraging approx. 80 m north of the marina at VP 3	Yes - Lough Ree SPA
Mallard (<i>Anas platyrhynchos</i>)	BoCCI Amber List (Breeding/Wintering)	07/10/2025	4	Loafing adjacent to red beds	Yes - Lough Ree SPA
		13/01/2026	1	Pair foraging through reedbeds north of VP 3	
		10/03/2026	2	Flying toward shoreline and landing beside willows	
		24/03/2026	4	Three resting on water approx. 400 m north of VP; one swimming within existing marina	
Tufted duck (<i>Aythya fuligula</i>)	BoCCI Amber List (Breeding/Wintering)	21/10/2025	57	Foraging and loafing approx. 90 m north of the marina at VP 3	Yes - Lough Ree SPA

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
		04/11/2025	23	Foraging and loafing between 200–250 m from VP 3	
		18/11/2025	2	Flying southwest to northeast	
		05/12/2025	26	Swimming, between approx. 270 m – 1.1 km east from VP 3 (majority of birds concentrated at 270 m from marina)	
		16/12/2025	26	Diving and swimming toward reed beds north of VP 3	
		27/01/2026	10	Loafing northeast of VP 3 beside island	
		10/02/2026	4	Flying southwest to northeast then north	

6.6.3.2.4 Vantage Point 4

A total of 10 target species were recorded during surveys at VP 4 (Table 6-22). Of these, 5 no. SCI species of SPAs within the vicinity of the Proposed Development were observed utilising habitats within and in the wider vicinity of the Proposed Development Site from VP 4. No birds listed on Annex I of the EU Birds or on the BoCCI Red List with respect to wintering populations were observed at VP 4 during any of the surveys.

Species were observed resting and foraging on the shoreline at VP 4, as well as foraging through shallow waters off the shore from VP 4, adjacent to the current Baysports building. In periods of heavier rain or winds, several species, including coot, mute swan, mallard, tufted duck, little grebe, and great crested grebe, were observed sheltering along the shoreline and adjacent to more sheltered reedbeds and existing willows. A grey heron was also observed foraging along the shoreline. The area of land at VP 4 was frequently inundated with water from Lough Ree.

Table 6-22. Summary of target species recorded at VP 4 during the Wintering Season

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
Black-headed gull (<i>Chroicocephalus ridibundus</i>)	BoCCI Amber List (Breeding/Wintering)	27/01/2026	3	Resting on grass	Yes - Middle Shannon Callows SPA
		24/02/2026	1	Flying southwest to northeast	

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
		10/03/2026	5	Perched on jetty and circling above Baysports	
Coot (<i>Fulica atra</i>)	BoCCI Amber List (Breeding/Wintering)	07/10/2025	3	Foraging	Yes - Lough Ree SPA
		21/10/2025	2	Foraging	
		05/12/2025	2	Swimming within bay adjacent to Baysports facility	
		27/01/2026	4	Loafing and feeding in reedbeds directly adjacent to shoreline	
		24/02/2026	1	Swimming along lake shore	
		10/03/2026	2	Foraging on grass	
Cormorant (<i>Phalacrocorax carbo</i>)	BoCCI Amber List (Breeding/Wintering)	04/11/2025	2	Flying east to west	No
		18/11/2025	1	Flying northwest to southeast	
		13/01/2026	1	Flying northeast to southwest	
Great Crested Grebe (<i>Podiceps cristatus</i>)	BoCCI Amber List (Breeding/Wintering)	27/01/2026	1	Feeding in sheltered bay	No
		24/02/2026	1	Swimming approx. 150 northeast of VP 4	
		10/03/2026	2	Swimming north of Baysports	
Grey heron (<i>Ardea cinerea</i>)	BoCCI Green Conservation Status (Breeding/Wintering)	16/12/2025	1	Wading along shoreline	No
		27/01/2026	1	Flying north to south and landed on grass	
Little grebe (<i>Tachybaptus ruficollis</i>)	BoCCI Green Conservation Status (Breeding/Wintering)	07/10/2025	2	Foraging	Yes - Lough Ree SPA
		21/10/2025	1	Foraging	
		27/01/2026	1	Feeding in reeds directly adjacent to shoreline	
Mallard (<i>Anas platyrhynchos</i>)	BoCCI Amber List (Breeding/Wintering)	07/10/2025	10	5 male, 5 female foraging along shoreline	Yes - Lough Ree SPA
		21/10/2025	16	8 pairs, foraging along the shoreline and loafing by reedbeds to the north of VP 4	

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
		04/11/2025	16	7 pairs swimming and foraging, 2 individuals flying northwest to southeast	
		05/12/2025	20	18 resting on lake shoreline; 2 flying in to join and landed	
		16/12/2025	2	Swimming along shoreline	
		27/01/2026	12	Feeding on grass	
		24/02/2026	2	Swimming beside reedbeds	
		10/03/2026	2	Flying from northwest and landing on water by VP 4	
Moorhen (<i>Gallinula chloropus</i>)	BoCCI Green Conservation Status (Breeding/Wintering)	24/02/2026	2	Foraging on grass and swimming along shoreline	No
Mute swan (<i>Cygnus olor</i>)	BoCCI Amber List (Breeding/Wintering)	27/01/2026	1	Resting on grass	No
		10/02/2026	2	Swimming along shoreline	
		24/03/2026	2	Foraging along shoreline	
Tufted duck (<i>Aythya fuligula</i>)	BoCCI Amber List (Breeding/Wintering)	21/10/2025	31	Loafing and foraging approx. 65 m north of VP 4	Yes - Lough Ree SPA
		27/01/2026	6	Sheltering behind willow treeline	

6.6.3.2.5 Vantage Point 5

A total of nine target species were recorded during surveys at VP 5 (Table 6-23). Of these, 4 no. SCI species of SPAs within the vicinity of the Proposed Development were observed utilising habitats within and in the wider vicinity of the Proposed Development Site from VP 5. No birds listed on Annex I of the EU Birds or on the BoCCI Red List with respect to wintering populations were observed at VP 5 during any of the surveys.

Most species were observed swimming and foraging along the reed beds located either side of VP 5. Birds observed included coot, little grebe, great crested grebe, tufted duck mallard, and mute swan. Both little grebe and coot were also heard from within reedbeds and surrounding woodland which was inundated with water from Lough Ree during several of the wintering bird surveys. A water rail was also heard within an area of flooded woodland to the south of VP 5.

A sparrowhawk (*Accipiter nisus*) was observed flying over the woodland north of VP 5 on 7th October 2025. The non-target species, pied wagtail, was often observed foraging along the shoreline and high-water line at VP 5.

Table 6-23. Summary of target species recorded at VP 5 during the Wintering Season

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
Coot (<i>Fulica atra</i>)	BoCCI Amber List (Breeding/Wintering)	07/10/2025	7	Foraging	Yes - Lough Ree SPA
		21/10/2025	2	Foraging and loafing, between 10–80 m from the shoreline at VP 5	
		16/12/2025	2	Heard in reed beds	
		13/01/2026	2	Foraging and swimming along reedbeds	
		27/01/2026	1	Swimming in northern most bay	
		10/02/2026	2	Swimming in reeds	
		24/02/2026	3	Two seen swimming along reed beds, one more heard in reed beds	
		10/03/2026	3	Foraging and swimming along northern-most reedbeds	
Cormorant (<i>Phalacrocorax carbo</i>)	BoCCI Amber List (Breeding/Wintering)	04/11/2025	3	Flying northwest to southeast	No
Great Crested Grebe (<i>Podiceps cristatus</i>)	BoCCI Amber List (Breeding/Wintering)	07/10/2025	1	Foraging	No
		21/10/2025	1	Pruning, swimming	
		18/11/2025	1	Foraging approx. 250 m east of VP 5	
		13/01/2026	1	Foraging approx. 120 m east of VP 5	
Grey heron (<i>Ardea cinerea</i>)	BoCCI Green Conservation Status (Breeding/Wintering)	05/12/2025	1	Flying overhead	No
Little grebe (<i>Tachybaptus ruficollis</i>)	BoCCI Green Conservation Status (Breeding/Wintering)	07/10/2025	5	Foraging	Yes - Lough Ree SPA
		21/10/2025	4	3 foraging, 1 heard in reed beds and flushed by other bird from reeds, approx. 15–120 m from the shoreline at VP 5	

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
		04/11/2025	2	Foraging and loafing approx. 80 m from VP 5	
		18/11/2025	5	Foraging by northern reed beds, approx. 115 m east of VP 5	
		13/01/2026	2	Heard in reedbeds	
		27/01/2026	3	At least two heard in reed beds; one heard in flood alluvial woodland	
		10/02/2026	2	Swimming in reedbeds	
		24/02/2026	1	Heard in reedbeds	
		10/03/2026	1	Heard in reedbeds	
		24/03/2026	1	Heard in reedbeds	
Mallard (<i>Anas platyrhynchos</i>)	BoCCI Amber List (Breeding/Wintering)	21/10/2025	4	2 pairs, loafing	Yes - Lough Ree SPA
		04/11/2025	9	Flying southwest to northwest and southeast and northwest	
		18/11/2025	4	Heard calling in reeds; flying east to west	
		16/12/2025	1	Heard in reed beds	
		13/01/2026	3	Foraging along reed beds approx. 200 m east of VP 5	
		27/01/2026	2	Swimming along reedbeds	
		10/02/2026	1	Swimming in reeds	
		10/03/2026	2	Foraging in alluvial woodland north of VP 5	
Mute swan (<i>Cygnus olor</i>)	BoCCI Amber List (Breeding/Wintering)	13/01/2026	1	Foraging along treeline approx. 300 m east of VP 5	No
		27/01/2026	2	Feeding along reedbeds	
		10/03/2026	2	Flying west to east	
Tufted duck (<i>Aythya fuligula</i>)	BoCCI Amber List (Breeding/Wintering)	04/11/2025	7	3 loafing approx. 130 m east from VP 5; 4 flying northeast to southwest	Yes - Lough Ree SPA

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
Water rail (<i>Rallus aquaticus</i>)	BoCCI Green Conservation Status (Breeding/Wintering)	27/01/2026	1	Heard in flooded alluvial woodland to the south of VP 5	No

6.6.3.2.6 Vantage Point 6

A total of four target species were recorded during surveys at VP 6, a frequently wetted field north of the Proposed Development. 1 no. SCI species of an SPA within the vicinity of the Proposed Development was observed utilising habitats from VP 6, located outside of the Proposed Development Site. No birds listed on Annex I of the EU Birds or on the BoCCI Red List with respect to wintering populations were observed at VP 5 during any of the surveys.

Moorhen, mallard and mute swan were observed swimming and foraging within areas of flooded field, with a grey heron observed perching within a wooded area in the middle of the field. The area adjacent to VP 6 consisted of an active building site with ongoing disturbance.

Levels of inundation within the field at VP 6 fluctuated across the wintering survey dates.

Table 6-24. Summary of target species recorded at VP 6 during the Wintering Season

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
Grey heron (<i>Ardea cinerea</i>)	BoCCI Green Conservation Status (Breeding/Wintering)	18/11/2025	1	Perched on wooded area in the middle of field	No
		24/02/2026	1	Flying southwest to northwest	
Mallard (<i>Anas platyrhynchos</i>)	SCI, BoCCI Amber List (Breeding/Wintering)	07/10/2025	2	Flying overhead	Yes - Lough Ree SPA
		24/02/2026	3	Foraging in grass within flooded area of field	
		10/03/2026	2	Resting on edge of flooded area of field	
		24/03/2026	2	Foraging and swimming in flooded area of field	
Moorhen (<i>Gallinula chloropus</i>)	BoCCI Green Conservation Status (Breeding/Wintering)	07/10/2025	1	Heard calling in flooded area of field	No
		18/11/2025	1	Swimming in flooded area of field	
		10/02/2026	1	Foraging and swimming in	

Species	Status	Date	Total Count	Notes	SCI of SPA within Likely Zone of Influence (Yes/No)
				flooded area of field	
		24/02/2026	2	Swimming and foraging in flooded area of field	
Mute swan (<i>Cygnus olor</i>)	BoCCI Amber List (Breeding/Wintering)	24/02/2026	2	Foraging in flooded area of field	No

6.6.3.2.7 Transect survey

Following surveys at the wintering bird vantage points, a walking transect from the northern end of the Proposed Development along the L2020 Local Road, to the N61 junction was conducted. The following non-target bird species were identified throughout the transect:

- Blackbird (*Turdus merula*)
- Blue tit (*Cyanistes caeruleus*)
- Buzzard (*Buteo buteo*)
- Chaffinch (*Fringilla coelebs*)
- Coal tit (*Periparus ater*)
- Collared dove (*Streptopelia decaocto*)
- Dunnock (*Prunella modularis*)
- Goldcrest (*Regulus regulus*)
- Goldfinch (*Carduelis carduelis*)
- Great tit (*Parus major*)
- Greenfinch (*Chloris chloris*)
- Hooded crow (*Corvus cornix*)
- House sparrow (*Passer domesticus*)
- Jackdaw (*Coloeus monedula*)
- Long-tailed tit (*Aegithalos caudatus*)
- Magpie (*Pica pica*)
- Mistle thrush (*Turdus viscivorus*)
- Pied wagtail (*Motacilla alba yarrellii*)
- Robin (*Erithacus rubecula*)
- Reed bunting (*Emberiza schoeniclus*)
- Song thrush (*Turdus philomelos*)
- Starling (*Sturnus vulgaris*)
- Wood pigeon (*Columba palumbus*)
- Wren (*Troglodytes troglodytes*)

6.6.3.3 Incidentals recorded during Aerial Drone Survey

An aerial drone-based topographical survey was conducted on 2nd May 2025 over an area of approx. 35 ha along the shore of Lough Ree within and in the vicinity of the Proposed Development Site. An additional hectare was surveyed to include the small island on which Hodson's Tower is located. A map of the surveyed area is shown in Figure 6-13.

During topographical drone surveys, birds and nests were observed as incidentals. Areas of suitable nesting habitat amongst reed beds were identified to the north and south of the Proposed Development Site, outside of the Proposed Development Site. 3 no. nests and 5 no. nesting birds were identified during the survey in areas of reed bed located outside of but adjacent to the Proposed Development

Site, as well as a 24 no. birds utilising the area at the time of the aerial drone survey. Due to the sensitive nature of nests and nesting birds, the exact location of nests and nesting birds are not disclosed in this report. An example of RGB imaging alongside thermal imaging of an identified nest is shown in Figure 6-14.

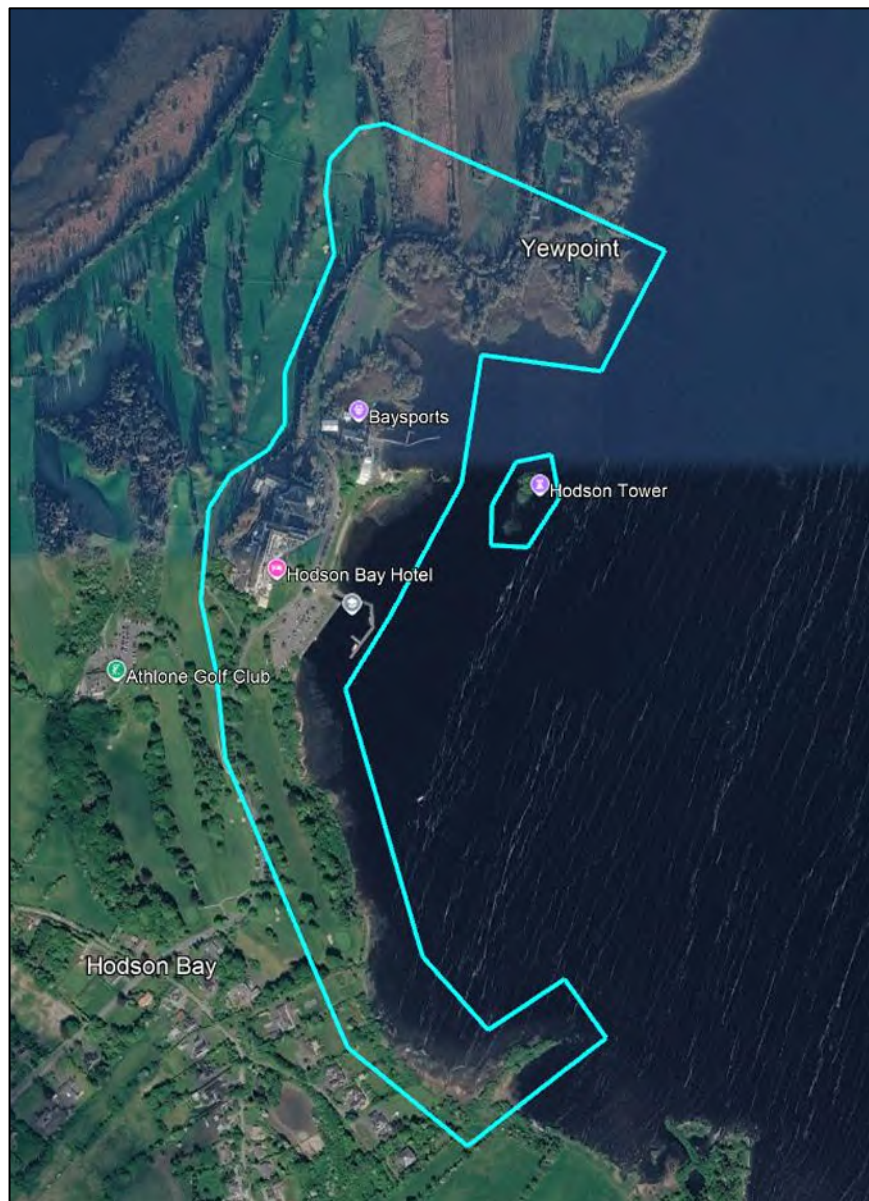
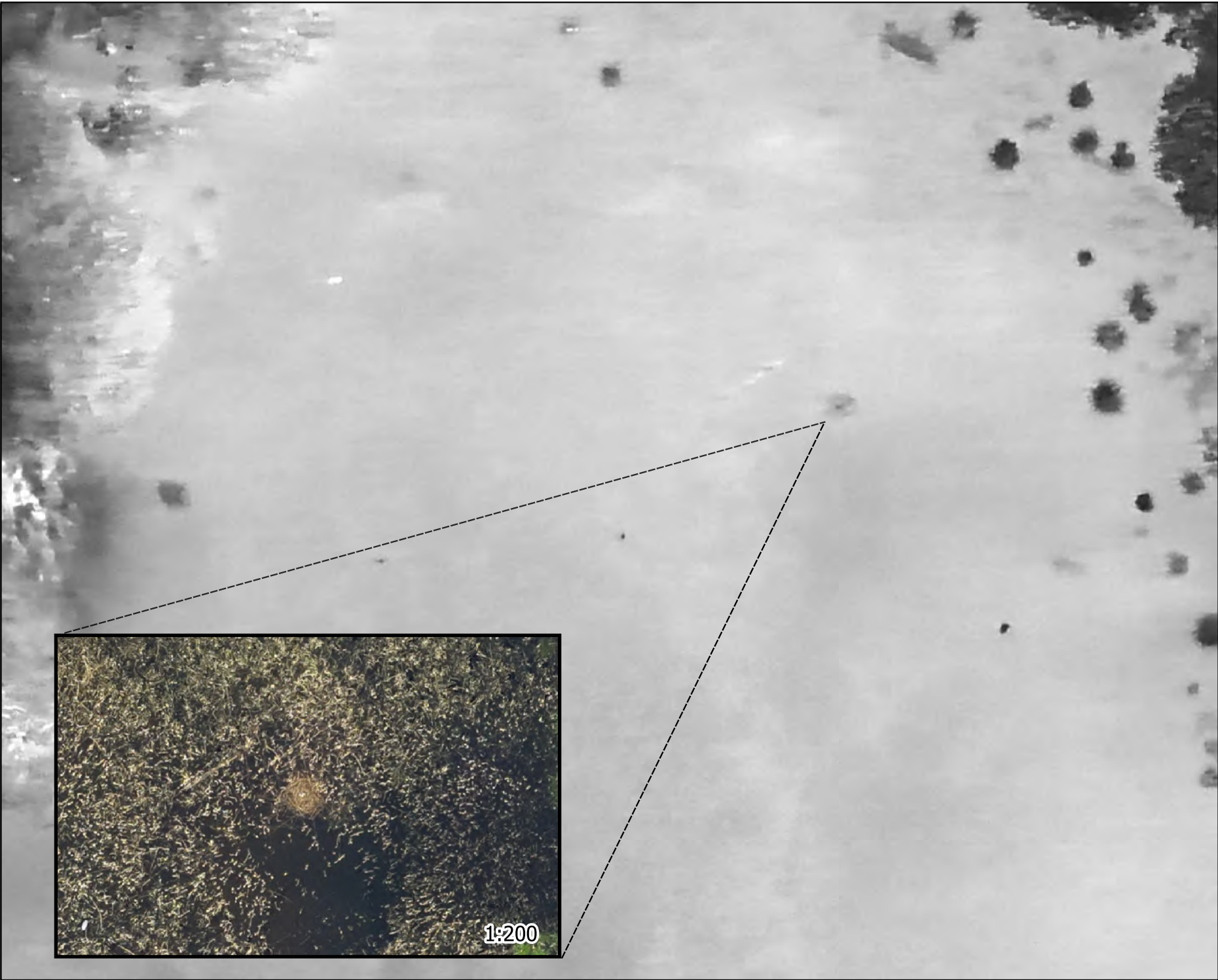


Figure 6-13. Area surveyed as part of the aerial drone topographical survey



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Drawing Title	
Thermal and RGB imaging of a nest from the aerial drone survey	
Project Title	
Hodson Bay Waterfront Park and Marina Redevelopment, Co. Roscommon	
Drawn By	Checked By
NR	AvdGM
Project No.	Drawing No.
241220	Figure 6-14
Scale	Date
1:200	10.06.2026



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6.6.3.4 Proposed Development Survey Data vs I-WeBS Data vs NPWS Conservation Objectives

The table below draws together, for each SCI species of Lough Ree SPA [004064] and Middle Shannon Callows SPA [004096] recorded during the dedicated Proposed Development bird surveys, three independent data points:

- The peak count recorded during breeding and wintering bird surveys conducted for the Proposed Development. In the case of wintering surveys, peak numbers are calculated by adding all numbers of a given species on a given date across all vantage points;
- The peak count recorded at the Hodson Bay I-WeBS subsite (0E528) over five recent survey seasons (2018/19–2023/24, per Table 6-14); and
- The current SPA-wide population estimate, and conservation status set out in the respective NPWS Conservation Objectives documents (Lough Ree SPA 004064, Version 1, 04 April 2025; Middle Shannon Callows SPA 004096, Version 1, 15 November 2022).

The final column expresses the site's peak recorded count as a proportion of the current SPA-wide population, to illustrate the significant Hodson Bay is as a proportion of each SPA's current estimated populations.

Table 6-25 Proposed Development Survey Data vs I-WeBS Data vs NPWS Conservation Objectives

SPA	SCI Species	Proposed Development Surveys Peak Numbers	I-WeBS Hodson Bay Peak (2018/19–23/24)	SPA Population as per SPA Conservation Objectives Documents	NPWS Conservation Objective and SPA Trend since Baseline	Site Peak as approx. % of SPA Population
Lough Ree SPA	Coot	208 (wintering surveys); 7 (breeding surveys)	541	619	To maintain the favourable conservation condition of Coot in Lough Ree SPA; +83% vs baseline (contrary to national decline)	33.6% (Wintering) The Peak I-WeBS numbers for Hodson Bay (2018/19 season) represent 87% of the current estimated population of wintering Coot utilising Lough Ree SPA.
Lough Ree SPA	Tufted Duck	153 (wintering surveys)	66	989	To maintain the favourable conservation condition of Tufted Duck in Lough Ree SPA; –2% vs baseline (broadly stable, contrary to national decline)	15.5%
Lough Ree SPA	Little Grebe	8 (wintering surveys);	9	89	To maintain the favourable conservation	9% (Wintering)

SPA	SCI Species	Proposed Development Surveys Peak Numbers	I-WeBS Hodson Bay Peak (2018/19–23/24)	SPA Population as per SPA Conservation Objectives Documents	NPWS Conservation Objective and SPA Trend since Baseline	Site Peak as approx. % of SPA Population
		2 (breeding surveys)			condition of Little Grebe in Lough Ree SPA; +71% vs baseline	
Lough Ree SPA	Mallard	27 (wintering surveys); 37 (breeding surveys)	15	537	To restore the favourable conservation condition of Mallard in Lough Ree SPA; –51% vs baseline (more severe than national decline)	4.6% (wintering)
Lough Ree SPA	Goldeneye	6 (single record during the breeding survey season (April), Goldeneye were not recorded during dedicated wintering surveys. It is considered likely that these Goldeneye were late leaving after the wintering season).	12	47	To restore the favourable conservation condition of Goldeneye in Lough Ree SPA; –77% vs baseline (more severe than national decline)	12.8%
Lough Ree SPA	Common Tern	5 (Common Tern were only recorded during the breeding season as would be anticipated).	Not recorded (I-WeBS is a wintering survey and Common Tern utilises Lough Ree during the breeding season)	64 breeding pairs (most recent estimate)	To restore the favourable conservation condition of Common Tern in Lough Ree SPA; –29% vs 1995 baseline	Common Tern did not utilise the Proposed Development Site or wider Study Area for Breeding activity. Additionally, the peak number of Terns cannot be directly compared to the

SPA	SCI Species	Proposed Development Surveys Peak Numbers	I-WeBS Hodson Bay Peak (2018/19–23/24)	SPA Population as per SPA Conservation Objectives Documents	NPWS Conservation Objective and SPA Trend since Baseline	Site Peak as approx. % of SPA Population
						estimate for breeding pairs within the SPA.
Middle Shannon Callows SPA	Black-headed Gull	21 (wintering surveys) 45 (breeding surveys)	36	1,055 (2-yr mean, 2018/19–20/21)	To restore the favourable conservation condition of Black-headed Gull in Middle Shannon Callows SPA; –13% vs baseline	2% (Wintering)

Though a peak of 208 Coot were recorded during wintering surveys, these numbers were recorded on the first survey on the 7th of October 2025. Numbers declined steeply across further surveys with numbers of coot recorded during surveys not exceeding 10 individuals on any given survey from December 2025 to March 2026. The lowest numbers of Coot recorded on any survey date was 2 individuals on the 18th of November 2025. Tufted duck followed a similar trend to Coot, but with higher overall numbers across the majority of survey dates. These species often occurred together in rafts and when in large congregations tended to utilise waters at considerable distance from the Proposed Development Site (approx. 250m – 700m). Little Grebe numbers were generally lower than other bird species but were recorded within or in close proximity to the Proposed Development site in all months but December. Mallard were recorded during all 12 wintering bird surveys with a peak count of 27 and a minimum count of 3. Black-headed gull were not recorded on 6 of the 12 wintering bird surveys undertaken, with all birds excluding two individuals recorded within January, February, and March of 2026.

The peak numbers recorded of both mallard and black-headed gull were higher within the breeding season than the wintering season. Both little grebe and coot were also recorded within the breeding season within or in the vicinity of the proposed Development Site. Though 5 common tern were recorded utilising the Proposed Development Site and wider area during the breeding season, no breeding behaviour was noted. No suitable habitat for breeding common tern is located within the Proposed Development Site.

Four further SCI species of both SPAs within the ZoI (Whooper Swan, Wigeon, Golden Plover, and Lapwing) were not recorded during any of the 5 breeding or 12 wintering bird surveys carried out for the Proposed Development. All four appear in the Hodson Bay I-WeBS dataset (Table 6-14: Whooper Swan peak 4; Wigeon peak 43; Golden Plover peak 100; Lapwing peak 300) and/or with the NBDC desk study records for the Hectad (Section 6.5.1.4). Golden Plover and Lapwing in particular show large historical peak counts at Hodson Bay (100 and 300 respectively) relative to their absence from the surveys undertaken for the Proposed Development. The absence of these species from the surveys undertaken for the Proposed development is likely due to the natural inter-annual and inter-seasonal variability in these species. This level of inter-seasonal variability has been previously observed at Hodson Bay within I-WeBS data.

6.6.3.5 Otter

Otter surveys were conducted along the shoreline of Lough Ree located within the Proposed Development Site, as well on the island located approx. 100m east of the existing Baysports Facility.

Large amounts of otter spraint (Plate 6-34, Plate 6-35) were identified on the island, which was determined to be in frequent use as a sprainting site for otter. Otter spraint was also identified on fallen trees within a strip of woodland approx. 100m south of the existing marina, behind stands of **Reed and large sedge swamp (FS1)** habitat (Plate 6-36). No holts or couches were identified within the Proposed Development Site, 150m up-shore or down-shore of the Proposed Development Site, or on the island at the time of survey.



Plate 6-34. A representative photo of otter spraint identified on Temple Island, outside of the Proposed Development Site.



Plate 6-35. A representative photo of otter spraint identified on Temple Island, outside of the Proposed Development Site.



Plate 6-36: A representative photo of old otter spraint identified on a fallen tree, approx. 100m south of the existing marina, outside of the Proposed Development Site.

6.6.3.6 Non-Volant Mammals

No badger setts, snuffle holes, latrines or prints were recorded within the Proposed Development Site during the dedicated badger surveys undertaken. The majority of the EIAR Study Area is comprised of artificial/man-made surfaces, wetland habitats and areas of highly managed amenity grassland. No Badger signs were recorded within or adjacent to the Proposed Development.

Mammal surveys were also carried out within the boundaries of the Athlone Golf Club adjacent to the Proposed Development. Several mammal tread paths were identified within Athlone Golf Club, which were suspected to be rabbit. A mammal tread path was identified within the wet grassland north of the Proposed Development Site. Both incidentals were located outside of the Proposed Development Site.

There are some areas which could potentially provide suitable habitat for badgers within the wider vicinity of Proposed Development Site, within improved agricultural grasslands in association with hedgerow and treeline, which provides suitable foraging grounds for badger, however there is no significant suitable habitat for Badger or any other protected non-volant mammal within the grounds of the Proposed Development.

No pine marten, red squirrel, or other protected non-volant mammal signs were documented within or in the vicinity of the Proposed Development Site at the time of mammal survey.

6.6.3.7 Bats

Full details of the habitats located within the Proposed Development Site are provided throughout Section 6.6.1. Bat surveys were undertaken within the site in Spring, Summer and Autumn of 2025. Five static detectors were deployed at 5 no. locations throughout the Proposed Development Site during each season. In complement, a bat habitat appraisal and manual activity surveys were conducted. All survey and detector locations are shown in Figure 6-15 and Figure 6-16.



Map Legend

- Proposed Development Site
- Trees assessed for Potential Bat Roost Features
- Structures assessed for Potential Bat Roosts

Spatial Reference
Name: IRENET95 Irish Transverse Mercator
Datum: IRENET95
Projection: Transverse Mercator



SITE LOCATION - NOT TO SCALE

Drawing Title

Locations of buildings and trees assessed for bat roost potential

Project Title		
Hodson Bay Waterfront Park and Marina Redevelopment, Co. Roscommon		
Project No.	Drawing No.	Scale
241220	Figure 6-15	1:8,000
Drawn By:	Checked By:	Date
BOC	AvdGM	04/08/2026

MKO

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Map Legend

— Proposed Development Site

★ Bat Roost Location

▲ Static Detector Locations

NVA positions

◆ Dusk 1 13.05.2025

◆ Dusk 2 23.06.2025

◆ Dusk 3 16.07.2025

Surveyor positions

● Dusk 1 13.05.2025

● Dusk 2 23.06.2025

● Dusk 3 16.07.2025

— Transect Route



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Drawing Title

Nighttime Bat Walkover Survey Transect Route and Static Detector Locations

Project Title

Hodson Bay Waterfront Park and Marina Redevelopment, Co. Roscommon

Drawn By

KL

Checked By

AJ

Project No.

241220

Drawing No.

Figure 6-16

Scale

1:8,500

Date

28/07/2026



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6.6.3.7.1 **Bat Habitat Appraisal**

During the bat habitat appraisal walkover and inspection survey, habitats within the Study Area were assessed for their suitability for bats to roost, forage and commute. Connectivity with the wider landscape was also considered to determine habitat suitability.

Artificial and heavily managed habitats dominated the Proposed Development, predominantly consisting of Buildings and artificial surfaces (BL3) (in the form of car parks, roads, footpaths and existing buildings) and areas of Amenity grassland (GA2). These habitats provided limited foraging and commuting potential on their own (considered *negligible-low* in a local context), however often occurred in close proximity or between other habitats of higher commuting and foraging habitats (scattered trees and parkland, treeline, scrub).

Areas of Wet willow-alder-ash woodland (WN6), shoreline willow Scrub (WS1), and Reed and large sedge swamps (FS1) habitats all occurred along the shoreline of Lough Ree, with areas of these habitats falling partially within and bordering the Proposed Development. With regard to foraging and commuting bats, these habitats were considered of *High* suitability due to the connectivity they provided throughout otherwise artificial habitats, connectivity provided throughout the wider landscape, and the provision of suitable habitat for prey insects.

Due to their isolated locations and often sparse nature, Treelines (WL2), Hedgerow (WL1), Scattered Trees and Parkland (WD5) and individual trees adjacent to the site within the golf course and along the L2020 road provided *Low - Moderate* foraging and commuting suitability for bats. These habitats within the Northern area of the Site and in the vicinity of the existing Baysports facility were more continuous in nature and provided better connectivity with the wider landscape, and were assessed as having *Moderate* suitability for foraging and commuting bats. These habitats within the site often connected to, or occurred within proximity to valuable lakeshore habitats, providing valuable connectivity to higher value foraging and commuting habitats along the shoreline of Lough Ree.

Features within the site determined to have some roosting potential were a small number of trees and buildings located throughout and adjacent to the Proposed Development. These have been discussed and assessed in sections 6.6.3.6.2 and 6.6.3.6.3. Other habitats within the site were assessed as having negligible potential to support roosting bats.



Plate 6-37. A representative image of a cypress sp. dominant treeline between Athlone Golf Club and the existing carpark toward the north of the Proposed Development Site.



Plate 6-38. A representative picture of the cedar sp. treeline located in the middle of the site, adjacent to the Hodson Bay Hotel

6.6.3.7.2 Roost Assessment - Structures

Several structures within and adjacent to the Proposed Development were identified and inspected as part of the roost assessment effort on 4th April 2025, including buildings throughout the Baysports facility, a derelict railway building along the L2020 road toward the south of the site, and a stone signal

tower (Hodson's Pillar) located on Temple Island, approx. 100m off the shoreline. Locations of assessed structures roost assessment results are shown in Table 6-26.

Table 6-26. Locations and roost assessment results of structures within and adjacent to the Proposed Development Site

Structure	IG Ref	Roost Assessment
Baysports – Main building	N 00908 46577	<i>Moderate</i>
Public Toilet Block Building	N 00879 46573	<i>Low</i>
Baysports – Marquee	N 00874 46592	<i>None</i>
Derelict Railway Building	N 00264 45480	<i>Low</i>
Hodson's Pillar	N 01152 46516	<i>Low</i>

The Baysports buildings and Public Toilet Block Building are proposed to be demolished as part of the Proposed Development. The interior and exterior of the buildings were inspected thoroughly (Plate 6-39 and Plate 6-40). Evidence of bats in the form of a small number of droppings were found in the attic of the main Baysports building, with minor access points identified in the roof. Therefore, the building was assessed as having *Moderate* suitability roosting potential. However, no potential for a large maternity roost or hibernacula was identified. Images of initial assessment of gaps in the roof of the main Baysports building are shown in Plate 6-39. Representative images of bat droppings identified in the attic of the main Baysports building are shown in Plate 6-40. As is detailed in section 6.6.3.6 a small roost of soprano pipistrelles was identified via thermal video footage and dusk emergence surveys which focused on the Baysports buildings on 16th July 2025 and the 9th September 2025.

No access points for bats or evidence of roosting bats were found in the Public Toilet Block Building at the time of survey. Images of the exterior assessment of the Public Toilet Block Building are shown in Plate 6-41 and Plate 6-42.

The Baysports marquees (2 no. in total), which are used to store sporting equipment for Baysports, consists of plastic sheet walls and roof and were assessed as providing no potential suitable roosting, foraging or commuting habitat for bats. Images of the assessment of the Baysports marquee building are shown in Plate 6-43 and Plate 6-44.

The derelict railway building, located along the L2020 was assessed externally. During external inspection, the roof was found to be in disrepair and partially open to the elements at the back of the building (Plate 6-45, Plate 6-46, Plate 6-47). Several cracks and gaps were also identified in the eaves of the derelict building (Plate 6-48). However, the building is located immediately next to the active Mayo Iarnród Éireann railway line. Therefore, in the context of several potential entrance points but location of the building in the context of an area with high levels of ongoing human disturbance, potential roosting suitability for this building was assessed as *Low*. The derelict building is located outside of the Proposed Development Site and will not be impacted by the Proposed Development.

Hodson's Pillar, the stone tower located on a small island approx. 100m from the shoreline, was assessed externally for potential roost features. Two PRF's in the form of external cracks were identified and were endoscoped under licence, with no evidence of roosting bats found at the time of survey. This structure has been assessed as having *Low* potential for roosting bats. Hodson's Pillar and Temple Island are located outside of the Proposed Development Site and will not be impacted by the Proposed Development.

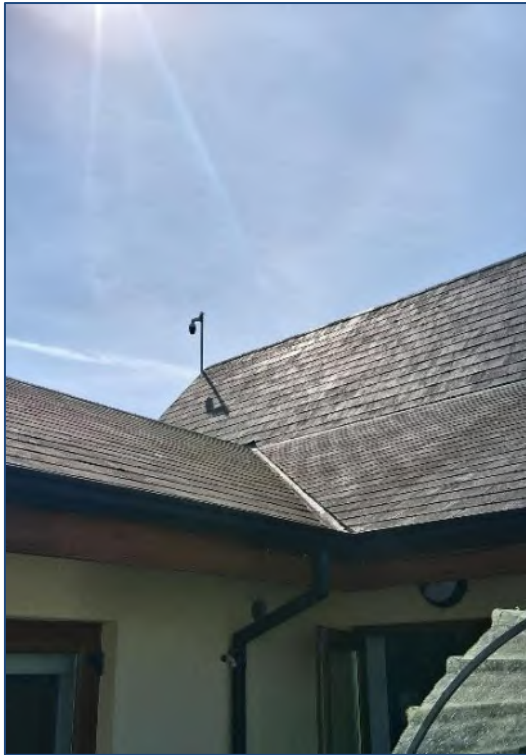


Plate 6-39. Representative images of gaps identified within the roof for potential bat access to the attic of the Main Baysports building



Plate 6-40. Representative images of bat droppings found within the attic of the Main Baysports building



Plate 6-41. A representative image of the Public Toilet Block Building



Plate 6-42. A representative image of the end of the Public Toilet Block Building



Plate 6-43. A representative image of the first of two Baysports marquees



Plate 6-44. A representative image of the second of two Baysports marquees



Plate 6-45. A representative image of the end of the derelict railway building, located outside of the Proposed Development Site



Plate 6-46. A representative image of the back of the derelict railway building, located outside of the Proposed Development Site.



Plate 6-47. A representative image of the ivy-covered from of the derelict railway building, located outside of the Proposed Development Site.



Plate 6-48. Representative images of gaps along the eaves of the southwestern end of the derelict railway building



Plate 6-49. Representative images of Hodson's tower and examples of cracks within the stonework

6.6.3.7.3 Roost Assessment – Trees

PRF assessments were conducted on all trees within the Proposed Development, with particular focus on those proposed for removal.

No PRF's were identified on trees proposed for removal, with the exception of an Ash tree located within the area of the proposed primary construction compound which was identified as having several PRF-Is in the form of broken branches, small hazard beams/ limb structural defects and thick ivy which was dying off. Due to inability to reach PRFs using a ladder at initial inspection, the Ash tree was later climbed for further inspection. Broken branches and minor hazard beams consisted only of small cavities which were not suitable for maternity bat roosts. No evidence of bat roosts or bat activity were identified within PRFs on the tree.



Plate 6-50. A representative photo of the ash tree identified as having initial PRF-I during ladder and endoscope surveys



Plate 6-51. A representative photo of the ash tree under inspection via tree climbing

6.6.3.7.4 Manual Activity Surveys

Manual bat activity surveys took place in the spring, summer, and autumn of 2025. Bat activity was recorded on all surveys, with a total of 1,808 bat passes (Plate 5-5). Soprano pipistrelle ($n = 1,413$) was the species recorded most frequently, followed by common pipistrelle ($n = 279$), Leisler's bat ($n = 92$), and *Myotis* spp. ($n = 21$). Brown long-eared bat was recorded rarely ($n = 3$). The following sections detail the results of emergence surveys and transect surveys carried out throughout 2025.

Plate 6-52 shows the bat species composition recorded during manual activity surveys. Manual activity results are a combination of all results across transect surveys and dusk emergence surveys.

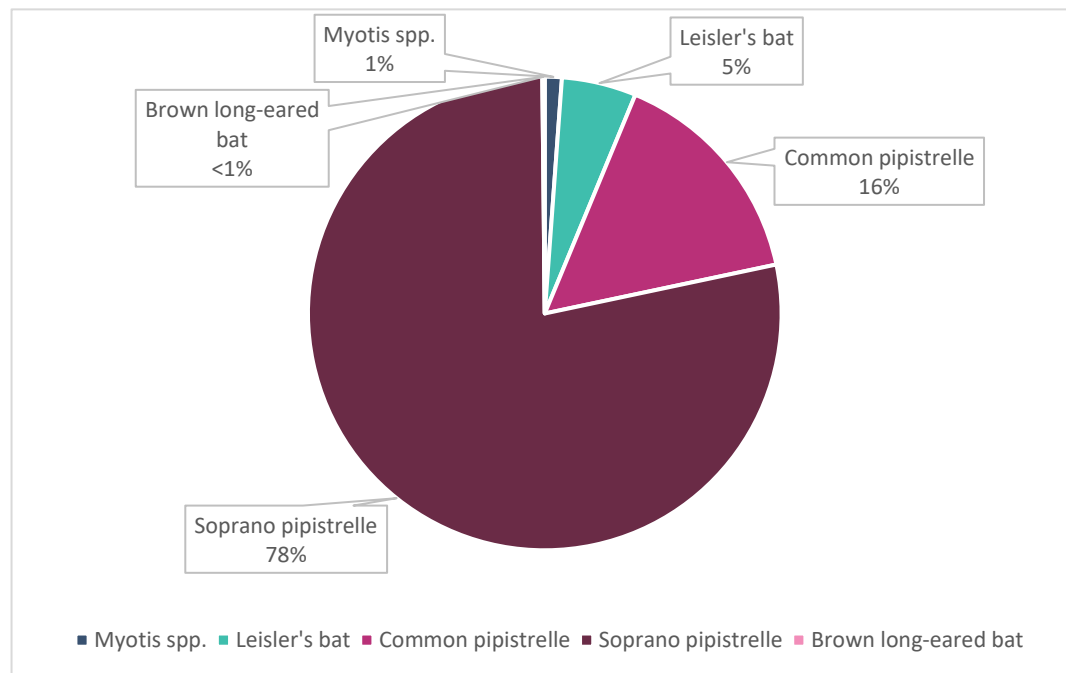


Plate 6-52. Species composition recorded during manual activity surveys.

6.6.3.7.5 Transect Surveys

Nighttime bat walkover surveys were conducted throughout the 2025 survey period on 15th May, 24th June, 15th July and 24th September 2025. The transect route followed local roads and covered all habitats within the site.

During the spring transect, bat activity was dominated by soprano pipistrelle, followed by common pipistrelle, with most of this activity observed along existing treelines and wooded areas. Leisler's bat was also recorded to a lesser extent throughout the site. A small number of *Myotis* spp. passes were recorded nearby the Baysports building, which is located along the lakeshore to the north-east.

The summer transects followed a similar route to the spring transect and recorded similar species composition. Soprano pipistrelles dominated the recordings and were observed commuting and foraging along treelines throughout and adjacent to the site. Common pipistrelles and Leisler's bats were also recorded displaying similar activity. *Myotis* spp. were recorded to a much lesser extent to the north of the site nearby a treeline as well as near the location of D02, which was located alongside a wooded area. One instance of brown long-eared bat was recorded to the south of the site along a treeline close to D01.

The autumn transect covered the same general route again. Activity comprised predominantly of soprano pipistrelles, followed by common pipistrelles commuting and foraging throughout the site. Two

small number of brown long-eared bats were recorded to the north of the site near a wooded area by the lakeshore.

6.6.3.7.6 **Dusk Emergence Surveys**

Presence/absence surveys were undertaken in the form of dusk emergence surveys on the evenings of the 13th May, 23rd June, 16th July and 9th September 2025. During potential roost inspection surveys of structures on the Proposed Development Site, the main Baysports building was assessed as having *Moderate* potential to support roosting bats, with potential access points identified and bat droppings recorded. In addition, this building is proposed to be demolished as part of the Proposed Development. Therefore, dusk emergence surveys were undertaken on the Baysports buildings, with particular focus on the main building.

Surveyors were positioned to achieve the best coverage of the buildings to monitor potential access points. One to two surveyors were equipped with thermal camera to aid the survey work. A summary of results of the emergences surveys are detailed below.

Dusk Emergence Survey 13th May 2025

No bats were observed emerging from the Baysports structure. Soprano and common pipistrelle bats were recorded foraging in the grounds to the west of the Baysports building and commuting within the wider area, particularly toward the treeline adjacent to Athlone Golf Club. One Leisler's bat was also recorded commuting nearby.

Dusk Emergence Survey 23rd June 2025

No bats were observed emerging from the structure. A small number of soprano pipistrelle bats and one Leisler's bat were recorded commuting along the treeline to the south of the building. Foraging behaviour was also observed along the trees to the south.

Dusk Emergence Survey 16th July 2025

Four bats (Soprano pipistrelle) were recorded emerging from the western apex of the attic of the main Baysports building. A small number of bats were recorded commuting in a southerly direction. Bat species were also recorded foraging on the treeline south of the building and near the reed beds on the lakeshore to the east of the building. Soprano pipistrelle, common pipistrelles and Leisler's bat were observed.

Dusk Emergence Survey 9th September 2025

Six bats (Soprano pipistrelle) were recorded emerging from the western apex of the same attic location on the main Baysports building. A small number of bats including soprano and common pipistrelles and one Leisler's bats were recorded commuting southwards over the building. Bats were also observed foraging around the treeline to the south and near the reed beds to the east.

6.6.3.7.7 **Static Detector Surveys**

In total 119,395 bat passes were recorded. Analysis of the detector recordings positively identified seven bat species/species groups. Soprano pipistrelle (*Pipistrellus pygmaeus*) made up the vast majority of the activity recorded within the site ($n = 60,258$), followed by common pipistrelles (*Pipistrellus pipistrellus*; $n = 35,847$) and Leisler's bats (*Nyctalus leisleri*; $n = 20,556$). *Myotis* spp. ($n = 2,093$) and Brown long-eared bats (*Plecotus auritus*, $n = 522$) were less frequently recorded, followed by Nathusius' pipistrelles (*Pipistrellus nathusii*, $n = 119$).

Plate 6-53 shows total bat species composition recorded at the site. Species composition was similar at all detectors, with *Pipistrellus* spp. activity dominating every location (Plate 6-54).

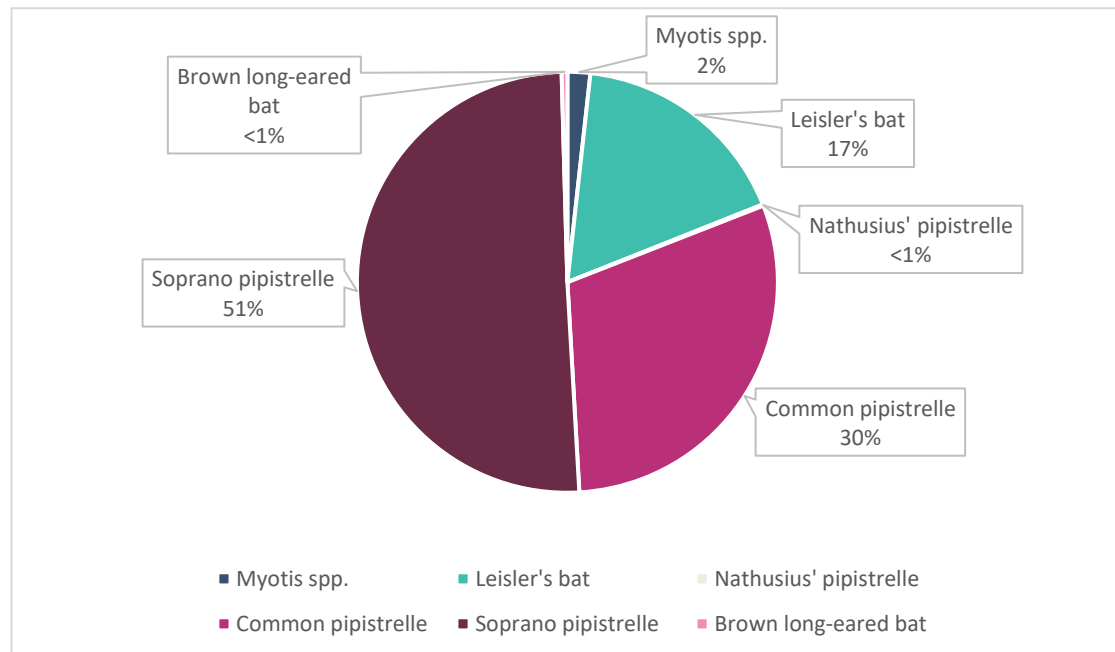


Plate 6-53. Total species composition recorded by static detectors during the 2025 survey period

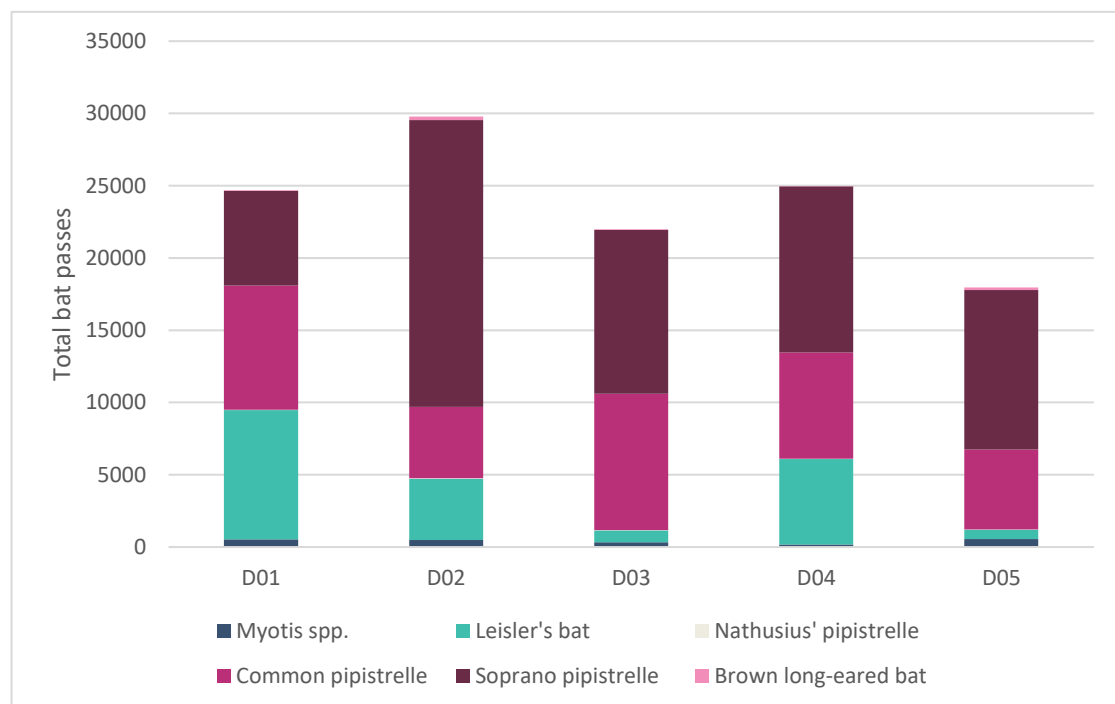


Plate 6-54. Total bat passes per static detector recorded during the 2025 survey period

6.6.3.7.8 Summary of Survey Results and Overall Findings

Four soprano pipistrelle bats were observed emerging from the western apex of the attic of the main Baysports building during July 2025. Six soprano pipistrelle bats were observed emerging from the western apex of the attic of the main Baysports building during September 2025. The Baysports building was confirmed to support a small bat roost during the activity season. No evidence of hibernacula was identified. A small accumulation of droppings was found within the structure. No large dropping accumulations indicative of large active roosts were found.

Seven bat species/species groups were recorded commuting and foraging across the site during the bat surveys carried out, including soprano pipistrelle, common pipistrelle, Leisler's bat, brown long-eared bat, Nathusius' pipistrelle and *Myotis* spp. The site supports a diverse local bat population. The habitats identified on site, and particularly treelines located within the site, were assessed as having *Low – Moderate* commuting and foraging suitability and were confirmed during activity surveys as valuable habitats for local bats. Lakeshore habitats assessed as high commuting and foraging potential were also confirmed to be utilised for these purposes during surveys.

6.6.3.7.9 Population size and class assessment

The subject site hosts a small population of roosting soprano pipistrelles and supports other bat populations of local importance.

Based on the information identified within the desk study, and during dedicated surveys undertaken, the site is used by local bat populations for foraging, commuting and roosting.

6.6.3.8 Amphibians

A single common frog (*Rana temporaria*) was recorded within the existing car park on amenity grassland within the north of the site. eDNA surveys were conducted for common frog and smooth newt (*Lissotriton vulgaris*) within the pond in Athlone Golf Club, adjacent to the Leyland cypress treeline which is proposed for removal. eDNA results for smooth newt were negative (0/12 replicates), while common frog eDNA results were positive (12/12 replicates). The pond is located outside of the Proposed Development Site.

The eDNA report is appended to this EIAR (Appendix 6-3).

6.6.3.9 Macroinvertebrate surveys

Sweep netting was conducted at 3 no. sites, in wadable depths throughout the macrophyte transect areas. Results of sweep netting in terms of taxonomic abundance is provided below in Table 6-27. In addition to the below community of macroinvertebrates both Zebra Mussel and Quagga Mussel were recorded in the vicinity of survey locations.

Table 6-27. Results of sweep netting conducted along reedbeds and lakeshore vegetation.

Taxon	Abundance		
	Site 1	Site 2	Site 3
<i>Asellus aquaticus</i>	–	1	7
<i>Bithynia</i> sp.	–	1	1
<i>Chironomidae</i>	15	5	5
<i>Corixidae</i>	25	8	30
<i>Dysticidae</i>	1	2	3
<i>Elmidae</i>	5	–	–
<i>Ephemoptera</i>	3	–	–
<i>Gammarus</i> sp.	1	2	–
<i>Gerris</i> sp.	–	2	–
<i>Glossiphoniidae</i>	–	–	5
<i>Hydracarina</i>	12	15	5
<i>Lymnaeidae</i>		2	–
<i>Orectochilus</i>	1	–	–
<i>Planorbidae</i>	–	1	–
<i>Polycentropus</i>	1	–	–
<i>Potamopyrgus</i> sp.	–	–	5
<i>Zygoptera</i>	3	3	–

6.6.3.10 Other Fauna

No evidence of other species of conservation concern was identified within the Proposed Development Site.

6.7 Identification of Key Ecological Receptors

Table 6-28 below summarises the ecological evaluation of all receptors as outlined in Section 6.4.4. It provides the rationale for the determination and identifies the habitats and fauna that are considered to be KERs and therefore those receptors that are subject to impact assessment and considered in Section 6.8 of this report. Following impact assessment mitigation measures are incorporated into the Proposed Development where required, to avoid potential significant impacts on these KERs.

Table 6-28. Identification of Key Ecological Receptors within the ZoI of the Proposed Development

Ecological feature or species	Reason for inclusion as a KER	KER
Designated Sites		
European Designated Sites	The Proposed Development Site is within the ZoI of four European sites, namely: ➤ Lough Ree SAC [000440] ➤ Lough Ree SPA [004064] ➤ River Shannon Callows SAC [000216] ➤ Middle Shannon Callows SPA [004096] Potential for Likely Significant Effects (LSEs) on these European sites was identified within the AA screening for the Proposed Development. Potential impacts on these European sites are assessed fully in the NIS for the Proposed Development. In the context of this Biodiversity Chapter these sites have been assigned International Importance and included as a KER as there is potential for direct and indirect effects on these European sites.	Yes
Nationally Designated Sites	The following Nationally designated sites were identified as being within the ZoI of the Proposed Development: ➤ Lough Ree pNHA [000440] ➤ River Shannon Callows pNHA [000216] Potential for likely significant effects on these Nationally Designated sites was identified within Section 6.5.1.1 above. In the context of this Biodiversity Chapter, these sites have been assigned National Importance and are included as a KER as there is potential for direct and indirect effects on these National sites.	Yes
Aquatic Habitats		
Eutrophic lake (FL5) ([3150] Natural eutrophic lakes with <i>Magnopotamion</i> or	The Proposed Development is located partially within Lough Ree, which has been classified as a Eutrophic lake (FL5) habitat. Lough Ree makes up the majority of Lough Ree SAC, which is designated for [3150] Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> - type vegetation habitat, to which Eutrophic	Yes

<i>Hydrocharition</i> - type vegetation)	Lake (FL5) within and adjacent to the Proposed Development corresponds (as supported by macrophyte surveys carried out for the Proposed Development). Therefore, due to Lough Rees designation as an SAC, this receptor has been assigned International Importance and is included as a KER.	
Reed and large sedge swamp (FS1)	Lakeshore fringing Reed and large sedge swamp (FS1) habitat was present around much of the lake margins and shoreline of Lough Ree, both partially within and in the wider vicinity of the Proposed Development Site. Areas of fringing habitat such as reed swamp are necessary to support the structure and functioning of [3150] Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> - type vegetation habitat, to which Eutrophic Lake (FL5) within Lough Ree corresponds and which has been identified as a KER and receptor of international Importance. Additionally, areas of this habitat adjacent to the Proposed Development and within the wider vicinity provide supporting habitat for waterbirds during the breeding and wintering seasons. As outlined below in this table, birds listed as SCI species of SPAs within the Likely Zone of Influence have been assessed as International Importance. Consequently, this receptor, which assists in the functioning of an Annex I habitat within Lough Ree SAC, and which provides suitable habitat for SCI birds of Lough Ree SPA, has been assigned International Importance and is included as a KER.	Yes
Drainage ditch (FW4)	A narrow Drainage Ditch (FW4) was identified within the southern end of the survey area, running for a short distance along the existing Mayo-Athlone railway line. While the drainage ditch is located outside of the Proposed Development Site, with a lack of continuous connectivity between fragmented sections of drains and mapped watercourses, taking a precautionary approach and in the absence of mitigation, the drainage ditch identified to the southern end of the Study Area may be subject to water quality deterioration during the construction phases of the Proposed Development and subsequently act as a pathway of water quality deterioration and sedimentation to downstream water bodies. While this habitat is of low ecological value and is assigned Local Importance (Lower Value), hydrological connectivity of this habitat to more sensitive downstream habitats leads to its inclusion as a KER.	Yes
Depositing/Lowland River (FW2)	The Proposed Development Site is located partially within Lough Ree and approx. 3.6 km upstream of the Upper River Shannon (EPA Code: 26S02). There is hydrological connectivity between Lough Ree and the upper River Shannon. The Upper River Shannon downstream of the Proposed Development Site has been assessed as a receptor of International Importance due to its designation as an SAC and an SPA (River Shannon callows SAC, Middle Shannon Callows SPA). While the Upper River Shannon (classified as a Depositing/Lowland River (FW2)) is not located within the Proposed Development Site,	Yes

	in the absence of mitigation, taking a precautionary approach, water quality deterioration effects arising as a result of the Proposed Development have the potential to result in a significant effect on this downstream habitat. For this reason, this habitat has been included as a KER.	
Terrestrial Habitats		
Wet willow-alder-ash woodland (WN6) 91E0 Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae),	Fragmented, fringing areas of habitat best conforming to Wet willow-alder-ash woodland (WN6) were present along the shoreline of Lough Ree, both within, adjacent to, and outside of (but within the wider vicinity) of the Proposed Development Site. Following condition assessment, areas of Wet willow-alder-ash woodland (WN6) were shown to conform to 91E0 Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae), designated as a QI habitat of Lough Ree SAC. In the absence of mitigation, the Proposed Development has the potential to have a significant effect on this habitat in the form of habitat disturbance and water quality deterioration. Consequently, this receptor has been assigned International Importance and is included as a KER.	Yes
Treelines (WL2), Hedgerow (WL1), Scattered trees and parkland (WD5) and individual trees	To facilitate the Proposed Development, 239 trees are proposed for removal, including the removal of a non-native Leyland Cypress treeline consisting of approx. 106 trees located between the existing northern carpark and Athlone Golf Club, as well as a non-native cedar treeline consisting of approx. 32 trees, located to the north of Hodson Bay Hotel, within the Proposed Primary Compound location. Other trees proposed for removal are located throughout areas of public realm classed as Scattered trees and parkland (WD5) and marginal areas of Athlone Golf Club adjacent to the L2020 road. Treelines (WL2), Hedgerow (WL1), individual trees, and trees within areas of Scattered trees and parkland have been assessed as being of Local importance (Higher Value) as these linear habitats, and areas of trees provide connectivity to the wider landscape and provide supporting habitat for a wide variety of faunal species of local importance. For this reason, these habitats have been included as a KER.	Yes
Buildings and artificial surfaces (BL3)	Buildings and artificial habitats (BL3) within the Proposed Development Site mainly consisted of roadways, car parks and footpaths, the existing marina, and the Baysports buildings and existing hardstand. This habitat is considered to be of overall low biodiversity value, providing limited habitat for any fauna. Additionally, the existing marina will be retained as part of the Proposed Development. The Baysports main building has been identified as supporting a small bat roost (max no. of bats recorded exiting was 6 individuals). Due to its suitability as a bat roosting feature, the Baysports Main building has been assessed as Local Importance (Higher Value). All	Yes (Exclusively the Baysports main building)

	other Buildings and Artificial Surfaces habitat has been assessed as Local Importance (Lower Value). Therefore, specifically the Baysports main building has been included as a KER, while all other buildings and artificial surfaces (BL3) habitat is not included as a KER. This will be assessed in conjunction with Bats, also identified as a KER, within Section 6.8.	
Exposed sand, gravel or till (ED1)	An area of gravel lakeside shore, classified as Exposed sand, gravel or till (ED1), was recorded along the shore of Lough Ree in front of the Hodson Bay Hotel. This habitat, while available along the wider shoreline of Lough Ree provides valuable habitat for local fauna. Therefore, it has been assessed as Local Importance (Higher Value). No loss of this habitat is proposed as a result of the Proposed Development. Therefore, this habitat is not included as a KER.	No
Amenity grassland (GA2)	Areas of Amenity grassland (GA2) identified within the Proposed Development Site included areas of managed grassland located adjacent to the Hodson Bay Hotel and existing Lough Ree marina and pier, as well as in the northern area of the Site near the existing northern carpark. This habitat is of low biodiversity value and is widely available in the wider vicinity, and as such has been assessed as Local Importance (Lower Value). Consequently, this habitat is not considered as a KER.	No
Scrub (WS1)	Areas of lakeshore willow Scrub (WS1) identified during walkover surveys of the Proposed Development are located along the southern area and extending from the northern area of the shingle shore of Lough Ree north of the existing marina. In addition, a very small area of willow scrub is located alongside the northern boundary of the existing Baysports hardstanding area. Small areas of scrub also occur alongside the L2020 road network in isolated areas. Scrub habitat assists in overall connectivity for fauna within the site while also providing valuable habitat for nesting birds. While the loss of scrub habitat is not considered significant this habitat has been carried forward as a KER of Local Importance (Higher Value) in relation to supporting habitat for birds only and is assessed under Birds in Section 6.8.	Yes
Recolonising Bare Ground (ED3) And Spoil and Bare Ground (ED2)	Areas of these habitats identified within the Site are of low ecological value, being isolated and limited in size, providing limited ecological value to local wildlife, and being common in the context of the wider landscape outside of the Proposed Development. Therefore, these habitats have been assessed as Local Importance (Lower Value). Consequently, these habitats are not considered as KERs.	No
Fauna		
Otter	Otter spraint was recorded along the shoreline of Lough Ree and on the island approx. 100 m east of the shoreline, both outside of the Proposed Development Site. No otter holts or couches were identified within/ in the vicinity of the Proposed Development Site. In addition, the baseline condition	Yes

	of the Proposed Development is that of a disturbed landscape typified by human usage year-round. However, in the absence of mitigation, the Proposed Development has the potential to cause disturbance to feeding/commuting otter, as well as indirect effects on otter prey availability via water quality deterioration. Therefore, otter as an ecological receptor has been assigned International Importance as a QI of Lough Ree SAC, and is included as a KER, with further assessment in this chapter.	
Birds of Local Importance (<i>higher value</i>) to International important species	An assemblage of waterbird species (including SCI species designated to Lough Ree SPA) were observed utilising areas of Lough Ree during dedicated breeding and wintering bird surveys. An assemblage of common birds were also observed during wintering and breeding bird surveys, as listed in Section 6.6.3.1 and 6.6.3.2 of this report. Common passerines and non SCI birds recorded utilising the Proposed Development Site and its adjacent habitats have been assessed as Local Importance (Higher Value). Birds listed as SCI species of SPAs within the Likely Zone of Influence have been assessed as International Importance. Appendix 5-1 of Chapter 5 outlines the operational phase increase in usage of the Proposed Development Site, with an approximate increase in visitors from 80,000 (baseline) to 168,000 (Predicted during operational phase of the proposed development). In the absence of mitigation or appropriate design, the Proposed Development has the potential to result in disturbance and displacement of birds, mortality, and water quality deterioration of supporting habitat. Therefore, birds from Local Importance (Higher Value) to International Importance are included as KERs for further assessment.	Yes
Bats	All bat species in Ireland are protected under the Bonn Convention (1992), Bern Convention (1982) and the EU Habitats Directive (92/43/EEC). Additionally, in Ireland, bat species are afforded further protection under the Birds and Natural Habitats Regulations (2011) and the Wildlife Acts as amended. All species of bats have therefore been assigned Local Importance (Higher Value). Bats have been recorded commuting and foraging across the Proposed Development Site. Additionally, a roost of 6 no. soprano pipistrelles was identified within the existing Baysports building, which is proposed to be removed. Sections of treeline and individual trees are also proposed for removal to facilitate the construction phase of the Proposed Development. Habitats within and surrounding the Proposed Development Site are utilised by bat populations of Local Importance (Higher Value). The Proposed Development has the potential to result in direct and indirect effects on these bats in the form of disturbance of commuting and foraging bats, disturbance of roosting bats, loss of a small bat roost, and loss of commuting and foraging habitat.	Yes

	Therefore, bats have been included as a KER for further assessment.	
Amphibians (Common frog, Smooth Newt)	An eDNA survey was conducted within the pond in Athlone Golf Club, west of the Leyland cypress treeline proposed for removal. eDNA survey results were positive for common frog and negative for smooth newt (eDNA results in Appendix 6-3 of this chapter). An individual frog was also observed in an area of amenity grassland within the existing northern carpark. Common frog is listed under the Wildlife Acts. Common frog is therefore assessed as Local Importance (Higher Value). The Proposed Development Site is not considered to provide significant suitable habitat for amphibians, with the majority of the site comprised of artificial or heavily managed habitats. The pond within the adjacent Athlone Golf Club course does however provide habitat for local frog populations. While there will be no loss of pond habitat, construction works associated with the Proposed Development could result in water quality deterioration of the pond. Therefore, common frog is included as a KER.	Yes
Aquatic and Fisheries Species	Lough Ree and the Upper River Shannon located approx. 3.6 km downstream of the Proposed Development Site are known to support a number of aquatic species. Aquatic and fisheries species which utilise Lough Ree and the downstream Upper River Shannon (see Section 6.5.1.7) have been assessed as Local Importance (Higher Value). Therefore, due to the potential for effects on these species as a result of the Proposed Development, fish and other aquatic species are included as a KER for further assessment.	Yes
Additional fauna (e.g. Badger, Pine Marten, red Squirrel, Irish hare, etc).	The Proposed Development Site is dominated by habitats that are artificial or highly modified in nature, with existing high levels of disturbance. No signs of badger in the form of tracks, latrines, snuffle holes or setts were identified within or in the vicinity of the Proposed Development Site. No signs of other protected fauna e.g. Irish Hare, Pine Marten, Red Squirrel, were recorded within or in the vicinity of the Proposed Development. The Proposed Development Site is not considered to provide significant suitable habitat for badger, Irish hare, Pine Marten, or other protected fauna not otherwise discussed within this table. For this reason, other faunal species are not considered further and not considered to be a KER.	No

6.8 Ecological Impact Assessment

6.8.1 Do-Nothing Effect

The Proposed Development Site is at present a highly active and developed area along the shore of Lough Ree with frequent and year-round use by businesses and members of the public. If the Proposed Development were not to proceed, it is unlikely that the current uses of the site would substantially change. Those activities being water sports and other recreation within Lough Ree and its shoreline habitats (developed areas and green spaces), boating and related activities, tourism, transport along roads, and parking within the existing car parks.

Habitats located within and adjacent to the Proposed Development Site would likely remain in their current condition and management regime (if any). The general biodiversity within the Proposed Development Site, as described in this chapter, would likely remain similar to its current state as activity levels and land use would likely remain the same.

In areas of Lough Ree where aquatic invasive species are present, further colonisation of the lake by quagga mussel, zebra mussel, Canadian waterweed, Nuttall's waterweed and starry stonewort is likely.

6.8.2 Likely Significant Effects During Construction Phases

6.8.2.1 Effects on Habitats During Construction

To facilitate the Proposed Development, areas of buildings and artificial surfaces as well as areas of amenity grassland will be lost, temporarily disturbed, or changed. These habitats are considered to be of Local Importance (Lower Value) and as such are not considered KERs. The northern area of amenity grassland habitat as well as an area of the existing northern car park will be used as a temporary relocation for Baysports activities during the construction phase of the new Water Sports Pavilion. A portion of this northern area of amenity grassland is also ultimately proposed to be developed into car parking while more areas of it will be planted with native tree planting. There will be an overall net gain of buildings and artificial surfaces within the Proposed Development. Overall, effects to these habitats are not considered significant at any geographical scale. The removal of the main Baysports building (which supports a confirmed roost) has however been carried forward in this section and assessed alongside Bats.

The effects on habitats **that are identified as KERs** are described in the below tables.

Any effects on habitats caused by spread of invasive species during the construction phase of the Proposed Development is dealt with in section 6.8.2.1.5.

6.8.2.1.1 Assessment of Potential Effects on KERs as a result of Water Quality Deterioration during the construction phase

Table 6-29. Assessment of potential effects as a result of water quality deterioration

Description of Effect	The effects on water quality are fully described in Chapter 8 'Hydrology and Hydrogeology' of this EIAR and are described here in relation specifically to ecology in terms of; supporting habitat for aquatic fauna, sensitive aquatic or aquatically influenced habitats, sensitive aquatic fauna, Nationally Designated sites, and EU Designated sites. This section assesses the potential for likely significant effects on water quality, aquatic habitats, aquatically dependent habitats and other riparian habitats, as well as potential effects on associated aquatic faunal species, including fish species identified during the desk study, as well as those likely to occur within or downstream of the Proposed Development Site.
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	There are no surface watercourses within the Proposed Development, although the Site is located approx. 3.6 km upstream of the Upper River Shannon. A Drainage ditch (FW4) also runs adjacent to the L2020 access road toward the south end of the Proposed Development. Additionally, phases of the Proposed Development (Proposed Marina Extension and Redevelopment) are located within Lough Ree, or along the shoreline of Lough Ree. In addition, a pond located within Athlone Golf Club is located to the west of an area of proposed new car parking. Surface water runoff from this area of the Proposed Development could result in water quality deterioration of the pond, which has been shown to have support a population of common frog. Consequently, potential pathways were identified for water quality deterioration on Lough Ree (including Lough Ree SAC, SPA, and pNHA), shoreline and riparian habitats, downstream waterbodies (including downstream European Designated Sites), the pond within Athlone Golf Club and its associated frog population, and aquatic fauna (including otter, waterbirds, and other sensitive aquatic species such as fish). Potential sources of pollution to surface waters and groundwaters arising from the construction phase of the Proposed Development have been identified and discussed within Section 8.5 of Chapter 8 of this EIAR and include: ➤ Earthworks, ➤ Works within Lough Ree, ➤ Piling foundations, ➤ Cofferdam installation, ➤ Slit laden surface water run-off, ➤ Release of chemicals, including hydrocarbons, from onsite machinery, concrete and other cement-based products, ➤ Drainage and seepage water resulting from infrastructure excavations, ➤ Stockpiled excavated material providing a point source of exposed sediment, ➤ Construction phase wastewater management.
Assessment of Significance prior to mitigation	In the absence of mitigation there is potential for construction phase works associated with the Proposed Development to result in a significant effect on the above identified receptors at a local geographic scale in the form of water quality deterioration during the construction phase. This would result in impacts on aquatic receptors ranging from Local Importance (Higher Value) to receptors of National Importance (Lough Ree pNHA, River Shannon Callows pNHA), and International Importance (Lough Ree SAC, Lough Ree SPA, River Shannon Callows SAC, Middle Shannon Callows SPA, associated QI species, and QI habitats as well as Reed and large sedge swamp habitat).
Mitigation	Proposed best practice construction methodologies and mitigation measures for the construction phase of the Proposed Development are outlined in Chapter 4 (Description) of this EIAR. Construction methodologies have been outlined within Section 4.6 of Chapter 4, and management of Construction phase activities have been outlined within Section 4.7. Standard best practice environmental control measures have been incorporated in the design of the development and are detailed in the CEMP which has been included as Appendix 4-2 of this EIAR. Water quality protection measures have been outlined within Section 4.7 of Chapter 4 outlining how water quality will be protected during the construction of the Proposed Development. In addition to this, specific mitigation is provided in relation to protection of water quality in Chapter 8: Hydrology and Hydrogeology of this EIAR, see Section 8.5.3 of Chapter 8. These mitigations relate to earthworks, pumping from open pits, cofferdam installation, bunding and dry works area works, piling foundations, potential release of hydrocarbons during construction and storage, release of cement-based products, wastewater management and potential contamination from wastewater disposal, groundwater impacts, and proposed monitoring. Additional measures for works in the vicinity of alluvial woodland habitat is provided below in Section 6.8.2.1.2.
Residual Effect	Following the implementation of mitigation, there will be no significant residual effect on aquatic or aquatically influenced habitats, species, or designated sites as a result of water quality deterioration arising from the construction phases of the Proposed Development.

following
Mitigation

6.8.2.1.2 Assessment of Potential Effects on Wet willow-alder-ash woodland (WN6) Habitat (91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*))

Table 6-30. Assessment of Potential Effects on Wet willow-alder-ash woodland (WN6) Habitat (91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*))

Description of Effect	Following dedicated alluvial forest relevé and condition assessment surveys, fragmented areas of Wet willow-alder-ash woodland (WN6) set back from the shoreline of Lough Ree were shown to conform to the habitat <i>91E0 Alluvial forests with Alnus glutinosa and Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>), listed in Annex I of the EU Habitats Directive and included as a QI of Lough Ree SAC. Incidences of this QI habitat were largely located outside or within close proximity to the Proposed Development, except for fringing areas of this habitat located to the north of the existing Baysports building, which were located partially within the Proposed Development Site. Construction measures to avoid water quality impacts during construction phases of the Proposed Development will include the installation cofferdam around the lake edge in the area of the Water Sports Pavilion. The cofferdam will be comprised of sheet piles and earthen berms. (See Section 4.6.2 of Chapter 4 Description of this EIAR for further details). In the absence of mitigation or appropriate design, construction phase works within the above-described area of the Site may result in disturbance to Alluvial woodland habitat. Therefore, alternative mitigation measures were identified as being required to avoid loss of alluvial forest habitat within this above outlined location. No other works associated with the construction phase are proposed to take place within areas of alluvial forest habitat. Therefore, other incidences of this habitat within or adjacent to the Proposed Development Site will not be directly affected by the construction phase of the Proposed Development. In addition, the potential for water quality deterioration effects on this habitat, arising from the construction phases of the Proposed Development, were also identified, and these have been assessed in section 6.8.2.1.1, and described with additional detail below.
Assessment of Significance prior to mitigation	In the absence of best practice construction methodology and mitigation measures, the potential disturbance to the outer margins of the area of alluvial forest habitat identified to the north of the existing Baysports building, has the potential to result in a significant effect on a receptor of International Importance. In addition, in the absence of best practice construction methodology and mitigation measures water quality deterioration effects have the potential to result in a temporary significant effect on this receptor of International Importance.
Mitigation	Mitigation measures to avoid water quality impacts during construction phases are considered in Section 6.8.2.1.1 and not repeated here. The Proposed Development, including site layout and construction phasing, was designed specifically to avoid areas of alluvial forest habitat identified along the shoreline of Lough Ree, both within and adjacent to the Proposed Development Site. In order to protect areas of alluvial forest habitat, all areas of woodland will be fenced off with Heras fencing (or similar) to prevent access of machinery or unauthorised access from public areas, thus preventing disturbance and direct degradation of this habitat. All fencing will remain in place for the duration of construction phase. In order to avoid any impacts on alluvial forest, additional/ alternative water quality protection solutions are required in this area. Sheet piling works are not proposed in areas of alluvial forest, and instead an earth bund structure will be installed in the vicinity of the alluvial forest. Works will take place outside of the identified root protection zone, as advised by an arboriculturist. In order to avoid disturbance of root structures, the dam structure will be constructed above ground, with an earth bund installed on top of

	the existing concrete hardstand in the vicinity of the alluvial forest habitat. The earth bund will connect to the sheet piling at a point outside of the identified areas of alluvial forest. The top-level of the cofferdam will be installed to a minimum of 37.5mAOD to ensure that the cofferdam is not breached during flooding. As with the cofferdam, the top-level of the bund will be installed to a minimum of 37.5mAOD to ensure that the bund is not breached during flooding (See Section 4.6.2 of Chapter 4 of the EIAR). Concrete removal in areas bordering alluvial forest habitat will be undertaken in a sensitive manner using hand tools where practical to ensure no tree roots are damaged. Concrete removal in this area will be conducted in the dry. Around the areas of concrete removal and prior to the commencement of works, a sandbag dam will be installed with an impermeable geomembrane to minimise any potential lake water penetration. Should any water penetrate the sandbag dam, water will be pumped from the area to the surface water drainage system (See Section 4.6.2 of Chapter 4 of the EIAR). Weather and flood forecasting will be continuously monitored, with concrete removal in this area taking place only during periods of dry weather and low lake levels. Silt curtains will be installed in front of areas of reed bed within the lake, to the north of the existing Baysports facility. Similarly, concrete pouring will be carried out during periods of dry weather and low lake levels, using water-tight shuttering and form works. Impermeable geomembrane sealing, sandbags and silt curtains will all be retained for the duration of concrete pouring and will be removed following the completion of works. Should rain be forecasted, or lake levels anticipated to rise, any concrete removal or concrete reinstatement works will cease until rain stops and lake levels return to a suitable level. Sheet piling and concrete removal works will be undertaken in August - September (inclusive) to avoid the main breeding and winter bird seasons, to be within the suitable season for works in water (July-September, IFI 2016), and to coincide with a time when water levels are at their lowest.
Residual Effect following Mitigation	Following the implementation of mitigation, there will be no significant residual effect on this receptor as a result of habitat disturbance or water quality deterioration arising from the construction phases of the Proposed Development.

6.8.2.1.3 Assessment of Potential Effects on Eutrophic Lake (FL5) and associated Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [3150] Habitat

Table 6-31. Assessment of Potential Effects on Eutrophic Lake (FL5) Habitat and associated Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [3150] Habitat

Description of Effect	The marina redevelopment and extension construction phase of the Proposed Development is located within lake habitat within Lough Ree SAC. Areas of cofferdam will be also installed around the existing concrete hardstand at Baysports as a measure to prevent run-off from the works area into Lough Ree. No other areas of in-lake works are proposed as part of the Proposed Development. Eutrophic lake habitat constitutes <i>Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [3150]</i> QI habitat associated with Lough Ree SAC, as well as Supporting <i>Wetlands [A999]</i> habitat associated with Lough Ree SPA, and Lough Ree lake habitat is a feature of interest for Lough Ree pNHA. The marina redevelopment and construction phase of the Proposed Development has the potential to directly disturb this habitat (and its associated European and National designations). The potential for water quality deterioration effects on this habitat, arising from the construction phases of the Proposed Development, were also identified and these have been assessed above in Section 6.8.2.1.1.
Assessment of Significance prior to mitigation	Lough Ree has a total area of approximately 10,500 ha, while the proposed marina redevelopment and extension phase of the Proposed Development will cover approximately 42 m² (0.0042 ha) of lakebed habitat, representing approximately 0.00004% of Lough Ree surface area. While the entire lake habitat within Lough Ree is mapped as <i>Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation</i>, aquatic drone transects surveys in the location of the proposed marina extension showed an absence of macrophytes between the first 10–20 m, with disturbed silt, sand and gravel substrates. High levels of siltation and algal coverage (<i>Cladophora sp.</i>) were also evident along aquatic drone transects extending from the existing marina, indicating potentially degraded lakebed habitat throughout the location of the proposed marina redevelopment and extension. (see macrophyte survey results in Appendix 6-2). Loss of 0.00004% of lake bed surface in this location is not considered to be significant. Despite the somewhat degraded nature of areas of Eutrophic Lake (FL5) habitat, particularly in the vicinity of the Proposed marina extension and redevelopment, in the absence of appropriate design and mitigation measures, potential for disturbance/water quality deterioration effects on this habitat during construction has the potential to result in a temporary significant effect on this receptor of International Importance.
Mitigation	Mitigation measures for water quality deterioration are considered in Section 6.8.2.1.1 and not repeated here. Aea of lake habitat in the vicinity of the proposed marina extension: Works to the lakebed will be limited to the driving of 42 steel piles, with the attachment of a floating breakwater, floating jetties and gangways connected to the shoreline which will not interact directly with the lakebed, or macrophyte communities present there. No in-lake vegetation removal is proposed as part of the marina redevelopment and extension phase of the Proposed Development. Silt curtains will be installed around each of the pile locations prior to the commencement of pile installation, in order to limit siltation impacts on lakebed vegetation in the wider vicinity. Silt curtains will be connected to the floating construction pontoon, with weights used to ensure the silt curtain sits flush to and remains on the lakebed around each of the pre-specified piling locations. Piles will be installed using vibration piling, with this lower-impact piling technique anticipated to help limit sediment disturbance and suspension on the lakebed, preventing additional siltation throughout macrophyte communities which are already subject to high levels of siltation.

	Piles will be installed in stages (sequentially one after another using a floating pontoon), with installation of steel piles anticipated to take 4–6 weeks. Floating jetties, breakwaters, gangway and canoe step will be installed following piling, with these components constructed off-site to minimise in-lake works duration. Installation of these floating components will occur via floating pontoon. Mooring anchors of the floating pontoon will be placed precisely on the lakebed and not dragged, to avoid disturbance to lakebed habitat. Pre-defined access routes will be used by the floating pontoon and Movax for the installation of piles and all other floating marina components, to limit the area of lakebed disturbance. Total works duration for the marina redevelopment and extension is anticipated to take approx. 6 months (including the 4–6 weeks of piling), with all invasive in-lake works (piling works) to be undertaken between August–September (months inclusive) during periods of lower lake water levels and outside of ecological sensitive time periods (e.g., core breeding bird season, core wintering bird season). Marina redevelopment and extension works will be temporary in duration, phased in nature and isolated in area, taking place in the immediate vicinity of the existing marina, around which, lakebed habitat is already subject to high levels of disturbance. Area of lake habitat in the vicinity of the proposed Water Sports Pavilion: The cofferdam location has been designed to minimise interaction with lake waters and marginal habitats of Lough Ree. An isolated, linear area of reed bed (approx. 50 m in length) fringing the existing Baysports facility concrete hardstand will be temporarily disturbed during the installation of the sheet piled cofferdam around this area. Linear areas of reedbed fringing the existing hardstand area will naturally reinstate following the completion of construction works, with no permanent net loss of this habitat. Further details on the Proposed Works pertaining to alluvial forest habitat and the installation of a cofferdam and earth bund for water quality protection are outlined in Sections 6.8.2.1.1 and 6.8.2.1.2.
Residual Effect following Mitigation	Following the implementation of mitigation, there will be no significant residual effect on this receptor as a result of habitat disturbance/loss or water quality deterioration arising from the construction phases of the Proposed Development.

6.8.2.1.4 Assessment of Potential Effects on Reed and large sedge swamp (FS1) Habitat

Table 6-32. Assessment of Potential Effects on Reed and large sedge swamp (FS1)

Description of Effect	Reed and large sedge swamp (FS1) was identified along the lake margins of Lough Ree both within and outside of the Proposed Development Site. Areas of this habitat will not be directly affected by the construction phase of the Proposed Development, with the exception of an approximately 50 m linear strip of Reed and large sedge swamp (FS1) located north of the existing concrete hardstand at Baysports, which may be disturbed or temporarily lost during the installation of cofferdam sheet piling as part of the construction phase of the Proposed Water Sports Pavilion. Planning Drawing 31022-DR-CIV-CE-50001 shows the location and design of the cofferdam to be installed prior to commencement of demolition works and Water Sports Pavilion construction works. The final detailed design of the cofferdam is to be confirmed by the Contractor prior to commencement of construction works following further detailed ground investigations in the area. In the absence of mitigation or appropriate design, this small linear strip of habitat could be temporarily lost or disturbed as a result of the cofferdam sheet piling installation. The potential for water quality deterioration effects on this habitat, arising from the construction phases of the Proposed Development, were also identified and these have been assessed above in Section 6.8.2.1.1.
Assessment of Significance prior to mitigation	The above-described minimal temporary disturbance/ loss of reedbed habitat is not considered significant at any geographical scale. In addition, water quality deterioration effects have the potential to result in a temporary significant effect on this receptor of International Importance at a local scale.
Mitigation	Mitigation measures to avoid water quality impacts during construction phases are considered in Section 6.8.2.1.1 and not repeated here. The Proposed Development, including site layout and construction phasing, was designed specifically to avoid areas of reedbed habitat identified along the shoreline of Lough Ree, both within and adjacent to the Proposed Development Site. No mitigation measures are required to address the temporary loss/ disturbance of approx. 50 m of reedbed habitat. This linear strip of habitat is considered small in length and will not cause a significant loss of the larger reedbed it is located within. In addition, this habitat is available abundantly in the wider vicinity, both inside, adjacent to and in the wider vicinity of the Proposed Development Site. The installation of a cofferdam in this location will limit sedimentation and run-off arising from the construction of the Proposed Water Sports Pavilion and thus protect the remainder of the reedbed habitat in this area from water quality deterioration effects. After the removal of cofferdam sheet piling, the area of reedbed will be allowed to recover naturally, with no permanent construction proposed within any area of reedbed habitat. During the construction phase of the Proposed Development, no access to other areas of reedbed habitat will be permitted. No loss or disturbance of any other area of reedbed is anticipated.
Residual Effect following Mitigation	Following the implementation of mitigation, there will be no significant residual effect on this receptor as a result of the construction phases of the Proposed Development.

6.8.2.1.5 Assessment of Potential Effects on Treeline (WL2), Hedgerow (WL1), and Scattered Trees and Parkland (WD5) Habitats

Table 6-33. Assessment of Potential Effects on Treeline (WL2), Hedgerow (WL1) and Scattered Trees and Parkland (WD5) Habitats

Description of Effect	To facilitate the Proposed Development, 239 trees are proposed for removal, including the removal of a non-native Leyland Cypress treeline consisting of approx. 106 trees located between the existing northern carpark and Athlone Golf Club, a non-native cedar treeline consisting of approx. 32 trees, located to the north of Hodson Bay Hotel, within the Proposed Primary Compound location, and small lengths of a non-native low and managed beech hedgerow located between the marina car park and the L2020 road. Other trees proposed for removal are located throughout areas of public realm classed as Scattered trees and parkland (WD5) and marginal areas of Athlone Golf Club adjacent to the L2020 road.
Assessment of Significance prior to mitigation	These habitats are receptors of Local Importance (Higher Value). In the absence of best practice mitigation measures, the removal of 239 trees would constitute a permanent significant loss of these habitats at a local scale.
Mitigation	The Proposed Development was designed specifically to retain individual trees and treelines within the Proposed Development Site where possible. 239 trees are proposed for removal, much of which are non-native. A total of 240 trees are proposed to be replanted, with all replanted trees to be native tree species and will vary in maturity. Tree species replanting has been designed with consideration for maintaining connectivity throughout the Proposed Development. See Drawing HBWP-ZZ-ZZ-DR-OKR-LA-001201 for the proposed replanting layout of the Proposed Development. There will be a minor increase in total number of trees within the Proposed Development. Where trees cannot be replanted within the vicinity of where they were removed, they will instead be replanted to enhance connectivity (i.e. replanted in the northern area of the site and along the L2020 road). An approximate breakdown of tree size specifications is provided below for the proposed replanting scheme: > 68% 3-4 x tr WR 30-35 (162 Trees) > 4% 3-4 x tr WR 20-25 (10 trees) > 10% 3-4 x tr WR 18-20 (23 Trees) > 19% Multi-stem 300/350 (45 Trees) Full details of tree replanting are provided in Drawing HBWP-ZZ-ZZ-DR-OKR-LA-001201 of this EIAR.
Residual Effect following Mitigation	Following implementation of mitigation, no potential for significant residual effect exists at any geographic scale in the long-term. However, there will be a negative residual effect at the local geographic scale in the short to medium term ¹² (5-15 years) while newly planted trees across the site establish into mature trees and treeline habitat.

¹² Duration of effects defined in line with EPA guidance (Section 3 page 51) https://www.epa.ie/publications/monitoring-assessment/assessment/EIAR_Guidelines_2022_Web.pdf (accessed May, 2025).

6.8.2.1.6 Assessment of potential effects regarding the spread of invasive species during the construction phase

Table 6-34. Assessment of Potential Effects regarding the spread of invasive species during the construction phase

Description of Effect	The following aquatic invasive species were identified during ecological surveys of Lough Ree: ➤ Quagga mussel ➤ Zebra mussel ➤ Nuttall's waterweed ➤ Canadian waterweed ➤ Starry stonewort These species are well established within Lough Ree, and in the absence of any works would continue to proliferate. However, taking a precautionary approach, in the absence of best practice biosecurity measures, the construction phases of the Proposed Development within Lough Ree have the potential to result in the further spread of invasive species throughout Lough Ree, as well as other downstream waterbodies.
Assessment of Significance prior to mitigation	Taking a precautionary approach, in the absence of best practice preventative and mitigation measures, the potential further spread of the above identified aquatic invasive alien species arising from the construction phase, has the potential to contribute to impacts on the aquatic habitats of Lough Ree, downstream River Shannon, as well as their EU and national designations, at baseline. This would constitute effects at a local geographic scale on receptors ranging from Local Importance (Higher Value) to International Importance.
Mitigation	Given the extent of colonisation of invasive aquatic species within Lough Ree, invasive species biosecurity measures and management focuses on containment and control, prevention of further spread and minimisation of impacts on the project works, as opposed to removal or eradication of invasive species. Indeed, invasive species are pervasive throughout Lough Ree and the Upper Shannon Catchment. The following best practice measures will be implemented during the construction phases of the Proposed Development: ➤ Prior to the commencement of any construction activities, all equipment must be cleaned, disinfected and dried prior to entering the Proposed Development Site. ➤ A dedicated biosecurity point shall be established within the Proposed Development Site for the disinfection and cleaning of all equipment, plant machinery or vehicles used during construction phases. ○ All machinery and plant, including the floating pontoon boat and Movax, will be subject to Check–Clean–Dry protocol, and inspected regularly: • Check: Inspect all equipment for plant material, mud, mussels • Clean: Pressure wash with hot water (>60°C where possible) • Dry: Allow to dry completely before reuse elsewhere ➤ A tool-box talk will be given by the onsite ECoW to notify the contractors of the presence of any terrestrial or aquatic invasive species, how to identify invasive species, and the biosecurity measures that will be followed to prevent further spread of invasives. ➤ Clear signage should be erected around the Proposed Development Site to alert and remind all workers of the presence of invasive species and the importance of biosecurity measures. ➤ During periods of in-lake works, silt curtains and fragment barriers should be used around areas of marina extension, in order to limit the spread of invasive species. ➤ Where any removal of invasive plant species is necessary, cut-and-collect systems should be used, with deployment of collection booms down-current of the works area. ○ Any removed invasive plant material should be removed from Lough Ree immediately and disposed of at a licensed waste facility. ➤ Where invasive mussel management is required from infrastructure, boats or machinery, mussels or mussel fragments should be removed mechanically via scraping or pressure washing

	- Any removed invasive species should be transported to a licensed waste facility located away from Lough Ree, surface water, groundwater or any drainage pathways. - Where possible, fixed moorings should be used for the floating pontoon boat and Movax, as opposed to dragging anchors and disturbing sediment and vegetation beds which include invasive species. - Evidence of cleaning and disinfection of all equipment will be fully logged and recorded, with the designated ECoW ensuring biosecurity compliance on site each day. The Construction Environmental Management Plan (CEMP) will fully outline all biosecurity methods for the cleaning and disinfection of all plant machinery, equipment/tools and PPE.
Residual Effect following Mitigation	Following the implementation of mitigation in the form of best practice biosecurity measures, there will be no significant residual effect on the above outlined receptors as a result of further spread of invasive species arising from the construction phases of the Proposed Development.

6.8.2.2 Effects on Fauna During Construction

The Proposed Development has the potential to result in habitat loss and disturbance impacts on the following faunal species included as KERs.

- › Otter
- › Birds
- › Bats

The potential for significant effects on aquatic fauna as a result of water quality deterioration of supporting aquatic habitats has been assessed in Section 6.8.2.1.1 above and is not repeated below.

6.8.2.2.1 Assessment of Potential Effects on Otter (*Lutra lutra*)

Table 6-35. Assessment of Potential Effects on Otter

Description of Effect	Otter spraint was identified along the shoreline of Lough Ree, south of the existing marina, as well as on the island approx. 100m east of the shoreline at the existing Baysports facility. No otter holts or couches were identified within, or in the vicinity of the Proposed Development Site at the time of survey. As previously discussed, the Proposed Development Site is subject to high levels of human related disturbance year-round. Boating, water sports activities, kayaking, swimming, walking, dog-walking, fishing, driving, and camping occur throughout the year resulting in a baseline condition of high human activity, which local otter populations have likely grown accustomed to. However, potential for effects on otter were identified in the form of displacement/disturbance effects on foraging and commuting otter as a result of the construction phase of the Proposed Development. The potential for effects on otter as a result of deterioration of water quality is assessed fully in 6.8.2.1.1 above and therefore not repeated in this section.
Assessment of Significance prior to mitigation	In the absence of mitigation, the construction phase of the Proposed Development has the potential to result in significant effects on otter via disturbance and displacement. While otter are considered a KER of International Importance due to their designation as a QI of Lough Ree SAC, given the existing baseline of the site being subject to high levels of disturbance, lack of otter signs recorded within the Proposed Development Site, and the availability of suitable lake habitat within the wider vicinity, disturbance/displacement effects during the construction phase are considered a temporary significant effect on a local scale. Water quality deterioration of supporting otter habitat is considered a temporary significant effect on a local scale.
Mitigation	Measures for the mitigation of water quality deterioration effects are outlined in Section 6.8.2.1.1, and not repeated here.

Prior to the commencement of construction works associated within the Proposed Development Site, the following measures will be undertaken for the avoidance of disturbance to otter which utilise Lough Ree in the vicinity of the proposed construction areas. The following measures are in line with 'Guidelines for the Treatment of Otters prior to the Construction of National Road Schemes' (TII 2006).

- A pre-commencement survey for otter will be carried out prior to the commencement of any works. No holts or couches were recorded during ecological surveys conducted in March 2025. If evidence of a newly established breeding holt or other otter breeding signs is recorded during pre-commencement surveys, construction works will not proceed until a derogation license is obtained from NPWS.
 - Works will be carried out in accordance with 'Guidelines for the Treatment of Otters prior to the Construction of National Road Schemes' (TII 2006).
 - A tool-box talk will be given by the onsite ECoW to notify the contractors of the presence of any otter signs and outline the mitigation measures that will be followed to prevent disturbance to the species.
 - All plant and equipment for use will comply with Statutory Instrument No. 359 of 1996 "European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations 1996" to minimise disturbance via noise emissions.
 - Operating machinery will be restricted to the Proposed Development Site.
 - Work will be completed during daylight hours.
 - Regular maintenance of plant will be carried out in order to minimise noise emissions. Particular attention will be paid to the lubrication of bearings and the integrity of silencers.
 - Compressors will be of the "sound reduced" models, fitted with properly lined and sealed acoustic covers which will be kept closed whenever the machines are in use and all ancillary pneumatic tools shall be fitted with suitable silencers.
 - Machines which are used intermittently will be shut down during periods when they are not in use.
 - All vehicles and mechanical plant will be fitted with effective exhaust silencers and maintained in good working order for the duration of the works.
- Plant and machinery with low inherent potential for generation of noise and/or vibration will be selected.
 - 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.
 - 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).
 - All plant and equipment for use will comply with Statutory Instrument No. 359 of 1996 "European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations 1996" to minimise disturbance via noise emissions.
 - 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. ○ Off-site fabrication of construction components should be utilised wherever possible to limit vibration levels. ○ Best practice vibration control measures will be employed by the contractor, as outlined 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. • A designated member of staff will be appointed as the point of contact for any queries or complaints from nearby local residents. Operating machinery will be restricted within the Proposed Construction Areas only. Given the largely crepuscular nature of otter, all work associated with the Proposed Development will be completed during daylight hours or as outlined below. The proposed construction working hours are as follows: ➤ 07:00 – 19:00 Monday to Friday. ➤ 08.00 – 17.00 Saturday ➤ Closed Sundays and public holidays. ➤ No works will be conducted at night. Any construction phase lighting associated with the Proposed Development will minimise illuminating fringing lake habitats e.g. lake waters, reedbeds, woodland, etc, through the below measures ➤ All lighting should include the following specifications ○ 2700 Kelvins (warm white) ○ Directional attachments to prevent upward light spill, as well as to prevent light spill on any sensitive habitats (e.g., light shields in the vicinity of woodland (alluvial or otherwise), reedbed, lakes shore, lake waters, and treelines). ○ Where possible, lighting should include timing options, either through motion sensor lighting or dimming. Construction phase lighting will only remain on during the outlined hours of construction. ○ Any construction phase light spill from lighting will fall below 1 lux on hedgerow, woodland or lake habitat (including marina lighting). ➤ In line with the following guidance that is provided in the Dark Sky Ireland Lighting Recommendations: ○ Every light needs to be justifiable, ○ Limit the use of light to when it is needed, ○ Direct the light to where it is needed, ○ Reduce the light intensity to the minimum needed, ○ Use light spectra adapted to the environment, ○ When using white light, use sources with a “warm” colour temperature (less than 2700K).’
Residual Effect following Mitigation	Following the implementation of the above mitigations and best practice procedures, no residual effects on otter are expected, resulting from the construction phase of the Proposed Development at any geographic scale.

6.8.2.2.2 Assessment of Potential Effects on Birds

Table 6-36 Assessment of Potential Impacts on Birds

Description of Effect	An assemblage of common passerine birds and waterbirds were observed utilising the Proposed Development Site during breeding and wintering bird surveys, as provided in Sections 6.6.3.1 and 6.6.3.2. Coot, little grebe, and mallard, all SCI species of Lough Ree SPA, were recorded utilising habitats within and in the vicinity of the site year-round, showing resident populations of these species within the area. SCI species of SPAs within the ZoI are discussed in detail within Section 6.8.2.2.3 and not within this table. Other common species commonly located within the Proposed Development Site and in the wider vicinity included mute swan and great-crested grebe. Overall, the area in the vicinity of the Proposed Development Site is utilised by a diverse population of bird species. A number of waterbird species have the potential to breed within or adjacent to the Proposed Development Site including mute swan, great-crested grebe, and a cohort of the SCI species of Lough Ree SAC discussed in Section 6.8.2.2.3. Similarly, trees and scrub habitat provides suitable habitat for breeding passerines within the Proposed Development Site. As previously discussed, the Proposed Development Site is subject to high levels of human related disturbance year-round. Boating, water sports activities, kayaking, swimming, walking, dog-walking, fishing, driving, and camping occur throughout the year resulting in a baseline condition of high human activity, which local bird populations have likely grown accustomed to. While some nesting habitat for waterbirds is available within/ immediately adjacent to the Proposed Development Site, this is also the habitat subject to the most human disturbance, being located adjacent to the existing Baysports buildings or in close proximity to the existing marina. However, potential for effects on birds were identified in the form of displacement/disturbance effects, and potential mortality associated with vegetation clearance as a result of the construction phase of the Proposed Development. The potential for effects on birds as a result of deterioration of water quality of supporting habitats is assessed fully in 6.8.2.1.1 above and therefore not repeated in this section.
Assessment of Significance prior to mitigation	The disturbance of birds during the construction phase has been assessed as a potential significant effect at a local geographic scale. This would result in impacts on receptors of Local Importance (Higher Value) (common passerines and local populations of common waterbirds). <i>SCI species of SPAs within the ZoI are not discussed or assessed within this table.</i> No significant loss of nesting habitat for waterbirds will occur as a result of the Proposed Development. However, vegetation clearance (trees, scrub) if undertaken within the nesting season could result in mortality to nesting birds. This would result in impacts at a local geographic scale, on receptors of local importance higher value. Water quality deterioration effects have the potential to result in a temporary significant effect on water bird populations of Local Importance (Higher Value) (common waterbird species not listed under any SPA within the ZoI).
Mitigation	Measures for the mitigation of water quality deterioration effects during construction are outlined in Section 6.8.2.1.1 All reedbed habitat within and in the vicinity of the Proposed Development Site will be retained (excluding minor disturbance to an approx. 50m length of reedbed adjoining the Baysports area hardstand as described in sections 6.8.2.1.3 and 6.8.2.1.4). All in-lake works including marina extension construction and erection of cofferdam adjacent to reedbed habitat will take place outside the breeding season (March – July) and wintering season (October – March) for waterbirds and will therefore be limited to the months August - September of any given year. The cofferdam once installed will provide a screening buffer between the construction area and retained reedbed habitat. This will aid in minimising disturbance effects to birds throughout the duration of the Water Sports Pavilion construction phase. All vegetation clearance works throughout the Proposed Development Site and works in the vicinity of sensitive habitats for breeding waterbirds (i.e. reedbeds) will be conducted outside of the breeding bird

	season (1st March – 31st August, dates inclusive) where possible. If works must be carried out that continue into the breeding bird season, then these works will commence at a minimum in the weeks prior to 1st March. This will allow for existing levels of disturbance arising from construction works commencing prior to the breeding bird season to act as a disturbance buffer to ensure that waterbird species do not build nests within the Proposed Development Site, but prioritise sites within the wider vicinity, of which there are significant suitable areas to the north and south of the Proposed Development. This would be done to prevent nest abandonment by waterbirds. Vegetation removal (trees, scrub) should take place outside of the bird nesting season. Where removal cannot be avoided during this season, it will be preceded by an inspection of any vegetation to be removed by a qualified ecologist. If any nests are identified during these surveys, then works will halt until nesting has concluded. Works will be conducted within the proposed construction working hours as follows: ➤ 07:00 – 19:00 Monday to Friday. ➤ 08.00 – 17.00 Saturday ➤ Closed Sundays and public holidays. These measures will be implemented to prevent disturbance to nighttime roosting waterbirds. All mitigations outlined above in Section 6.8.2.2.1 relating to prevention of disturbance and displacement of otter will be applied for the prevention of disturbance/ displacement of birds, including construction phase lighting measures. Therefore, these measures have not been repeated here. In addition, activities relating to the temporary relocation of Baysports to the North of the Proposed Development during the construction phase of the Water Sports Pavilion will be set back a minimum of 10m from lakeshore woodland habitat and 5m from reedbed habitat. This will be done to ensure no damage or loss of these valuable lakeshore habitats for bird species.
Residual Effect following Mitigation	Following the implementation of the mitigation proposed above, there will be no significant residual effect on birds as a result of the Proposed Development at any geographic scale.

6.8.2.2.3 **Assessment of Potential Effects on SCI species of SPAs within the ZoI.**

Table 6-37 Assessment of Potential Effects on SCI species of SPAs within the ZoI

Description of Effect	An assemblage of SCI species of SPAs within the ZoI were observed utilising habitats (lake and associated fringing habitats) adjacent to the Proposed Development Site during breeding and wintering bird surveys, as provided in Sections 6.6.3.1 and 6.6.3.2, and as interpreted further in Section 6.6.3.4. Section 6.6.3.4 of this report also highlights findings of the Desk Study (I-WeBS data, NPWS Conservation Objectives and population estimates) and how these compare to survey results gathered for the Proposed Development. Coot, little grebe, and mallard, all SCI species of Lough Ree SPA, were recorded utilising habitats within and in the vicinity of the site year-round, showing resident populations of these species within the area. During the winter season tufted duck was the most numerous SCI species recorded utilising the waters in the vicinity of the Proposed Development, but with larger numbers of tufted duck generally at a significant distance from the Proposed Development Site. No evidence of breeding activity from the breeding SCI species associated with Lough Ree SPA (common tern and common scoter) was observed within or adjacent the Proposed Development Site during breeding bird surveys. However, a number of wintering SCI species associated with Lough Ree SPA (coot, little grebe and mallard) have the potential to breed within habitats adjacent to the Proposed Development Site. Black-headed gull were recorded utilising lake habitat adjacent the Proposed Development Site intermittently throughout the wintering season, with higher numbers utilising these areas during the breeding season surveys. This trend was also noted for mallard. There will be no significant loss of suitable habitat for SCI species as a result of the Proposed Development, including no loss of reedbed habitat, while the area of lake habitat to be lost to
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	the marina extension (0.0042 ha) equates to 0.00004% of to total area of Lough Ree and as such is not considered significant. As previously discussed, the Proposed Development Site is subject to high levels of human related disturbance year-round. Boating, water sports activities, kayaking, swimming, walking, dog-walking, fishing, driving, and camping occur throughout the year resulting in a baseline condition of high human activity, which local bird populations have likely grown accustomed to. While some nesting habitat is available within/ immediately adjacent to the Proposed Development Site, this is also the habitat subject to the most human disturbance, being located adjacent to the existing Baysports buildings or in close proximity to the existing marina. However, potential for effects on the SCI species of SPAs within the ZoI were identified in the form of displacement/disturbance effects as a result of the construction phase of the Proposed Development. The potential for effects on birds as a result of deterioration of water quality of supporting habitats is assessed fully in 6.8.2.1.1 above and therefore not repeated in this section.
Assessment of Significance prior to mitigation	No significant loss habitat for SCI species will occur as a result of the Proposed Development. However, in the absence of mitigation, given recorded year-round use of habitats adjacent to the Site by SCI species of SPAs within the ZoI, construction-phase disturbance from in-lake works, piling, and lakeshore vegetation disturbance has the potential to result in a significant effect on SCI species at a local geographic scale, given recorded year-round use of these habitats. This would constitute effects on receptors of International Importance. Water quality deterioration effects have the potential to result in a temporary significant effect on SCI species (receptor of International Importance) at a local geographic scale.
Mitigation	Measures for the mitigation of water quality deterioration effects during construction are outlined in Section 6.8.2.1.1. All reedbed habitat within and in the vicinity of the Proposed Development Site will be retained (excluding minor disturbance to an approx. 50m length of reedbed adjoining the Baysports area hardstand as described in sections 6.8.2.1.3 and 6.8.2.1.4). All in-lake works including marina extension construction and erection of cofferdam adjacent to reedbed habitat will take place outside the core breeding season (March – July) and core wintering season (October – March) for waterbirds and will therefore be limited to the months August - September of any given year. The cofferdam once installed will provide a screening buffer between the construction area and retained reedbed habitat. This will aid in minimising disturbance effects to birds throughout the duration of the Water Sports Pavilion construction phase. Construction works in the vicinity of sensitive habitats for breeding waterbirds (i.e. reedbeds) will be conducted outside of the breeding bird season (1st March – 31st August, dates inclusive) where possible. If works must be carried out that continue into the breeding bird season, then these works will commence at a minimum in the weeks prior to 1st March. This will allow for existing levels of disturbance arising from construction works commencing prior to the breeding bird season to act as a disturbance buffer to ensure that waterbird species do not build nests within the Proposed Development Site, but prioritise sites within the wider vicinity, of which there are significant suitable areas to the north and south of the Proposed Development. This would be done to prevent nest abandonment by waterbirds. Works will be conducted within the proposed construction working hours as follows: ➤ 07:00 – 19:00 Monday to Friday. ➤ 08.00 – 17.00 Saturday ➤ Closed Sundays and public holidays.

	These measures will be implemented to prevent disturbance to nighttime roosting SCI waterbirds. All mitigations outlined above in Section 6.8.2.2.1 relating to prevention of disturbance and displacement of otter will be applied for the prevention of disturbance/ displacement of SCI species of SPAs within the ZoI, including construction phase lighting measures. Therefore, these measures have not been repeated here. In addition, activities relating to the temporary relocation of Baysports to the North of the Proposed Development during the construction phase of the Water Sports Pavilion will be set back a minimum of 10m from lakeshore woodland habitat and 5m from reedbed habitat. This will be done to ensure no damage or loss of these valuable lakeshore habitats for SCI species of SPAs within the ZoI, many of which were recorded utilising this Northern area of the Proposed Development year-round.
Residual Effect following Mitigation	Following the implementation of the mitigation proposed above, there will be no significant residual effect on SCI species of SPAs within the ZoI as a result of the Proposed Development at any geographic scale.

6.8.2.2.4 Assessment of Potential Effects on Bats

Table 6-38. Assessment of Potential Impacts on Bats

Description of Effect	Loss of Roosting Habitat A soprano pipistrelle roost of 6 no. bats was identified within the existing Baysports building, which is proposed for removal as part of the construction phase of the Proposed Development. There will also be removal of 239 trees, including a Leyland cypress treeline of approximately 106 trees and a cedar treeline of approximately 32 trees. All trees to be removed were inspected (including via endoscope and ladder for any PRFs where features for inspection were identified). One Ash tree proposed for removal located within the area of the proposed primary construction compound required further inspection via tree climbing following the identification of PRFs. No potential for the tree to support a maternity roost was identified. However, the tree has the potential to support opportunistic bat roosting of individuals. No bat roosts or evidence of bats were found in the tree following inspection at height at the time of survey. The Proposed Development will result in the loss of one confirmed small bat roost (Baysports main building) and a potentially suitable roost feature in the form of the ash tree. Foraging/Commuting Habitat Loss/Degradation The loss of treelines and individual trees as commuting features could impact connectivity within the Proposed Development Site, as well as throughout the wider landscape and hence could impact successful commuting and foraging behaviour by bats. The removal of foraging habitats will decrease the bats' feeding resources (i.e. insects' population) within the Proposed Development Site. This has the potential to cause impacts via the loss of commuting and foraging habitats. Disturbance Works associated with the construction phases of the Proposed Development have the potential to cause effects via disturbance to bats. Effects via disturbance may occur as a result of artificial lighting and excessive noise within the Proposed Development Site.
Assessment of Significance prior to mitigation	Impacts on Roosting Bats In the absence of mitigation, the loss of the bat roost of 6 no. soprano pipistrelles and the loss of trees throughout the Proposed Development Site will have a significant effect on roosting bats, a receptor of Local Importance (Higher Value), on a local geographic scale. Loss of Foraging and Commuting Habitat/Habitat Fragmentation

	While treeline habitat and individual trees are widespread in the wider vicinity, in the absence of mitigation, the loss of trees and treelines throughout the Proposed Development Site have the potential to result in significant effect on foraging and commuting bats at a local geographic scale. Disturbance In the absence of appropriate design, the construction phase of the Proposed Development has the potential to disturb bats by noise and illumination of commuting and foraging areas. This is assessed as a temporary significant effect at a local geographic scale.
Mitigation	Mitigation measures regarding impacts to roosting bats A bat derogation licence has been sought from the NPWS for the exclusion and removal of the roost of 6 no. soprano pipistrelle identified in the existing Baysports building. This derogation license was received from NPWS on the 22.07.2026. this Derogation License is included as Appendix 6-4. The Derogation license outlines that the actions which the derogation authorises shall be completed within 1st November – 31st December 2026 inclusive, and that <i>‘if the derogation addresses works that are subject of a planning application, no such works permitted under this derogation can occur until planning permission is granted’</i>. Taking these measures both into account, Term and Condition 8 <i>‘If this derogation expires prior to works permitted under this derogation commencing, a new application must be sought in advance, including the provision of any updated data or reports’</i> will be followed, and an active derogation license maintained until a decision is made regarding granting of planning permission for the Proposed Development. The below measures have been included in order to address any impacts to roosting bats as a result of the Proposed Development, primarily in relation to the small roosting population of soprano pipistrelle bats identified within the Baysports main building: Pre-Commencement Surveys ➤ A pre-commencement survey of the Baysports main building will be undertaken by a suitably licenced ecologist to identify any changes in baseline conditions since the previous surveys (conducted between May-September 2025). This will include a detailed inspection of the building proposed for demolition to confirm the presence/absence of bats immediately prior to works. If required, an emergence survey will also be carried out. ➤ A mature ash tree located within the Proposed Development Site is part of the cohort of trees to be removed to facilitate the Proposed Development. The tree was inspected at height, with PRFs inspected for the presence of bats. No signs of bats were identified during surveys of this tree, therefore a derogation license is not required. However, as this tree was assessed as having PRF-I features, a pre-commencement survey will be carried out on it. The requirement for a pre-commencement survey is in line with best practice, and does not present a lacuna in the survey effort. ➤ If any further bat roosts are identified during pre-commencement surveys, another bat derogation licence will be obtained from the NPWS prior to felling. Once a bat derogation licence is obtained, tree felling activity will be supervised by a qualified ecologist. The ecologist will provide further recommendations on felling methodology and timing, as necessary. Ecological Oversight of Works/ Supervision ➤ A toolbox talk will be delivered to all site personnel to ensure awareness of legal protections, identification of bats, and procedures to follow should bats be encountered. ➤ Roof removal works around the roost entrance will be undertaken under ecological supervision, where required, to ensure appropriate safeguards are implemented. ➤ In the event that bats are encountered during works, activities will cease and the licensed ecologist will advise on appropriate actions.

Timing of works

- Demolition works will be scheduled outside of the main bat activity period (May–September), unless otherwise agreed with the licensed ecologist.

Provision of Alternative Roosting Habitat

- Prior to the commencement of demolition, at least one bat box/ replacement roost feature will be installed to provide an immediate alternative roosting option if required. Compensatory roosting features will be provided within the site in accordance with best practice (Marnell et al., 2022; NRA, 2006; Collins, 2023).
- A minimum of one Rocket bat box will be installed, with additional boxes incorporated where feasible to enhance roosting opportunities for local bat populations.
- Rocket bat boxes and other bat boxes will be:
 - Installed at a height of $\geq 3\text{m}$ above ground level;
 - Oriented south to southeast where possible;
 - Located away from artificial lighting;
 - Positioned adjacent to linear features such as treelines or woodland edge to maintain connectivity with existing commuting routes.
 - Located as close as possible to the existing bat roost to be removed.
- Final locations of replacement/ compensatory bat roosting features will be agreed in consultation with a licenced ecologist.
- The installed Rocket box structure and any other bat boxes will be subject to post-installation inspection by the appointed Ecological Clerk of Works (ECoW) (or Project Ecologist) to confirm correct placement and suitability. The condition of the boxes will subsequently be reviewed as part of ongoing site maintenance to ensure their integrity is maintained and that they remain fit for purpose.

Monitoring of the compensatory roost feature

Monitoring of the compensatory roosting features will be undertaken on an annual basis (by a suitably licenced individual) for a minimum period to be agreed with NPWS, in order to assess their uptake and effectiveness. Monitoring will be carried out by a suitably qualified ecologist using a combination of appropriate and non-intrusive techniques, including:

- Visual inspection for signs of use (e.g. staining, droppings, or moisture);
- Inspection using an endoscope, where access allows;
- Use of thermal imaging or emergence surveys, where appropriate;
- DNA analysis of droppings, if required to confirm species presence.

The results of monitoring will be used to evaluate the success of the mitigation measures and to inform any adaptive management required. Confirmation of compensatory roost feature usage and monitoring outcomes will be reported to NPWS in accordance with licence conditions.

Measures to mitigate loss of Foraging/Commuting Habitat

The Proposed Development was designed specifically to retain individual trees and treelines within the Proposed Development Site where possible.

239 trees are proposed for removal, with a total of 240 trees are proposed to be replanted and will vary in maturity. Tree species replanting has been designed with consideration for maintaining connectivity throughout the Proposed Development. See Drawing HBWP-ZZ-ZZ-DR-OKR-LA-001201 for the proposed replanting layout of the Proposed Development. Where trees cannot be replanted within the vicinity of where they were removed, they will instead be replanted to enhance connectivity (i.e. replanted in the northern area of the site and along the L2020 road).

The longest area of treeline removal where replanting is not proposed is the non-native Leyland treeline located to the north of the Proposed Development Site. However, due to the presence of another treeline within the Athlone Golf Club, located closely west of the treeline to be removed and running parallel to the Leyland treeline, no loss of overall commuting connectivity is anticipated. In addition, trees will be planted within the north of the Site in areas of existing amenity grassland which will enhance connectivity and foraging potential of this northern area over baseline conditions.

The planting scheme will use native tree species to strengthen ecological value in accordance with the All-Ireland Pollinator Plan. By incorporating a carefully designed mix of native trees, the design and development will enhance existing habitats and replace removed non-native treeline habitat and trees for commuting and foraging bats. Retained trees throughout the Proposed Development Site will be protected during construction in full accordance with BS:5837 (Trees in Relation to Construction).

Measures to mitigate disturbance effects on bat species

- All work will be completed as outlined above in Sections 6.8.2.2.1, 6.8.2.2.2, and 6.8.2.2.3, and predominantly during daylight hours.
- All plant and equipment for use will comply with Statutory Instrument No. 359 of 1996 "European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations 1996".
- Operating machinery will be restricted to the Proposed Development Site and will not traverse into adjacent habitats.
- Regular maintenance of plant will be carried out in order to minimise noise emissions. Particular attention will be paid to the lubrication of bearings and the integrity of silencers.
- Compressors will be of the "sound reduced" models fitted with properly lined and sealed acoustic covers which will be kept closed whenever the machines are in use and all ancillary pneumatic tools shall be fitted with suitable silencers.
- Machines which are used intermittently will be shut down during periods when they are not in use.
- All vehicles and mechanical plant will be fitted with effective exhaust silencers and maintained in good working order for the duration of the works

Construction Phase Lighting Measures

Any construction phase lighting associated with the Proposed Development will minimise illuminating fringing lake habitats e.g. lake waters, reedbeds, woodland, etc as well as linear features (treelines and other trees), through the below measures:

- All lighting should include the following specifications
 - 2700 Kelvins (warm white)
 - Directional attachments to prevent upward light spill, as well as to prevent light spill on any sensitive habitats (e.g., light shields in the vicinity of woodland (alluvial or otherwise), reedbed, lakes shore, lake waters, and treelines.
 - Where possible, lighting should include timing options, either through motion sensor lighting or dimming. Construction phase lighting will only remain on during the outlined hours of construction.
 - Any construction phase light spill from lighting will fall below 1 lux on hedgerow, woodland or lake habitat (including marina lighting).
- In line with the following guidance that is provided in the Dark Sky Ireland Lighting Recommendations:
 - Every light needs to be justifiable,
 - Limit the use of light to when it is needed,
 - Direct the light to where it is needed,

	○ Reduce the light intensity to the minimum needed, ○ Use light spectra adapted to the environment, ○ When using white light, use sources with a “warm” colour temperature (less than 2700K).’
Residual Effect following Mitigation	With the implementation of the above prescribed mitigation measures, no significant residual effects on roosting, commuting or foraging bats are anticipated during the construction phase of the Proposed Development.

6.8.3 Likely Significant Effects During Operational Phase

6.8.3.1 Effects on Habitats during Operation

The operation of the Proposed Development will not result in any additional loss or disturbance of habitats and as such there is no potential for any significant effects in this regard.

Any effects on habitats caused by spread of invasive species during the operational phase of the Proposed Development is dealt with in section 6.8.3.1.2.

6.8.3.1.1 Assessment of Potential Effects on KERs as a result of Water Quality Deterioration during the operational phase

Table 6-39. Assessment of potential effects on water quality during operation

Description of Effect	The effects on water quality are fully described in Chapter 8 ‘Hydrology and Hydrogeology’ of this EIAR and are described here in relation specifically to ecology in terms of; supporting habitat for aquatic fauna, sensitive aquatic or aquatically influenced habitats, sensitive aquatic fauna, Nationally Designated sites, and EU Designated sites. This section assesses the potential for likely significant effects on water quality, aquatic habitats, aquatically dependent habitats and other riparian habitats, as well as potential effects on associated aquatic faunal species, including fish species identified during the desk study, as well as those likely to occur within or downstream of the Proposed Development Site. The operational stage of the Proposed Development will result in the production of foul water as well as potential for surface water runoff to sensitive aquatic habitats and associated receptors (outlined above). If not adequately managed, there is potential for impacts on groundwater and surface water quality.
Assessment of Significance prior to mitigation	In the absence of mitigation and following the precautionary principle, there is potential for the operational stage of the Proposed Development to result in a significant effect on the above identified receptors at a local geographic scale in the form of surface water or groundwater quality deterioration. This would result in impacts on aquatic receptors ranging from Local Importance (Higher Value) to receptors of International Importance, at a local geographic scale.
Mitigation	The below surface water and foul water management systems will be implemented and as such will remove the potential for water quality deterioration during the operational phase of the Proposed Development. Surface Water The Proposed Development Site is located in close proximity to Lough Ree, the surface water drainage strategy (see Appendix 4-4) has been developed with water quality as a primary consideration alongside Nature Based Solutions (NBS) and SuDS. The surface water drainage network for the site will collect runoff from roofs, roads and other hard standing areas. The drainage strategy will follow a SuDS treatment train approach to manage water quality. This will involve intentional grading of the site, reducing surface water runoff entering any conventional drainage systems and attenuating the runoff in

	proposed SuDS features, prior to discharge to Lough Ree. There are select areas of Proposed Development that cannot be routed to attenuation. All surface water runoff from car parking and other vehicular areas will be routed through hydrocarbon interceptors combined with a full retention silt/suspended solids trap prior to discharge. The SuDS strategy has been developed with the Landscape Architect to maximise nature-based drainage solutions including the below: ➤ Permeable/porous surfacing for car parking and shared surface areas. ➤ Tree pits with structural cells, providing interception, attenuation storage. ➤ Rain gardens and bioretention systems/depressions, providing surface ponding storage, filtration and passive treatment prior to discharge. Treatment is provided in the form of engineered media to remove certain urban pollutants. ➤ Integrated filter strips along boundaries and promenade edge. The Active Travel corridor within the Proposed Development Site will retain its existing network and drainage regime, with no material alteration to runoff behaviour from these areas. Existing gullies along the active travel corridor will be relocated to the carriageway to accommodate proposed footway widening. Foul Water A pre-connection inquiry has been submitted to Uisce Éireann on June 5th, 2026, to confirm capacity for the Uisce Éireann infrastructure to accept discharge from the site. The application reference number is CDS26004773. As set out in Drawing 31022-CIV-XX-SV-D-C-00001 of Appendix 4-4 Drainage Strategy Report, there is an existing foul water network located within the Proposed Development site, along the L2020 Local Road within the southern extent of the Proposed Development site boundary. As described in Section 8.3.8 of Chapter 8: Hydrology and Hydrogeology, there is a licenced urban wastewater and sewage treatment plant within the Site named Hodson Bay and Environs (Registration No. D0377-01). There is one licenced discharge (local authority reference number WP-16-11, ID 2023_983) into Lough Ree along the marina wall. Uisce Éireann sewer network records show an existing foul water network near the vicinity of the Proposed Development site, but no public sewers within the site boundary. The gravity sewer in the vicinity serves the Hodson Bay area, which drains southward toward the N61 to a wastewater treatment plant. Existing foul water infrastructure for the Hodson Bay Hotel connects to an existing Uisce Éireann Wastewater Pump Station located south of the Proposed Development. Foul water will be collected from the proposed Water Sports Pavilion buildings and Marina facilities and will connect to the existing on-site pumping station operated by Uisce Éireann.
Residual Effect following Mitigation	Following the implementation of the above outlined surface water and foul water design, there will be no significant residual effects on the above outlined receptors as a result of surface water or groundwater quality deterioration arising from the operational phase of the Proposed Development.

6.8.3.1.2 **Assessment of Potential Effects regarding the spread of invasive species during the operational phase**

Table 6-40. Assessment of Potential Effects regarding the spread of invasive species during the operational phase

Description of Effect	The following aquatic invasive species were identified during ecological surveys of Lough Ree: ➤ Quagga mussel ➤ Zebra mussel ➤ Nuttall's waterweed ➤ Canadian waterweed ➤ Stony starwort
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	These species are well established within Lough Ree, and in the absence of any development would continue to proliferate. The operational phase of the Proposed Development is commensurate with current operational management and use of the Proposed Development. Taking a precautionary approach, In the absence of best practice biosecurity measures, the operational phase of the Proposed Development has the potential to result in the further spread of invasive species throughout Lough Ree, as well as other downstream waterbodies.
Assessment of Significance prior to mitigation	Taking a precautionary approach, in the absence of best practice biosecurity measures, the potential further spread of the above identified aquatic invasive alien species arising from activities during the operational phase of the Proposed Development has the potential to contribute to impacts on the aquatic habitats of Lough Ree, downstream River Shannon, as well as their EU and national designations, at baseline. Due to the nature of the operational phase, this would constitute effects at a local geographic scale on receptors ranging from Local Importance (Higher Value) to International Importance.
Mitigation	Given the extent of colonisation of invasive aquatic species within Lough Ree, the objective of operational biosecurity measures is to limit the further spread of invasives throughout Lough Ree and other waterbodies. The operational phase of the Proposed Development will be commensurate with the current baseline in terms of activities and use of the Site. Operational phase biosecurity measures will be in line with national policy for the prevention of spread of invasive species in line with the Recreational Boating and Watercraft Pathway Action Plan 2022-2027. Biosecurity signage outlining the presence of invasive aquatic species and the mandatory Check–Clean–Dry protocol will be installed at several locations on and around the Proposed Marina Redevelopment and extension, including launching points and mooring areas. This will aid in awareness of the issue of invasive species within the area and provide guidance to the public on how to minimise the spread of invasive alien species.
Residual Effect following Mitigation	Following the implementation of the above measures, there will be no significant residual effect on the above outlined receptors as a result of the operational phase of the Proposed Development.

6.8.3.2 Effects on Fauna during Operation

Table 6-41. Assessment of Potential Effects on Fauna during the operational phase of the Proposed Development

Description of Effect	As previously described in preceding sections of this report, the current baseline of the Proposed Development is subject to high levels of human disturbance with the site actively utilised for boating, kayaking, water sports, fishing, and swimming. In addition, shoreline habitats are frequently used for walking, dog walking, and general access and activities from the public. During evenings campervans frequently use areas of the site. Operational phase usage of the site is predicted to be commensurate with baseline conditions in terms of the types of activity on the site. Appendix 5-1 of Chapter 5 outlines the predicted yearly increase of visitors to the area from all activities associated with the Proposed Development (e.g. boating, use of the Water Sports Pavilion, swimming, walking and general use of public realm). An increase was predicted from approximately 80,000 visitors per annum (at baseline) to approximately 168,000 visitors per annum (post completion of all phases of the Proposed Development). This constitutes an approximate doubling in usage of the Proposed Development Site by visitors per annum. While the Proposed Development aims to provide a space to be utilised year-round, intensity of usage is likely to remain similar to baseline conditions, with the summer months attracting peak visitor numbers and the winter months attracting the lowest visitor numbers. Similar to baseline conditions, winter activities will also have a lower capacity for disturbance than summer activities within the Proposed Development Site. However, given the results of surveys for fauna (provided within Section 6.6.3 and its sub-sections), it is likely that faunal species including birds, bats, and otter are accustomed to human related activity and
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	associated disturbance at the Proposed Development Site. No additional loss of any supporting habitat for fauna is anticipated during the operational phase of the Proposed Development. The proposed development is an urbanised area with existing lighting located along the entire length of the Proposed Development Site including the existing marina. Therefore, it is likely that local populations of fauna are accustomed to disturbance from existing baseline lighting. Operational phase lighting has been incorporated within the design of the Proposed Development. Taking a precautionary approach, though the baseline condition of the Site has existing lighting throughout, in the absence of appropriate biodiversity sensitive design principles, operational phase lighting has the potential to result in impacts on fauna within the Proposed Development (birds, bats, otter). Effects with regards to SCI species of SPAs within the ZoI are discussed in Section 6.8.3.3 below and not within this table. The potential for operational water quality related impacts on aquatic fauna has been addressed in section 6.8.3.1.1 and are not repeated here.
Assessment of Significance prior to mitigation	Disturbance to fauna as a result of operational phase usage of the Proposed Development (excluding operational lighting) is not considered to be significant at any geographic scale. Operational phase lighting, in the absence of appropriate design, has the potential to result in a significant effect to birds, bats, and otter at a local geographic scale. This would result in an effect on receptors ranging from Local Importance (Higher Value) e.g. bats, local populations of birds, to receptors of International Importance (Otter). The potential for operational water quality related impacts on aquatic fauna has been addressed in section 6.8.3.1.1 and are not repeated here.
Mitigation	No mitigation measures are required regarding disturbance of fauna arising from general usage of the Proposed Development Site during the operational phase. As outlined above, disturbance during the operational phase is not considered significant at any geographic scale. In addition, during design of the Proposed Development, all high-quality supporting habitat for local fauna (lakeshore reedbeds and alluvial forest habitat) will be retained. Operational phase lighting has been designed to take into account potential for effects on biodiversity. See Planning Drawing No. P752-2995-E and the External Lighting Report included in this planning application for the proposed Lighting Plan for the site. Operational phase lighting has been designed with the following principles: ➤ Luminaires to be of 2700 Kelvin colour temperature or less and with a warm white light, ➤ The minimum number of luminaires required should be incorporated, ➤ Light spill to be minimised within the Site and directed away from all sensitive habitats, ➤ Luminaires to be of 0-degree tilt with no upward light spill. All external luminaires have been specified with a correlated colour temperature of 2700 K. Warm white light sources emit a lower proportion of short wavelength (blue) light than higher colour temperature sources and as such are a more appropriate choice where lighting is in proximity to ecologically sensitive environments. The lighting installation has been designed using precision optical distributions that direct light towards the intended task areas while reducing illumination of adjacent vegetation, habitat corridors and boundary features. Rear light shields have been incorporated where required to further reduce spill light beyond the operational areas of the Proposed Development. A U23 lighting control profile, which progressively reduces light output during periods of reduced activity will be implemented. This approach reduces the duration and intensity of artificial lighting during the hours when many nocturnal and crepuscular species are most active. The lighting design of the marina has been designed to reduce light spill, with the majority of light spill located on floating platforms or within berths, and with lux levels falling quickly below 1 lux beyond the

	marina extension footprint. Use of louvres with a clear or opaque lens, that prevent upward light spill and luminaires with a colour temperature of 2700 Kelvin or lower with a warm-white light will be incorporated within lighting of the marina extension to minimise any potential light spill.
Residual Effect following Mitigation	Following the implementation of the above mitigations and best practice procedures, no residual effects on fauna are expected, resulting from the operational phase of the Proposed Development at any geographic scale.

6.8.3.3 Effects on SCI species of SPAs within the Zol.

Table 6-42. Assessment of Potential Effects on SCI species of SPAs within the Zol during the operational phase of the Proposed Development

Description of Effect	Potential for disturbance as a result of usage of the Proposed Development Site during the operational phase Section 6.6.3.4 of this report highlights findings of the Desk Study (I-WeBS data, NPWS Conservation Objectives and population estimates) and how these compare to survey results gathered for the Proposed Development. Coot, little grebe, and mallard, all SCI species of Lough Ree SPA, were recorded utilising habitats within and in the vicinity of the site year-round, showing resident populations of these species within the area. During the winter season tufted duck was the most numerous SCI species recorded utilising the waters in the vicinity of the Proposed Development, but with larger numbers of tufted duck generally at a significant distance from the Proposed Development Site. No evidence of breeding activity from the breeding SCI species associated with Lough Ree SPA (common tern and common scoter) was observed within the Proposed Development Site during breeding bird surveys. However, a number of wintering SCI species associated with Lough Ree SPA (coot, little grebe and mallard) have the potential to breed within or adjacent to the Proposed Development Site. Black-headed gull were recorded utilising the Proposed Development Site intermittently throughout the wintering season, with higher numbers utilising the Proposed Development site during the breeding season surveys. This trend was also noted for mallard. The highest peak count of any SCI species recorded during the wintering or breeding season was coot at 208 individuals on the 7th of November 2025. While this peak number of coot recorded during wintering surveys represent a significant proportion of the SPA population attributed to Lough Ree SPA (33.6%), these numbers were only recorded on one date, at the start of the wintering season. Furthermore, the majority of coot recorded on this date (182 of 206 birds) were located in a large raft at a significant distance from the Proposed Development Site (approx. 700m). Numbers of coot declined steeply across further surveys with numbers of coot recorded during surveys not exceeding 10 individuals on any given survey from December 2025 to March 2026. The lowest numbers of coot recorded on any survey date was two individuals on the 18th of November 2025. Section 6.6.3.4 further discusses trends in other SCI species over the course of surveys carried out for the Proposed Development. Tufted duck followed a similar trend to coot, but with higher overall numbers across the majority of survey dates. These species often occurred together in rafts and when in large congregations tended to utilise waters at considerable distance from the Proposed Development Site (approx. 250m – 700m). Little Grebe numbers were generally lower than other bird species but were recorded within or in close proximity to the Proposed Development Site in all months but December. Little grebe were typically associated with reedbed habitat. Mallard were recorded during all 12 wintering bird surveys with a peak count of 27 and a minimum count of three. Black-headed gull were not recorded on six of the 12 wintering bird surveys undertaken. All black-headed gulls, excluding two individuals were recorded within January, February, and March of 2026. To summarise, none of the SCI species designated as breeding species of these SPAs were found to be breeding at the Proposed Development Site. Some of the wintering species of these SPAs were resident at and in the vicinity of the Proposed Development Site during the breeding season and have the potential to utilise the wider area for breeding activity. A number of the wintering species of the above SPAs were found to utilise the Proposed Development Site and surrounding area during the wintering bird season. However, the majority of these were recorded
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	utilising waters at a significant distance from the Proposed Development Site. Small numbers of wintering SCI species utilised the Proposed Development Site and surrounding habitats during the wintering bird season. Habitats adjacent to the Proposed Development Site are considered to support small populations of SCI species associated with the above SPAs year-round. As previously described in preceding sections of this report, the current baseline of the Proposed Development Site is subject to high levels of human disturbance with the site actively utilised for boating, kayaking, water sports, fishing, and swimming. In addition, shoreline habitats are frequently used for walking, dog walking, and general access and activities from the public. During evenings campervans frequently use areas of the site. Operational phase usage of the site is predicted to be commensurate with baseline conditions in terms of the types of activity on the site. Appendix 5-1 of Chapter 5 outlines the predicted yearly increase of visitors to the area from all activities associated with the Proposed Development (e.g. boating, use of the Water Sports Pavilion, swimming, walking and general use of public realm). An increase has been predicted from approximately 80,000 visitors per annum (at baseline) to approximately 168,000 visitors per annum (post completion of all phases of the Proposed Development). This constitutes an approximate doubling in usage of the Proposed Development Site by visitors per annum. While the Proposed Development aims to provide a space to be utilised year-round, intensity of usage is likely to remain similar to baseline conditions, with the summer months attracting peak visitor numbers and the winter months attracting the lowest visitor numbers. Similar to baseline conditions, winter activities will also have a lower capacity for disturbance than summer activities within the Proposed Development Site. Areas proposed for development that will concentrate activity (water sports pavilion, marina extension) are already highly disturbed areas within the Proposed Development Site. In addition, from early in the design process, the Proposed Development was designed to avoid developing any areas of sensitive bird habitat (reedbeds, woodland). The northern area of the Proposed Development has been designed to be utilised in a low intensity way, keeping this area of the Proposed Development Site as a comparatively low usage area. There will be no loss of any supporting habitat for SCI species during the operational phase of the Proposed Development. Therefore, considering the above bird survey findings (regarding SCI species usage of the site), as well as the nature of the operational phase of the Proposed Development, there will be no significant increase in disturbance of SCI species that may give rise to adverse effects. No loss of any supporting habitat for SCI species of SPAs with the ZoI is anticipated during the operational phase of the Proposed Development. Potential for disturbance as a result of operational phase lighting of the Proposed Development The Proposed Development Site is an urbanised area with existing lighting located along the entire length of the Proposed Development Site including the existing marina. Therefore, it is likely that local populations of SCI species are accustomed to disturbance from existing baseline lighting. Operational phase lighting has been incorporated within the design of the Proposed Development. Taking a precautionary approach, though the baseline condition of the Site has existing lighting throughout, in the absence of appropriate biodiversity sensitive design principles, operational phase lighting has the potential to result in impacts on SCI species of SPAs within the ZoI which utilise the Proposed Development for nighttime roosting or nesting. Potential for water quality related effects as a result of operational phase of the Proposed Development The potential for operational water quality related impacts on SCI species of SPAs within the ZoI has been addressed in section 6.8.3.1.1 and are not repeated here.
Assessment of Significance prior to mitigation	Disturbance to SCI species of SPAs within the ZoI as a result of operational phase usage of the Proposed Development (excluding operational lighting) is not considered to be significant at any geographic scale. Operational phase lighting, in the absence of appropriate design, has the potential to result in a significant effect to SCI species of SPAs within the ZoI at a local geographic scale. This would result in an effect on receptors of International Importance.

	The potential for operational water quality related impacts on SCI species of SPAs within the ZoI has been addressed in section 6.8.3.1.1 and are not repeated here.
Mitigation	No mitigation measures are required regarding disturbance of SCI species of SPAs within the ZoI arising from general usage of the Proposed Development Site during the operational phase. As outlined above, disturbance during the operational phase is not considered significant at any geographic scale. In addition, during the design of the Proposed Development, all high-quality supporting habitat for these species (lakeshore reedbeds and alluvial forest habitat) was retained. There will be no loss of any reedbed or woodland habitat as a result of the Proposed Development during its operational phase. Operational phase lighting has been designed to take into account potential for effects on biodiversity. See Planning Drawing No. P752-2995-E and the External Lighting Report included in this planning application for the proposed Lighting Plan for the site. Operational phase lighting has been designed with the following principles: ➤ Luminaires to be of 2700 Kelvin colour temperature or less and with a warm white light, ➤ The minimum number of luminaires required should be incorporated, ➤ Light spill to be minimised within the Site and directed away from all sensitive habitats, ➤ Luminaires to be of 0-degree tilt with no upward light spill. All external luminaires have been specified with a correlated colour temperature of 2700 K. Warm white light sources emit a lower proportion of short wavelength (blue) light than higher colour temperature sources and as such are a more appropriate choice where lighting is in proximity to ecologically sensitive environments. The lighting installation has been designed using precision optical distributions that direct light towards the intended task areas while reducing illumination of adjacent vegetation, habitat corridors and boundary features. Rear light shields have been incorporated where required to further reduce spill light beyond the operational areas of the Proposed Development. A U23 lighting control profile, which progressively reduces light output during periods of reduced activity will be implemented. This approach reduces the duration and intensity of artificial lighting during the hours when SCI species may utilise adjacent lakeside habitats for roosting. The lighting design of the marina has been designed to reduce light spill, with the majority of light spill located on floating platforms or within berths, and with lux levels falling quickly below 1 lux beyond the marina extension footprint. Use of louvres with a clear or opaque lens, that prevent upward light spill and luminaires with a colour temperature of 2700 Kelvin or lower with a warm-white light will be incorporated within lighting of the marina extension to minimise any potential light spill.
Residual Effect following Mitigation	Following the implementation of the above mitigations and best practice procedures, no residual effects on SCI species of SPAs within the ZoI are expected, resulting from the operational phase of the Proposed Development at any geographic scale.

6.8.4 Effects on Designated Sites

6.8.4.1 European Designated Sites

The Proposed Development is partially located within the boundary of the following European Designated Sites:

- Lough Ree SAC [000440]
- Lough Ree SPA [004064]

The Proposed Development is also located hydrologically upstream of the following European Designated Sites within the likely zone of influence:

- River Shannon Callows SAC [000216]
- Middle Shannon Callows SPA [004096]

A potential for likely significant effect was therefore identified on the above European sites. In relation to European sites, an Appropriate Assessment Screening Report and NIS have been prepared to provide the competent authorities with the information necessary to complete an Appropriate Assessment for the Proposed Development in compliance with Article 6(3) of the Habitats Directive.

As per the EPA Guidance (2022), “A biodiversity section of an EIAR, for example, should not repeat the detailed assessment of potential effects on European sites contained in documentation prepared as part of the Appropriate Assessment process, but it should refer to the findings of that separate assessment in the context of likely significant effects on the environment, as required by the EIA Directive”. This section provides a summary of the key assessment findings with regard to potential impacts on European sites.

The Stage 1 Screening Assessment concluded as follows:

‘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 EU Designated Sites:

- Lough Ree SAC [000440]
- River Shannon Callows SAC [000216]
- Lough Ree SPA [004064]
- Middle Shannon Callows SPA [004096]

As a result, an Appropriate Assessment (AA) of the Proposed Development is required.’

The findings presented in the NIS are that:

‘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.’

6.8.4.2 Nationally Designated Sites

The following pNHAs were identified to be located within the Proposed Development Site, and located hydrologically downstream of the Proposed Development, respectively. Therefore, the following pNHAs were identified to be within the Likely ZoI of the Proposed Development:

- Lough Ree pNHA [000440]
- River Shannon Callows pNHA [000216]

Potential pathways for impact on Lough Ree pNHA included direct habitat disturbance, potential disturbance to protected species within Lough Ree pNHA, as well as water quality deterioration.

Potential pathways for impact on River Shannon Callows pNHA included water quality deterioration and potential ex-situ disturbance of protected species of the River Shannon Callows pNHA.

However, mitigation measures will be implemented which will ensure that water quality will be protected and disturbance of fauna and habitats associated with the above pNHAs will be prevented during all phases of the proposed works. These mitigations are outlined in 6.8.2 and 6.8.3 of this chapter, as well as within Chapter 4 and Chapter 8 of this EIAR (as outlined within Section 6.8.2.1.1).

Following implementation of best practice construction methodology and mitigation measures, no residual Likely Significant Effects with regard to habitat disturbance or water quality deterioration are anticipated on the identified pNHAs within the likely ZoI.

6.9 Cumulative Impact Assessment

The Proposed Development was considered in combination with other plans and projects in the area that could result in cumulative impacts on the KERs identified in Section 6.7 of this report, including European Designated Sites and Nationally designated sites. This included a review of online Planning Registers and served to identify past, present and future plans and projects, their activities and their predicted environmental effects. This included a review of online Planning Registers and served to identify past, present and future plans and projects, their activities and their predicted environmental effects. The projects considered are listed in Appendix 2-5 of Chapter 2: Background of the Proposed Development of this EIAR. The full list of projects has been considered and relevant ones from this list are discussed in this section.

6.9.1 Assessment of Plans

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

- Roscommon County Council Development Plan 2022-2028
- 4th National Biodiversity Action Plan 2023-2027
- Regional Spatial and Economic Strategy for the Northern and Western Regional Assembly (2020-2032)

The review focused on policies and objectives that relate to designated sites for nature conservation, biodiversity and protected species. Policies and objectives relating to the conservation of Annex I habitats were also reviewed. An overview of the search results with regard to plans is provided in Table 6-43.

Potential for cumulative impacts on European sites are considered within the Natura Impact Statement that accompanies this application.

Table 6-43. Assessment of Plans

Plans	Key Policies/Issues/Objectives Directly Related To European Sites, Biodiversity and Sustainable Development in the Zone of Influence	Assessment of Proposed Development compliance with policy
Roscommon County Development Plan 2022-2028	ED 6.27 Collaborate with relevant state bodies, neighbouring Local Authorities and local communities in delivering a UNESCO accredited, Biosphere for Lough Ree and the Mid- Shannon Wilderness Park. NH 10.1 Ensure the protection, conservation and enhancement of the biodiversity of the county. NH 10.2 Support the implementation of the relevant recommendations contained in the National Biodiversity Action Plan, including no net loss in biodiversity, and the All Ireland Pollinator Plan. NH 10.5 Ecological Impact Assessment (EcIA) will be required for Proposed Developments likely to significantly impact on natural habitats and/or species, and which are not subject to Environmental Impact Assessment NH 10.6 Require all new developments in the early pre-planning stage of the planning process to identify, protect and enhance ecological features by making provision for local biodiversity (e.g. through provision of swift boxes, bat roost sites, green roofs, etc.) having regard to the recommendations outlined in the Habitat Mapping in Co. Roscommon, 2011 and the County Roscommon Swift Survey, 2020 NH 10.8 Ensure that no plans, programmes, etc. or projects are permitted that give rise to significant cumulative, direct, indirect or secondary impacts on the integrity of European Sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration	Roscommon County Development Plan was comprehensively reviewed, with particular reference to Policies and Objectives that relate to the biodiversity, protected species and designated sites. No potential for residual negative cumulative impacts were identified when considered in conjunction with the Proposed Development. The Proposed Development has been subject to a full environmental assessment i.e. EIAR and Appropriate Assessment. The Proposed Development is in line with the biodiversity objectives of Roscommon County Development Plan.

Plans	Key Policies/Issues/Objectives Directly Related To European Sites, Biodiversity and Sustainable Development in the Zone of Influence	Assessment of Proposed Development compliance with policy
	of construction, operation, decommissioning or from any other effects, (either individually or in combination with other plans, programmes, etc. or projects). ITC 7.48 Ensure new development is adequately serviced with surface water drainage infrastructure which meets the requirements of the Water Framework Directive, associated River Basin Management Plans and CFRAM Management Plans. Furthermore, the Council will undertake its obligations under the European Union (Good Agricultural Practice for Protection of Waters) Regulations 2017. CAEE 8.16 Support the ongoing preservation, maintenance and enhancement of green areas and green infrastructure within the built environment, to reduce carbon dioxide and mitigate against the risk of flooding. CAEE 8.25 Protect and enhance the biodiversity and ecological value of wetlands and other landscape features such as semi-natural grasslands, rivers, streams and turloughs which support the ecological network throughout County Roscommon. NH 10.3 Implement the County Roscommon Heritage Plan and the Biodiversity Action Plan, or any subsequent plans, in partnership with all relevant stakeholders.	
Northern and Western Regional Assembly Regional Spatial	Regional Policy Objective (RPO) 5.4: Encourage the prioritisation of Site-Specific Conservation Objectives (SSCO) for all sites of Conservation Value, designated in EU Directive (i.e. SACs, SPAs) to integrate with the development objectives of this Strategy.	The Spatial and Economic Strategy was comprehensively reviewed, with particular reference to Policies and Objectives that relate to the biodiversity, protected species, designated sites and other natural heritage interests. A

Plans	Key Policies/Issues/Objectives Directly Related To European Sites, Biodiversity and Sustainable Development in the Zone of Influence	Assessment of Proposed Development compliance with policy
and Economic Strategy 2020-2032	RPO 5.2 (a): Protect manage and conserve the quality, character and distinctiveness of our Landscapes and seascapes. RPO 5.5: Ensure efficient and sustainable use of all our natural resources, including inland waterways, peatlands, and forests in a manner which ensures a healthy society a clean environment and there is no net contribution to biodiversity loss arising from development supported in this strategy. Conserve and protect designated areas and natural heritage areas. Conserve and protect European sites and their integrity. RPO 5.7: Ensure that all plans, projects and activities requiring consent arising from the RSES are subject to the relevant environmental assessment requirements including SEA, EIA and AA as appropriate.	comprehensive Screening for Appropriate Assessment and Natura Impact Statement has been submitted along with this application in which cumulative impacts with regard to European Sites is assessed. The Proposed Development will not result in any significant effects on biodiversity, designates sites or water. The Proposed Development is in compliance with the objectives in this strategy.
National Biodiversity Action Plan 2023-2030	Ireland's 4th National Biodiversity Action Plan 2023-2030 (Department of Housing, Local Government and Heritage, 2024) (the "NBAP"). The NBAP strives for a "whole of government, whole of society" approach to the governance and conservation of biodiversity. It demonstrates Ireland's continuing commitment to meeting and acting on its obligations to protect Ireland's biodiversity for the benefit of future generations and will implement this through a number of key targets, actions and objectives. The Wildlife (Amendment) Act 2023 introduced a new public sector duty on biodiversity. The legislation provides that every public body, as listed in the Act, is obliged to have regard to the objectives and targets in the NBAP. The NBAP sets out five key objectives as follows. 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. ➤ Outcome 2A: The protection of existing designated areas and species is strengthened and conservation and restoration within the existing protected network are enhanced.	The National Biodiversity Action Plan was comprehensively reviewed, with particular reference to Policies and Objectives that relate to Biodiversity, the Natura 2000 Network, nationally designated sites, and sustainable development. No potential for cumulative impacts when considered in conjunction with the Proposed Development were identified. The Proposed Development is in line with the objectives of the National Biodiversity Action Plan.

Plans	Key Policies/Issues/Objectives Directly Related To European Sites, Biodiversity and Sustainable Development in the Zone of Influence	Assessment of Proposed Development compliance with policy
	➤ Outcome 2B: Biodiversity and ecosystem services in the wider countryside are conserved and restored – agriculture & forestry. ➤ Outcome 2C: Biodiversity and ecosystem services in the wider countryside are conserved and restored – peatlands & climate action. ➤ Outcome 2D: Biodiversity and ecosystem services in the marine and freshwater environment are conserved and restored. ➤ Outcome 2E: Genetic diversity of wild and domesticated species is safeguarded. ➤ Outcome 2F: A National Restoration Plan is in place to contribute to the ambition of the EU Biodiversity Strategy 2030 and global restoration targets. ➤ Outcome 2H: Invasive alien species (IAS) are controlled and managed on an all-island basis to reduce the harmful impact they have on biodiversity and measures are undertaken to tackle the introduction and spread of new IAS to the environment. 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.	

6.9.2 Assessment of Projects

Assessment material for this cumulative impact assessment was compiled on the relevant developments within the vicinity of the Proposed Development. 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, NISs, layouts, drawings etc.) for all relevant projects where available. The projects considered are listed in Appendix 2-5 of Chapter 2: Background of the Proposed Development of this EIAR. The full list of projects has been considered and relevant ones from this list are discussed in this section.

The cumulative assessment boundaries considered from an ecological perspective were as following:

- The cumulative assessment boundary for terrestrial ecology included 1 km around the Proposed Development Site.
- The cumulative boundary for aquatic receptors and hydrological effects reflect that outlined in Chapter 8 of this EIAR (Developments within the Shannon [Upper]_SC_090 WFD Sub Catchment)
- The cumulative assessment boundary for ornithological receptors includes all of Lough Ree SPA, including a 500m buffer of Lough Ree shoreline.

The dominant land uses in the area were also considered in the assessment, these included amenity grassland, pastoral agriculture, roads and individual residential developments.

6.9.2.1 Projects within the Hodson Bay Area

- Permission for development of a sustainable eco-tourism project at Yew Point, Hodson Bay. (Roscommon County Council Planning Ref.: 2360204). The NIS/EcIA13 for Yew Point Eco Tourism Village were reviewed as part of this assessment. Key ecological receptors identified in the EcIA included scrub, eutrophic lakes, water quality, aquatic habitats/species, badger, otter, birds, bats, Lough Ree SAC, Lough Ree SPA, River Shannon Callows SAC, Middle Shannon Callows SPA, Lough Croan Turlough SPA, Lough Ree pNHA and River Shannon Callows pNHA. These reports identified potential for significant effects through surface water run-off and percolation of polluting materials through the karsified bedrock underlying the site and disturbance/displacement to otter and avifauna during the construction and operational phases of the development. As such, the potential for in-combination effects with the Proposed Development specifically in relation to aquatic receptors and designated sites were initially identified (construction related impacts on water quality, disturbance to fauna). However, with the implementation of mitigation measures outlined within this Biodiversity Chapter and the mitigation measures outlined within the EcIA for Yew Point Eco Tourism Village, no potential for significant cumulative effects were identified. Furthermore, this development is currently under construction, and as such the construction phases are not likely to overlap.

¹³ <https://roscommoncoco.eplanning.ie/iDocsWebDPSS/ViewFiles.aspx?docid=332635&format=djvu>

- Permission for minor amendments to the sustainable eco-tourism project Yew Point, Hodson Bay previously approved under Planning Ref. No. PD/23/6020414. This application is supported by an addendum Natura Impact Statement (NIS) to the original NIS submitted under Ref. No. PD/23/60204 (Roscommon County Council Planning Ref.: 2560020). The addendum NIS for this project identified no further potential for significant likely effects. With the implementation of mitigation measures outlined within this NIS and the mitigation measures outlined within the addendum NIS and original NIS for Yew Point Eco Tourism Village, no potential for significant cumulative effects were identified.
- Permission for development of recreational facilities at Baysports, Hodson Bay (Roscommon County Council Planning Ref.: 2262)15. The NIS for this project was reviewed as part of this assessment. The NIS for the project identified potential for adverse effects on Lough Ree SAC and Lough Ree SPA. As such the potential for in-combination effects with the Proposed Development specifically in relation Lough Ree SAC/SPA were initially identified (operational phase related impacts on water quality, habitat loss/ fragmentation, disturbance to fauna). However, with the implementation of mitigation measures outlined within this report and within the NIS accompanying this EIAR and the mitigation measures outlined within the NIS for the development of recreational facilities at Baysports, no potential for significant cumulative effects were identified.

6.9.2.2 Projects surrounding Lough Ree

- Permission for Lanesborough Outdoor Theatre, a 500-seat outdoor community amphitheatre at Former Council Depot at Commons North Lime Quarry, Lanesborough, Co. Longford (ACP Case Ref.: JP14.318314)16. The NIS for this project was available and so was reviewed as part of this assessment. The NIS for the project identified potential for adverse effects on Lough Ree SAC and Lough Ree SPA (reduction in water quality from release of suspended solids and/or other pollutants into the surface water system). As such the potential for in-combination effects with the Proposed Development specifically in relation Lough Ree SAC/SPA (as well as Lough Ree pNHA) were initially identified (construction related impacts on water quality). However, with the implementation of mitigation measures outlined within this Biodiversity Chapter and the NIS submitted alongside this EIAR, and the mitigation measures outlined within the NIS for the Lanesborough Outdoor Theatre, no potential for significant cumulative effects were identified.
- Permission for extension of Lough Ree Yacht Club including the construction of an open-sided boat shelter building, the expansion of internal circulation road within the site and all ancillary works (Westmeath County Council Planning Ref.: 21474)17. The AA Screening for this project was reviewed as part of this assessment. The AA Screening for the project did not identify any potential for likely significant effects on Lough Ree SAC and Lough Ree SPA. As such there is no potential for in-combination effects with the Proposed Development specifically in relation Lough Ree SAC/SPA. With the implementation of mitigation measures outlined within this Biodiversity Chapter and the NIS submitted alongside this EIAR, and the lack of potential for significant effects on the Natura 2000 network as outlined within the AA Screening for the Lough Ree Yacht Club, no potential for significant cumulative effects were identified.

¹⁴ <https://roscommoncoco.eplanning.ie/iDocsWebDPSS/ViewFiles.aspx?docid=365785&format=djvu>

¹⁵ <https://roscommoncoco.eplanning.ie/iDocsWebDPSS/ViewFiles.aspx?docid=298294&format=djvu>

¹⁶ [https://www.pleanala.ie/publicaccess/FurtherInformation/318314/05%20NIS%20\(incl%20AASR\).pdf?r=210217193014](https://www.pleanala.ie/publicaccess/FurtherInformation/318314/05%20NIS%20(incl%20AASR).pdf?r=210217193014)

¹⁷ <https://westmeathcoco.eplanning.ie/iDocsWebDPSS/ViewFiles.aspx?docid=177537&format=djvu>

- Permission to construct a fisheries base at Portrun, Co. Roscommon (Roscommon County Council Planning Ref.: 2560258)18. The NIS for this project was available and was reviewed as part of this assessment. The NIS for the project identified potential for effects on Lough Ree SAC and Lough Ree SPA (reduction in water quality from release of suspended solids and/or other pollutants into the surface water system). As such the potential for in-combination effects with the Proposed Development specifically in relation Lough Ree SAC/SPA were initially identified. However, with the implementation of mitigation measures outlined within this Biodiversity Chapter and the NIS submitted alongside this EIAR, and the mitigation measures outlined within the NIS for the project, no potential for significant cumulative effects were identified.

6.9.2.3 Other large Scale Projects

6.9.2.3.1 Seven Hills Windfarm (ACP Case Ref: PA20.313750)

This proposed wind farm consists of 20 no. turbines and is approx. 8.7 km from the Proposed Development¹⁹. The site of the Seven Hills Wind Farm and that of the Proposed Development are not hydrologically linked. The NIS/EIAR for the Seven Hills Wind Farm project²⁰ was reviewed as part of this assessment. These reports identified potential for significant effects on key ecological receptors including River Shannon Callows pNHA, Suck River Callows NHA, Castle French East Bog NHA, Annaghbeg Bog NHA, Ballygar Bog NHA, Castle French West Bog NHA, Aughrim Bog NHA, Killure Bog NHA, Carrickynaghtan Bog NHA, Crit Island West NHA, Kilmore Bog NHA, Feacle Turlough pNHA, Four Roads Turlough pNHA, Ballynamona Bog and Corkip Lough SAC, Killeglan Grassland SAC, Four Roads Turlough SAC, River Shannon Callows SAC, Lough Croan Turlough SPA, River Suck Callows SPA, Four Roads Turlough SPA, Middle Shannon Callows SPA, Lough Ree SPA, eroding/upland rivers and associated aquatic habitats/species, turloughs, dry calcareous and neutral grassland including scrub mosaic, hedgerows, stone walls, badger, otter, bats, fisheries and aquatic fauna.

As such the potential for in-combination effects with the Proposed Development were identified. However, with the implementation of mitigation measures outlined within this Biodiversity Chapter and the NIS submitted alongside this EIAR, and the mitigation measures outlined within the NIS for the Seven Hills Wind Farm, no potential for in-combination effects were identified.

6.9.3 Assessment of Cumulative Effects

The residual construction and operational impacts of the Proposed Development are considered cumulatively with other plans and projects as described in Sections 6.9.1, and 6.9.2. Particular focus has been placed on those plans and projects that are in closest proximity to the Proposed Development Site and those that could potentially result in cumulative impacts on designated sites, surface water, habitats and species.

Following the detailed surveys undertaken and impact assessment provided in Section 6.8, (including mitigation measures), it is concluded that there will be no significant residual habitat loss, disturbance, deterioration of water quality associated with the Proposed Development and therefore it cannot contribute to any cumulative effect when considered in-combination with other plans and projects. The Proposed Development has been deliberately designed to minimise the effects on biodiversity through avoidance of important habitats for biodiversity where possible, and focussing development within existing disturbed or heavily modified areas.

¹⁸ <https://roscommoncoco.eplanning.ie/DocsWebDPSS/ViewFiles.aspx?docid=375893&format=djvu>

¹⁹ <https://www.pleanala.ie/publicaccess/EIAR-NIS/313750/Seven%20Hills%20WF%20SID/Volume%201%20-%20NTS%20and%20EIAR%20Chapters/Ch.6%20-%20Biodiversity%20-%20F%20-%202022.06.03%20-%20190907.pdf?r=061866975728>

No significant effects as a result of the Proposed Development in relation to disturbance, displacement or mortality of faunal species has been identified. Therefore, there is no potential for the Proposed Development to contribute to any cumulative effect in this regard.

The Proposed Development will not result in any significant residual effects on biodiversity and will not contribute to any cumulative effect when considered in combination with other plans and projects.

In the review of the projects and plans 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.

6.10 Conclusion

Following consideration of the residual effects (post mitigation) it is concluded that the Proposed Development will not result in any significant effects on any of the identified KERs in the long term. It has been concluded that there will be a temporary residual effect at the local geographic scale in the short to medium term (5-15 years) on trees and treeline habitat. No significant effects on receptors of International, National, County Importance or Local importance (higher value) were identified in the long term.

The potential for effects on the European Designated Sites is fully described in the Natura Impact Statement that accompanies this application. The NIS concludes that in view of best scientific knowledge and on the basis of objective information, the Proposed Development either individually or in combination with other plans or projects, is not likely to have adverse effects on the European Sites that were assessed as part of the Appropriate Assessment process. Similarly, with the prescribed mitigations in place, there is no potential for impact on any nationally designated site.