

PROPOSED DEVELOPMENT AT CORNAMADDY, ATHLONE, CO.  
WESTMEATH

# Natura Impact Statement

Ballymore Real Estate Investments Limited

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## 1 INTRODUCTION

### 1.1 Background

DNV was commissioned by Ballymore Real Estate Investments Limited to prepare an Appropriate Assessment (AA) Screening Report in relation to a Proposed Development at Cornamaddy, Athlone, Westmeath. The AA Screening Report concluded that a degree of uncertainty exists in whether the Proposed Development could give rise to potentially significant effects on two European sites, namely:

- Lough Ree SAC (000440)
- Lough Ree SPA (004064)

A Natura Impact Statement (NIS) has therefore been prepared for the Proposed Development. The purpose of this NIS report is to provide information for the relevant competent authority to carry out a NIS in respect of the Proposed Development.

The Proposed Development details amendments to a previously permitted development under the LRD permission reference 318736-23. The previously permitted development also underwent an AA Screening and NIS which concluded that the development would not adversely affect the integrity of any European sites after the proposed mitigations were in place. This report aims to update the findings of the previous NIS and determine if the amended application will have any significant adverse effects on European Sites.

### 1.2 Quality Assurance and Competence

All surveying and reporting have been carried out by qualified and experienced ecologists and environmental consultants. KM carried out the ecological survey and also authored this report. KM is a Graduate Ecologist with DNV and has a B.Sc (Hons) in Environmental Biology from University College Dublin. She is also a Qualifying member of the Chartered Institute of Ecology and Environmental Management (CIEEM). KM has a range of fieldwork experience including plant, mammal, bird, and amphibian surveys in addition to freshwater ecology research. Her deskwork experience includes bat call sonogram analysis, habitat mapping, and report writing. KM has contributed to the preparation of several Stage 1 AA Screenings, Stage 2 NIS, Preliminary Ecological Appraisals (PEA), and Ecological Impact Assessment (EcIA) reports.

### 1.3 Description of Proposed Development

#### 1.3.1 Site Location

The Site of the Proposed Development, as seen in Figure 1, is located at Cornamaddy, Athlone, Co. Westmeath. The Site is bordered to the south by agricultural fields, to the west by active construction sites, to the north by an unnamed local road, and to the east by Blyry Court. The Site consists of a number of fields currently used for grazing horses with boundary treelines and hedgerows. Lough Coosan and Lough Killinure are both located less than 2km north of the Site. The application Site has an approximate area of 5.45 hectares (Ha).



FIGURE 1. SITE LOCATION.

### 1.3.2 Proposed Development Description

The Proposed Development subject to this report is a proposed Phase 1A amendment to a permitted residential development (LRD Permission Reference 318736-23) located at Cornamaddy, Athlone, Co. Westmeath. This document forms part of the planning application and should be read in conjunction with all drawings, reports, specifications, and particulars associated with the planning application.

The development will comprise 175no. dwellings and 130 apartments, a creche, and associated site works. The proposed development incorporates the following amendments:

- Alteration to the permitted phasing with phase one incorporating a total of 130no. residential units of which there 102no. dwellings and 28no. duplex apartment units, in lieu of 129no. residential units as granted.
- Phase one incorporating 102no. 2storey dwellings with the dwelling mix comprising 57no. 3bed units and 45no. 4bed units.
- Phase one incorporating 2no. duplex apartment blocks which comprises 12no. 1bed triplex apartments, 8no. 2bed duplex apartments and 8no. 3bed duplex apartments. (overall units in phase one increasing from 129no. residential units as granted to 130no. residential units).
- The provision of a Creche.
- Alterations to the site layout in phase one comprising a reconfiguration of public open spaces, communal spaces, and overall site layout along with public lighting, planting, and boundary treatments to include boundary walls, railings & fencing.
- Provision of a revised road layout to serve phase one.
- All ancillary site development/construction works to facilitate foul, water, and service networks for connection to the existing foul, water and ESB networks.
- Provision of associated site infrastructure works to include for foul, water, and storm water infrastructure.
- Provision of 2no. ESB substations.

The Proposed Site layout is shown below in Figure 2.



**FIGURE 2. PROPOSED SITE LAYOUT. (EXTRACTED FROM DRAWING NO: 2650-HWS-P1-ZZ-D-A-10022\_P04 (HOWELLS, 2026))**

### 1.3.3 Drainage and Water Supply

#### 1.3.3.1 Surface water

According to Civil Engineering Planning Report submitted for this amended application, water supply to the Proposed Development will be provided by adding a new 150mm connection to the existing 150mm diameter watermain running along the N55 (IORS, 2026). Confirmation of feasibility was received from Irish Water on the 13th of November 2020 (Reference: CDS200001202). Surface water on Site will be discharged into the existing drainage channel along the Site's western boundary. The layout of the proposed surface water drainage is visualised in Figure 3.

It is a policy of the Westmeath County Development Plan (2021 – 2027) Policy CPO 10.97: “to resist the discharge of additional surface water to combined sewers and promote Sustainable Urban Drainage Systems (SuDS) and solutions to maximise the capacity of towns with combined drainage systems.” It is noted that these design features are a requirement in all new developments, as per the above policy; to contribute to both the improvement of water quality in receiving waterbodies and the easing of pressures on existing drainage networks.

Attenuation tanks will be installed on Site which will provide the required storage volume for the catchment area of the Site. The stored surface water in the attenuation tanks will then discharge into a drainage ditch via a hydrobreak flow control device. Upstream of the attenuation tanks, there will be petrol interceptors installed which will offer treatment and oil separation in the case of accidental spillage or leaks from vehicles. Other SuDS measures included within the design of the Proposed Development consist of permeable paving and bioretention areas. These will aid in the mitigation of any potential adverse effects on downstream surface water systems caused by urban stormwater run-off by reducing the run-off rate, volume, and frequency. Green areas present on Site will also allow for the natural filtration of surface water.

The Garrynafela Stream currently flows through the centre of the Site. Sections of this stream will be culverted prior to the commencement of construction activity on Site. The Garrynafela Stream is hydrologically connected to Lough Ree Special Area of Conservation (SAC) and Special Protection Area (SPA) and the potential implications to the downstream European sites due to the proposed works to and near this waterbody will be assessed further in this report.

#### 1.3.3.2 Foul Drainage

Foul water from the Proposed Development will be connected to the existing Irish Water manhole to the northwest of the Site, as shown in Figure 4. The remaining layout of the proposed foul water drainage is visualised in Figure 3. Foul water from the Site will be discharged to mains sewer and treated at the Athlone Wastewater Treatment Plant (WwTP) prior to discharging into the Shannon River. The wastewater discharge calculations for the Proposed Development are as follows; a flow rate per day of 0.33 l/s, a Dry Weather Flow of 1.97 l/s and a P.E. of 2.7.

A Pre-Connection application has been submitted to Irish Water and a Confirmation of Feasibility was received (Reference: CDS200001202).





## 2 LEGISLATIVE AND POLICY CONTEXT

### 2.1 Legislative Background

The Habitats Directive (92/43/EEC) seeks to conserve natural habitats and wild fauna and flora by the designation of Special Areas of Conservation (SACs) and the Birds Directive (2009/147/EC) seeks to protect birds of special importance by the designation of Special Protected Areas (SPAs). The Habitats Directive has been transposed into Irish law through the EC (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011). It is the responsibility of each member state to designate SPAs and SACs, both of which will form part of Natura 2000, a network of protected sites throughout the European Community.

SACs and SPAs are collectively known as “Natura 2000” or “European” sites. SACs are selected for the conservation of Annex I habitats (including priority types which are in danger of disappearance) and Annex II species (other than birds). SPAs are selected for the conservation of Annex I birds and other regularly occurring migratory birds and their habitats. The annexed habitats and species for which each site is selected correspond to the Qualifying Interests (QIs) and Special Conservation Interests (SCIs) of the sites; from these the conservation objectives of the site are derived.

An ‘Appropriate Assessment’ (AA) is an assessment required prior to the grant of planning permission to determine whether a plan or project, based on best scientific knowledge, will have an adverse effect on the integrity of a European site, either alone or in combination with other plans and projects. It is required for any plan or project not directly connected with or necessary to the management of a site but likely to have a significant effect on it.

An AA is required under Article 6 of the Habitats Directive where a project or plan may give rise to significant effects upon a Natura 2000 site. Paragraph 3 states that:

*“6(3) Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site, in view of the site’s conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”*

#### 2.1.1 Legislative Context

The obligations in relation to a NIS have been implemented in Ireland under Chapter 3 of Part 6 of the Planning and Development Act 2024, and in particular Section 215 in relation to Natura Impact Statements.

A NIS may be prepared and submitted to the competent authority by the applicant for permission.

The preparation of a NIS must comply with the following content requirements as per the Planning and Development Act 2024:

- The NIS must be prepared by a person with the necessary scientific competence.
- It must specify all habitat types and species for which the relevant European site(s) is (/ are) designated and those likely to be significantly affected by the development.
- The NIS must identify all potential significant effects of the development on the relevant European site(s), considering its (/ their) conservation objectives. This includes effects arising from the development itself or in combination with other plans or projects.
- It must assess the identified effects and their implications for the European site(s).
- The NIS should identify any measures proposed to avoid or reduce adverse effects on the European site(s).
- Based on the assessments, the NIS must conclude whether the proposed development will adversely affect the integrity of the European site(s). Additionally, this may extend to:
  - Retrospective consent applications, the NIS must conclude whether the development has, is, or will adversely affect the integrity of the European site.

- Requests to alter or extend permissions, the NIS must conclude whether the proposed changes will adversely affect the integrity of the European site.

Following the preparation and submission of a NIS by the applicant for permission, the competent authority shall carry out an Appropriate Assessment of the relevant development as per the obligations set out in the Planning and Development Act 2024, Part 6, Chapter 3, Section 217.

## 2.2 Policy Context

### 2.2.1 Westmeath County Development Plan 2021 -2027

While the County Development Plan in its entirety is relevant to the Proposed Development and can be referred to separately, policies, principles and objectives of the Westmeath County Development Plan 2022 – 2027 that are of relevance to this Screening Report are outlined below:

- **Policy 12.4:** Protect and conserve Special Areas of Conservation, candidate Special Areas of Conservation, Special Protection Areas and candidate Special Protection Areas, designated under the EU Birds and Habitats Directives respectively.
- **Policy 12.5:** Ensure that no plans, programmes, etc. or projects giving rise to significant cumulative, direct, indirect or secondary impacts on European Sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans, programmes, etc. or projects).
- **Policy 12.6:** Ensure that any plan or project that could have a significant adverse impact (either by themselves or in combination with other plans and projects) upon the conservation objectives of any Natura 2000 Site or would result in the deterioration of any habitat or any species reliant on that habitat will not be permitted.
- **Policy 12.7:** Assess any plan or project in accordance with Article 6 of the Habitats Directive to determine whether the plan or project is likely to have a significant effect on the site either individually or cumulatively upon the integrity, conservation objectives and qualifying interest of any Natura 2000 Site.
- **Policy 12.8:** Require an ecological appraisal for development not directly connected with or necessary to the management of Natura Sites, or a proposed Natura Site and which are likely to have significant effects on that site either individually or cumulatively.
- **Policy 12.9:** Identify and provide appropriate buffer zones between Designated Sites and local biodiversity features and areas zoned for development.
- **Policy 12.11:** Promote the maintenance and as appropriate, achievement of favourable conservation status of habitats and species and to improve the ecological coherence of the Natura 2000 network, by maintaining and where appropriate, developing features in the landscape which are of major importance for wild fauna and flora.

### 2.2.2 Westmeath Biodiversity Action Plan 2025 - 2031

The Westmeath Biodiversity Action Plan 2025 – 2031 is set out to protect and improve biodiversity through specific objectives:

- **Objective 1:** Support Biodiversity and Build Climate Resilience.
- **Objective 2:** Raise Biodiversity Awareness in Communities.
- **Objective 3:** Support Research & Monitoring of Biodiversity Practices.
- **Objective 4:** Incorporate Biodiversity into All Council Activity.
- **Objective 5:** Encourage Nature Conservation Projects

## 2.3 Stages of Appropriate Assessment

The AA process is a four-stage process. Each stage requires different considerations, assessments and tests to ultimately arrive at the relevant conclusion for each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

The four stages of an AA, can be summarised as follows:

- **Stage 1: Screening.** The Screening for AA considers whether a plan or project is directly connected to or necessary for the management of a European site, or whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a European site in view of its conservation objectives.
- **Stage 2: Natura Impact Statement (NIS).** This stage considers whether the Proposed Development alone or in combination with other projects or plans, will have adverse effects on the integrity of a European site and includes any mitigation measures necessary to avoid, reduce or offset any negative effects. In order to inform this assessment, this NIS has been prepared comprising as it does a targeted professional scientific examination of the Proposed Development and the relevant European sites to identify and characterise any possible implications for any of the relevant European sites in view of their conservation objectives and taking account of in-combination effects. If the assessment is negative i.e. adverse effects on the integrity of a site cannot be excluded, then the process must proceed to Stage 3, or the plan or project should be abandoned.
- **Stage 3: Derogation from Article 6(3) under certain circumstances.** If the outcome of Stage 2 is negative i.e., adverse impacts to the sites cannot be scientifically ruled out, despite mitigation, the plan or project should proceed to Stage 3 or be abandoned. Stage 3 requires:
  - Examination of alternative solutions, and, where no alternative solution exists;
  - Examining whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project to adversely affect a European site, where no less damaging solution exists.
  - Implementation of compensatory measures to maintain the coherence of the Natura 2000 network.

The Habitats Directive promotes a hierarchy of avoidance, mitigation, and compensatory measures. First the project should aim to avoid any negative effects on European sites by identifying possible effects early in the planning stage and designing the project to avoid such effects. Second, mitigation measures should be applied, if necessary, during the AA process to the point where no adverse impacts on the site(s) remain. If the project is still likely to result in adverse effects, and no further practicable mitigation is possible, a refusal for planning permission may be recommended. In this case, the project will generally only be considered where no alternative solutions are identified and the project is required for IROPI, or, in the case of priority habitats, considerations of health or safety, or beneficial consequences of primary importance for the environment or to other IROPI. Then compensation measures are required for any remaining adverse effects.

## 2.4 Stage 1: Appropriate Assessment Screening Conclusion

An AA Screening Report was prepared for the Proposed Development by DNV in July 2026. The conclusion of the AA Screening Report is as follows:

*“The Proposed Development at Cornamaddy, Athlone, Co. Westmeath has been assessed taking into account:*

- *The nature, size and location of the proposed works and possible impacts arising from the construction works.*
- *The QIs and conservation objectives of the European sites*
- *The potential for in-combination effects arising from other plans and projects.*

*Upon the examination, analysis and evaluation of the relevant information and applying the precautionary principle, it is concluded by the authors of this report that the possibility may not be excluded that the Proposed Development will have a significant effect on any of the European sites listed below:*

- *Lough Ree SAC (000440).*
- *Lough Ree SPA (004064).*

*In carrying out this AA screening, any targeted ecological mitigation measures and/or measures intended or included for the purposes of avoiding adverse effects arising as a result of the Proposed Development on any European site have not been taken into account.*

*On the basis of the screening exercise carried out above, the likelihood of significant effects on European sites cannot be excluded. Therefore, a NIS will be prepared for the Proposed Development and is included under a separate cover. The NIS will assess the impact of the project on the integrity of the European sites, having regard to the conservation objectives of the sites. The NIS will describe proposed mitigation measures to avoid and reduce significant effects and will provide objective scientific information to enable the competent authority to carry out an AA of the Proposed Development.”*

As such, this NIS will assess the potential effects of the Proposed Development on

- **Lough Ree SAC (000440).**
- **Lough Ree SPA (004064).**

These sites are linked to the Proposed Development via hydrological pathways, as shown in Figure 5.



FIGURE 5. RELEVANT EUROPEAN SITES AS IDENTIFIED IN AA SCREENING (DNV, 2026).

## 3 NIS METHODOLOGY

### 3.1 Guidance

This NIS has been undertaken in accordance with the following guidance:

- *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities*. (Department of Environment, Heritage and Local Government, 2010 revision);
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities*. Circular NPW 1/10 & PSSP 2/10;
- NPWS Presentation: Updates and Learnings from Current Practice (Paul Scott, Ecological Guidance and Advisory Unit, March 2024) - This presentation provides current insights, case law updates, and practical advice for implementing AA, including procedural steps, conservation objectives, and mitigation consideration;
- *Communication from the Commission on the precautionary principle* (European Commission, 2000);
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* (European Commission, 2019);
- *Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission, 2021);
- *Appropriate Assessment Screening for Development Management, OPR Practice Note PN01, Office of the Planning Regulator March 2021*; and
- *Amendments to section 42 of the Planning and Development Act 2000, as amended and associated Planning and Development Regulations 2001. Department of the Environment, Heritage and Local Government. (2021). Circular Letter: EUIPR 01/2021.*

### 3.2 NIS Steps

The Natura Impact Statement (NIS) has been prepared in accordance with the requirements of Article 6(3) of the Habitats Directive and follows a structured assessment process comprising the following steps:

- Description of the baseline environment at the location of the Proposed Development, including relevant ecological features and environmental conditions.
- Identification of relevant European sites (Natura 2000 sites) that could potentially be affected by the Proposed Development, based on the findings of the Screening for Appropriate Assessment (DNV 2026).
- Compilation and review of site-specific information for each relevant European site, including conservation objectives, qualifying interests (QIs) or special conservation interests (SCIs), site vulnerabilities, and ecological sensitivities.
- Identification and detailed description of potential direct, indirect, and cumulative effects of the Proposed Development on the integrity of each relevant European site, with specific reference to their QIs/SCIs and site-specific conservation objectives (SSCOs), where available.
- Assessment of the likelihood and significance of effects on each European site, applying the precautionary principle and considering the potential for adverse effects on site integrity, either alone or in combination with other plans or projects.
- Consideration of other plans or projects that may act in combination with the Proposed Development to give rise to significant effects on the relevant European sites.
- Identification and detailed description of mitigation measures that are necessary to avoid or reduce adverse effects on the integrity of European sites, ensuring that such measures are precise, enforceable, and capable of being implemented in full.

- Conclusion of the assessment, confirming whether, in light of the mitigation measures proposed, the Proposed Development will not adversely affect the integrity of any European site, thereby enabling the Competent Authority to make a determination in accordance with Article 6(3).

### 3.3 Desk Study

A desktop study was carried out to collate and review available information, datasets, and documentation sources relevant for the completion of the NIS. The desk- top study, completed in June 2026, relied on the following sources:

- Information on the network of European sites, relevant boundaries, QIs and conservation objectives, obtained from the National Parks and Wildlife Service (NPWS) at [www.npws.ie](http://www.npws.ie) and the European Environment Agency (EEA) at <https://natura2000.eea.europa.eu/>;
- Information on the status of EU protected habitats and species in Ireland, obtained from the NPWS Article 17 reports;
- Text summaries of the relevant European sites taken from the respective Site Synopses for each site, available at [www.npws.ie](http://www.npws.ie);
- Information on waterbodies, catchment areas and hydrological connections obtained from the Environmental Protection Agency (EPA) at [www.gis.epa.ie](http://www.gis.epa.ie);
- Information on bedrock, groundwater, aquifers and their statuses, obtained from Geological Survey Ireland (GSI) at [www.gsi.ie](http://www.gsi.ie);
- Satellite imagery and mapping obtained from various sources and dates including Google, Digital Globe, Bing and Ordnance Survey Ireland; and
- Information on the extent, nature and location of the Proposed Development, provided by the applicant and their design team.

A comprehensive list of all the specific documents and information sources consulted in the completion of this report is provided in Section 6.

### 3.4 Field Surveys

Multiple ecological field surveys have been carried out at the Site to date. Surveys undertaken within the past eighteen months are summarised in Table 1. Results relevant to this Screening Report have been summarised in Section 4.2.

**TABLE 1. FIELD SURVEYS UNDERTAKEN AT THE PROPOSED DEVELOPMENT SITE.**

| Survey                              | Surveyor | Dates                                         |
|-------------------------------------|----------|-----------------------------------------------|
| Preliminary Habitat Survey          | KM       | 11 <sup>th</sup> & 22 <sup>nd</sup> June 2026 |
| Invasive Flora Survey               | KM       | 11 <sup>th</sup> & 22 <sup>nd</sup> June 2026 |
| Bird Scoping Survey                 | KM       | 11 <sup>th</sup> & 22 <sup>nd</sup> June 2026 |
| Preliminary Bat Habitat Assessments | KM       | 11 <sup>th</sup> & 22 <sup>nd</sup> June 2026 |
| Mammal Survey                       | KM       | 11 <sup>th</sup> & 22 <sup>nd</sup> June 2026 |
| General Fauna Survey                | KM       | 11 <sup>th</sup> & 22 <sup>nd</sup> June 2026 |

### 3.5 Impact Prediction

Potential impacts on the relevant European site(s) identified during the AA Screening are based on information regarding their QIs and/or SCI species, and the attributes and targets relating to their SSCOs where available. These have been informed by the desk study and any field surveys carried out prior to the preparation of this report.

Impact prediction is based on the Source-Pathway-Receptor (S-P-R) model. The following describes the steps of the S-P-R approach taken in this NIS:

- Potential sources of effects were identified based on the Proposed Development description and details, including changes to potentially suitable *ex-situ* habitats at the Site (i.e., habitats utilised by Species of Conservation Importance (SCI) bird species outside of their designated SPAs).
- Up-to-date GIS spatial datasets for water catchments as well as any information from relevant site investigations and/or field surveys were used to identify the QIs/ SCIs within the relevant European site(s) that have a notable S-P-R connection to the Proposed Development:
  - The catchment data were used to establish or discount potential hydrological connectivity between the Proposed Development and any QIs/SCIs.
  - Groundwater and bedrock information used to establish or discount potential hydrogeological connectivity between the Proposed Development and any QIs/SCIs.
  - Air and land connectivity assessed based on Proposed Development details and proximity to QIs/SCIs.
  - Consideration of potential indirect pathways, e.g., impacts to flight paths, *ex-situ* habitats, etc.
- Identification of potential impacts for those QIs/SCIs linked to the Proposed Development via notable S-P-R connections.

Where the preceding steps identified any potential for adverse impacts on any QIs/SCIs for the relevant European site(s), appropriate mitigation measures to eliminate the potential for significant adverse effects are identified in this report.

### 3.6 Limitations

No wintering bird surveys have been carried out on Site since 2023. The Chartered Institute of Ecology and Environmental Management (CIEEM) best practise for surveys involving mobile species (e.g. birds) is for surveys to be updated every eighteen months. However, it is noted that this application is for an amendment to an already granted LRD application at the Site. The previous grant of planning was informed by the findings of a suite of winter bird surveys conducted in 2022/23 and, as such, the Site is effectively to be developed.

Based on the winter bird surveys carried out to date, and the preliminary habitat and bird scoping surveys carried out in June 2026 to confirm no significant change had occurred to the habitat suitability the Site provides, it is confirmed that there will be no loss of important *ex-situ* habitat for wintering bird species associated with the nearby Lough Ree SPA or the Middle Shannon Callows SPA. The proposed amendments to the granted application do not change this conclusion, as is laid out in more detail in the below text.

In summary, the lack of recent wintering bird surveys carried out on this Site is not deemed to be a significant limitation due to the following factors.

1. Five wintering bird surveys were conducted in 2022 and 2023 for the original permitted application (Enviroguide, 2023). These surveys found no evidence of significant wintering bird usage of the Site. Three waterbird species were recorded during the surveys, specifically the black-headed gull (*Chroicocephalus ridibundus*), snipe (*Gallinago gallinago*), and grey heron (*Ardea cinerea*). Grey heron and black-headed gulls were recorded flying over the Site and were not associated with or utilizing the Site for foraging, roosting, or nesting purposes. On occasion snipe were observed utilising sections of the applicant's lands for foraging, however the maximum number of snipe recorded at any one time across the entire site was five individuals. A Site is considered to have a nationally significant population of snipe if 20 or more individuals are recorded at once (Burke, 2025). Therefore, in light of the very low snipe counts recorded, it can be concluded that this Site does not support a nationally significant snipe population.
2. The composition of the habitats present at the Proposed Development Site continue to be largely unsuitable as an *ex-situ* feeding/roosting resource for the SCI species for Lough Ree SPA and the Middle Shannon Callows SPA i.e., ducks, geese, waders and shorebirds, as was the case in 2022/23. The rough grasslands dominating much of the Site do not provide potential *ex-situ*

feeding resources for the above groups, of which the majority favour waterbodies (i.e., diving/dabbling species), arable/cultivated land, or open green spaces with short grass swards such as those of playing pitches etc. Nor does it support nationally or internationally significant populations (as per Burke et al., 2025) for any waterbird species associated with Lough Ree SPA or the Middle Shannon Callows SPA. Therefore, based on the results of these surveys, no significant impacts on the SCI bird species of these European Sites are anticipated.

## 4 NATURA IMPACT STATEMENT

### 4.1 Existing Environment

#### 4.1.1 Desk Study Results

##### 4.1.1.1 Hydrology, Geology and Hydrogeology

The Site of the Proposed Development is located within the Upper Shannon Water Framework Directive (WFD) catchment (ID: 26E) and the Shannon(Upper)\_SC\_090 WFD sub catchment (ID: 26E\_6) (EPA, 2026). The closest mapped watercourse to the Site is the Garrynafela Stream, which flows east to west across the Site before flowing north. The Kippinstown Stream flows into the Garrynafela Stream just north of the Site, after which the Garrynafela stream continues flowing north for approximately 1.3km before discharging into Ballaghkeeran Bay, which flows north into Lough Killinure, which in turn discharges into the larger Lough Ree. This water eventually flows south from Lough Ree into the Shannon River.

The Site is situated on the Athlone Gravels groundwater body. The bedrock aquifer within the Site boundary is classified as a 'Locally Important Aquifer, or Bedrock which is Moderately Productive only in Local Zones' (GSI, 2026). Groundwater vulnerability to contamination across the Site varies from Moderate to High, as seen in Figure 6 (GSI, 2026).

The subsoils beneath the Site are classified as 'Fen Peat' (FenPt), which covers large areas of the Site's western land, and 'Gravels derived from Limestones' (GLs) which cover the remainder of the Site (GSI, 2026). The Soil Information System (SIS) National Soils data has identified multiple different soil types on Site. These include BminSP or 'Shallow poorly drained mineral soil derived from mainly basic parent materials' in the eastern areas, BminSRPT or 'Peaty shallow reasonable drained mineral soil derived from mainly basic parent materials' along the southern boundary, and lastly BminSW or 'Shallow well drained mineral soil derived from mainly basic parent materials' in the Site's northern regions and central area (GSI, 2026).

The Waterbody Status for surface and ground water bodies relevant to the Site as recorded by the EPA in accordance with European Communities (Water Policy) Regulations 2003 (SI no. 722/2003) are provided Table 2 (EPA, 2026).

**TABLE 2. WFD RISK AND WATER BODY STATUS**

| Waterbody Name              | Water body; EU code | Location from Site | Distance from Site (m/km) | WFD water body status (2019-2024) | WFD 3 <sup>rd</sup> cycle Risk Status | Hydraulic Connection to the Site                                                                                            |
|-----------------------------|---------------------|--------------------|---------------------------|-----------------------------------|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>Surface Water Bodies</b> |                     |                    |                           |                                   |                                       |                                                                                                                             |
| Garrynafela                 | IE_SH_26S021660     | N/A                | On Site                   | Poor                              | At Risk                               | Located within the Site boundary.<br><br>Hydrological connection via surface water discharge to the local drainage network. |
| Kippinstown                 |                     | NW                 | 185m                      |                                   |                                       | Hydrological connection via upstream surface                                                                                |

| Waterbody Name     | Water body; EU code | Location from Site | Distance from Site (m/km) | WFD water body status (2019-2024) | WFD 3 <sup>rd</sup> cycle Risk Status | Hydraulic Connection to the Site                                                                                                                        |
|--------------------|---------------------|--------------------|---------------------------|-----------------------------------|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    |                     |                    |                           |                                   |                                       | water discharge to the local drainage network.                                                                                                          |
| Shannon (Upper)    | IE_SH_26S021800     | SW                 | 2.8km                     | Poor                              | At Risk                               | Downstream of Athlone WwTP emission point.<br><br>Potential hydrological connection via upstream surface water discharge to the local drainage network. |
| Lake Water Bodies  |                     |                    |                           |                                   |                                       |                                                                                                                                                         |
| Ballaghkeeran Bay  | IE_SH_26_750d       | N                  | 1km                       | Moderate                          | At Risk                               | Potential hydrological connection via upstream surface water discharge to the local drainage network.                                                   |
| Lough Killinure    | IE_SH_26_750b       | N                  | 1.8km                     | Good                              | Not at Risk                           |                                                                                                                                                         |
| Lough Ree          | IE_SH_26_750a       | NW                 | 2.8km                     | Moderate                          |                                       |                                                                                                                                                         |
| Groundwater Bodies |                     |                    |                           |                                   |                                       |                                                                                                                                                         |
| Athlone Gravels    | IE_SH_G_246         | N/A                | N/A                       | Good                              | Not At Risk                           | Underlying groundwater-body                                                                                                                             |

## 4.2 Relevant Field Survey results

### 4.2.1 Habitats & Flora

The Site of the Proposed Development is composed of multiple habitats. Two types of grassland are present. The first and most dominant grassland was *Dry meadows and grassy verges* (Fossitt Code: GS2). *Wet grassland* (Fossitt Code: GS4) was present along the boundaries of drainage ditches, and particularly in the southwestern field where small patches of standing water were present. In these grassland habitats common spotted orchid (*Dactylorhiza fuchsii*) was found in low abundances. No other orchid species, or orchid species relevant to Annex habitats, were found.

The Garrnafela Stream traverses the Site from east to west and then turns north alongside the western most treeline. The stream is approximately 2m in width and had a gentle current during both surveys. Its depth ranged between 2 feet and 0.5 feet. Evidence of poaching from horses was present in certain spots along the riverbank. Two drainage ditches are present on Site. The first flows along the western boundary of the Site before discharging into the Garrnafela Stream. The second drainage ditch marked the southern boundary of the northern wet grassland area. This ditch was less than a foot deep and flowed

east to west into the Garrynafela Stream. It is unlikely that this ditch is permanently wet due to the lack of aquatic plants present.

Two invasive species were observed during the ecological walkovers, the sycamore which is considered to be an invasive of *medium* impact, and the Norway maple an invasive of *low* impact. It is worth noting that neither species is considered a significant invasive species threat at the Site or in agricultural settings and are common features of planted hedgerows and treelines in Ireland.

Sycamore is considered to be an invasive maple species in certain settings due to its ability to outcompete native tree species, and its supposedly low contribution to local biodiversity by supporting fewer insect species than native tree species. However sycamore's invasiveness is considered to be more of an issue in some sensitive native woodland settings, and this species has been found to support relatively high numbers of lichen species, including rarer species, when compared to native tree species (Leslie, 2005). Sycamore is not considered to pose any risk of impacts at the Site of the Proposed Development. This species is not included in the TII (2020) invasive management guidance and does not require a specific removal approach; it can be removed as per normal tree removal protocol if required to facilitate the development by the arborist tree impact plan. The same applies to the Norway Maple.

No protected plant species or Annex 1 habitats were recorded on Site.

## 4.2.2 Fauna

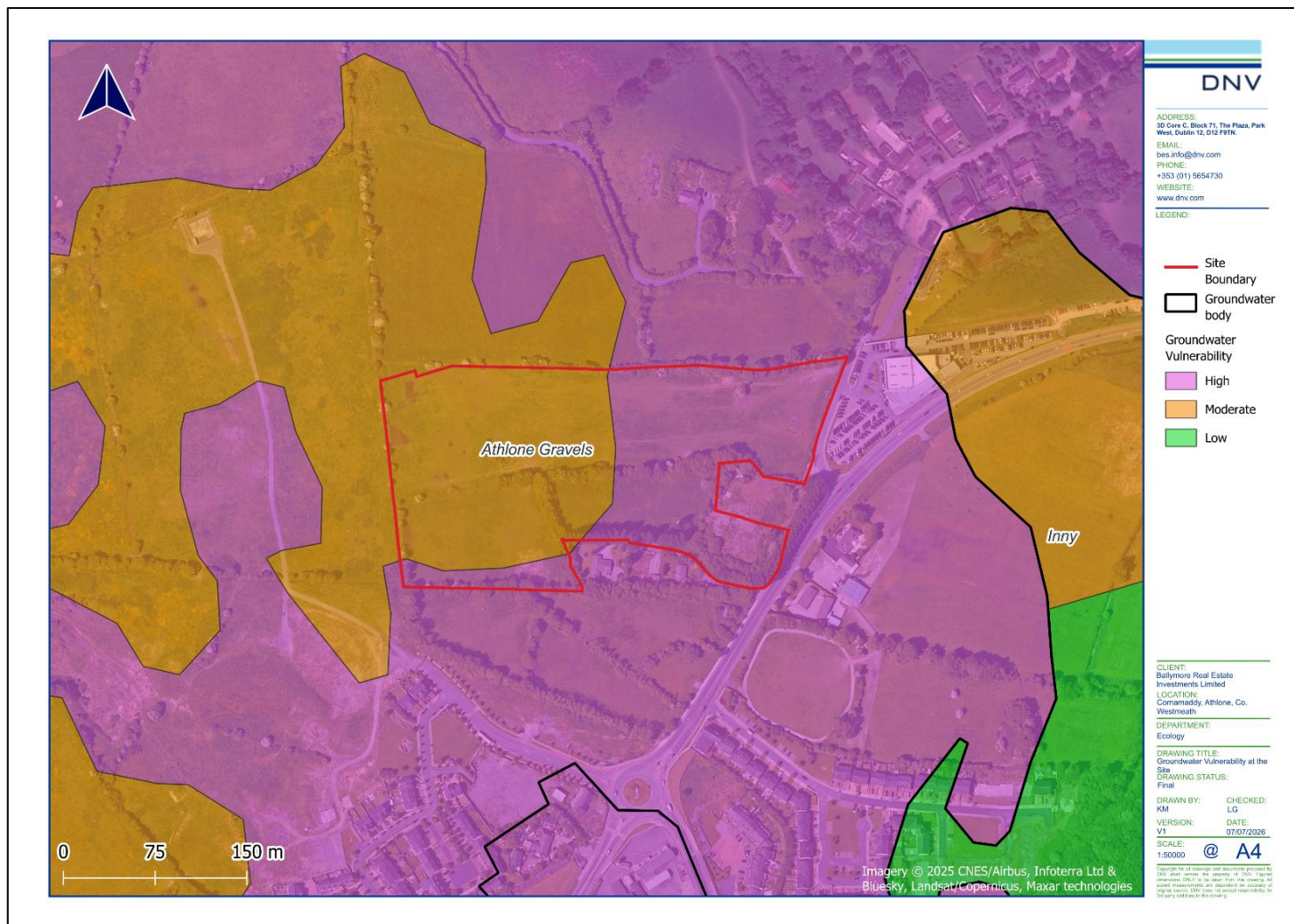
The only direct evidence of mammal presence found during the survey was common rabbit (*Oryctolagus cuniculus*) scat. Though water features are present on Site (e.g drainage ditches and the Garrynafela Stream) no signs of otter (*Lutra lutra*) were found. While it is possible that otters travel up the Garrynafela Stream and onto Site, it is unlikely that this Site supports a resident, or regularly occurring, population due to a lack of evidence at the Garrynafela Stream during the surveys. For example, no otter prints, fur, scat, or holts were found on Site. Furthermore, the anthropogenic disturbance caused by the active construction directly west of the Site further reduces the possibility of a resident otter population. While small minnows (*Phoxinus phoxinus*) were recorded by the surveyor in the Garrynafela Stream, no larger fish species were recorded, suggesting limited foraging opportunities for otters at the Site.

A total of 29 bird species were observed at the Site during the surveys, as detailed in Table 3. Of these two were red-listed and six were amber-listed according to Birds of Conservation Concern in Ireland 2020-2026 (Gilbert et al., 2021).

**TABLE 3. LIST OF ALL BIRD SPECIES OBSERVED AT THE SITE.**

| Species Name                                     | BoCCI | Observations                                                                                                                                              |
|--------------------------------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Swift ( <i>Apus apus</i> )                       | Red   | Two individuals foraging high above the Site.                                                                                                             |
| Meadow Pipit ( <i>Anthus pratensis</i> )         | Red   | Five individuals foraging on Site.                                                                                                                        |
| Common Starling ( <i>Sturnus vulgaris</i> )      | Amber | Approximately 10 individuals were recorded flying over Site.                                                                                              |
| Barn Swallow ( <i>Hirundo rustica</i> )          | Amber | Approximately 15 individuals were recorded foraging on Site. Foraging took place throughout the survey period in multiple areas.                          |
| House Martin ( <i>Delichon urbicum</i> )         | Amber | One individual foraging just southeast of the Site.                                                                                                       |
| House Sparrow ( <i>Passer domesticus</i> )       | Amber | Approximately three individuals recorded on Site.                                                                                                         |
| Lesser Black-backed Gull ( <i>Larus fuscus</i> ) | Amber | Multiple flyovers. At least 3 individuals.                                                                                                                |
| Willow warbler ( <i>Phylloscopus trochilus</i> ) | Amber | Recorded foraging on Site.                                                                                                                                |
| Common Buzzard ( <i>Buteo buteo</i> )            | Green | Observed perched on tree within site boundary and stayed within the general area. No evidence of nesting was found within the surveyed area.              |
| Wren ( <i>Troglodytes troglodytes</i> )          | Green | Recorded foraging on Site. Likely nesting on site as one individual was observed carrying food in its beak. Alarm calls sounded when surveyor approached. |

| Species Name                                   | BoCCI | Observations                                                                                |
|------------------------------------------------|-------|---------------------------------------------------------------------------------------------|
| Stonechat ( <i>Saxicola rubicola</i> )         | Green | Recorded foraging on Site.                                                                  |
| Goldfinch ( <i>Carduelis carduelis</i> )       | Green | Recorded foraging on Site.                                                                  |
| Jackdaw ( <i>Corvus monedula</i> )             | Green | Recorded commuting through the Site.                                                        |
| Rook ( <i>Corvus frugilegus</i> )              | Green | Recorded commuting through the Site.                                                        |
| Raven ( <i>Corvus corax</i> )                  | Green | Four individuals commuted across the Site.                                                  |
| Woodpigeon ( <i>Columba palumbus</i> )         | Green | Recorded commuting through the Site.                                                        |
| Blackbird ( <i>Turdus merula</i> )             | Green | Recorded foraging on Site.                                                                  |
| European Robin ( <i>Erithacus rubecula</i> )   | Green | Recorded foraging on Site. Fledglings present on Site. One adult spotted with food in beak. |
| Blackcap ( <i>Sylvia atricapilla</i> )         | Green | Recorded foraging on Site.                                                                  |
| Bullfinch ( <i>Pyrrhula pyrrhula</i> )         | Green | Recorded foraging on Site.                                                                  |
| Chaffinch ( <i>Fringilla coelebs</i> )         | Green | Recorded commuting through the Site.                                                        |
| Song Thrush ( <i>Turdus philomelos</i> )       | Green | Recorded foraging on Site.                                                                  |
| Grey Heron ( <i>Ardea cinerea</i> )            | Green | Recorded commuting through the Site.                                                        |
| Pied Wagtail ( <i>Motacilla alba</i> )         | Green | Recorded commuting through the Site.                                                        |
| Hooded Crow ( <i>Corvus cornix</i> )           | Green | Recorded on Site.                                                                           |
| Magpie ( <i>Pica pica</i> )                    | Green | Call heard on Site.                                                                         |
| Blue tit ( <i>Cyanistes caeruleus</i> )        | Green | Recorded foraging on Site. Fledglings present.                                              |
| Greater whitethroat ( <i>Sylvia communis</i> ) | Green | Recorded on Site.                                                                           |
| Reed Bunting ( <i>Emberiza schoeniclus</i> )   | Green | Recorded on Site.                                                                           |



**FIGURE 6. MAP OF GROUNDWATER VULNERABILITY ON SITE.**

### 4.3 Summary Of Relevant European Sites

The following descriptions of the relevant habitats and species occurring within the European site(s) considered in this NIS have been extracted from Site Synopses and any supporting documents available for the relevant site(s) (NPWS, 2015) (NPWS, 2019).

#### 4.3.1 Lough Ree SAC (000440)

*'Lough Ree is the third largest lake in Ireland and is situated in an ice-deepened depression in Carboniferous limestone on the River Shannon system between Lanesborough and Athlone. The site spans Counties Longford, Roscommon and Westmeath. Some of its features (including the islands) are based on glacial drift. It has a very long, indented shoreline and hence has many sheltered bays. Although the main habitat, by area, is the lake itself, interesting shoreline, terrestrial and semi aquatic habitats also occur.*

*Reedbeds of Common Reed (Phragmites australis) are an extensive habitat in a number of more sheltered places around the lake, but single-species 'swamps' consisting of such species as Common Club-rush (Scirpus lacustris), Slender Sedge (Carex lasiocarpa), Great Fen-sedge (Cladium mariscus) and two scarce species of sedge (Carex appropinquata and C. elata) also occur in suitable places. Some of these grade up into species-rich alkaline fen with Black Bog-rush (Schoenus nigricans) and Whorl grass (Catabrosa aquatica), or freshwater marsh with abundant Water Dock (Rumex hydrolapathum) and Hemp-agrimony (Eupatorium cannabinum). Lowland wet grassland is found in abundance around the shore and occurs in two types. One is 'callowland', grassland which floods in winter. This provides feeding for winter waterfowl and breeding waders. The other is an unusual community on stony wet lake shore which is found in many places around the lake, and is characterized by Water Germander (Teucrium scordium), a scarce plant species almost confined to this lake and Lough Derg.*

*Dry calcareous grassland occurs scattered around the lake shore. This supports typical species such as Yellow-wort (Blackstonia perfoliata), Carlina Thistle (Carlina vulgaris) and Quaking-grass (Briza media). Orchids also feature in this habitat e.g. Bee Orchid (Ophrys apifera) and Common Spotted orchid (Dactylorhiza fuchsii). Limestone pavement occurs occasionally around the lake shore. The most substantial area is at Rathcline in the extreme north-east. While this has been planted with commercial forestry since the 1950s, it still displays a diverse representation of pavement types, from the typical clint-gryke system to large blocky pavements and scattered boulders. In all cases the pavement is covered by a bryophyte-rich flora, with abundant Ivy (Hedera helix), and a scrub layer dominated by Ash (Fraxinus excelsior), Hazel (Corylus avellana) and some Spindle (Euonymus europaeus). The ground flora is variable, though in places it is species-rich.*

*Dry broadleaved semi-natural woodland occurs in several places around the lake, most notably at St John's Wood and on Hare Island. St John's Wood is recognised as the largest and most natural woodland in the Midlands. Its canopy is dominated by Hazel, Pedunculate Oak (Quercus robur), Holly (Ilex aquifolium) and Ash, but a range of other trees and shrubs occur, including Wych Elm (Ulmus glabra), Yew (Taxus baccata), Wild Cherry (Prunus avium) and Irish Whitebeam (Sorbus hibernica). The ground flora of St John's Wood is species-rich, and is remarkable for the presence of two species, Toothwort (Lathraea squamaria) and Bird's-nest Orchid (Neottia nidus avis), which tend to occur in sites with a long history of uninterrupted woodland cover. The tree species composition on Hare Island is similar to that in St John's Wood, with additional non-native species such as Sycamore (Acer pseudoplatanus) and Beech (Fagus sylvatica). This wood also has an exceptionally rich ground flora. Some of the smaller areas of woodland around Lough Ree are mixed woodland with a high percentage of exotics such as Beech. Some areas of well-developed Hazel scrub also occur.*

*Associated with the extensive raised bog system at Clooncraff/Clonlarge are areas of bog woodland. At least two small areas of woodland occur on the raised bog domes. However, it would appear that this habitat is in the early stages of development. The largest area is dominated by low trees of Downy Birch and Lodgepole Pine (Pinus contorta). Occasional trees of Scots Pine (Pinus sylvestris) also occur. The ground layer is wet and quaking with a lush carpet of mosses present, including various species of Sphagnum, Pleurozium schreberi and Aulacomium palustre. The main vascular plant species in the ground flora are Bog-rosemary (Andromeda polifolia), Cranberry (Vaccinium oxycoccos), Bog-myrtle (Vaccinium myrtillus), Hare's-tail Cottongrass and Deergrass. Bog Woodland is of particular conservation importance and is listed with priority status on the E.U. Habitats Directive. At St John's Wood, there is an interesting area of woodland that grows on cut-away peat. This is dominated by Downy Birch and Alder Buckthorn (Frangula alnus). The occurrence of the latter species in such abundance is unusual in Ireland.*

The lake itself contains one of only two populations in Ireland of the endangered fish species, Pollan (*Coregonus autumnalis*), which is genetically different from Continental European stock. The shrimp *Mysis relicta* (Class Crustacea) occurs in this lake and is a relict of the glacial period in Ireland.

There is a population of Otter around the lake. This species is listed in the Red Data Book as being threatened in Europe and is protected under Annex II of the E.U. Habitats Directive.

Land uses within the site include recreation in the form of cruiser hire, angling, camping, picnicking and shooting. Chalet accommodation occurs at a few locations around the lake. Low-intensity grazing occurs on dry and wet grassland around the shore, and some hay is made within the site. Some of these activities are damaging, but in a very localised way, and require careful planning. The main threat to the aquatic life in the lake comes from artificial enrichment of the waters by agricultural and domestic waste, and also by peat silt in suspension which is increasingly limiting the light penetration and thus restricting aquatic flora to shallower waters. At present Lough Ree is less affected by eutrophication than Lough Derg. Lough Ree and its adjacent habitats are of major ecological significance. Some of the woodlands around the lake are of excellent. St John's Wood is particularly important; it is one of the very few remaining ancient woodlands in Ireland. The lake itself is an excellent example of a mesotrophic to moderate-eutrophic system, supporting a rare fish species and a good diversity of breeding and wintering birds.'

#### 4.3.2 Lough Ree SPA (004064)

'Situated on the River Shannon between Lanesborough and Athlone, Lough Ree is the third largest lake in the Republic of Ireland. It lies in an ice-deepened depression in Carboniferous Limestone. Some of its features (including the islands) are based on glacial drift. The main inflowing rivers are the Shannon, Inny and Hind, and the main outflowing river is the Shannon. The greater part of Lough Ree is less than 10 m in depth, but there are six deep troughs running from north to south, reaching a maximum depth of about 36 m just west of Inchmore. The lake has a very long, indented shoreline and hence has many sheltered bays. It also has a good scattering of islands, most of which are included in the site.

Beds of Common Reed (*Phragmites australis*) are an extensive habitat in a number of the more sheltered places around the lake; monodominant stands of Common Club rush (*Scirpus lacustris*), Slender Sedge (*Carex lasiocarpa*) and Saw Sedge (*Cladium mariscus*) also occur as swamps in suitable places. Some of these grade into species rich calcareous fen or freshwater marsh. Lowland wet grassland, some of which floods in winter, occurs frequently around the shore.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Whooper Swan, Wigeon, Teal, Mallard, Shoveler, Tufted Duck, Common Scoter, Goldeneye, Little Grebe, Coot, Golden Plover, Lapwing and Common Tern. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

Lough Ree is one of the most important Midland sites for wintering waterfowl, with nationally important populations of Little Grebe (52), Whooper Swan (139), Wigeon (2,070), Teal (1,474), Mallard (1,087), Shoveler (54), Tufted Duck (1,012), Goldeneye (205), Coot (338), Golden Plover (3,058) and Lapwing (5,793) – all figures are three year mean peaks for the period 1997/98 to 1999/2000. Other species which occur in winter include Great Crested Grebe (29), Cormorant (99), Curlew (254) and Black-headed Gull (307) as well as the resident Mute Swan (85). Greenland White-fronted Goose has been recorded on occasion on the flooded margins of the site.

The site supports a nationally important population of Common Tern (90 pairs in 1995). It is a traditional breeding site for Black-headed Gull and whilst a full survey has not been carried out in recent years, substantial numbers of nesting birds were present on at least one island in 2003. Lesser Black-backed Gull and Common Gull have bred in the past and may still breed. Lough Ree is a noted site for breeding duck and grebes: Tufted Duck (202 pairs) and Great Crested Grebe (32 pairs) – records from 1995. Of particular note is that Lough Ree is one of the two main sites in the country for breeding Common Scoter, a Red Data Book species. Surveys have recorded 39 pairs and 32 pairs in 1995 and 1999 respectively. Cormorant also breeds on some of the islands within the site – 86 nests were recorded in 2010. The woodland around the lake is a stronghold for Garden Warbler and this scarce species probably occurs on some of the islands within the site.

Lough Ree SPA is of high ornithological importance for both wintering and breeding birds. It supports nationally important populations of eleven wintering waterfowl species. The site has a range of breeding waterfowl species, notably nationally important populations of Common Scoter and Common Tern. Of particular note is the regular presence of three species, Whooper Swan, Golden Plover and Common Tern, which are listed on Annex I of the E.U. Birds Directive. Parts of Lough Ree SPA are Wildfowl Sanctuaries.'

### 4.3.3 Qualifying Interests and Conservation Objectives

The QIs/SCIs and their respective conservation objectives for each of the relevant European site(s) are detailed in Table 4. QI habitats relevant to the Lough Ree SAC (000440) in the vicinity of the Proposed Development are detailed in Figure 7.

**TABLE 4. QUALIFYING INTERESTS (QIs) / SPECIAL CONSERVATION INTERESTS (SCIs) AND THEIR CONSERVATION OBJECTIVES FOR THE RELEVANT EUROPEAN SITES. THE CONSERVATION STATUS OF EACH QI / SCI WAS SOURCED FROM THE RELEVANT STANDARD DATA FORM(S) (SOURCE: EEA (2026)) AND THE LATEST NATIONAL STATUS IS TAKEN FROM THE LATEST ARTICLE 17 REPORT (NPWS, 2025) AND BOCCI<sup>1</sup> RESPECTIVELY.**

| QI / SCI<br>(* = priority habitat)                                                                                                                       | Conservation Status | National Status | Conservation Objective                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Lough Ree SAC (000440)</b>                                                                                                                            |                     |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| [3150] Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation                                                                    | Excellent           | Inadequate      | To restore the favourable conservation condition of this habitat within the Lough Ree SAC.                                                                                                                                                                                                                                                                                                                                                                                                                       |
| [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)                         | Good                | Bad             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| [7110] Active raised bogs                                                                                                                                | Good                | Bad             | This habitat is not listed in the most recent conservation objectives document for this SAC. The conservation objectives supporting document for raised bog habitats within this SAC states that surveys of Lough Ree SAC show that active raised bog habitat is present and there is considerable potential for the degraded raised bog habitat to develop into active raised bogs following restoration measures and as such the document has included this habitat as a priority I habitat for Lough Ree SAC. |
| [7120] Degraded raised bogs still capable of natural regeneration                                                                                        | Reduced             | Bad             | To restore the favourable conservation condition of this habitat within the Lough Ree SAC.                                                                                                                                                                                                                                                                                                                                                                                                                       |
| [7230] Alkaline fens                                                                                                                                     | Excellent           | Bad             | To maintain the favourable conservation condition of this habitat within the Lough Ree SAC.                                                                                                                                                                                                                                                                                                                                                                                                                      |
| [8240] Limestone pavements                                                                                                                               | Reduced             | Inadequate      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| [91D0] Bog woodland                                                                                                                                      | Good                | Bad             | To restore the favourable conservation condition of this habitat within the Lough Ree SAC.                                                                                                                                                                                                                                                                                                                                                                                                                       |
| [91E0] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> ( <i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i> ) | Excellent           | Bad             | This habitat is not listed in the most recent conservation objectives document for Lough Ree SAC.                                                                                                                                                                                                                                                                                                                                                                                                                |
| [1355] Otter ( <i>Lutra lutra</i> )                                                                                                                      | Excellent           | Favourable      | To maintain the favourable conservation condition of this species within the Lough Ree SAC.                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Lough Ree SPA (004064)</b>                                                                                                                            |                     |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

<sup>1</sup> Birds of Conservation Concern in Ireland (BOCCI) 2020-2026 (Gilbert, Stanbury & Lewis, 2021). The colours represent the species designation on the various BOCCI lists.

| QI / SCI<br>(* = priority habitat)                       | Conservation<br>Status | National<br>Status | Conservation Objective                                                                                                                                                          |
|----------------------------------------------------------|------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [A004] Little grebe<br>( <i>Tachybaptus ruficollis</i> ) | N/A                    | Green              | To maintain the favourable conservation condition of this species within the Lough Ree SPA.                                                                                     |
| [A038] Whooper swan<br>( <i>Cygnus cygnus</i> )          | Good                   | Amber              | To restore the favourable conservation condition of this species within the Lough Ree SPA.                                                                                      |
| [A050] Wigeon ( <i>Anas penelope</i> )                   | N/A                    | Amber              |                                                                                                                                                                                 |
| [A052] Teal ( <i>Anas crecca</i> )                       | Good                   | Amber              |                                                                                                                                                                                 |
| [A053] Mallard ( <i>Anas platyrhynchos</i> )             | Excellent              | Amber              |                                                                                                                                                                                 |
| [A056] Shoveler ( <i>Anas clypeata</i> )                 | N/A                    | Red                | To maintain the favourable conservation condition of this species within the Lough Ree SPA.                                                                                     |
| [A061] Tufted duck ( <i>Aythya fuligula</i> )            | Excellent              | Amber              |                                                                                                                                                                                 |
| [A065] Common scoter<br>( <i>Melanitta nigra</i> )       | Good                   | Red                | To restore the favourable conservation condition of this species within the Lough Ree SPA.                                                                                      |
| [A067] Goldeneye<br>( <i>Bucephala clangula</i> )        | Excellent              | Red                |                                                                                                                                                                                 |
| [A125] Coot ( <i>Fulica atra</i> )                       | Excellent              | Amber              | To maintain the favourable conservation condition of this species within the Lough Ree SPA.                                                                                     |
| [A140] Golden plover<br>( <i>Pluvialis apricaria</i> )   | Reduced                | Red                | To restore the favourable conservation condition of this species within the Lough Ree SPA.                                                                                      |
| [A142] Lapwing ( <i>Vanellus vanellus</i> )              | Good                   | Red                |                                                                                                                                                                                 |
| [A193] Common tern<br>( <i>Sterna hirundo</i> )          | Good                   | Amber              |                                                                                                                                                                                 |
| [A999] Wetland and waterbirds.                           | N/A                    | N/A                | To maintain the favourable conservation condition of Wetland habitats in Lough Ree SPA as a resource for the regularly-occurring migratory waterbirds that utilise these areas. |



**FIGURE 7. QI HABITATS RELEVANT TO THE LOUGH REE SAC WITHIN VICINITY OF THE PROPOSED DEVELOPMENT**

## 4.4 Impact Prediction

This section follows the S-P-R method as outlined in Section 3.5 to identify if and how any of the QIs/SCIs of the relevant European sites are linked to the Proposed Development. Once the connections have been identified, the potential impacts of the Proposed Development on the Lough Ree SAC (000440) and Lough Ree SPA (004064) in light of its QIs/SCIs are assessed.

For the purposes of objectivity and clarity, mitigation measures **are not considered in the impact prediction**. This includes all measures that will act limit or eliminate the potential for significant adverse impacts on the relevant European site.

### 4.4.1 Potential impacts of the Proposed Development on key Species and Habitats

The following elements of the Proposed Development were identified and assessed for their potential to cause likely significant effects on European sites.

#### **Construction Phase** (*Estimated duration: 16 months*)

- Uncontrolled releases of dust, sediments and/or other pollutants to air due to earthworks;
- Surface water run-off containing silt, sediments and/or other pollutants into nearby waterbodies or surface water network;
- Surface water run-off containing silt, sediments and/or other pollutants into the local groundwater;
- Waste generation during the Construction Phase comprising soils and construction wastes;
- Increased noise, dust and/or vibrations as a result of construction activity;
- Loss of potential *ex-situ* habitat for SCI bird species;
- Increased dust and air emissions from construction traffic;
- Increased lighting in the vicinity as a result of construction activity; and
- Increased human presence and activity as a result of construction activity.

#### **Operational Phase** (*Estimated duration: Indefinite*)

- Surface water drainage from the Site of the Proposed Development;
- Foul water from the Proposed Development;
- Increased SCI bird collision risk and flightline disruption risk due to the Proposed Development;
- Increased lighting at the Site and in the vicinity emitted from the Proposed Development; and
- Increased human presence and activity at the Site and in the vicinity as a result of the Proposed Development.

The QIs/SCIs for the relevant European sites are shown on Figure 7 and described in Table 5 below outlines the identified pathways between the Proposed Development and the relevant QIs/SCIs, and assesses the potential significant effects of the Proposed Development on these. The assessment outlined below does not consider mitigation measures that will be implemented as part of the Proposed Development, but the nature of mitigation that will be required to eliminate the potential for significant adverse impacts is identified in the table, if any.

**TABLE 5. ASSESSMENT OF THE POTENTIAL IMPACT OF THE PROPOSED DEVELOPMENT ON THE QIs AND SCIs OF THE RELEVANT EUROPEAN SITES. THOSE QIs/SCIs FOR WHICH NOTABLE IMPACT PATHWAYS WERE IDENTIFIED HAVE BEEN HIGHLIGHTED IN GREEN.**

| Description                                                                                                                                                                                                                                                                                                                                                                                           | Impact Pathway(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Assessment of likely significant effects                                                                                                                                                                                                                                                                                                                                                                                                                        | Mitigation Requirement                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Lough Ree SAC (000440)</b>                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                    |
| <b>3150 Natural eutrophic lakes with Magnopotamion or Hydrocharition – type vegetation</b>                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                    |
| <i>Conservation objective:</i> To restore the favourable conservation condition of this habitat in the Lough Ree SAC:                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                    |
| <p>According to the Conservation Objectives document for this SAC, this habitat occurs in Lough Ree, Killinure Lough, Coosan Lough and Ballaghkeeran Bay.</p> <p>This habitat requires mesotrophic waters, and typically has well-developed reed swamp, fen and marsh communities around the lake shoreline.</p>                                                                                      | <p><b>A hydrological connection</b> exists between the Site and this habitat via the Garrynafela Stream. The Garrynafela Stream flows into Ballaghkerran Bay approximately 1.4 river km downstream of the Site. During the Construction Phase, there is potential for sediment, silt and pollutants to reach the Garrynafela Stream and ultimately flow into this habitat in Ballaghkeeran Bay.</p> <p><b>A hydrogeological connection</b> exists between the Site and this habitat via the Athlone Gravels groundwater body. During the Construction Phase, there is potential for groundwater contaminated by construction activities at the Site to reach this downgradient habitat.</p> | <p>Water contaminated by pollutants generated during the Construction Phase entering this habitat, either via the Garrynafela Stream or through groundwater discharge, could lead to a reduction in water quality that negatively impacts the conservation condition of this habitat.</p> <p>This habitat does not occur within the Site boundary and there will be no direct loss of habitat area or distribution as a result of the Proposed Development.</p> | <p><b>Construction Phase:</b></p> <ul style="list-style-type: none"> <li>• Water Quality Management</li> <li>• Silt Fence and Straw Bale Maintenance</li> <li>• Culvert Placement</li> </ul> <p><b>Operational Phase:</b><br/>None envisioned.</p> |
| <b>6210 Semi-natural dry grassland and scrubland facies on calcareous substrates (Festuco Brometalia) (*important orchid sites)</b>                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                    |
| <i>Conservation Objective:</i> To restore the favourable conservation condition of this habitat in the Lough Ree SAC:                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                    |
| <p>Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) comprises species-rich plant communities found on shallow, well-drained calcareous substrates.</p> <p>Two sites within the Lough Ree SAC contain large enough discrete areas of this Annex I habitat. The closest record of this habitat within the SAC is in site I.D. 2012, located along the</p> | <p>No S-P-R connection identified. Due to the terrestrial nature of this habitat and the lack of a significant S-P-R link between the Proposed Development and this habitat, significant impacts can be ruled out.</p> <p><b>The potential for impact on this habitat is therefore excluded.</b></p>                                                                                                                                                                                                                                                                                                                                                                                        | <p>None anticipated as no notable impact pathways were identified.</p>                                                                                                                                                                                                                                                                                                                                                                                          | <p>None required.</p>                                                                                                                                                                                                                              |

| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Impact Pathway(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Assessment of likely significant effects                                                                                                                                                                                                                                                                                                                                                                                                                  | Mitigation Requirement                                                                                                                                                                                                                             |
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| southwestern boundary adjacent to Coosan Lough, approximately 1.8km from the Site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                    |
| <b>7110 Active raised bogs &amp; 7120 Degraded raised bogs still capable of natural regeneration</b><br><u>Conservation objective:</u> To restore the favourable conservation condition of degraded raised bogs still capable of natural regeneration in the Lough Ree SAC<br>Active raised bogs habitat is not listed in the most recent conservation objectives document for this SAC. The conservation objectives supporting document for raised bog habitats within this SAC states that surveys of Lough Ree SAC show that active raised bog habitat is present and there is considerable potential for the degraded raised bog habitat to develop into active raised bogs following restoration measures and as such the document has included this habitat as a priority I habitat for Lough Ree SAC:                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                    |
| <p>Active raised bog (ARB) habitat within the Lough Ree SAC was mapped as 5.7ha. The total area of Degraded raised bog (DRB) on the high bog (HB) potentially restorable to ARB by drain blocking is 44.7ha. The total potential ARB on the HB is therefore estimated to be 50.4ha.</p> <p>DRB corresponds to those areas of high bog where the hydrology has been adversely affected by peat cutting, drainage, afforestation and other land use activities, but which are capable of regeneration to ARB within 30 years.</p> <p>Water chemistry within raised bogs is influenced by atmospheric inputs (rainwater). However, within soak systems, water chemistry is influenced by other inputs such as focused flow or interaction with underlying substrates. Water chemistry in areas surrounding the high bog varies due to influences of different water types (bog water, regional groundwater, and run-off from surrounding mineral lands)</p> | <p><b>A hydrological connection</b> exists between the Site and this habitat via the Garrynafera Stream. The Garrynafera Stream flows into Ballaghkerran Bay approximately 1.4 river km downstream of the Site. During the Construction Phase, there is potential for sediment, silt and pollutants to reach the Garrynafera Stream and ultimately flow into this habitat.</p> <p><b>A hydrogeological connection</b> exists between the Site and this habitat via the Athlone Gravels groundwater body. During the Construction Phase, there is potential for groundwater contaminated by construction activities at the Site to reach this downgradient habitat.</p> | <p>Water contaminated by pollutants generated during the Construction Phase entering this habitat, either via the Garrynafera Stream or through the groundwater, could lead to a reduction in water quality that negatively impacts the conservation condition of this habitat.</p> <p>This habitat does not occur within the Site boundary and there will be no direct loss of habitat area or distribution as a result of the Proposed Development.</p> | <p><b>Construction Phase:</b></p> <ul style="list-style-type: none"> <li>• Water Quality Management</li> <li>• Silt Fence and Straw Bale Maintenance</li> <li>• Culvert Placement</li> </ul> <p><b>Operational Phase:</b><br/>None envisioned.</p> |
| <b>7230 Alkaline fens</b><br><u>Conservation Objective:</u> To maintain the favourable conservation condition of this habitat in the Lough Ree SAC:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                    |

| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Impact Pathway(s)                                                                                                                                                                                                                                                                                    | Assessment of likely significant effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Mitigation Requirement                                                                                                                                                                                                                             |
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| <p>The full extent of alkaline fens in the Lough Ree SAC is currently unknown. The main area is considered to occur in the vicinity of St. John's Wood, on the western side of the lake but there are likely to be additional areas around the lake. Alkaline fens occur in association with other habitats such as wet grassland and marsh.</p> <p>Maintenance of groundwater, surface water flows, and water table levels within natural ranges is essential for this wetland habitat.</p> | <p><b>A hydrogeological connection</b> exists between the Site and this habitat via the Athlone Gravels groundwater body. During the Construction Phase, there is potential for groundwater contaminated by activities at the Site to reach and impact this downgradient habitat.</p>                | <p>This habitat is particularly sensitive to groundwater pollution, as a significant portion of water found in fen habitats is supplied by surrounding groundwater resources. Groundwater contaminated by pollutants generated during the Construction Phase entering this habitat could lead to a reduction in water quality that negatively impacts the conservation condition of this habitat.</p> <p>This habitat does not occur within the Site boundary and there will be no direct loss of habitat area or distribution as a result of the Proposed Development.</p> | <p><b>Construction Phase:</b></p> <ul style="list-style-type: none"> <li>• Water Quality Management</li> <li>• Silt Fence and Straw Bale Maintenance</li> <li>• Culvert Placement</li> </ul> <p><b>Operational Phase:</b><br/>None envisioned.</p> |
| <p><b>8240 Limestone pavements</b><br/> <u>Conservation Objective:</u> To maintain the favourable conservation condition of this habitat in the Lough Ree SAC:</p>                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                    |
| <p>Limestone pavement is a priority EU Annex I habitat.</p> <p>Limestone pavements often occurs in close association with other habitats including grasslands and heath. This habitat is present on the eastern side of Lough Ree and is approximately 2.1ha.</p>                                                                                                                                                                                                                            | <p>No S-P-R connection identified. Due to the terrestrial nature of this habitat and the lack of a significant S-P-R link between the Proposed Development and this habitat, significant impacts can be ruled out.</p> <p><b>The potential for impact on this habitat is therefore excluded.</b></p> | <p>None anticipated as no notable impact pathways were identified.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>None required.</p>                                                                                                                                                                                                                              |
| <p><b>91D0 Bog Woodland</b><br/> <u>Conservation Objective:</u> To restore the favourable conservation condition of this habitat in the Lough Ree SAC:</p>                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                    |

| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Impact Pathway(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Assessment of likely significant effects                                                                                                                                                                                                                                                                                                                                                                                                                  | Mitigation Requirement                                                                                                                                                                                                                             |
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| <p>Bog woodland occurs in three distinct habitats in Ireland: on intact raised bogs, where it is associated with low-flow flushes on the high bog; on cutover bog, where it occurs in association with a weak groundwater influence; and within Sessile Oak woodlands in association with nutrient-poor flushes.</p> <p>Bog woodland is typically species-poor but with a characteristic and distinctive flora. Negative indicator species include bracken (<i>Pteridium aquilinum</i>) and bramble (<i>Rubus fruticosus</i>), which can become invasive if the site begins drying out.</p>                                                                                                                      | <p><b>A hydrological connection</b> exists between the Site and this habitat via the Garrynafera Stream. The Garrynafera Stream flows into Ballaghkerran Bay approximately 1.4 river km downstream of the Site. During the Construction Phase, there is potential for sediment, silt and pollutants to reach the Garrynafera Stream and ultimately flow into this habitat.</p> <p><b>A hydrogeological connection</b> exists between the Site and this habitat via the Athlone Gravels groundwater body. During the Construction Phase, there is potential for groundwater contaminated by activities at the Site to impact this downgradient habitat.</p> | <p>Water contaminated by pollutants generated during the Construction Phase entering this habitat, either via the Garrynafera Stream or through the groundwater, could lead to a reduction in water quality that negatively impacts the conservation condition of this habitat.</p> <p>This habitat does not occur within the Site boundary and there will be no direct loss of habitat area or distribution as a result of the Proposed Development.</p> | <p><b>Construction Phase:</b></p> <ul style="list-style-type: none"> <li>• Water Quality Management</li> <li>• Silt Fence and Straw Bale Maintenance</li> <li>• Culvert Placement</li> </ul> <p><b>Operational Phase:</b><br/>None envisioned.</p> |
| <p><b>91E0</b> Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>)<br/> <u>Conservation Objective:</u> This habitat is not listed in the most recent conservation objectives document for Lough Ree SAC:</p>                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                    |
| <p>Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>)* is present in Lough Ree SAC. Numerous patches of 91E0* are present along the lakeshore at St John's Wood.</p> <p>Periodic flooding is essential to maintain alluvial woodlands along river and lake floodplains, but not for woodland around springs/seepage areas. In 91E0* at St John's Wood, evidence of periodic inundation was almost always present in the form of a strand line of reeds, other plant detritus and litter. Water levels in Lough Ree are controlled by the weir at Athlone. Lake levels are drawn down in autumn and then rise over</p> | <p><b>A hydrological connection</b> exists between the Site and this habitat via the Garrynafera Stream. The Garrynafera Stream flows into Ballaghkerran Bay approximately 1.4 river km downstream of the Site. During the Construction Phase, there is potential for sediment, silt and pollutants to reach the Garrynafera Stream and ultimately flow into this habitat.</p> <p><b>A hydrogeological connection</b> exists between the Site and this habitat via the Athlone Gravels groundwater body. During the Construction Phase, there is potential for</p>                                                                                         | <p>Water contaminated by pollutants generated during the Construction Phase entering this habitat, either via the Garrynafera Stream or through the groundwater, could lead to a reduction in water quality that negatively impacts the conservation condition of this habitat.</p>                                                                                                                                                                       | <p><b>Construction Phase:</b></p> <ul style="list-style-type: none"> <li>• Water Quality Management</li> <li>• Silt Fence and Straw Bale Maintenance</li> <li>• Culvert Placement</li> </ul> <p><b>Operational Phase:</b><br/>None envisioned.</p> |

| Description                                                                                                                                                                                                                                                                                                  | Impact Pathway(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Assessment of likely significant effects                                                                                                                                        | Mitigation Requirement                                                                                                                                                                                                                             |
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| the winter and early spring in a regular seasonal pattern of flooding. The strand line was used in combination with changes in vegetation to identify the internal extent of 91E0*.                                                                                                                          | <p>groundwater contaminated by activities at the Site to impact this downgradient habitat.</p> <p><b>Land and Air Connection:</b><br/>As shown in Figure 7, the polygon representing this habitat mapped by the NPWS extends far beyond the SAC boundary and over the Site boundary. However, as no 91E0 habitat has been found on or in proximity to this Site during any of the ecological surveys, it can be concluded that no land or air pathways to this QI habitat exist.</p>                                                                                                                                                               |                                                                                                                                                                                 |                                                                                                                                                                                                                                                    |
| <b>1355 Otter (<i>Lutra lutra</i>)</b><br><u>Conservation Objective:</u> To maintain the favourable conservation condition of this species within the Lough Ree SAC:                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                 |                                                                                                                                                                                                                                                    |
| <p>Otter populations are present within the Lough Ree SAC.</p> <p>Otters have a broad diet that varies locally and seasonally, but is typically dominated by fish, in particular salmonids, eels and sticklebacks in freshwater (Bailey and Rochford, 2006; Reid et al., 2013)</p>                           | <p><b>A hydrological connection</b> exists between the Site and this habitat via the Garrynafela Stream. The Garrynafela Stream flows into Ballaghkerran Bay approximately 1.4 river km downstream of the Site. During the Construction Phase, there is potential for sediment, silt and pollutants to reach the Garrynafela Stream and ultimately flow into this SAC.</p> <p><b>A hydrogeological connection</b> exists between the Site and this habitat via the Athlone Gravels groundwater body. During the Construction Phase, there is potential for groundwater contaminated by activities at the Site to impact this downgradient SAC.</p> | <p>Reductions in water quality could lead to a reduction in fish populations and thus negatively impact otter populations due to their dependency on fish as a food source.</p> | <p><b>Construction Phase:</b></p> <ul style="list-style-type: none"> <li>• Water Quality Management</li> <li>• Silt Fence and Straw Bale Maintenance</li> <li>• Culvert Placement</li> </ul> <p><b>Operational Phase:</b><br/>None envisioned.</p> |
| <b>Lough Ree SPA (004064)</b>                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                 |                                                                                                                                                                                                                                                    |
| <b>A004 Little grebe (<i>Tachybaptus ruficollis</i>), A056 Shoveler (<i>Anas clypeata</i>), A061 Tufted duck (<i>Aythya fuligula</i>), and A125 Coot (<i>Fulica atra</i>)</b><br><u>Conservation Objective:</u> To maintain the favourable conservation condition of these species within the Lough Ree SPA: |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                 |                                                                                                                                                                                                                                                    |

| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Impact Pathway(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Assessment of likely significant effects                                                                                                                                                                                                                                                                                                        | Mitigation Requirement                                                                                                                                                                                                                             |
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| <p>The Lough Ree SPA is a vital area of wetland that supports the above bird species. These species use this site in populations large enough to be of conservation significance.</p> <p>Any significant loss to the wetland habitat within this SPA would negatively impact migratory waterbirds that utilise this SPA. Such loss of wetland habitat would likely reduce the diversity and abundance of waterbird species that the wetland can support. This, in turn, could negatively impact the Conservation Objectives for waterbird species listed as Special Conservation Interests in the SPA or other regularly-occurring migratory waterbird species.</p> | <p><b>A hydrological connection</b> exists between the Site and this SPA via the Garrynafela Stream. The Garrynafela Stream flows into Ballaghkerran Bay approximately 1.4 river km downstream of the Site. During the Construction Phase, there is potential for sediment, silt and pollutants to reach the Garrynafela Stream and ultimately flow into this SPA.</p> <p><b>A hydrogeological connection</b> exists between the Site and this SPA via the Athlone Gravels groundwater body. During the Construction Phase, there is potential for groundwater contaminated by activities at the Site to impact this downgradient SPA.</p> | <p>Water contaminated by pollutants generated during the Construction Phase entering this habitat, either via the Garrynafela Stream or through the groundwater, could lead to a reduction in water quality that negatively impacts these species due to their dependence on aquatic habitats for roosting, foraging, and nesting purposes.</p> | <p><b>Construction Phase:</b></p> <ul style="list-style-type: none"> <li>• Water Quality Management</li> <li>• Silt Fence and Straw Bale Maintenance</li> <li>• Culvert Placement</li> </ul> <p><b>Operational Phase:</b><br/>None envisioned.</p> |
| <p><b>A038 Whooper swan (<i>Cygnus cygnus</i>), A050 Wigeon (<i>Anas penelope</i>), A052 Teal (<i>Anas crecca</i>), A053 Mallard (<i>Anas platyrhynchos</i>), A065 Common scoter (<i>Melanitta nigra</i>), A067 Goldeneye (<i>Bucephala clangula</i>), A140 Golden plover (<i>Pluvialis apricaria</i>), A142 Lapwing (<i>Vanellus vanellus</i>), A193 Common tern (<i>Sterna hirundo</i>).</b></p> <p><b>Conservation Objective:</b> To restore the favourable conservation condition of these species within the Lough Ree SPA:</p>                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                    |
| <p>The Lough Ree SPA is a vital area of wetland that supports the above bird species. These species use this site in numbers great enough to be of conservation significance.</p> <p>Any significant loss to the wetland habitat within this SPA would negatively impact migratory waterbirds that utilise this wetland habitat. Such loss of wetland habitat would likely reduce the diversity and abundance of waterbird species that the wetland can support. This, in turn, could negatively impact the Conservation Objectives for waterbird species listed as Special</p>                                                                                     | <p><b>A hydrological connection</b> exists between the Site and this SPA via the Garrynafela Stream. The Garrynafela Stream flows into Ballaghkerran Bay approximately 1.4 river km downstream of the Site. During the Construction Phase, there is potential for sediment, silt and pollutants to reach the Garrynafela Stream and ultimately flow into this SPA.</p> <p><b>A hydrogeological connection</b> exists between the Site and this SPA via the Athlone Gravels groundwater body. During the Construction Phase, there is potential for</p>                                                                                     | <p>Water contaminated by pollutants generated during the Construction Phase entering this habitat, either via the Garrynafela Stream or through the groundwater, could lead to a reduction in water quality that negatively impacts these species due to their dependence on aquatic habitats for roosting, foraging, and nesting purposes.</p> | <p><b>Construction Phase:</b></p> <ul style="list-style-type: none"> <li>• Water Quality Management</li> <li>• Silt Fence and Straw Bale Maintenance</li> <li>• Culvert Placement</li> </ul> <p><b>Operational Phase:</b><br/>None envisioned.</p> |

| Description                                                                                                                                                                                                                                                                                                                                                                                                                                              | Impact Pathway(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Assessment of likely significant effects                                                                                                                                                                                                                                     | Mitigation Requirement                                                                                                                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conservation Interests in the SPA or other regularly-occurring migratory waterbird species.                                                                                                                                                                                                                                                                                                                                                              | groundwater contaminated by activities at the Site to impact this downgradient SPA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                    |
| <b>A999 Wetland and waterbirds.</b><br><u>Conservation Objective:</u> To maintain the favourable conservation condition of Wetland habitats in Lough Ree SPA as a resource for the regularly-occurring migratory waterbirds that utilise these areas.                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                    |
| Any significant loss to the wetland habitat within the SPA would likely negatively impact the regularly occurring migratory waterbirds that utilise this wetland habitat. Such loss of wetland habitat would likely reduce the diversity and abundance of waterbird species that the wetland can support. This, in turn, could negatively impact the Conservation Objectives for waterbird species listed as Special Conservation Interests in this SPA. | <p><b>A hydrological connection</b> exists between the Site and this habitat via the Garrynafela Stream. The Garrynafela Stream flows into Ballaghkerran Bay approximately 1.4 river km downstream of the Site. During the Construction Phase, there is potential for sediment, silt and pollutants to reach the Garrynafela Stream and ultimately flow into this habitat.</p> <p><b>A hydrogeological connection</b> exists between the Site and this habitat via the Athlone Gravels groundwater body. During the Construction Phase, there is potential for groundwater contaminated by activities at the Site to reach and subsequently impact this downgradient habitat.</p> | Water contaminated by pollutants generated during the Construction Phase entering this habitat, either via the Garrynafela Stream or through the groundwater, could lead to a reduction in water quality that negatively impacts the conservation condition of this habitat. | <p><b>Construction Phase:</b></p> <ul style="list-style-type: none"> <li>• Water Quality Management</li> <li>• Silt Fence and Straw Bale Maintenance</li> <li>• Culvert Placement</li> </ul> <p><b>Operational Phase:</b><br/>None envisioned.</p> |

## 4.4.2 Potential for In-combination Effects

### 4.4.2.1 Existing Planning Permissions

A search of planning applications located within a 300m radius of the Site of the Proposed Development was conducted using online planning resources such as the National Planning Application Database (NPAD) (MyPlan.ie). Any planning applications listed as granted or decision pending from within the last five years were assessed for their potential to act in-combination with the Proposed Development and cause likely significant effects on the relevant European sites. Long-term developments granted outside of this time period were also considered where applicable.

The larger developments within the vicinity of the Site are listed in Table 6 below:

**TABLE 6. GRANTED AND PENDING LARGE DEVELOPMENT APPLICATIONS WITHIN 500 M OF THE PROPOSED DEVELOPMENT. LOCATION AND DISTANCE GIVEN IS RELATIVE TO THE PROPOSED DEVELOPMENT.**

| Planning Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Planning Authority              | Status                       | Location                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------------|--------------------------------|
| <b>22577</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Westmeath County Council</b> | <b>Granted. Conditional.</b> | <b>Directly SW of Site.</b>    |
| <p><b>Development Description</b></p> <p>5-year permission for development at a site of total c.10.87 ha on lands located at Cornamaddy, Athlone, Co. Westmeath. The site is generally bounded to the west by greenfield lands and Cornamagh Cemetery, to the north by greenfield lands, to the south by greenfield lands and the Ballymahon Road (N55) and to the east by the existing Drumaconn housing estate.</p> <p>The development will comprise of a residential development and public open space comprising the following:</p> <ul style="list-style-type: none"> <li>• Amendments to permitted application WMCC Reg Ref. 14/7103 ABP Ref. PL25.244826 for the removal of 38 no. permitted units (not constructed) to be replaced by: Construction of 70 no. residential units comprising: 4 no. 2 bed terraced houses (c.78 sq.m each), 60 no. 3 bed semidetached (c. 96-116 sq.m each) and 6 no. 4 bed semidetached houses (c. 147 sq.m each) with associated private gardens.</li> <li>• The creche facility, public open spaces, landscaping, roads layouts, car parking, boundary treatment works, public lighting and all associated site works associated with the 87 no. remaining units retained as permitted under WMCC Reg Ref. 14/7103 ABP Ref. PL25.244826 will remain unchanged.</li> <li>• All pedestrian and vehicular access roads and footpaths including a section of the planned east/west distributor road connecting to a sections of the distributor road permitted under WMCC Reg. Refs 14/7103 ABP Ref. PL25.244826 and 22/253 to the east of the site.</li> <li>• All associated site development works, services provision, drainage works, public open space (c.1.03ha), landscaping, boundary treatment works, public lighting, associated esb substation cabinets, bin stores, car and bicycle parking provision.</li> <li>• This development will form part of a larger/future phase of the development.</li> </ul> <p><b>Potential for In-combination effects</b></p> <p>This planning application is accompanied by an Environmental Impact Assessment Report and Natura Impact Statement. The NIS Report for this project includes a suite of mitigation measures to ensure it will not adversely affect the integrity of any European sites. As such, it is determined there is no potential for in-combination effects between the Proposed Development and this development <u>in the event that all listed mitigation measures are followed.</u></p> |                                 |                              |                                |
| <b>22253</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Westmeath County Council</b> | <b>Granted. Conditional.</b> | <b>Directly W of the Site.</b> |

| Planning Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Planning Authority       | Status                | Location        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------|-----------------|
| <b>Development Description</b><br><p>The development will consist of the following:</p> <ul style="list-style-type: none"> <li>• Construction of 75 no. residential units comprising: 51 no. 2 storey semi-detached and terraced houses (consisting 4 no. 2 bed houses and 47 no. 3 bed houses, ranging in size from c.78 sq.m – 120 sq.m each), and 24 no. 3 storey apartment/duplex units (consisting 12 no. 2 bed apartments and 12 no. 3 bed duplexes, ranging in size from 84sq.m to 121 sq.m each), with associated private gardens and east/west facing terraces;</li> <li>• All pedestrian and vehicular access roads and footpaths including a section of the planned east/west distributor road connecting to a section of the distributor road permitted under WMCC Reg. Ref. 14/7103/ ABP Ref. PL25.244826 to the south east of the site.</li> <li>• All associated site development works, services provision, drainage works, residential open space (c.0.28ha) and public open space (c.0.82ha), landscaping, boundary treatment works, public lighting, 1 no. esb substation cabinets, bin stores, car and bicycle parking provision;</li> <li>• Provision of a new detention basin on the eastern portion of the site designed to cater for the proposed development, in lieu of the drainage works permitted under WMCC Reg. Ref. 14/7103 / ABP Ref. PL 25.244826;</li> <li>• This development will form part of a larger/future phase of the development;</li> <li>• No changes to the existing pumping station located outside the northern site boundary;</li> </ul> <b>Potential for In-combination effects</b><br><p>A Natura Impact Statement has been prepared in respect of this application. The NIS Report for this project includes a suite of mitigation measures to ensure it will not adversely affect the integrity of any European sites. As such, it is determined there is no potential for in-combination effects between the Proposed Development and this development <u>in the event that all listed mitigation measures are followed.</u></p> |                          |                       |                 |
| 2360374                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Westmeath County Council | Granted. Conditional. | 215m W of Site. |
| <b>Development Description</b><br><p>Large Scale Residential Development on a site of total c. 7.31 ha comprising of a residential development and public open space comprising the following:</p> <ul style="list-style-type: none"> <li>• Construction of 177 no. residential units on a gross site area of 7.31 ha, ranging in height from 2-3 storeys comprising detached, semi-detached, and terraced houses, maisonettes and 3 storey duplex apartments.</li> <li>• 65 no. 2 bed houses, 71 no. 3 bed houses and 9 no. 4 bed houses will be provided.</li> <li>• 24 no. 1 bed maisonette apartment units and 8 no. 3 storey duplex apartment units will be provided</li> <li>• All associated development works.</li> <li>• This development will form part of a larger phase of permitted and proposed development.</li> </ul> <b>Potential for In-combination effects</b><br><p>This planning application is accompanied by an Environmental Impact Assessment Report and Natura Impact Statement. The NIS Report for this project includes a suite of mitigation measures to ensure it will not adversely affect the integrity of any European sites. As such, it is determined there is no potential for in-combination effects between the Proposed Development and this development <u>in the event that all listed mitigation measures are followed.</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                       |                 |

#### 4.4.2.2 Relevant Policies and Plans

The local policies and plans detailed in Section 2.2 above were reviewed and considered for possible in-combination effects with the Proposed Development. Each of these plans has undergone AA, and where potential for likely significant effects has been identified an NIS has been prepared which identifies appropriate mitigation. As such, it is considered that the plans and policies listed will not result in in-combination effects with the Proposed Development. The Westmeath County Development Plan 2021 – 2027 has directly addressed the protection of European sites and biodiversity through specific objectives. The above-listed plans are not being relied upon to rule out potential significant effects on European sites.

It is therefore concluded that there is **no possibility for any significant in-combination effects** to European sites involving the Proposed Development.

### 4.5 Avoidance and Mitigation Measures

The following sections outline the avoidance and mitigation measures identified to eliminate the potential for significant adverse impacts on the relevant European sites. Once the recommended measures outlined in the following sections are implemented in full, no adverse impacts on the relevant European sites or their QIs/SCIs are anticipated as a result of the Proposed Development.

#### 4.5.1 Summary of Potential Effects

Potential significant effects arising from the **Construction Phase** include:

- Water quality impacts in designated sites arising from surface water run-off during the Construction/Infill Phase, in particular during flooding events,
- Water quality impacts in designated sites arising from contaminated groundwater flowing north and west from the Site into designated sites.

No significant effects are anticipated to arise from the **Operational Phase** of this Proposed Development.

The following mitigation and enhancement measures will ensure no significant effects arise on designated sites as a result of the Proposed Development, either alone or in-combination with other projects.

#### 4.5.2 Construction Phase

All works carried out as part of the Proposed Development will comply with all Statutory Legislation including the Local Government (Water Pollution) acts, 1977 and 1990 and the contractor will cooperate fully with the Environmental Section of Westmeath County Council.

Personnel working on Site will be trained in the implementation of environmental control and emergency procedures. Procedures and relevant documents produced will be formulated in consideration of standard best international practice including but not limited to:

- Construction Industry Research and Information Association (CIRIA) (2001), Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors;
- CIRIA (2005) Environmental Good Practice on Site (C650);
- BPGCS005, Oil Storage Guidelines;
- CIRIA C648: Control of water pollution from linear construction projects: Site guide (Murnane et al. 2006); and
- Inland Fisheries Ireland (2016). Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters.

##### 4.5.2.1 Mitigation 1: Water Quality Management

The following mitigation measures are relevant to the protection of water quality downstream and downgradient of the Site.

- All works within and adjacent to the Garrynafela Stream will be planned in accordance with the contractor's Ecological Clerk of Works (ECoW) and a method statement. The ECoW or Site

Environmental Manager will give a toolbox talk in advance of works, and all working areas will be marked out clearly in advance of works.

- Prior to the commencement of developments on site, the site engineer and the contractors should be made aware of the ecological sensitivity of this Site and its surrounding habitats. They must be made familiar with the mitigation measures outlined in this report and if possible, a statement signed by them acknowledging the mitigation measures proposed should be presented to the Local Authority along with the Notice of Commencement.
- Silt-management measures will be implemented for all groundworks in order to prevent the release of any suspended solids into the Garrynafela Stream. This will include the use of straw bales/silt fences along the entire length of the Garrynafela Stream along the western Site boundary.
- Silt-fencing such as Terrastop (<https://ssienvironmental.ie/product/silt-fence/>) will be installed following good Silt-fencing installation guidance (e.g., [https://ssienvironmental.ie/wp-content/uploads/2018/03/Terrastop\\_Install\\_02-1.pdf](https://ssienvironmental.ie/wp-content/uploads/2018/03/Terrastop_Install_02-1.pdf)).
- Harmful materials such as fuels, oils, greases, paints and hydraulic fluids must be stored in bunded compounds well away from storm water drains and gullies. Refuelling of machinery should be carried out using drip trays.
- Fuel bowzers to be located in bunded areas which can cater for 100% of the primary vessel capacity.
- Refuelling will not be permitted within 10m of surface drains, with the exception of pumps for dewatering purposes, which are to be stored on portable spill bunds.
- Only appropriately trained site operatives permitted to refuel plant and machinery onsite.
- Regular inspections carried out on plant and machinery for leaks and general condition.
- All manholes and gullies will be covered with silt fencing material and sandbags to limit silt and chemical run-off into surface water.
- Runoff from machine service and concrete/grout mixing areas must not enter storm water drains and gullies leading off-site.
- Spill kits shall be available in each item of plant required.
- During construction, all excavated materials will be visually assessed for contamination.
- Any suspected contaminated material detected will be sent for analysis to a suitable environmental laboratory and subsequently quantified, segregated and transported for disposal by a licenced contractor.
- No direct discharges to be made to waters where there is potential for cement/residues/oils/chemicals in discharges.
- Stockpile areas for sands and gravel should be kept to minimum size, well away from storm water drains and gullies leading off-site.
- Open excavations to be backfilled immediately following installation of services, etc.
- Earthworks and the movement of plant on soil surfaces will be avoided during periods of extensive rainfall to limit silt laden runoff and damage to soil structure.
- Pre-cast concrete should be used wherever possible. When this is not possible, any works using cast-in-place (poured) concrete must be done in the dry and effectively isolated from any flowing water or drains for a sufficient period to ensure no leachate from the concrete.
- Where concrete is being poured on site, the following concrete / aggregate management measures should include:
  - Best practice in bulk-liquid concrete management must be employed on site addressing pouring and handling, secure shuttering, adequate curing times etc.
  - Where concrete shuttering is used, measures should be put in place to prevent shutter failure and control storage, handling and disposal of shutter oils.
  - Ready mix concrete wagons and mixers should be washed off site to minimise emissions into any local watercourses.
  - Activities which result in the creation of cement dust should be controlled by dampening down the areas.
  - Raw and uncured waste concrete should be disposed of by removal from the site or by burial on the site in a location and manner which will not impact upon the local watercourses.
  - Scheduling cement pours for dry days.

- Following heavy rainfall events, it is important to mitigate excessive outflow of silt and particulates to the surrounding surface water drainage system. During the pre-construction & construction phase, silt outflows to surface water drainage infrastructure (gullies, drains, etc.) and along watercourses and the Blyry Court road may be mitigated using sandbags, straw bales, or silt fencing, where suitable. During the construction phase, once site-specific surface water drainage infrastructure has been developed, silt chambers should be blocked off following high rainfall events to prevent excessive silt outflows to the surface water drainage system.
- A temporary drainage system will be established complete with oil interceptors and settlement ponds to remove contaminants from run-off, prior to discharge off-site.
- All material and earth removed should be stockpiled within a bunded area or within a geotextile barrier until required for use.
- Covers are to be provided over soil stockpiles when high wind and inclement weather are encountered if required. These stockpiles will be located at least 10m from the Garrynafela Stream and will be surrounded by silt-fencing to filter any suspended solids from surface waters arising from these materials.
- Conduct weekly inspections of silt fences, straw bales, sediment traps, bunded areas, and temporary drainage features, particularly after rainfall. Maintain a log of inspections and maintenance.
- Any dewatering water from excavations must pass through a settlement tank or silt bag prior to discharge. Discharge points should be away from the stream or directed through controlled swales with energy dissipation.
- Exposed soil slopes adjacent to the stream should be covered with geotextile mats, mulch, or hydroseeding immediately after excavation. Temporary check dams can be installed in drainage channels leading to the stream to reduce sediment transport.
- No machinery, stockpiling, or materials storage within the stream. Where work near the stream is unavoidable, use temporary barriers to prevent sediment and pollutants entering the water.
- Any disturbed stream banks must be restored with natural vegetation after completion of works.
- Designate a concrete washout area at least 30 m from Garrynafela Stream, lined with impermeable material and containment measures. Washout water must be treated or collected and not allowed to enter the stream.
- Use temporary diversion ditches or berms to route clean stormwater around construction areas toward Garrynafela Stream without picking up sediment. Avoid directing sedimentladen water toward the stream.
- Implement a stream-specific spill response plan. Any accidental discharge or sedimentation event near Garrynafela Stream must be immediately contained, reported, and remediated.
- Where the stream is accessible to the public or downstream properties, install signage and temporary fencing to prevent accidental access to active works, reducing the risk of contamination or disturbance.
- Location of any stilling/settling ponds will take into account groundwater vulnerability at the site and will be located in suitable areas.
- Leachate generation from stockpiles or waste receptacles will be prevented by using waterproof covers.
- Prolonged exposure of contaminated soils or groundwater to the atmosphere will be avoided where practical.

#### **4.5.2.2 Mitigation 2: Silt Fence and Straw Bale Maintenance**

Surface water run-off on Site will be managed using silt fencing and straw bale barriers. Silt fencing and/or straw bales will be installed along the entire length of the Garrynafela Stream and drainage ditches. Both straw bale barriers and silt fencing act as a temporary entrenched and anchored barrier, intercepting sediment-laden run-off and trapping sediment from drainage areas. Careful anchoring and regular checks are required. It is most effective to install silt fencing in conjunction with straw bales. In this application the straw bales will provide more structural stability to the silt fence than if the silt fence was installed alone.

**Silt fencing and straw bales will be installed prior to the commencement of earthworks on Site.**

Silt fencing will be maintained as follows:

- Silt fences will be inspected daily based on Site and weather conditions for any signs of contamination or excessive silt deposits and records of these checks will be maintained. Any deficiencies will be immediately corrected, damaged or otherwise ineffective silt fencing will be repaired/replaced by the contractor as per the manufacturer's specification.
- Where sediment has built up, this will be carefully removed at the end of each day of build-up, taking care not to damage the integrity of the fences. Sediment should be removed regularly where it reaches a third to one half of the height of the fence. Ponded water will be pumped into a sediment tank and discharged based on Site authorisations or disposal via a permitted wastewater contractor. Under no circumstances will any wastewater generated onsite be released into the nearby drainage ditches or Garrnafela Stream.
- Upon decommissioning of the fencing, any excess sediment accumulation will be removed and disposed of in accordance with the relevant waste legislation.

Straw bale barriers will be maintained as follows:

- Straw bales will be inspected daily based on Site and weather conditions and records of these checks will be maintained. Any deficiencies will be immediately corrected, ineffective straw bale barriers will be replaced by the contractor immediately.
- Straw bales will be inspected to ensure run-off isn't passing under or around the bales and to ensure the straw bale remains in the desired location.
- The straw bales will be inspected to ensure they are not full of sediment as clogging can prevent run-off from filtering through the bale. The lifespan of straw bales on Construction Sites is approximately three months, after which they must be replaced, or a new barrier placed directly upslope of the old bale.

#### 4.5.2.3 Mitigation 3: Culvert placement

Sections of the Garrnafela Stream will be culverted to facilitate the Proposed Development. All works adjacent to the Garrnafela Stream will be carried out in accordance with *IFI Guidance on Protection of Fisheries During Construction Works in and Adjacent to Waters* (IFI, 2016) and the National Roads Authority (now TII) *Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes*.

The following mitigation measures will protect the Garrnafela Stream during culvert placement:

- A suitably qualified ECoW will be present on-Site during all culvert placement works.
- The Garrnafela Stream will be culverted at the outset of construction works, and prior to the stripping of the topsoil on Site.
- The Garrnafela Stream will be culverted during low flow/dry conditions, and this will be undertaken in sections. The upstream end of the Garrnafela Stream will be dammed and any water will be over-pumped via a silt bag to the downstream end of the waterbody.
- Where in-stream bed material is to be removed, coarse aggregates, if present, should be stockpiled for replacement in the reformed channel.
- Instream works will only be carried out during the period July – September.
- Instream machine works will be minimised, and any machines working in the watercourse must be protected against leakage or spillage of fuels, oils, greases, and hydraulic fluids.
- Instream earthworks must be executed so as to minimise the suspension of solids.
- If cast-in-place concrete is required, all work must be carried out in the dry and effectively isolated from the Garrnafela Stream.
- Works involving the breaking of stream banks e.g., any reprofiling of the stream channel, will be carried out with suitable and effective mitigation in place to minimise/prevent sediment release to the stream i.e., silt-traps and other suitable in-stream measures for the collection/filtration of sediment e.g., straw bales.

## 4.6 Monitoring

### 4.6.1 Construction Phase

During the Construction Phase, the following monitoring will be carried out by the construction contractor to ensure the implemented mitigation measures are maintained effectively:

- Surface water and groundwater protection measures will be checked by the Site manager/Site Environmental Manager regularly to ensure they remain effective, and they will be checked more frequently during periods of moderate to heavy rainfall as deemed necessary. These monitoring records will be made available to the local planning authority on request.

### 4.6.2 Operational Phase

The Operational Phase will comprise residential use that is consistent with the neighbouring land use in the area. Monitoring during the Operational Phase is not considered to be necessary.

## 5 CONCLUSION

This Natura Impact Statement details the findings of the NIS conducted to further examine the potential direct and indirect impacts of the Proposed Development at Cornamaddy, Athlone, Co. Westmeath on the following European Sites:

- Lough Ree SAC (000440)
- Lough Ree SPA (004064)

The above sites were identified by a screening exercise that assessed likely significant effects of a range of impacts that have the potential to arise from the Proposed Development. The AA investigated the potential direct and indirect effects of the proposed works, both during construction/infill and operation, on the integrity and qualifying interests of the above European Site, alone and in combination with other plans and projects, taking into account the site's structure, function and conservation objectives.

Where potentially significant effects were identified, a range of mitigation and avoidance measures have been suggested to avoid them. This NIS has concluded that, once the avoidance and mitigation measures are implemented as proposed, the Proposed Development will not have an adverse effect on the integrity of the above European site(s), individually or in combination with other plans and projects. Where applicable, a suite of monitoring surveys have been proposed to confirm the efficacy of said measures in relation to ensuring no adverse impacts on the habitats of the relevant European sites have occurred.

As a result of the complete, precise and definitive findings in of this NIS, it has been concluded, beyond reasonable scientific doubt that, **under the assumption all mitigation measures are followed,** the Proposed Development will have no significant adverse effects on the QIs, SCIs and on the integrity and extent of the Lough Ree SAC (000440) or Lough Ree SPA (004064).

Accordingly, the Proposed Development will not adversely affect the integrity of any relevant European site.

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Driven by its purpose, to safeguard life, property, and the environment, DNV helps tackle the challenges and global transformations facing its customers and the world today and is a trusted voice for many of the world's most successful and forward-thinking companies.