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APPROPRIATE ASSESSMENT SCREENING REPORT

MAIN STREET, BALLYMAHON, Co. LONGFORD

2025

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1.0 INTRODUCTION

Panther Ecology Ltd was commissioned by Kenny Lyons Associate Architects on behalf of the client to prepare an Appropriate Assessment Screening Report regarding a residential development and all associated site works at Main Street, Ballymahon, Co. Longford (GPS Coordinates: 53.56686, -7.767094).

The principal aim of this study is to assess whether significant effects to European sites (the Natura 2000 network) are likely to occur as a result of this project in accordance with Article 6(3) of the Habitats Directive and the Planning and Development (Amendment) Act, 2001, as amended. This report has been prepared with regards to the European Communities (Natural Habitats) Regulations 1997 (S.I. No. 94 of 1997), and the later amendment regulations (S.I. No. 233 of 1998; S.I. No. 237 of 2005; S.I. No. 477 of 2011).

A study was undertaken by Rachel French who has a Msc in Wildlife Biology and Conservation from Edinburgh University and a BSc in Herbal Science from Munster Technological University, with experience in wildlife and habitat surveys. This report was reviewed by Paula Farrell who has a BSc in Wildlife Biology with experience in floral, habitat, mammal, amphibian, invertebrate and bird surveys. This comprised a review of the development site, a site visit on 5th February 2025 to examine the ecological context of the development site, a desk study of the information on European sites within the potential zone of influence of the site and an analysis of the information in the context of the guidance to determine if a Natura Impact Statement is required.

2. LEGISLATIVE CONTEXT

The EU Habitats Directive (92/43/EEC) on the conservation of natural habitats and of wild fauna and flora, as amended by council directive 97/62/EC, 2006/105/EC, and Regulation EC1882/2003 of September 2003, as transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477/11), provides the framework for legal protection for habitats and species of European importance. The Natura 2000 network provides an ecological infrastructure for the protection of sites that are of particular importance for rare, endangered or vulnerable habitats and species within the EU. The Natura 2000 network in Ireland is made up of European Sites which include:

- Special Areas of Conservation (SACs)
- Special Protection Areas (SPAs)

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

"Any plan or project not directly connected with, or necessary to the management of the site, but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site, and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will

not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."

3. SCREENING FOR APPROPRIATE ASSESSMENT

Screening is the first stage in the Appropriate Assessment process and is carried out to determine whether a Stage 2 Appropriate Assessment and a Natura Impact Statement (NIS) is required. Screening addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3);

- 1. Whether a plan or project is directly connected to or necessary for the management of the European (Natura 2000) site; and
- 2. Whether a plan or project, alone or in combination with other plans or projects, is likely to have significant effects on a European (Natura 2000) site, in view of its conservation objectives.

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

The findings and conclusions of the screening process should be documented, with the necessary supporting evidence and objective criteria. This is of particular importance in the cases where the Appropriate Assessment process ends at the screening stage because the conclusion is that no significant effects are likely.

Screening for Appropriate Assessment involves:

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

3.1 Methodology Guidelines

This Appropriate Assessment has been carried with reference to the following guidelines:

- Appropriate Assessment of Plans and Projects in Ireland. Guidelines for Planning Authorities. DoEHLG, 2010.
- Circular NPWS 1/10 & PSSP 2/10 Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities
- Managing Natura 2000 sites The Provisions of Article 6 of The Habitats Directive 92/43/EEC. European Commission, 2000.

- Circular L8/08 Water Services Investment and Rural Water Programmes Protection of Natural Heritage and National Monuments 2 September 2008
- Assessment of Plans and Projects Significantly Affecting Natura 2000 sites. Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. European Commission, 2021.
- Commission Notice "Managing Natura 2000 sites The provisions of Article 6 of the Habitats Directive 92/43/EEC. European Commission, 21.11.2018
- CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester.

3.2 Desktop Research

Desktop research was carried out to gather information on the ecology of the site and surrounding areas. The locations of the Natura 2000 sites within the potential zone of influence of Main Street, Ballymahon, Co. Longford were identified from National Parks and Wildlife Service (NPWS) online map viewer. Other Natura sites beyond 15km were also reviewed and considered for the potential for the project to have a negative effect.

Water quality data from the EPA was reviewed for the assessment of biological and environmental data collected on waterbodies in Ireland as per the Water Framework Directive (WFD) Monitoring Programme of River Ecology Monitoring Results (2021), which was assessed 3rd of February.

Information on the characteristics of the Natura 2000 sites within the potential zone of influence was reviewed from the conservation objectives documents, site synopses and Standard Natura 2000 data forms available on the NPWS website.

3.3 Site Survey

A site characterisation assessment was undertaken on the 5th of February 2025 to examine the ecological context of the development site, by systematically walking the site and boundaries and determining the habitats present. The habitat survey was undertaken in accordance with the standard methodology outlined in Fossitt's "A Guide to Habitats in Ireland", a hierarchical classification scheme based upon the characteristics of vegetation present. The Fossitt system also indicates when there are potential links with Annex I habitats of the E.U. Habitats Directive (92/43/EEC). Cognisance was also taken of the Heritage Council guidelines, "Best Practice Guidance for Habitat Survey and Mapping", (Smith et al., 2011).

Bird species and signs of fauna activity were also noted. Particular attention was given to the possible presence of habitats and/or species, which are legally protected under Irish and European legislation and to assessing any potential ecological connectivity with Natura 2000 sites or supplementary or stepping-stone habitats of relevance to Natura 2000 sites.

4.0 DESCRIPTION OF PROPOSED DEVELOPMENT AND EXISTING SITE

4.1 Proposed Development

The proposed development will consist of the refurbishment of an existing Convent as part of the proposed Pobal le Cheile Project along the R392, Ballymahon, Co. Longford (GPS location: 53.56686, -7.767094), as shown in the location map Figure 4.1.

The proposed regeneration work will involve:

- The refurbishment of the Convent of Mercy NIAH Reg. No. 13316005.
- Demolition of existing side extensions.
- The construction of two new extensions to the convent on the southwest and northeast sides.
- Construction of a new community hall.
- Construction of a new parking facilities on the grounds of the convent.

Foul water from the development will be collected by a new proposed network of 100mm uPVC pipes that will connect to the existing foul water drainage infrastructure to the west. Foul water will be directed to the Ballymahon Waste Water Treatment Plant (D0096) located in Ballymahon town, south of the development site, which currently has some available capacity and upgrades are underway. The Ballymahon WWTP discharges the treated water to the River Inny.

Surface water comprised of rainwater run-off from the roofs of the proposed dwellings will be collected by the new proposed drainage system and petrol interceptor and will be connected to the existing Irish Water surface water drainage infrastructure to the north. Permeable paving for the car parking areas will allow water to infiltrate to ground.

Drinking water will be supplied by mains. Irish Water has not been contacted as there are preexisting connections to the mains and these have deemed suitable for the current plans. A connection application will be made. According to the Irish Water Supply Capacity Register, there is capacity within Ballymahon town.

The proposed heating system is air source heat pumps.

A Lighting plan has been prepared by Galileo Energy Services and it is compliant with lighting guidelines and incorporating industry best practice methods. Seven new external lights will be fitted onsite and supplied by a new mains board. Only LED lights will be used. The light columns will be 6m tall. Four EV car chambers will be installed in the car park.

A Landscape Plan is not proposed for this site. No trees or hedgerows will be removed as part of the proposed development.

The estimated construction timeframe for the proposed development is approximately 15-18 months. Construction works would be confined to the proposed development footprint and would not necessitate any works within a watercourse or drainage ditch.

The proposed development will require site levelling. This will include upgrading of falls to the new drainage collectors. The proposed development will require the importation of construction materials for the extensions to the convent building, and 1,720cu.m of clean crushed stone with a void ratio of 40% for the construction of soakaways and the car park. The proposed construction will not involve the exportation of soils from the site.

The closest Natura 2000 site is the Lough Ree SAC (Site Code: 000440) located approximately 5.4km to the west of the proposed development as shown in Figure 4.2 below.

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

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

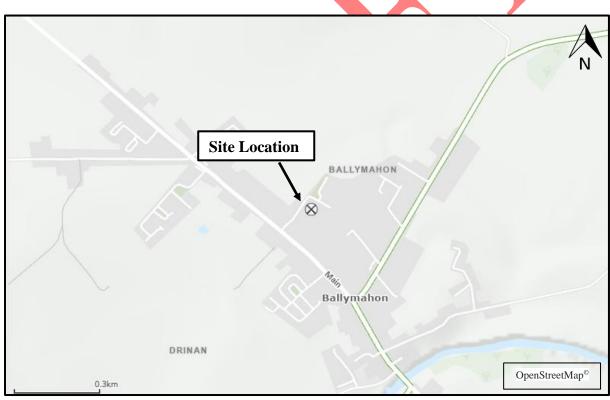


Figure 4.1: Location of Site at Ballymahon, Co. Longford.

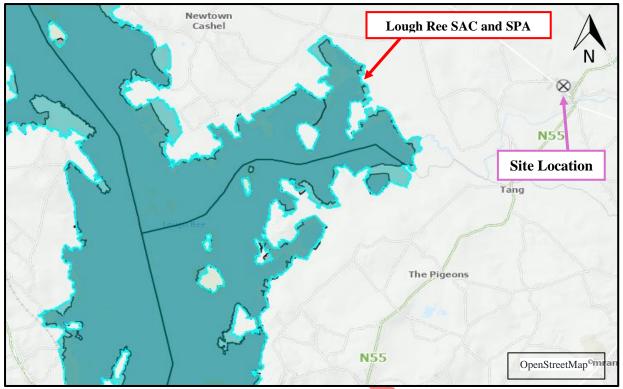


Figure 4.2: Location of Development site and Natura 2000 Sites

4.2 Existing Environment

The proposed development is located within an urban environment in the town of Ballymahon. Residential and commercial developments are located along the local road network. Within the wider environment of this town, agriculture dominates the landscape with some areas of commercial forestry. There are no watercourses or drainage ditches onsite. Buildings and artificial surfaces comprised of the existing convent and adjacent buildings are the dominant habitat features here as noted below.

4.2.1 Habitats and flora

Site characterisation assessments were undertaken on the 5^{th of} February 2025 to examine the ecological context of the development site, by systematically walking the site and boundaries and determining the habitats present. During the site assessment the following habitats were observed. During the site assessment, the following habitats were observed:

The majority of the site is comprised of Buildings and artificial surfaces (BL3) and Dry meadows and grassy verges (GS2).

The **Buildings and artificial surfaces** (**BL3**) habitat includes the main building to the centre north of the development site as well as the surrounding pavements and tarmacked areas which occur in every area besides the east of the site. This habitat included species such as Mosses (Bryophyta), Willowherb (*Epilobium spp.*), Dandelion (*Taraxacum agg.*), Nipplewort

(Lapsana communis), Ragwort (Senecio jacobaea), Cat's Ear (Hypochaeris radicata), Sowthistle (Sonchus spp.), Thistle (Cirsium spp.), and Dock (Rumex spp.).

The **Dry meadows and grassy verges habitat** (**GS2**) habitat occurs to the east and south of the development site. This habitat appears mostly unmanaged. The species present within this habitat include Cock's-foot Grass (*Dactylis glomerata*), False Oat-grass (*Arrhenatherum elatius*), Rye Grass (*Lolium spp.*), Common Bent Grass (*Agrostis capillaris*), Fescue (*Festuca spp.*), Creeping Buttercup (*Ranunculus repens*), Ribwort Plantain (*Plantago lanceolata*), Cleavers (*Galium aparine*), Self Heal (*Prunella vulgaris*), Vetch (*Vicia spp.*), Cat's Ear (*Hypochaeris radicata*), Speedwell (*Veronica spp.*), Dandelion (*Taraxacum agg.*), Sedge (*Carex* spp.), Willowherb (*Epilobium spp.*), Bramble (*Rubus fruticosus agg.*), Thistle (*Cirsium spp.*), Common Sorrel (*Rumex acetosa*), Tutsan (*Hypericum spp.*), Soft Rush (*Juncus effusus*), Bedstraw (*Galium spp.*) Ragwort (*Senecio jacobaea*), Nipplewort (*Lapsana communis*), Barren Strawberry (*Potentilla sterilis*), and Snowdrop (*Galanthus spp.*).

The **Hedgerows** (**WL1**) habitat is situated to the east of the development site. This habitat consists of a short line of overgrown shrubs. Species recorded include Cherry Laurel (*Prunus laurocerasus*), Arrow Bamboo (*Pseudosasa japonica*), Ash (*Fraxinus excelsior*), Elder (*Sambucus nigra*), Ivy (*Hedera spp.*), Bramble (*Rubus fruticosus agg.*), Honeysuckle (*Lonicera spp.*), Ornamental Holly (*Ilex spp.*), Butterfly Bush (*Buddleja davidii*), Cleaver (*Galium aparine*), Nettle (*Urtica dioca*), and Willowherb (*Epilobium spp.*).

The **Treeline** (WL2) habitat resides to the east and south of the development site. Species present in this habitat include Cypress (*Chamaecyparis spp.*), Apple (*Malus spp.*), Elder (*Sambucus nigra*), Spotted Laurel (*Aucuba japonica*), Ivy (*Hedera spp.*) and Larch (*Larix spp.*).

The **Flowerbeds and borders (BC4)** habitat is primarily located towards the west of the site. This habitat includes Heather (*Calluna vulgaris*), Euonymus (*Euonymus spp.*), Rose (*Rosa spp.*), Honeysuckle (*Lonicera spp.*), Ornamental Holly (*Ilex spp.*), Butterfly Bush (*Buddleja davidii*), Cleaver (*Galium aparine*), Willowherb (*Epilobium spp.*), Oxeye Daisy (*Leucanthemum spp.*), Nettle (*Urtica dioca*), and Sowthistle (*Sonchus spp.*).

The Scattered trees and parkland (WD5) habitat is located to the west of the site outside the redline boundary. Species in this habitat include Yew (*Taxus baccata*), False Cypress (*Chamaecyparis pisifera*), and Ivy (*Hedera spp.*).

No Third Schedule invasive or protected flora were noted during the site assessment. See Table 4.1 for summary for habitats located at and adjacent the proposed development. See Appendix D for photo log of the site.

 Table 4.1 Summary of Habitats Identified at and Adjacent the Development Site

HABITAT CLASSIFICATION HIERARCHY				
LEVEL 1 LEVEL 2 LEVEL 3				
G – Grassland and marsh	GS – Semi-natural grassland	GS1 – Dry meadows and grassy verges		

HABITAT CLASSIFICATION HIERARCHY				
LEVEL 1	LEVEL 2	LEVEL 3		
B – Cultivated and built land	BL – Built Land	BL3 – Buildings and artificial surfaces		
	BC - Cultivated land	BC4 - Flowerbeds and borders		
W – Woodland and scrub	WL – Linear woodland/ scrub	WL2 - Treeline WL1 - Hedgerows WS1 - Scrub		
vv — vv oodiand and scrub	WD – Highly modified/nonnative woodland	WD5 – Scattered trees and parkland		

4.2.2 Fauna

Bird species noted during the site walkover included Rook (Corvus frugilegus), Pied Wagtail (Motacilla alba), Robin (Erythacus rubecula), Wren (Troglodytes troglodytes) Jackdaw (Coloeus monedula), Hooded Crow (Pica pica), Magpie (Pica pica), Blackbird (Turdus merula), Great Tit (Parus major), Blue Tit (Cyanistes caeruleus), Goldcrest (Regulus regulus), Dunnock (Prunella modularis), Collared Dove (Streptopelia decaocto), and Song Thrush (Turdus philomelos).

None of these species are on the red list (Gilbert et al, 2021). Goldcrest is amber listed. None of the bird species recorded are listed under Annex I of the E.U. Birds Directive. The proposed development would not support suitable habitats for the qualifying interests of the Lough Ree SPA. There are no freshwater habitats within the red line boundary. The site would be of limited foraging value to water birds as the grassland area is quite small and very close to anthropogenic disturbances. In addition, no species associated with the SPA were recorded onsite.

Evidence of mammals (pathways) were observed within the dry meadows habitat. Most likely the tracks were made by domesticated animals given the location within an urban area. The site would be of limited value to foraging protected mammals such as Badger and Otter since it is mostly comprised of modified habitats and within proximity of anthropogenic activity. There are no freshwater habitats onsite to offer suitable foraging for Otter. The Fauna typical of that found throughout the rest of Ireland, which would be expected to be found in the area include Bat species, Badger (*Meles meles*), Fox (*Vulpes vulpes*), Otter (*Lutra lutra*), Wood Mouse (*Apodemus sylvaticus*), Pine Marten (*Martes martes*), Stoat (*Mustela erminea hibernica*), American Mink (*Mustela vison*), Deer, Irish Hare (*Lepus timidus hibernicus*), Hedgehog (*Erinus europaeus*), Red Squirrel (*Sciurus vulgaris*) and Grey Squirrel (*Sciurus carolinensis*).

Gannon & Associates was commissioned by Longford County Council to carry out a roost inspection bat survey in relation to the proposed development. Upon inspection, evidence of roosting opportunities was identified in the form of broken windows, attic voids, gaps in the brickwork and the remains of prey animals such as moth and butterfly wings. The structural

condition and surrounding habitat indicate potential for bat use. No other evidence such as droppings or urine stains on wood was found.

4.2.3 NBDC Records

In addition to the site walkover, flora and fauna records were reviewed on the National Biodiversity Data Centre (NBDC) website for the proposed development site and vicinity over the last 30 years. No protected plant species under the Flora (Protection) Order, 2022 (S.I. No. 235 of 2022) were recorded within the 10km square (Tetrad – N15) in which the proposed development site is located.

Near threatened flora recorded within the tetrad are: Greater Knapweed (*Centaurea scabiosa*) and Tubular Water-dropwort (*Oenanthe fistulosa*).

One invasive plant species listed in the Third Schedule of the European Communities Birds and Natural Habitats) Amendment (S.I. No. 355 of 2015) of Regulations 2011-2015 was recorded within the 10km square (Tetrad – N15): Rhododendron (*Rhododendron ponticum*). Protected fauna species of note recorded within the NBDC 10km square (Tetrad – N15) include the protected species, Common Frog (*Rana temporaria*), Smooth Newt (*Lissotriton vulgaris*), Freshwater White-clawed Crayfish (*Austropotamobius pallipes*), Marsh Fritillary (*Euphydryas aurinia*), Common Lizard (*Zootoca vivipara*), Brown Long-eared Bat (*Plecotus auritus*) Daubenton's Bat (*Myotis daubentonii*) Eurasian Badger (*Meles meles*) Pygmy Shrew (*Sorex minutus*), Red Squirrel (*Sciurus vulgaris*), European Otter (*Lutra lutra*), Lesser Noctule (*Nyctalus leisleri*), Pine Marten (*Martes martes*), Pipistrelle (*Pipistrellus pipistrellus sensu lato*), Red Deer (*Cervus elaphus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*) and European Hedgehog (*Erinaceus europaeus*), and Whiskered Bat (*Myotis mystacinus*).

High impact invasive species listed in the Third Schedule of the European Communities Birds and Natural Habitats) Amendment (S.I. No. 355 of 2015) of Regulations 2011-2015 include Harlequin Ladybird (*Harmonia axyridis*), American Mink (*Mustela vison*), Brown Rat (*Rattus norvegicus*) Grey Squirrel (*Sciurus carolinensis*), and Sika Deer (*Cervus nippon*).

Bird species of note include Barn Owl (Tyto alba), Swallow (Hirundo rustica), Black-headed Gull (Larus ridibundus), Coot (Fulica atra), Common Goldeneye (Bucephala clangula), Common Grasshopper Warbler (Locustella naevia), Kestrel (Falco tinnunculus), Kingfisher (Alcedo atthis), Linnet (Carduelis cannabina), Pheasant (Phasianus colchicus), Pochard (Aythya ferina), Common Redshank (Tringa totanus) Common Sandpiper (Actitis hypoleucos), Snipe (Gallinago gallinago), Starling (Sturnus vulgaris), Swift (Apus apus), Wood Pigeon (Columba palumbus), Curlew (Numenius arquata), Eurasian Teal (Anas crecca), Tree Sparrow (Passer montanus), Corn Crake (Crex crex), Eurasian Wigeon (Anas penelope), Woodcock (Scolopax rusticola), Golden Plover (Pluvialis apricaria), Gadwall (Anas strepera), Great Black-backed Gull (Larus marinus), Great Cormorant (Phalacrocorax carbo), Great Crested Grebe (Podiceps cristatus), Greater White-fronted Goose (Anser albifrons), Grey Partridge (Perdix perdix), Hen Harrier (Circus cyaneus), House Martin (Delichon urbicum), House Sparrow (Passer domesticus), Lesser Black-backed Gull (Larus fuscus), Little Egret (Egretta garzetta), Little Grebe (Tachybaptus ruficollis), Mallard (Anas platyrhynchos), Mew Gull (Larus canus) Mute Swan (Cygnus olor), Northern Lapwing (Vanellus vanellus), Northern Pintail (Anas acuta), Rock Pigeon (Columba livia), Ringed Plover (Charadrius hiaticula), Sand Martin (Riparia riparia), Sky Lark (Alauda arvensis), Spotted Flycatcher (Muscicapa

striata), Pigeon (Columba oenas), Tufted Duck (Aythya fuligula), Water Rail (Rallus aquaticus), Whooper Swan (Cygnus cygnus) and the Yellowhammer (Emberiza citrinella).

4.3 WATER QUALITY

The development is located within the Upper Shannon Catchment (ID: 26F), Sub Catchment Inny[Shannon]_SC_070 (ID: 26_1). The nearest EPA mapped watercourse to the proposed development site is an unnamed watercourse (River Waterbody Code: IE_SH_26I011350 – Order 1, Segment Code: 26_3974) located approximately 542m East of the development site. It is joined by another unnamed watercourse (River Waterbody Code: IE_SH_26I011350 – Order 2, Segment Code: 26_4112) 605m east of the development site. These flow into the River Inny approximately 986m southwest the development site. The River Inny (EPA Code: 26I01 – Order 5) is located approximately 615m southeast of the development site and flows in a westerly direction for 7.7km until it discharges into Lough Ree to the west of Ballymahon.

Other watercourses include the Drinan stream (EPA Code: 26D81 – Order 1) located approximately 630m from the development site and flows in a southernly direction for approximately 1.2km until it joins the River Inny (EPA: 26I01 – Order 5). The Royal Canal is located approximately 835m northeast of the development site. Another unnamed watercourse is located (River Waterbody Code: IE_SH_26I011350 – Order 1, Segment Code: 26_917) approximately 1.3km southwest of the development site.

The Inny River at its closest to the development site is designated as part of the Lough Ree SAC (Site Code: 000440). The Conservation Objectives document for the SAC shows that water quality objectives have been set for Natural eutrophic lakes with Magnopotamion or Hydrocharition with a target to maintain/restore appropriate Secchi transparency, however a specific target has yet to be established. Other water quality objectives for this habitat include maintaining a good chlorophyll a status, with an annual average chlorophyll a concentration of 2.5-8.0g/l, maintaining good phytoplankton composition status, maintaining trace/absent attached algal biomass (<5% cover) and good phytobenthos status and restoring good macrophyte status (Ecological Quality Ratio for lake macrophytes of ≥0.68).

The water quality objective for Degraded raised bogs still capable of natural regeneration is to maintain water quality on the high bog and transitional areas close to natural reference conditions. Water chemistry within raised bogs is influenced by atmospheric outputs (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 runoff from surrounding mineral lands).

The water quality objective for Alkaline fens is to maintain appropriate water quality to support the natural structure and functioning of the habitat. Fens receive natural levels of nutrients (e.g. iron, magnesium, and calcium) from water sources.

A deterioration in water quality can also have an indirect impact on qualifying interests of the Lough Ree SPA by impacting prey.

There are no drainage ditches or watercourses onsite or in the immediate vicinity of the site.

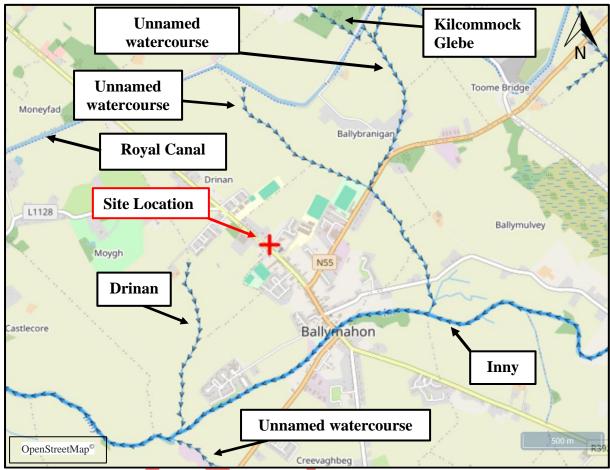


Figure 4.3: Mapped watercourses close to the development site.

The Environmental Protection Agency (EPA) does not undertake surface water monitoring along the unnamed watercourses or the Drinan stream, but it does undertake surface water monitoring along the River Inny. The results for the nearest monitoring stations with available information (as per Table 4.2) for the period 2005 - 2023 are summarised in Figure 4.4 below for indicative purposes. There was only one monitoring station with recent water quality information downstream of the site before the Inny River discharges into Lough Ree. As can be seen in Figure 4.4 below, the Inny River is mainly achieving a water quality status of between Q3-4 (Moderate) and Q4 (Good) in recent years.

EPA comments on the most recent monitoring results for the Inny River are as follows: "The Gaine River runs between Lough Derravaragh and Lough Owel flowing through Multyfarnham to join the River Inny. All three sites were in poor condition. Dissolved oxygen saturation levels were once again particularly low at Station 0200 in Multyfarnham. This may be due to a groundwater input with low oxygen saturation. The river is associated with the large karstic Derravaragh Groundwater Body which feeds both Lough Owel and Lough Lene. A zone of high groundwater vulnerability is mapped on GSI.ie in Multyfarnham plus a nearby spring or well is mapped 300m to the east of the bridge. The Multyfarnham Waste Water Treatment Plant is located between Station 0200 and 0270. No significant deterioration is noted, and oxygen saturation increased from 63% at 0200 to 73% at 0270. There was a slight decline in water quality in the upper reaches of the Inny at 0100 with a decline from good to moderate ecological condition. Further downstream, the River Inny was sampled at Shrule

Bridge (1350) upstream of its confluence with Lough Ree in August 2023. Satisfactory conditions remained with a high diversity of 28 different macroinvertebrate taxa recorded.". The EPA does undertake surface water monitoring within Lough Ree. However, data for the water quality status of individual lake stations is not provided. The lough was given a moderate status between 2007-2013 but has since improved to a status of good between the years of 2018-2021.

Table 4.2: Inny River Monitoring Stations within the vicinity of the development

STATION NO.	STATION LOCATION	EASTING	Northing	APPROX. LOCATION RELATIVE TO DEVELOPMENT SITE
RS26I011150	Clynan or New bridge	221439.3	258604.76	8.2km upstream
RS26I011350	Shrule Br	213497	255849	3.2km downstream

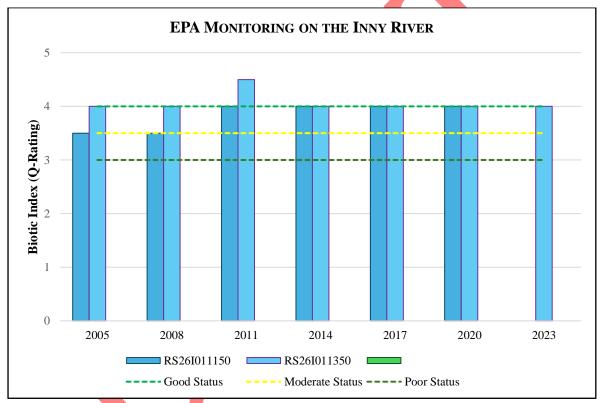


Figure 4.4: EPA Ecological Monitoring of the Inny River from 2005 – 2023.

Preliminary Flood Risk Assessment

According to the Preliminary Flood Risk Assessment (PFRA) Mapping tool by the OPW, the development site is not located within an area of fluvial or pluvial flooding, indicative of 10% AEP (10-yr) event, 1% AEP (100-yr) event or 0.1% AEP (1000-yr) event. However, it should be noted that this map is based on broad-scale simple analysis and may not be accurate for a specific location. There is no history of flooding at the development site, the nearest flooding event was approximately 806m southwest of the site's boundary.

5.0 EUROPEAN SITES (NATURA 2000 SITES) within zone of influence

In assessing the zone of influence of this project upon European sites, the following factors must be considered:

- Potential impacts arising from the project,
- The location and nature of European sites,
- Pathways between the development and European sites.

The project impact sources, environmental pathways and protected site characteristics were screened to identify European sites potentially within the zone of influence of the project.

Four Special Area of Conservation (SAC) sites and one Special Protection Area (SPA) sites occur within the potential zone of influence of the proposed development site and are shown in the following table:

Table 5.1. Special Protection Areas and Special Areas of Conservation potentially within the zone of influence of the proposed development.

SITE NAME	DESIGNATION	SITE CODE	DISTANCE
Lough Ree	SAC	000440	4.9km W
Lough Ree	SPA	000781	5.4km W
Ballymore Fen	SAC	002313	10.8km SE
Mount Jessop Bog	SAC	002202	12.5km N
Carn Park Bog	SAC	002336	14.9km SW

Maps detailing European sites potentially within the zone of influence of the site are included as Appendix C below. For this assessment, the site considered to be within the zone of influence of the proposed development are the Lough Ree SAC (Site Code: 00440) and Lough Ree SPA (Site Code: 000781) due to proximity.

The Ballymore Fen SAC is located 10.8km (over 15km upstream) southeast of the proposed development. This has been designated for Transition mires, vegetation associated with bogland and fens. These habitats are not found onsite. There is also no downstream hydrological connection. Given the considerable distance from the proposed site, the lack of associated habitats, absence of a direct hydrological connection, nature and scale of the development the Ballymore Fen SAC has been screened out.

The Mount Jessop Bog SAC (Site Code: 002202) is located 12.5km (over 62km hydrologically upstream) north of the proposed development. This SAC has been designated for bog woodland and regenerating bogland. Neither of these habitats are found within the proposed development. Given the considerable distance from the proposed site, the lack of associated habitats, the nature and scale of the development, and the absence of a direct hydrological connection, the Mount Jessop Bog SAC has been screened out.

Carn Park Bog SAC (Site Code: 002336) is located 14.9km (over 27km hydrologically downstream) southwest of the development site. This SAC has been designated for active raised bogland and degraded regenerative bogland. Neither of these habitats occur within the proposed development. There are no watercourses within the redline boundary, therefore no

direct hydrological connection to this SAC. Given the considerable distance from the proposed site, the lack of associated habitats, the nature and scale of the development, the absence of instream works, and no direct hydrological connection the Carn Park Bog SAC has been screened out.

5.1 Lough Ree SAC (Site Code: 00440)

Lough Ree is the third largest lake in Ireland and is within the Upper Shannon catchment. It is hydrologically connected to the River Shannon Callows SAC (Site Code: 000216) and Middle Shannon Callows SPA (Site Code: 004096) which are south of the SAC. Although the main habitat, by area, is the lake itself, interesting shoreline, terrestrial and semi aquatic habitats also occur. The site is a SAC selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive:

	TABLE 5.2. ANNEX I HABITATS			
CODE	DESCRIPTION			
3150	Rich pondweed lake habitat			
6210	Calcareous grassland *important orchid-rich			
7110	Active raised bogs			
7120	Degraded raised bogs still capable of natural regeneration			
7230	Alkaline fens			
8240	Limestone pavements			
91D0	Bog woodland			
91E0	Alluvial Forests			

^{*} denotes a priority habitat

TABLE 5.3. ANNEX II SPECIES				
CODE COMMON NAME SCIENTIFIC NAME				
1355	Otter	Lutra lutra		

The conservation objectives for the SAC site are to maintain or restore the favourable conservation condition of the qualifying interests. An excerpt from the Natura 2000 Data Form for the River Barrow and River Nore SAC is included below, while further details are available within the site's site synopsis (NPWS, 2024).

"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 been classified as mesotrophic in quality, but the size of the system means that a range of conditions prevail depending upon, for example, rock type. Species present include Intermediate Bladderwort (Utricularia intermedia), pondweeds (*Potamogeton spp.*), Quillwort (*Isoetes lacustris*), Greater Duckweed (*Spirodela polyrhiza*), stoneworts (*Chara spp.*, including *C. pedunculata*) and Arrowhead (*Sagittaria sagittifolia*).

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 Whorlgrass (*Catabrosa aquatica*), or freshwater marsh with abundant Water Dock (*Rumex hydrolapathum*) and Hemp-agrimony (*Eupatorium cannabinum*).

Dry calcareous grassland occurs scattered around the lake shore. These supports typical species such as Yellow-wort (*Blackstonia perfoliata*), Carline Thistle (*Carlina vulgaris*) and Quakinggrass (*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. 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.

At St John's Wood, patches of wet alluvial woodland are present along the lakeshore. They are dominated by Ash, Grey Willow (Salix cinerea), Alder (Alnus glutinosa) and, in places, Downy Birch (Betula pubescens). The ground flora includes Creeping Bent (Agrostis stolonifera), Wild Angelica (Angelica sylvestris), Meadowsweet (Filipendula ulmaria), Common Marshbedstraw (Galium palustre), Yellow Iris (Iris pseudacorus), Gipsywort (Lycopus europaeus), Water Mint (Mentha aquatica), Reed Canary-grass (Phalaris arundinacea), Creeping Buttercup (Ranunculus repens) and Wood Dock (Rumex sanguineus). Pockets of wet woodland occur elsewhere around the lake. Most of these are dominated by willows (Salix spp.), Alder and Downy Birch.

Small examples of raised bog occur, which are of interest in that they show a natural transition through wet woodland and/or swamp to lakeshore habitats. Active Raised Bog (ARB) habitat comprises areas of high bog that are wet and actively peat forming, where the percentage cover of bog mosses (*Sphagnum spp.*) is high, and where some or all of the following features occur: hummocks, pools, wet flats, Sphagnum lawns, flushes and soaks. Results from surveys of the raised bog habitat in 2003 indicate the presence of 5.9 ha of Active Raised Bog (ARB). Also present are examples of Degraded Raised Bog (DRB) capable of regeneration. In general, the vegetation of these degraded areas is dominated by typical raised bog species such as Crossleaved Heath (*Erica tetralix*), Heather (*Calluna vulgaris*), Hare's-tail Cottongrass (*Eriophorum vaginatum*), Bog Asphodel (*Narthecium ossifragum*) and Deergrass (*Scirpus cespitosus*). Typically, the degraded bog areas have a low cover of peat-forming bog mosses (*Sphagnum spp.*).

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. 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. Smaller lakes occur around the lake shore, especially on the east side, and these often have the full range of wetland habitats contained within and around them. A number of small rivers also pass through the site.

The site supports a number of rare plant species which are listed in the Irish Red Data Book. Alder Buckthorn and Bird Cherry (*Prunus padus*) are woodland components at St John's Wood and elsewhere. Narrow-leaved Helleborine (*Cephalanthera longifolia*) and Betony (*Stachys officinalis*), both of which are also legally protected under the Flora (Protection) Order, 1999, occur among the ground flora of Hare Island (where the former occurs in notable abundance).

Small flocks of Greenland White-fronted Goose, an Annex I species on the E.U. Birds Directive, use several areas of callowland around the lake in winter.

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."

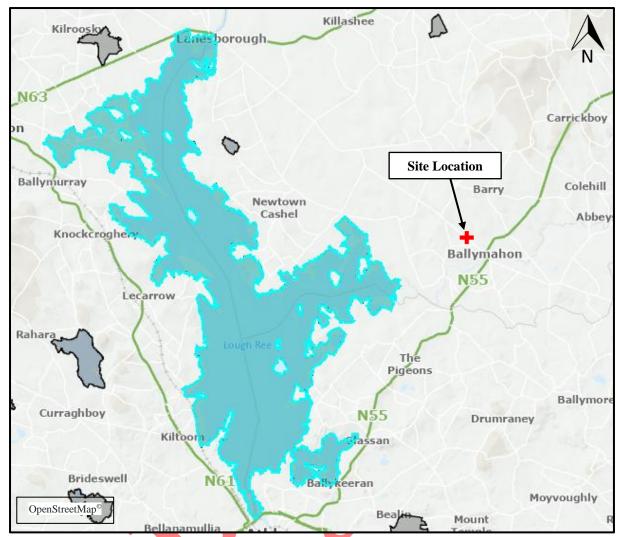


Figure 5.1: Lough Ree SAC

The conservation objectives for the SAC site are to maintain or restore the favourable conservation status of habitats and species of community interest. Site specific conservation objectives (SSCOs) for the qualifying interests of the Lough Ree SAC are provided in the table below, where available from the NPWS document "Lough Ree SAC 000440" (NPWS, 2016).

TABLE 5.4. LOUGH REE SAC CONSERVATION OBJECTIVES				
ATTRIBUTE MEASURE		TARGET	SELECTED NOTES	
[3150] Rich pondweed lake habi	itat			
Habitat area	Hectares	Area stable or increasing, subject to natural processes	This habitat is associated with base rich lakes, with circumneutral or higher pH, in low	
Habitat distribution	Occurrence	The following sediment communities should be maintained in a natural condition: Muddy estuarine community complex; Sand to muddy fine sand community complex; Fine sand with Fabulina fabula community.	lying, large, naturally more productive catchments and is characterised by high abundance and diversity of pondweeds (<i>Potamogeton spp.</i>) and mesotrophic values for total phosphorus and chlorophyll.	
Typical species	Occurrence	Maintain the natural extent of the <i>Sabellaria</i> alveolata reef, subject to natural process	Fluctuations in lake water level are typical in	
Vegetation composition: characteristic zonation	Occurrence	All characteristic zones should be present, correctly distributed and in good condition	Ireland but can be amplified by activities such as abstraction and drainage. Increased water	
Vegetation distribution: maximum depth	Metres	Maintain maximum depth of vegetation, subject to natural processes	level fluctuations can increase wave action, up-root vegetation, increase turbidity, alter	
Hydrological regime: water level fluctuations	Metres	Maintain appropriate natural hydrological regime necessary to support the habitat	the substratum and lead to release of nutrients from the sediment.	
Lake substratum quality	Various	Maintain appropriate substratum type, extent and chemistry to support the vegetation	Lough Ree had 33 µg/l TP in 1980/1 and	
Water quality: transparency	Metres	Maintain/restore appropriate Secchi transparency. There should be no decline in Secchi depth/transparency	47μg/l in n 1993/4 (Bowman, 1998) but had good nutrient condition status in 2007-2009 and 2010-12 (McGarrigle, et al., 2010;	
Water quality: nutrients	μg/l P; mg/l N	Maintain the concentration of nutrients in the water column to sufficiently low levels to support the habitat and its typical species	Bradley, et al., 2015). maximum chlorophyll has decreased in	
Water quality: phytoplankton biomass	μg/l Chlorophyll a	Maintain appropriate water quality to support the habitat, including good chlorophyll a status	Lough Ree since the 1995-97 period, possibly as a result of zebra mussel filtration.	
Water quality: phytoplankton composition	EPA phytoplankton composition metric	Maintain appropriate water quality to support the habitat, including good phytoplankton composition status		
Water quality: attached algal biomass	Algal cover and EPA phytobenthos metric	Maintain trace/absent attached algal biomass (<5% cover) and good photobenthos status		

TABLE 5.4. LOUGH REE SAC CONSERVATION OBJECTIVES				
ATTRIBUTE	MEASURE	TARGET	SELECTED NOTES	
Water quality: macrophyte status	EPA macrophyte metric (The Free Index)	Restore good macrophyte status		
Acidification status	pH units; mg/l	Maintain appropriate water and sediment pH, alkalinity and cation concentrations to support the habitat, subject to natural processes		
Water colour	mg/l PtCo	Maintain appropriate water colour to support the habitat		
Dissolved organic carbon (DOC)	mg/l	Maintain appropriate organic carbon levels to support the habitat		
Turbidity	Nephelometric turbidity units/ mg/l SS/ other appropriate units	Maintain appropriate turbidity to support the habitat		
Fringing habitat: area	Hectares	Maintain the area and condition of fringing habitats necessary to support the natural structure and functioning of the lake habitat		
[6210] Calcareous grassland (*in	mportant orchid-rich)			
Habitat area	Hectares	Area stable or increasing, subject to natural processes.	The Irish semi-natural grasslands survey (ISGS) (O'Neill et al., 2013) surveyed several	
Habitat distribution	Occurrence	No decline, subject to natural processes	sites in the SAC; however, only two of these (ISGS 259 and 2012) contained large enough	
Vegetation composition: typical species	Number at a representative number of monitoring stops	At least seven positive indicator species present, including two "high quality" species	discrete areas of this Annex I habitat to be mapped (0.25ha in total)	
Vegetation composition: negative indicator species	Percentage at a representative number of monitoring stops	Negative indicator species collectively not more than 20% cover, with cover by an individual species not more than 10%		
Vegetation composition: non native species	Percentage at a representative number of monitoring stops	Cover of non-native species not more than 1%		

TABLE 5.4. LOUGH REE SAC CONSERVATION OBJECTIVES			
ATTRIBUTE	MEASURE	TARGET	SELECTED NOTES
Vegetation composition: woody species and bracken	Percentage at a representative number of monitoring stops	Cover of woody species (except certain listed species) and bracken (Pteridium aquilinum) not more than 5% cover	
Vegetation structure: broadleaf herb: grass ratio	Percentage at a representative number of monitoring stops	Broadleaf herb component of vegetation between 40 and 90%	
Vegetation structure: sward height	Percentage at a representative number of monitoring stops	At least 30% of sward between 5cm and 40cm tall	
Vegetation structure: litter	Percentage at a representative number of monitoring stops	Litter cover not more than 25%	
Physical structure: bare soil	Percentage at a representative number of monitoring stops	Not more than 10% bare soil	
Physical structure: disturbance	Square metres	Area showing signs of serious grazing or other disturbance less than 20m2	
[7120] Degraded raised bogs stil	l capable of natural reg	eneration	
Habitat area	Hectares	Restore area of active raised bog to 70.1ha, subject to natural processes	Active Raised Bog (ARB) habitat on Clooncraff and Cloonlarge Bogs is estimated
Habitat distribution	Occurrence	Restore the distribution and variability of active raised bog across the SAC.	as 5.9ha in area in 2003 (Fernandez et al. 2006). Area of Degraded Raised Bog (DRB)
High bog area	Hectares	No decline in extent of high bog necessary to support the development and maintenance of active raised bog.	on the High Bog (HB) has been modelled as 44.7ha. It is estimated that this entire area is potentially restorable to ARB by drain
Hydrological regime: water levels	Centimetres	Restore appropriate water levels throughout the site	blocking. The total potential ARB on the HB is therefore estimated to be 50.6ha.
Hydrological regime: flow patterns	Flow direction; slope	Restore, where possible, appropriate high bog topography, flow directions and slopes.	Eco hydrological assessments of the cutover estimates that an additional 19.5ha of bog
Transitional areas between high bog and adjacent mineral soils (including cutover areas)	Hectares; distribution	Restore adequate transitional areas to support/protect active raised bog and the services it provides	forming habitats could be restored. The long term target for ARB is therefore 70.1ha.

TABLE 5.4. LOUGH REE SAC CONSERVATION OBJECTIVES					
ATTRIBUTE	MEASURE	TARGET	SELECTED NOTES		
Vegetation quality: central ecotope, active flush, soaks, bog woodland	Hectares	Restore 35.1ha of central ecotope/active flush/soaks/bog woodland as appropriate			
Vegetation quality: microtopographical features	Hectares	Restore adequate cover of high quality microtopographical features			
Vegetation quality: bog moss (Sphagnum) species	Percentage cover	Restore adequate cover of bog moss (Sphagnum) species to ensure peat forming capacity			
Typical ARB species: flora	Occurrence	Restore, where appropriate, typical active raised bog flora			
Typical ARB species: fauna	Occurrence	Restore, where appropriate, typical active raised bog fauna			
Elements of local distinctiveness	Occurrence	Maintain features of local distinctiveness, subject to natural processes			
Negative physical indicators	Percentage cover	Negative physical features absent or insignificant			
Vegetation composition: native negative indicator species	Percentage cover	Native negative indicator species at insignificant levels			
Vegetation composition: non- native invasive species	Percentage cover	Non-native invasive species at insignificant levels and not more than 1% cover			
Air quality: nitrogen deposition	Kg N/ha/year	Air quality surrounding bog close to natural reference conditions. The total N deposition should not exceed 5kg N/ha/yr			
Water quality	Hydrochemical measures	Water quality on the high bog and in transitional areas close to natural reference conditions			
[7230] Alkaline fens	[7230] Alkaline fens				
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession.	The full extent of this Alkaline fens in the SAC is currently unknown. The main area is		
Habitat distribution	Occurrence	No decline, subject to natural processes	considered to occur in the vicinity of St.		
Hydrological regime	Metres	Appropriate natural hydrological regimes necessary to support the natural structure and functioning of the habitat	John's Wood, on the western side of the lake but there are likely to be additional areas around the lake.		
Peat formation	Flood duration	Active peat formation, where appropriate			

TABLE 5.4. LOUGH REE SAC CONSERVATION OBJECTIVES				
ATTRIBUTE	MEASURE	TARGET	SELECTED NOTES	
Water quality: nutrients	Water chemistry measures	Appropriate water quality to support the natural structure and functioning of the habitat	Vascular plants listed for fen in this SAC include saw sedge (<i>Cladium mariscus</i>),	
Vegetation structure: typical species	Percentage	Maintain vegetation cover of typical species including brown mosses and vascular plants	yellow sedge (<i>Carex viridula</i>), black bog rush (<i>Schoenus nigricans</i>), blunt-flowered rush	
Vegetation composition: trees and shrubs	Percentage	Cover of scattered native trees and shrubs less than 10%	(Juncus subnodulosus), whorl grass (Catabrosa aquatica), water mint (Mentha aquatica), grass-of-Parnassus (Parnassia	
Physical structure: disturbed bare ground	Percentage	Cover of disturbed bare ground less than 10%. Where tufa is present, disturbed bare ground less than 1%	palustris) and marsh pennywort (Hydrocotyle vulgaris)	
Physical structure: drainage	Percentage	Areas showing signs of drainage as a result of drainage ditches or heavy trampling less than 10%		
[8240] Limestone pavements				
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession	Limestone pavements often occurs in close association with other habitats including	
Habitat distribution	Occurrence	No decline, subject to natural processes	grasslands and heath.	
Vegetation composition: typical species	Number at a representative number of monitoring stops	At least seven positive indicator species present	Includes red data and other rare or localised species as well as archaeological and geological features, which often support distinctive species	
Vegetation composition: bryophyte layer	Percentage at a representative number of monitoring stops	Bryophyte cover at least 50% on wooded pavement		
Vegetation composition: negative indicator species	Percentage at a representative number of monitoring stops	Collective cover of negative indicator species on exposed pavement not more than 1%		
Vegetation composition: non native species	Percentage at a representative number of monitoring stops	Cover of non-native species not more than 1% on exposed pavement; on wooded pavement not more than 10% with no regeneration		

TABLE 5.4. LOUGH REE SAC CONSERVATION OBJECTIVES					
ATTRIBUTE	MEASURE	TARGET	SELECTED NOTES		
Vegetation composition: scrub	Percentage at a representative number of monitoring stops	Scrub cover no more than 25% of exposed pavement			
Vegetation composition: bracken cover	Percentage at a representative number of monitoring stops	Bracken (Pteridium aquilinum) cover no more than 10% on exposed pavement			
Vegetation structure: woodland canopy	Percentage at a representative number of monitoring stops	Canopy cover on wooded pavement at least 30%			
Vegetation structure: dead wood	Occurrence in a representative number of monitoring stops	Sufficient quantity of dead wood on wooded pavement to provide habitat for saproxylic organisms			
Physical structure: disturbance	Occurrence in a representative number of monitoring stops	No evidence of grazing pressure on wooded payement			
Indicators of local distinctiveness	Occurrence	Indicators of local distinctiveness are maintained			
[91D0] Bog woodland					
Habitat area	Hectares	Area stable or increasing, subject to natural processes	This Annex I habitat is regarded as a component of the Active Raised Bog (ARB)		
Habitat distribution	Occurrence	No decline, subject to natural processes	habitat (7110)		
Vegetation composition: positive indicator species	Number in a representative number of monitoring stops	Birch (Betula pubescens), bog moss (Sphagnum species) and at least five other species present	The most recent estimate for the area of the Annex I Bog woodland is 2.1ha		
Vegetation composition: negative indicator species	Percentage cover at a representative number of monitoring stops	Both native and non-native invasive species absent or under control. Total cover should be less than 10%	Bog woodland is typically species-poor but with a characteristic and distinctive flora.		

TABLE 5.4. LOUGH REE SAC CONSERVATION OBJECTIVES				
ATTRIBUTE	MEASURE	TARGET	SELECTED NOTES	
Woodland structure: cover and height of birch	Percentage cover and metres at a representative number of monitoring stops	A minimum 30% cover of birch (Betula pubescens) with a median canopy height of 4m		
Woodland structure: dwarf shrub cover	Percentage cover at a representative number of monitoring stops	Dwarf shrub cover not more than 50%		
Woodland structure: ling cover	Percentage cover at a representative number of monitoring stops	Ling (Calluna vulgaris) cover not more than 40%		
Woodland structure: bryophyte cover	Percentage cover at a representative number of monitoring stops	Bryophyte cover at least 50%, with bog moss (Sphagnum spp.) cover at least 25%		
Woodland structure: tree size classes	Occurrence	Each size class present		
Woodland structure: senescent and dead wood	Occurrence	Senescent or dead wood present		
[91E0] Old sessile oak woods wi				
There is no information available	for this qualifying interes	t.		
[1355] Otter Distribution	% positive survey sites	No significant decline	Otters need lying up areas throughout their territory where they are secure from	
Extent of terrestrial habitat	Hectares	No significant decline. Area mapped and calculated as 330.6ha along river banks/lake shoreline/around pools	disturbance. Broad diet that varies locally and	
Extent of freshwater habitat (river)	Kilometres	No significant decline. Length mapped and calculated as 22.7km	seasonally, but dominated by fish, in particular salmonids, eels and sticklebacks	
Extent of freshwater (lake) habitat	Hectares	No significant decline. Area mapped and calculated as 2097.4ha		
Couching sites and holts	Number	No significant decline		

TABLE 5.4. LOUGH REE SAC CONSERVATION OBJECTIVES						
ATTRIBUTE MEASURE TARGET SELECTED NOTES						
Fish biomass available	Kilograms	No significant decline	Otters will regularly commute across stretches of open water up to 500m e.g.			
Barriers to connectivity Number No significant increase between mainland and an island						

Lough Ree SAC Conservation Status

According to the Habitat's Directive, favourable conservation status of a habitat is achieved when:

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

According to the Habitat's Directive, favourable conservation status of a species is achieved when:

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

The conservation statuses for the qualifying interests of the Lough Ree SAC site are outlined below.

Table 5.5. Conservation Status of Lough Ree SAC Qualifying Interests.

CODE	QUALIFYING INTEREST	NATIONAL CONSERVATION STATUS*
3150	Rich pondweed lake habitat	Inadequate
6210	Calcareous grassland (*orchid-rich)	Bad
7110	Active Raised Bogs*	Bad
7120	Degraded raised bogs	Bad
7230	Alkaline Fens	Bad
8240	Limestone Pavements	Inadequate
91D0	Bog Woodland	Favourable
91 A0	Old Oak Woodlands	Bad
1355	Otter	Favourable

^{*}Sourced from the Status of EU Protected Habitats and Species in Ireland (NPWS, 2019b and 2019c).

5.2 Lough Ree SPA Site Code: (004064)

The majority 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.

The site is a Special Protection Area (SPA) selected for the following species:

TABLE 5.6. SPECIAL CONSERVATION INTERESTS OF THE LOUGH REE SPA			
CODE	COMMON NAME	SCIENTIFIC NAME	
A004	Little Grebe	Tachybaptus ruficollis	
A050	Wigeon	Anas penelope	
A052	Teal	Phalacrocorax carbo	
A056	Shoveler	Anas clypeata	
A038	Whooper Swan	Cygnus cygnus	
A053	Mallard	Anas platyrhynchos	
A067	Goldeneye	Bucephala clangula	
A065	Common Scoter	Melanitta nigra	
A125	Coot	Fulica atra	
A140	Golden Plover	Pluvialis apricaria	
A142	Lapwing	Vanellus vanellus	
A193	Common Tern	Sterna hirundo	
A999	Wetland and Wetland Birds	Calidris alba	

An excerpt from the site's Site Synopsis (NPWS, 2015) is included below.

"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."

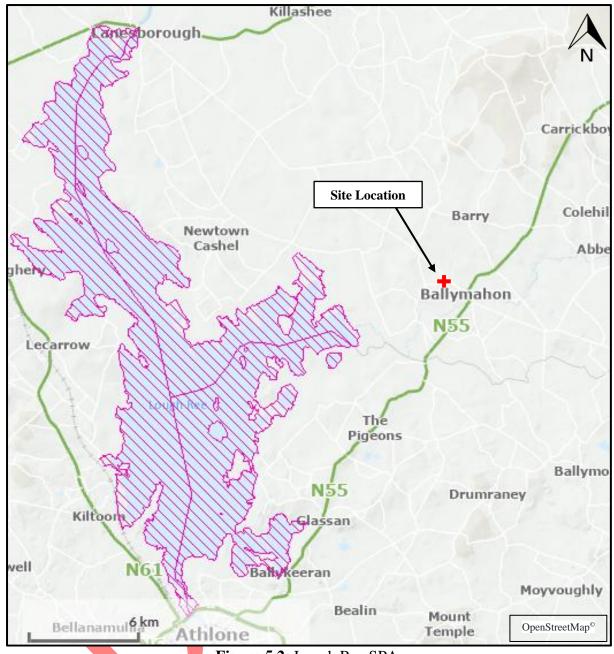


Figure 5.2: Lough Ree SPA

The conservation objectives of the Lough Ree SPA do not include species specific targets. However, it does state that wetland habitats should be maintained or restored to favourable conditions as a habitat for the migratory waterbirds that utilise it regularly.

6.0 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

6.1 Disturbance to Protected Habitats and Species

The site does not directly impinge on any part of a European site, and as such would not be expected to have any in-situ effects upon a protected site through loss or destruction of habitat, fragmentation of habitat, disturbance of habitat or direct reduction in species density. See Appendix A for summary of the Qualifying Interests and summary of potential impact from the proposed site. The Lough Ree SAC is located approximately 4.9km (8.1km hydrologically downstream) from the development site, and the Lough Ree SPA is located approximately 5.4km (8.6km hydrologically downstream) from the development site. This connection is via the Inny river located 615m from the site. There are no watercourses or drainage ditches present on site.

It is not considered that the development site would contain the habitats or species for which the Lough Ree SAC or SPA has been designated. No areas of woodland exist within the development site; therefore, the site does not contain any habitat which would have potential links to Bog Woodlands [91D0] or Alluvial Forests [91A0]. The closest mapped Bog woodlands are approximately 5.1km (7.7km hydrologically downstream) to the southeast and the closest Alluvial Forest is approximately 7.8km (44.3km hydrologically upstream) to the southwest of the development site. There would be no direct impact to these qualifying interests as these habitats are not within the red line boundary. There are no instream works occurring and there is no watercourse or drainage ditch present on site. There are no water quality objectives set for these habitats within the Conservation Objectives document. Therefore, any potential indirect impact is not expected.

No areas of peatlands occur in the development site therefore, the site does not contain any habitat which would have potential links to Active raised bogs [7110] or Degraded raised bogs [7120]. The nearest Active raised bogs are located 19.5km (28.3km hydrologically upstream) west of the development site. Calcareous grassland [6210] was not recorded within the boundary of the site. The nearest mapped example of Calcareous grassland is located 18.2km (20.4km hydrologically downstream) southwest of the development site. No areas of wetlands, bare rock, or freshwater bodies occur on the development site and therefore the development does not contain habitats linked to Alkaline fens [7230] or Limestone pavements [8240]. Rich pondweed lake habitats [3150] are associated with Lough Ree which is located 9km hydrologically downstream from the development site. The full extent of the Alkaline fens in the SAC has not been mapped. 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. There is a small area of limestone pavement on the eastern side of Lough Ree. No habitats associated with the Lough Ree SAC are found onsite therefore, no direct impact is anticipated. A deterioration in water quality could indirectly impact these qualifying interests. A deterioration in water quality can have an indirect impact on these habitats however, there will be no in-stream works and given the distance to the nearest watercourse, an indirect impact is not expected.

Some of the qualifying interests associated with of the Lough Ree SAC are sensitive to a deterioration in water quality. However, as there is no watercourses within or adjacent the boundary and no in-stream works, it is considered that the proposed development would not

have the potential to affect water quality of the Upper Shannon catchment, during both the construction and the operational phases, as discussed in section 6.3 below.

No evidence of Otter (including holts, slides, spraints and tracks) was recorded during the ecological site assessment. NBDC has records of Otter on the River Inny both upstream and downstream of the development site. The nearest NBDC record of Otter is 3.7km (6.3km hydrologically upstream) northeast of the development site on The Royal Canal (Ferdia Marnell, Atlas of Mammals in Ireland 2010-2015). The site is comprised of modified habitats which would be of limited value to Otter, should this species be present within the vicinity. There are no freshwater habitats onsite or within proximity. No works will take place within or directly adjacent to a watercourse. Therefore, the development would not directly affect Otter due to habitat loss or fragmentation, given the limited land-take required, and of modified habitats, and given the availability of more suitable otter habitat in the general area. There are no water quality objectives set for this species within the Conservation Objectives document of the SAC. A potential deterioration in water quality could indirectly affect Otter by directly affecting food availability. However, as there are no in-stream works, it is not considered that the proposed development would have the potential to indirectly affect the water quality of the Upper Shannon catchment, the SAC, and SPA (see section 6.3 below).

The majority of the qualifying interests of the Lough Ree SPA are associated with wetland or freshwater habitats. The habitats within the red line boundary of the development site are mostly areas of dry meadows and grassy verges, amenity grassland, hedgerows and buildings and artificial surfaces. Water birds associated with the SPA, for example, the Whooper Swan, Teal, or Lapwing have been known to feed on grasslands and stubble on agricultural grasslands, although their diet primarily consists of aquatic vegetation. The grassland habitats cover a small area, and the rest of the site consists of modified habitats. There would also be high anthropogenic disturbance in the area, making it unlikely that birds would visit this site. There will be no direct impact to these species during the construction phase as there will be no works within the boundaries of the SPA. Water birds can be indirectly affected by water quality deterioration which impacts their prey populations. However, as there are no in-stream works, it is not anticipated that the proposed development will have any indirect significant effects on the qualifying interests of the Lough Ree SPA.

It is not envisaged that protected species would be directly impacted by the development due to noise generated by the proposed development as the surrounding area is mostly urban in nature. Fauna in the area would be accustomed to human generated noise from residential and agricultural activities commonly audible within the centre and outskirts of urban areas. While there would be an increase in noise emissions during the construction and demolition phase of the development, these would not be considered to pose a significant risk owing to the transient nature of the works. Fauna in the area would also be accustomed to noise from vehicular traffic during the operational phase of the development.

The potential disturbance on protected habitats and species of designated sites due to dust during the construction and demolition phases would not be considered significant, given the transient nature of construction works and the scale of the proposed development. Demolition and construction works will take place within the site boundary exclusively. There will be no demolition works within the vicinity of a designated site or watercourse/drainage ditch. It is not considered that the operational phase of the development would have the potential to adversely impact upon designated sites due to air emissions given the nature of the development and proposed heating system.

It is therefore considered that the proposed development would not result in any significant risk to the protected habitats and species of the Lough Ree SAC, or SPA due to habitat fragmentation or loss, disturbance or reduction in species density.

6.2 Invasive Species

Under Regulation 49(2) of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) as Amended 2015 (S.I. No. 355 of 2015) save in accordance with a licence granted under paragraph (7), any person who plants, disperses, allows or causes to disperse, spreads or otherwise causes to grow in any place specified in relation to any plant which is included in Part 1 of the Third Schedule shall be guilty of an offence. Materials containing invasive species such as Japanese Knotweed are considered "controlled waste", and, as such, there are legal restrictions on their handling and disposal. Under Regulation 49(7) of the European Communities Birds and Natural Habitats) Amendment (S.I. No. 355 of 2015) of Regulations 2011-2015, it is a legal requirement to obtain a license to move "vector materials" listed in the Third Schedule, Part 3.

Table 6.1: National Biodiversity Data Centre records of Third Schedule invasive species within 10km square (Tetrad – N15) of the proposed development.

THIRD SCHEDULE INVASIVE FLORA

Rhododendron (*Rhododendron ponticum*)

The spread of invasive plant and animal species can negatively impact on the conservation objectives of certain Annex I habitats and species designated within SACs.

No Third Schedule invasive species were recorded within or adjacent to the site boundary.

No Landscape Plan has been proposed for this development.

The risk of invasive species being introduced onto the site during the construction phase of the project is considered to be low, with no import of materials with the potential to contain invasive flora species. Therefore, it is considered that there will be no significant risk to protected habitats and species as a result of invasive species.

6.3 Potential Impacts on Water Quality

The development is located within the Upper Shannon catchment. The nearest EPA mapped watercourse to the proposed development site is an unnamed watercourse (River Waterbody Code: IE_SH_26I011350 – Order 1, Segment Code: 26_3974) located approximately 542m East of the development site. It is joined by another unnamed watercourse (River Waterbody Code: IE_SH_26I011350 – Order 2, Segment Code: 26_4112) 605m east of the development site. These flow into the River Inny approximately 986m southwest the development site. The SAC/SPA contains qualifying interests sensitive to water quality deterioration.

During the construction phase of projects, a deterioration in water quality can arise through the release of suspended solids during soil disturbance works, the release of uncured concrete and the release of hydrocarbons (fuels and oils). Construction works would be confined to the proposed development footprint, with no construction works taking place within a watercourse

or drainage ditch. The proposed construction area of the development would be mainly within buildings and artificial surfaces habitats which would be considered as having been modified and of lower ecological value.

The development is not adjacent to a watercourse and there are no drainage ditches on site that connect to the unnamed watercourse or the Drinan stream. The nearest mapped watercourse is located a considerable distance away from the development site (542m) and there are physical barriers in between (such as buildings, roads, walls, hedgerows, etc) that would minimise any potential surface water runoff from the development site into the unnamed watercourse during the construction phase. Construction works would be confined to the proposed development footprint, with no works taking place within a riparian zone or aquatic habitat.

During the operational phase surface water comprised of rainwater run-off from the roofs of the proposed dwellings will be collected by the new proposed drainage system and will be connected to the existing Irish Water surface water drainage infrastructure to the north. A petrol interceptor will also collect hydrocarbons from the surface run-off. The proposed surface water drainage design for the car parking and roads incorporates SUDs features such as permeable paving, that will reduce the flow in the surface water drainage system and infiltrate to ground.

Foul water from the proposed development will ultimately be directed to the Ballymahon WWTP (D0096) which currently has available capacity according to the Irish Water WWTP Capacity Register. The most recent Annual Environmental Report for Ballymahon WWTP (2021) shows that a deterioration in water quality downstream of the discharge location of the WWTP has been noted. However, it is not clear if this is caused by the WWTP. The report determined that "The WWTP is non compliant with the ELV's set in the Wastewater Discharge Licence." and that "The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status".

The development site is not located within a flood zone, therefore is not expected that the proposed development would have the potential to increase the risk of flooding downstream on the Upper Shannon catchment. Additionally, it is highly unlikely that floodwaters would come in contact with any significant potentially hazardous or polluting substances onsite which could affect water quality. Therefore, the development site would not be anticipated to pose a significant risk upon a Natura 2000 site as a result of floodwaters.

Surface water during the demolition and construction phase which could include run-off from dust will be collected in the existing surface water drainage system to the west of the site. This infrastructure includes pipes and manholes. A new drainage system for surface water will also be constructed and connected to mains. Permeable parking is proposed for the car parking areas and will infiltrate to ground.

It is therefore considered that, due to the nature and location of the development and no excavation works within a watercourse or riparian zone, the development would not pose a significant risk upon the Lough Ree SAC or SPA site due to a deleterious effect on water quality during either the construction or operational phases.

6.4 In Combination Effects

The following plans and projects were reviewed and considered for in-combination effects with the proposed development:

- Longford County Development Plan 2021-2027;
- County Longford Local Economic and Community Plan 2023-2029;
- Proposed and permitted developments in the area available on Longford County Council planning system.

The development site is located in the centre of Ballymahon town. According to the Longford County Development Plan, Ballymahon is as a self - sustaining town with high levels of population growth. The Development plan notes the need to accommodate an additional 147 households over the Plan period 2021-2027 according to the housing demand.

The convent of mercy site where the proposed development will be accessed will be via an existing road just off Main Street R392 to the southwest. The N55 is located approximately 416m to the southeast of the development site, providing connection to Edgeworthstown to the northeast and to Longford town to the northwest. The N55 joins the M6 in Athlone approximately 20.1km southwest of the development site providing connection to Galway in the west and Dublin in the east. Recent planning applications granted within the vicinity are shown in table 6.4.1 below.

Table 6.2: Recent planning applications close to the proposed site

Application No.	Development Type	Outcome	Approximate Distance
19312	Permission for the demolition of existing fire damaged building formerly known as "St. Matthews Girls School" and all ancillary works	Granted - Conditional	Adjacent NE
2460100	Permission for the development for a Discount Foodstore Supermarket with ancillary off-licence sales. The proposed development comprises: 1) The demolition of existing single storey former school building and site clearance; 2) Construction of new footpath to (West side) of existing Church View access road and associated and ancillary road realignment; 3) Construction of new access road from Church View access road, providing vehicular and pedestrian access to the proposed development (and facilitating the future development of adjoining lands); 4) The construction of a single storey Discount Foodstore (with ancillary off-licence use) with mono-pitch roof measuring 2,291 sqm gross floor space with a net retail sales area of 1,489 sqm; and, 5) Provision of car and cycle parking, boundary treatments, free standing and building	Granted - Conditional	Adjacent N

Application No.	Development Type	Outcome	Approximate Distance
	mounted signage, covered trolley bay, refrigeration and air conditioning plant and equipment, hard and soft landscaping, public lighting, electric vehicle charging infrastructure, roof mounted solar panels, ESB substation, drainage, utility and services infrastructure and connections, and all other associated and ancillary development and works above and below ground level		
19117	Permission for the (a) demolition of existing single storey extension to the rear of existing Dental Surgery previously granted planning permission under 07/1096 and proposed two storey extension to rear of existing surgery, (b) change of use of adjoining single storey residential building to use as dental surgery with provision of new single storey extension to the rear, link corridor between buildings, new front access door, (c) to include changes to existing floor layouts to both buildings and changes to relevant elevations, (d) provision of parking area to rear upgrade to access and gate, connection to relevant drainage, provision of boundary wall/fences and retaining walls, signage and all associated site development works where it is now proposed to reduce in size the proposed extension to the rear of building away from lateral boundaries, retain ground excavation works and amendments boundary treatment including rear access and boundary location	Granted - Conditional	170m S
21256	Permission for the construction of a new single storey extension to existing school building to accommodate new w/c facilities and all associated site development works	Granted - Conditional	247m NW
2287	Permission for the proposed change of use of existing 2 no. derelict agricultural buildings (which are listed as Protected Structures) into a cafe/restaurant/food outlet with associated kitchen area, customer sit down area, customer and staff toilet facilities, cheese making factory with shop together with seeking full planning permission for the proposed construction of a single storey extension linking the 2 no. buildings together, alterations to facades and all ancillary works	Granted- Conditional	292m NW
22282	Permission for the upgrade of existing floodlighting, to include the erection of 8	Granted - Conditional	345m E

Application No.	Development Type	Outcome	Approximate Distance
	number 18 metre lighting poles, LED sports floodlights and all associated site works		
2314	change of use of existing dwelling house to doctors surgery, alterations to window openings to the existing dwelling, construction of an entrance porch and all associated site works	Granted - Conditional	554m S
21176	Permission for (1) alterations to previously granted planning permission reference 13/148 (extended under planning reference 18/67) to include the omission of the proposed storage building and car wash building, (2) installation of a car wash facility and, (3) construction of all ancillary site features including container compound, drainage, service bay, parking bays, line marking and e-charge points	Granted - Conditional	736m NW
21323	Permission for the retention and completion of existing storage shed to the rear of existing dwelling house and all ancillary works	Granted - Conditional	775m NW
2360195	Permission for the proposed construction of an industrial/commercial/warehousing unit which was previously granted full planning permission under planning reference number PL04/1253 to the rear of existing car showroom & garage, connection to existing services and all ancillary site works	Granted - Conditional	992m NW

Most of the recent developments in the vicinity of the development site consisted of construction or amendments to residential dwellings, and commercial buildings and most of these have been granted planning permission subject to conditions.

The proposed heating system for the proposed development is air source heat pumps, which is low impact in-and-of-itself. In-combination heating impacts would be controlled by national energy policies, grant schemes and gas emission targets.

Continued implementation of the Water Framework Directive would result in achieving, or maintaining, improvements to water quality in the Upper Shannon Catchment. Developments such as this proposed development could act in combination with existing environmental pressures on the Upper Shannon Catchment, including agriculture, anthropogenic, domestic and urban waste water, urban run-off, industry and forestry. However, as noted in Section 6.3, it is not considered that the development would pose a significant risk upon any Natura 2000 site due to a deleterious effect on water quality, during either the construction or operational phase given the proposed drainage systems and due to the distance to the nearest mapped watercourse. The proposed surface water drainage network will include SUDs features within the drainage system such as permeable parking. Surface water from the development site will be directed to the existing municipal stormwater drainage infrastructure. Therefore, it is considered that there would be no significant cumulative effects upon water quality which could pose a risk to the Lough Ree SAC and SPA

7.0 SCREENING STATEMENT AND CONCLUSIONS

This report identified the presence of European sites (Natura 2000) within the potential zone of influence of the proposed development and noted that the proposed development site is located approximately 5.4km from the Lough Ree SAC (Site Code 000440) and 4.9km from the Lough Ree SPA (Site Code 000781). The potential for impacts to European sites as a result of the proposed development such as potential water quality impacts, introduction of invasive species, habitat destruction and impacts from noise and dust were considered and the level of risk posed assessed.

During Stage 1 Screening for Appropriate Assessment, it was considered that there would be no potential for a significant impact upon the qualifying interests / special conservation interests of the Lough Ree SAC and the Lough Ree SPA during both the construction and operational phase of the proposed development.

This report presents a Stage 1 Appropriate Assessment Screening for the Proposed Development, outlining the information required for the competent authority to screen for appropriate assessment and to determine whether or not the Proposed Development, either alone or in combination with other plans and projects, in view of best scientific knowledge, is likely to have a significant effect on any European or Natura 2000 site.

Accordingly, having carried out the Stage 1 Appropriate Assessment Screening, the competent authority may determine that a Stage 2 Appropriate Assessment of the Proposed Development is not required as it can be excluded, on the basis of objective scientific information following screening under this Regulation 49(2) of the European Communities (Birds and Natural Habitats) Regulations 2011, as amended, that the Proposed Development, individually or in combination with other plans or projects, will not have a significant effect on any European site.

It can be objectively concluded that no significant effects arising from the proposed development are likely to occur in relation to the Lough Ree SAC and Lough Ree SPA or indeed any other Natura 2000 site in the wider hinterland.

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APPENDIX A

ALL QUALIFYING INTERESTS

LOUGH REE SAC (SITE CODE: 00440)			
QUALIFYING INTEREST	LOCATION IN THE NATURA 2000 SITE RELATIVE TO APPLICATION SITE	POTENTIAL FOR IMPACTS FROM THE DEVELOPMENT	LISTED FOR FURTHER EXAMINATION IN APPENDIX B
[3150] Rich pondweed lake habitat	The proposed development is located within the current known distribution, current range and favourable reference range of these qualifying interests (NPWS, 2019b). The nearest mapped examples of these qualifying interests are located with the Lough Ree SAC and SPA 5.4km (over 9km hydrologically downstream) south of the proposed development (NPWS, 2016). A deterioration in water quality could have the potential to affect this qualifying interest.	Yes	Yes
[6210] Calcareous grassland *important orchid-rich	The proposed development is located outside the current known distribution, but within the current range and favourable reference range of these qualifying interests (NPWS, 2019b). The nearest examples of these qualifying interests are located over 20km hydrologically downstream of the proposed development (NPWS, 2016). A potential deterioration in water quality would not be anticipated to significantly affect this qualifying interest.	No	No
[7110] Active raised bogs	The proposed development is located outside the current known distribution, but within the current range and favourable reference range of these qualifying interests (NPWS, 2019b). The nearest examples of these qualifying interests are located greater than 27km hydrologically downstream of the development site (NPWS, 2016). A deterioration in water quality could have the potential to affect this qualifying interest.	Yes	Yes
[7120] Degraded raised bogs	The proposed development is located outside the current known distribution, but within the current range of these qualifying interests (NPWS, 2019b). The nearest examples of these qualifying interests are located greater than 27km hydrologically downstream of the proposed development (NPWS, 2016). A deterioration in water quality could have the potential to affect this qualifying interest.	Yes	Yes
[7230] Alkaline fens	The proposed development is located within the current known distribution, current range and favourable reference range of these qualifying interests (NPWS, 2019b). The nearest examples of these qualifying interests are located greater than 21km downstream of the proposed development (NPWS, 2016). A deterioration in water quality could have the potential to affect this qualifying interest.	Yes	Yes
[8240] Limestone pavements	The proposed development is located outside the current distribution, current range and favourable reference range of this qualifying interest (NPWS, 2019b). The nearest	No	No

LOUGH REE SAC (SITE CODE: 00440)			
QUALIFYING INTEREST	LOCATION IN THE NATURA 2000 SITE RELATIVE TO APPLICATION SITE	POTENTIAL FOR IMPACTS FROM THE DEVELOPMENT	LISTED FOR FURTHER EXAMINATION IN APPENDIX B
	examples of these qualifying interests are located greater than 26km hydrologically downstream of the development site (NPWS, 2016). There are no water quality objectives set for this qualifying interest. It is therefore not anticipated that the proposed development would have the potential to significantly affect this qualifying interest.		
[91D0] Bog woodland	The proposed development is located outside the current known distribution, current range and favourable reference range of these qualifying interests (NPWS, 2019b). The nearest examples of these qualifying interests are located 5.1km to the southeast (7.7km hydrologically downstream) of the development site (NPWS, 2016). There are no water quality objectives set for this qualifying interest. It is therefore not anticipated that the proposed development would have the potential to significantly affect this qualifying interest.	No	No
[91E0] Alluvial forests	The proposed development is located within the current known distribution, current range and favourable reference range of this qualifying interest (NPWS, 2019b). The nearest example of this qualifying interest is approximately 7.8km southwest (44.3km hydrologically upstream) of the development site. A potential deterioration in water quality would not be anticipated to significantly affect this qualifying interest.	No	No
[1355] Otter (Lutra lutra)	The proposed development is located within the current distribution, current range and favourable reference range of Otter (NPWS, 2019c). There are no records of Otter within the unnamed watercourse or the Drinan stream. The nearest NBDC record of Otter is 3.7km (6.3km hydrologically upstream) northeast of the development site on the Royal Canal (Ferdia Marnell, Atlas of Mammals in Ireland 2010-2015). A potential deterioration in water quality could indirectly affect this qualifying interest by causing a reduction in prey populations and availability.	Yes	Yes

	LOUGH REE SPA (SITE CODE: 004064)	
QUALIFYING INTEREST	LOCATION IN THE NATURA 2000 SITE RELATIVE TO APPLICATION SITE	POTENTIAL FOR IMPACTS FROM THE DEVELOPMENT*
[A004] Little Grebe (Tachybaptus ruficollis)	Feeds on a range of invertebrates (particularly insect larvae), small fish and molluscs. Wintering habitats include ephemeral wetlands and are often encountered on sheltered coasts, estuaries and coastal lakes and lagoons. Breeding sites are widely scattered with higher densities in the northeast. A significant deterioration in water quality can have an indirect effect on this qualifying interest.	Yes
[A038] Whooper Swan (Cygnus cygnus)	Wintering species favours lakes, estuaries and sheltered coasts, marshes, flooded lands, brackish lagoons and coastal bays. Diet includes plant material such as leaves, stems and roots of aquatic plants, grasses, sedges and horsetails. May also may also supplement their diet with marine and freshwater mussels. Breeds in Iceland during the summer. A significant deterioration in water quality could have an indirect effect on this qualifying interest.	
[A050] Wigeon (Anas Penelope)	Wintering species shows a preference for coastal saltmarshes, freshwater, brackish and saline lagoons, flooded grasslands, estuaries, intertidal mudflats and other sheltered marine habitats. Its diet is leaves, seeds, stems and root bulbs of pond weeds and fine grasses. Breed on shallow freshwater marshes, under tussocks adjacent to lakes and lagoons or on lake islands. A significant deterioration in water quality could have an indirect effect on this qualifying interest	
[A052] Teal (Anas crecca)	Wintering species along the coast on saline or brackish lagoons with abundant submergent vegetation, saltmarshes, tidal creeks, intertidal mudflats, river deltas, estuarine waters and sheltered coastal bays with a preference for marshes with mud flats. Its diet is seeds of aquatic plants, grasses, sedges and agricultural grain. They usually nest near small freshwater lakes or pools and small upland streams away from the coast, and also in thick cover. A significant deterioration in water quality could have an indirect effect on this qualifying interest.	
[A053] Mallard (Anas platyrhynchos)	Wintering species occurs in almost every wetland type with the exception of some habitats such as sand dunes. Its diet is omnivorous and opportunistic such as insects, molluscs, crustaceans, worms and occasionally amphibians and fish. Nest sites vary, mostly in ground hidden in vegetation. A significant deterioration in water quality could have an indirect effect on this qualifying interest.	

[A056] Shoveler	Feeds on zooplankton found in ephemeral wetlands particularly turloughs and callows.	
(Anas clypeata)	Also feed on small molluscs, insects and larvae, seeds and plant material. Prefers shallow	
	eutrophic waters rich in plankton during the winter Nests on the ground among waterside	
	vegetation, often many nests in close proximity. Breeding in Ireland is centred around	
	Lough Neagh and the mid- Shannon basin. A significant deterioration in water quality	
	could have an indirect effect on this qualifying interest.	
[A061] Tufted duck	Feed predominantly on mussels, and to a lesser extent on crustaceans, insect larvae	
(Aythya fuligula)	(particularly caddis-fly) and bryozoans. Winter on lowland freshwater lakes. Often seen	
	on town lakes, canals and slow-moving rivers as well. During breeding they show a	
	preference for large open lakes in lowland areas, where nests are built in waterside	
	vegetation. A significant deterioration in water quality could have an indirect effect on	
	this qualifying interest.	
Common scoter	During the summer the diet is varied and includes water plants, insect larvae and	
(Melanitta nigra)	freshwater crustaceans. In the winter, they forage mostly in waters less than 20 m deep	
	and with coarse sandy substrates. They feed predominantly on benthic bivalve molluscs.	
	Almost entirely marine during winter. They nest on islands with dense covering of scrub	
	and tree cover. A significant deterioration in water quality could have an indirect effect	
	on this qualifying interest.	
[A067] Goldeneye	Population size 126. Wintering species on inshore waters, shallow bays, estuaries and	
(Bucephala	coastal lagoons. Its diet is predominantly of aquatic invertebrates such as molluscs,	
clangula)	worms, crustaceans, aquatic insects and insect larvae (e.g. dragonflies, damsel flies and	
	may flies) as well as amphibians, small fish and some plant material (mainly in the	
	autumn) such as seeds, roots and the vegetative parts of aquatic plants. Nests in holes in	
	trees and nestboxes, and occasionally in rabbit burrows, usually near water. A significant	
	deterioration in water quality could have an indirect effect on this qualifying interest.	
[A125] Coot (Fulica	Wintering species, habitats include eutrophic and mesotrophic lakes, pools, ponds,	
atra)	reservoirs, barrages, gravel-pits, canals, drainage ditches, dykes, oxbow lakes, fish	
	ponds, creeks, rivers and river deltas, as well as open marshes, freshwater meadows,	
	flood-lands, freshwater and saline lagoons, salt-pans, clay-pans and sewage ponds. Its	
	diet is omnivorous with algae the vegetative pasts of aquatic and terrestrial plants (e.g.	
	waterweeds, bulrushes, reeds and grasses), the seeds of waterweeds, sedges, water-lilies,	
	grasses and cereal crops, clubmoss Selaginella and aquatic fungi. Its diet includes	
	molluscs, adult and larval insects (especially flies, caddisflies, Odonata, Lepidoptera,	
	beetles and bugs), worms, leeches, shrimps, spiders, small fish, fish eggs, frogs, birds	
	and bird eggs, and small mammals. Breed in large shallow bodies of water that are	

	nutrient rich and abundant in bottom vegetation for feeding and emerging vegetation for	
	nest anchorage. A significant deterioration in water quality could have an indirect effect	
	on this qualifying interest.	
[A140] Golden	Wintering species frequents freshwater wetlands, moist grasslands, pastures, agricultural	
Plover (Pluvialis	land and highland steppe also foraging on tidal shores, coastal rocky outcrops, intertidal	
apricaria)	flats and saltmarshes, shallow bays and estuaries. Its diet consists predominantly of	
	insects, crustaceans and some plant material. Breeds across the high arctic regions of	
	Russia & North America. A significant deterioration in water quality could have an	
	indirect effect on this qualifying interest.	
[A142] Lapwing	Wintering species found on riverbanks, lake shores, fresh and saline marshes, drainage	
(Vanellus vanellus)	ditches, estuaries and mudflats. Its diet consists of adult and larval insects, spiders, snails,	
	earthworms, frogs. They breed on open farmland and appear to prefer nesting in fields	
	that are relatively bare. A significant deterioration in water quality could have an indirect	
	effect on this qualifying interest.	
[A193] Common tern	Feeds predominantly on fish. Winters in west and South Africa. Breeds inland in	_
(Sterna hirundo)	freshwater lakes. Nest colonially on the ground from August to October. Breeds on the	
	coast, and inland on islets in freshwater lakes. A significant deterioration in water quality	
	could have an indirect effect on this qualifying interest.	

APPENDIX B

QUALIFYING INTERESTS WITHIN THE PROJECT ZONE OF INTEREST



CONSERVATION OBJECTIVES (NPWS 2011)	THREATS AND PRESSURES (NPWS 2019)	KEY ENVIRONMENTAL CONDITIONS	POTENTIAL IMPACTS FROM THE DEVELOPMENT
[3150] Rich pondweed lake habitat	 Agricultural activities generating point source pollution to surface or ground waters Agricultural activities generating diffuse pollution to surface or ground waters Forestry activities generating pollution to surface or ground waters Discharge of urban waste water (excluding storm overflows and/or urban run-offs) generating pollution to surface or ground water Modification of hydrological flow Physical alteration of water bodies Plants, contaminated or abandoned industrial sites generating pollution to surface or ground water Peat extraction Pollution to surface or ground water due to urban run offs 	A deterioration in Water Quality* could potentially impact on this habitat. Key Conservation Measures Reducing pollution (particularly with dissolved and/or particulate nutrients, but also humic substances, organic matter and fine sediment/turbidity) from agricultural, domestic and urban waste-water, forestry, turf-cutting and other sources Reversal/mitigation of hydrological and morphological impacts, e.g. abstractions and drainage.	No potential for a significant impact on water quality as there is no potential for significant groundwater contamination or significant runoff (sediments or hydrocarbons) from the site that would enter any watercourse or drainage system that is hydrologically connected to the SAC.
[7110] Active raised bogs	 Peat extraction Drainage Conversion to forest from other land uses, or afforestation 	A deterioration in Water Quality* could potentially impact on this habitat. Key Conservation Measures	No potential for a significant impact on water quality as there is no
	(excluding drainage)Burning for agriculture	Adapt/manage exploitation of energy resources	potential for significant groundwater contamination or

CONSERVATION OBJECTIVES (NPWS 2011)	THREATS AND PRESSURES (NPWS 2019)	KEY ENVIRONMENTAL CONDITIONS	POTENTIAL IMPACTS FROM THE DEVELOPMENT
	Temperature changes (e.g. rise of temperature & extremes) due to climate change	 Management, control or eradication of other invasive alien species Management of problematic native species Restore habitats impacted by multi-purpose hydrological changes 	significant runoff (sediments or hydrocarbons) from the site that would enter any watercourse or drainage system that is hydrologically connected to the SAC.
[7120] Degraded raised bogs	 Peat extraction Drainage Conversion to forest from other land uses, or afforestation (excluding drainage) Burning for agriculture Temperature changes (e.g. rise of temperature & extremes) due to climate change 	A deterioration in Water Quality* could potentially impact on this habitat. Key Conservation Measures Adapt/manage exploitation of energy resources Management, control or eradication of other invasive alien species Management of problematic native species Restore habitats impacted by multi-purpose hydrological changes	No potential for a significant impact on water quality as there is no potential for significant groundwater contamination or significant runoff (sediments or hydrocarbons) from the site that would enter any watercourse or drainage system that is hydrologically connected to the SAC.

CONSERVATION OBJECTIVES (NPWS 2011)	THREATS AND PRESSURES (NPWS 2019)	KEY ENVIRONMENTAL CONDITIONS	POTENTIAL IMPACTS FROM THE DEVELOPMENT
[7230] Alkaline fens	 Abandonment of grassland management Intensive grazing or overgrazing by livestock Drainage Modification of hydrological flow Natural succession resulting in species composition change Mixed source pollution to surface and ground waters Abstraction from groundwater, surface water or mixed water Agricultural activities generating diffuse pollution to surface or ground waters 	A deterioration in Water Quality* could potentially impact on this habitat. Key Conservation Measures Reinstate appropriate agricultural practices to address abandonment, including mowing, grazing, burning or equivalent measures. Adapt mowing, grazing and other equivalent agricultural activities; CA06 Stop mowing, grazing and other equivalent agricultural activities. Reduce diffuse pollution to surface or ground waters from agricultural activities Reduce impact of mixed source pollution Reduce impact of multi-purpose hydrological changes Restore habitats impacted by multi-purpose hydrological changes Management of habitats (others than agriculture and forest) to slow, stop or reverse natural processes.	No potential for a significant impact on water quality as there is no potential for significant groundwater contamination or significant runoff (sediments or hydrocarbons) from the site that would enter any watercourse or drainage system that is hydrologically connected to the SAC.

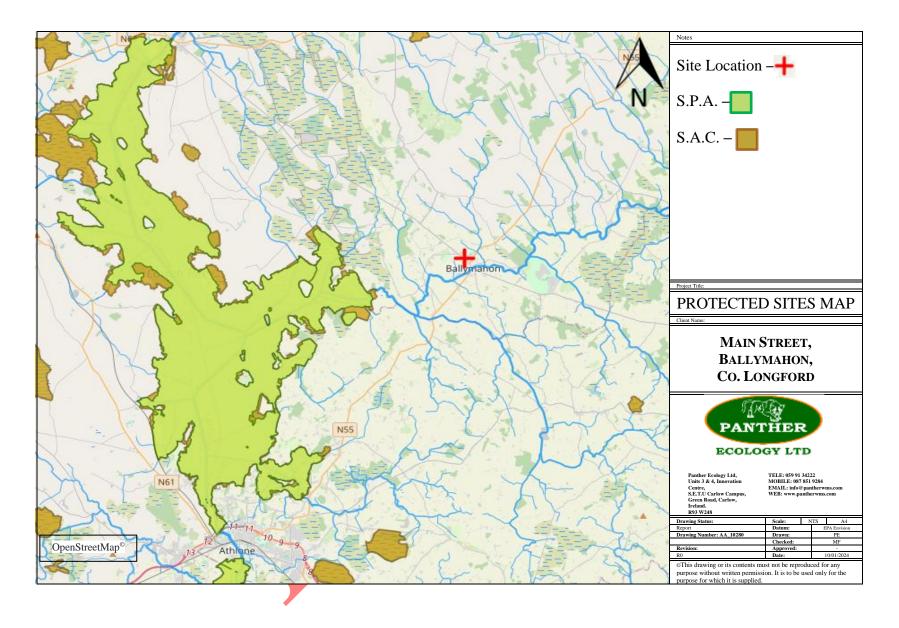
CONSERVATION OBJECTIVES (NPWS 2011)	THREATS AND PRESSURES (NPWS 2019)	KEY ENVIRONMENTAL CONDITIONS	POTENTIAL IMPACTS FROM THE DEVELOPMENT
[1355] Otter (Lutra lutra)	None listed	A significant impact on water quality could indirectly impact upon this qualifying interest by causing a reduction in prey populations and availability. Key Conservation Measures The network of mammal underpasses on new roads are examples of positive measures that have been taken to reduce otter roadkill. Diffuse and point-source pollution of freshwaters and coastal waters is likely to impact otters indirectly through changes to prey abundance.	No potential for a significant impact on water quality as there is no potential for significant groundwater contamination or significant runoff (sediments or hydrocarbons) from the site that would enter any watercourse or drainage system that is hydrologically connected to the SAC. There are no works occurring within a watercourse or drainage ditch.

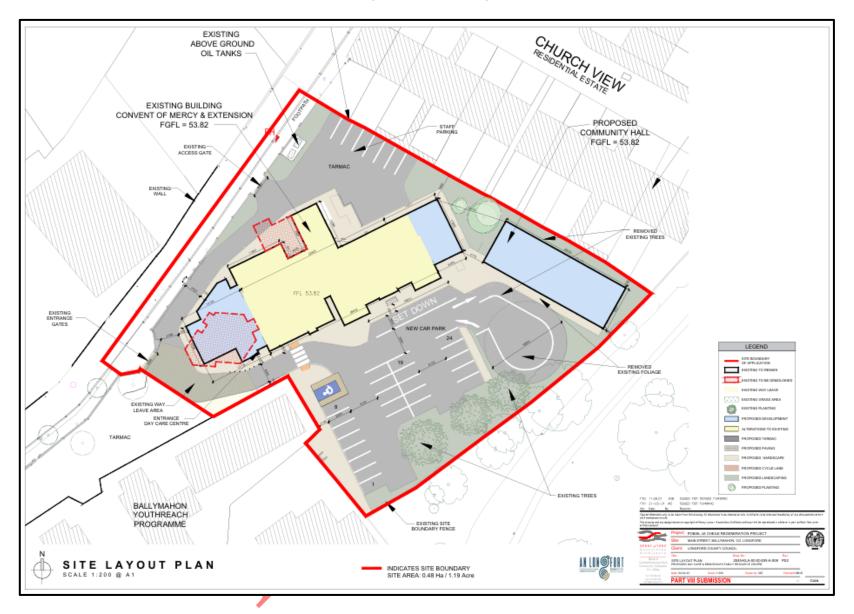
^{*} See Table 5.1 for Water Quality Targets set in Conservation Objectives

LOUGH REE SPA (SITE CODE: 004064)			
CONSERVATION OBJECTIVES (NPWS 2012)	THREATS AND PRESSURES	KEY ENVIRONMENTAL CONDITIONS	POTENTIAL IMPACTS FROM THE DEVELOPMENT
 [A004] Little Grebe (Tachybaptus ruficollis) [A038] Whooper Swan (Cygnus cygnus) [A050] Wigeon (Anas Penelope) [A052] Teal (Anas crecca) [A053] Mallard (Anas platyrhynchos) [A056] Shoveler (Anas clypeata) [A061] Tufted duck (Aythya fuligula) Common scoter (Melanitta nigra) [A067] Goldeneye (Bucephala clangula) [A125] Coot (Fulica atra) [A140] Golden Plover (Pluvialis apricaria) [A142] Lapwing (Vanellus vanellus) [A193] Common tern (Sterna hirundo) 	 Deterioration & loss of habitat; Hunting; Over fishing of food source; Impact on water quality; Disturbance of nesting birds; Residential or recreational activities and structures generating marine pollution . 	A significant impact on water quality could indirectly impact upon this qualifying interest by causing a reduction in prey populations and availability. **Key Conservation Measures** • Reduce/eliminate marine pollution from marine aquaculture; • Protect from hunting and disturbance; • Protect habitat for foraging and nesting birds. Reduce/eliminate point source pollution to surface or ground waters from industrial, commercial, residential and recreational areas and activities	No potential for a significant impact on water quality as there is no potential for significant groundwater contamination or significant runoff (sediments or hydrocarbons) from the development site that would enter any watercourse or drainage system that is hydrologically connected to the SPA. There are no works occurring within a watercourse or drainage ditch

APPENDIX C

PROTECTED SITES AND SITE PLANS







APPENDIX D PHOTO LOG



Plate 1: Site entrance



Plate 3: Hedgerow (WL1)



Plate 2: Treeline



Plate 4: Mammal tracks, most likely made by domestic animals

Notes:

APPENDIX D PHOTO LOG



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	AA_ 10280	A	approved:	-	
			date:	10/01/2	2025

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Plate 5: Dry meadows and grassy verges (GS2)



Plate 6: Stonewalls and other stonework (BL3)



Plate 7: Buildings and artificial surfaces (BL3)



Plate 8: Flower beds and border (BL4) outside redline boundary

Notes:

APPENDIX D PHOTO LOG



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