Proposed Housing Development, Tuamgraney, Co. Clare

NATURA IMPACT STATEMENT

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EXECUTIVE SUMMARY

This Natura Impact Statement (NIS) assesses the likely significant effects of a proposed housing development at Tuamgraney, Co. Clare, on the Lough Derg (Shannon) SPA. A Screening for Appropriate Assessment (Ecofact, 2026a) identified potential direct, indirect and cumulative impacts relating to water quality and invasive species. Mitigation was therefore required and a Stage 2 Appropriate Assessment undertaken. A separate Biodiversity Assessment has also been completed.

The site is located approximately 2.2 km upstream of the Lough Derg (Shannon) SPA (Site Code 004058), which is designated for Tufted Duck (Aythya fuligula), Goldeneye (Bucephala clangula), Cormorant (Phalacrocorax carbo), Common Tern (Sterna hirundo), and Wetlands and Waterbirds habitat. Potential impact pathways relate to deterioration in water quality and the introduction or spread of invasive species. Construction-phase risks include sediment run-off, accidental fuel or oil spillages, and the spread of invasive species via machinery and personnel. Operational-phase risks relate primarily to surface water run-off from hardstanding areas. Cumulative effects were also considered in the context of existing water quality pressures and increased residential activity.

Mitigation measures include implementation of a Construction Environmental Management Plan and Surface Water Management Plan; appropriate site compound location; strict fuel and chemical storage and handling procedures; sediment control measures including silt fencing; minimisation and protection of stockpiles; biosecurity protocols; SuDS measures; and installation of an oil–water separator. A pre-connection request has been submitted to Irish Water for connection to the public water and wastewater network.

Following examination, analysis and evaluation of the relevant information, and taking full account of the mitigation measures proposed, it is concluded that the development will not adversely affect the integrity of the Lough Derg (Shannon) SPA, either alone or in combination with other plans or projects.

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1. INTRODUCTION

The current document is a Natura Impact Statement (NIS) and assesses the likely significant effects on the Lough Derg (Shannon) SPA arising from a proposed housing development in Tuamgraney, Co. Clare.

A Screening for Appropriate Assessment was carried out for the proposed development and determined that there was the potential for direct, indirect and cumulative impacts regarding water quality and invasive species (Ecofact, 2026a). Mitigation was deemed to be required and therefore a Natura Impact Statement is required. A Biodiversity Assessment has also been completed for the development (Ecofact, 2026b). A Screening for Environmental Impact Assessment has also been completed which concluded that an Environmental Impact Assessment is not required (Ecofact, 2026c).

The preparation of this NIS for Appropriate Assessment is as required under the Habitats Directive (92/43/EEC) in instances where a plan or project may give rise to significant effects upon a Natura 2000 site. Natura 2000 sites are of European Importance and have been designated in accordance with the requirements of the EC Habitats Directive (1992) and EC Birds Directive (2009/147/EC); transposed into Irish legislation as the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011). The Habitats Directive, in combination with the Birds Directive (2009), establishes a network of internationally important sites designated for their ecological status; identified as Special Areas of Conservation (SACs) designated under the Habitats Directive for the protection of flora, fauna and habitats and as Special Protection Areas (SPAs) designated under the Birds Directive to protect rare, vulnerable and migratory birds. These sites together form a Europe-wide 'Natura 2000' network of designated sites, referred to in this report as Natura 2000 sites.

This assessment follows the Habitats Directive 92/43/EEC, Article 6(3) and the guidance published by the National Parks and Wildlife Service (DoEHLG, 2010) '*Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities*'. The current Natura Impact Statement (NIS) assesses the impact of the proposed housing development at construction and operation stages in relation to direct, indirect and cumulative effects on the Integrity of the Natura 2000 network.

1.1 Legislative context

The current assessment takes account of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora - '*The Habitats Directive'* which was transposed into Irish law by the '*European Community (Natural Habitats) Regulations 1997*' (S.I. No. 94/1997). The most recent transposition of this legislation in Ireland is the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011). The Birds Directive (2009/147/EC) which is now included in the former Regulations seeks to protect birds of special importance by the designation of Special Protection Areas (SPAs) whereas the Habitats Directive does the same for habitats and other species groups within Special Areas of Conservation (SACs), which are designated or proposed as candidate Special Areas of Conservation (cSACs). It is the responsibility of each member state to designate SPAs and SACs, both of which will form part of Natura 2000, a network of protected areas throughout the European Community. Article 6, paragraphs 3 and 4 of the EC 'Habitats' Directive (1992) state that:

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

6(4) 'If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and / or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.'

In addition, the European Court of Justice in Case C-127/02 (the "Waddenzee Ruling") has made a relevant ruling in relation to Appropriate Assessment and this is reflected in the current assessment:

'Any plan or project not directly connected with or necessary to the management of the site is to be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives if it cannot be excluded, on the basis of objective information, that it will have a significant effect on that site, either individually or in combination with other plans or projects" and that the plan or project may only be authorised "where no reasonable scientific doubt remains as to the absence of such effects.'

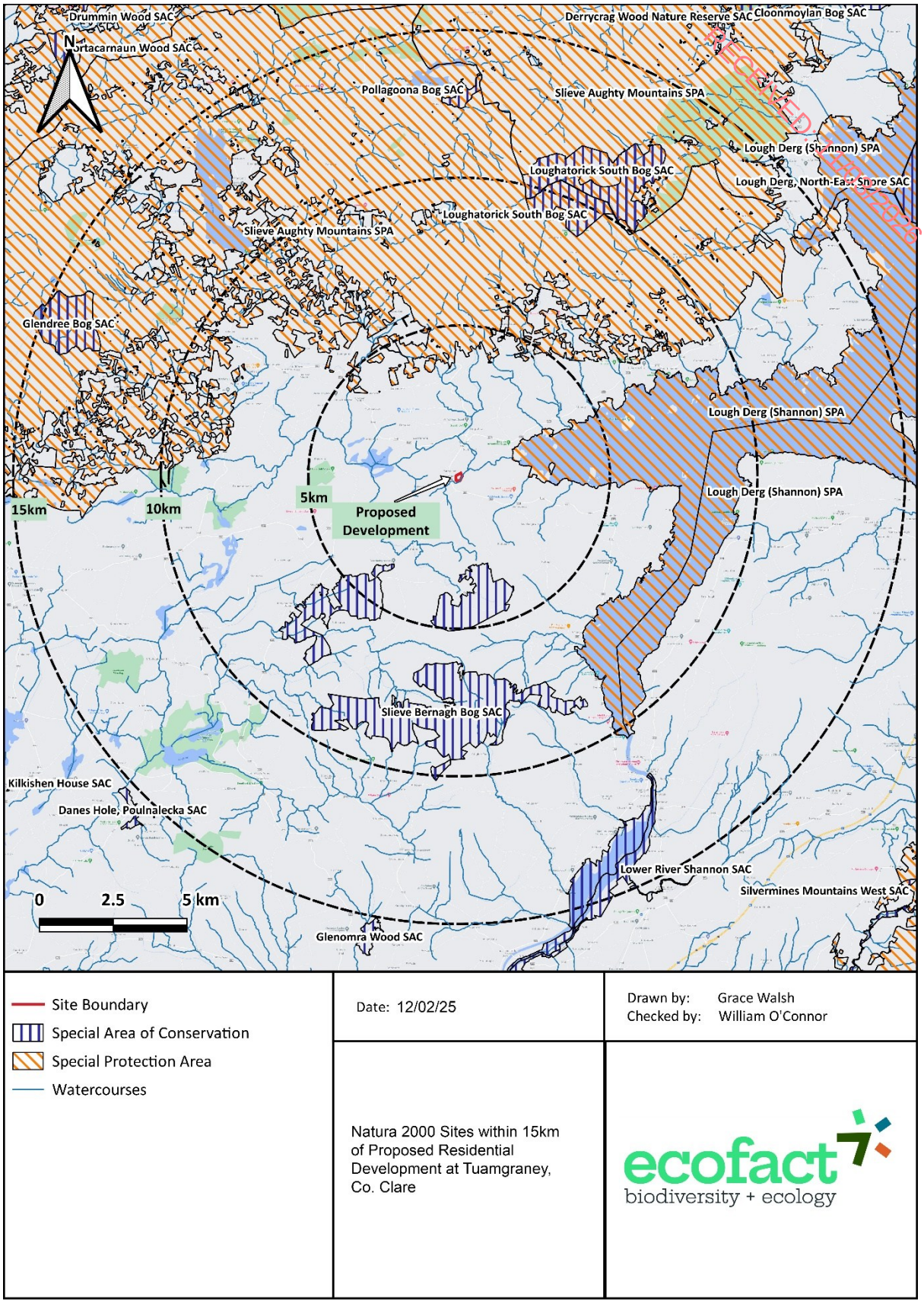

Figure 1 Natura 2000 Sites within 15km of Proposed Residential Development at Tuamgraney, Co. Clare

2. METHODOLOGY

2.1 Desktop Review

A desktop study was undertaken to identify the extent and scope of the potentially affected Natura 2000 sites within the current study area, in relation to the proposed housing development at Tuamgraney, Co. Clare. The desktop study identified the conservation interests of the designated sites with respect to the qualifying interests (species and habitats) relevant to the designated sites within the area.

A review of published literature was undertaken in order to collate data on the receiving environment; a range of additional sources of information including scientific reports produced by, and information on the websites of the EPA and NPWS were also reviewed. Information sources reviewed included the NPWS site synopses for the Lough Derg (Shannon) SPA, as well as protected species data held on the NPWS online database. The National Biodiversity Data Centre website was accessed for previous records of protected species in the area. A full bibliography of information sources reviewed is given in the reference section.

2.3 Site Survey

The proposed development site was surveyed in January 2022, August 2022, August 2025, with a final site visit completed in February 2026. Comprehensive flora and fauna surveys were undertaken across different seasons allowing a detailed ecological assessment to be completed. The surveys completed are documented in Ecofact (2026b).

2.3 Appropriate Assessment Methodology

The preparation of this NIS for Appropriate Assessment follows the guidance published by DoEHLG (2010) '*Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities*'. According to these guidelines, assessing the impacts of a project or plan on a Natura 2000 site is a four staged approach, as described below:

- ***Stage One: Screening / Test of Significance*** - The process which identifies the likely impacts upon a Natura 2000 site of a project or plan, either alone or in combination with other projects or plans, and considers whether these impacts are likely to be significant.
- ***Stage Two: Appropriate Assessment*** - The consideration of the impact of the project or plan on the integrity of the Natura 2000 site, either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts.
- ***Stage Three: Assessment of Alternative Solutions*** - The process which examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site; and
- ***Stage Four: Assessment Where Adverse Impacts Remain*** - An assessment of compensatory measures where, in the light of an assessment of Imperative Reasons of Overriding Public Interest (IROPI), it is deemed that the project or plan should proceed.

The safeguards set out in Article 6(3) and (4) of the Habitats Directive are triggered not by certainty but by the possibility of significant effects. Thus, in line with the precautionary principle, it is unacceptable to fail to undertake an appropriate assessment on the basis that it is not certain that there are significant effects.

2.4.1 Natura Impact Assessment

A Natura Impact Statement (NIS) considers whether the plan or project, alone or in combination with other projects or plans, will have adverse effects on the integrity of a Natura 2000 site, and includes any mitigation measures necessary to avoid, reduce or offset negative effects. The current report is set out in the format of a NIS and comprises a scientific examination of the plan / project and the relevant Natura 2000 sites; to identify and characterize any possible implications for the site in view of the site's conservation objectives, structure and function, taking account of in combination effects. The requirements for Appropriate Assessment derive directly from Article 6(3) of the EU Habitats Directive (1992).

Direct and indirect impacts in isolation or in combination with other plans and projects on the identified Natura 2000 sites in view of the sites' conservation objectives have been examined. Case law of the European Court of Justice (ECJ) has established that Appropriate Assessment must be based on best scientific knowledge in the field. These are the qualifying interests i.e., Annex I habitats, Annex I bird species (EU Birds Directive, incorporated into the EU Habitats Directive) and Annex II species hosted by a site and for which that site has been selected. The conservation objectives for Natura sites (SACs and SPAs) are determined under Article 4 of the Habitats Directive and are intended to ensure that the relevant qualifying interests i.e., Annex I habitats, Annex I bird species and Annex II species present within the designated sites are maintained in a favourable condition. The current assessment of the proposed housing development provides a description of the project and the receiving environment. The conservation objectives of the Natura 2000 site potentially affected by the proposal are listed and potential impacts outlined with respect to the integrity of the Natura 2000 site. Mitigation measures have been proposed for the protection of the conservation interests and the avoidance of impacts to Natura 2000 Sites occurring within the study area.

3. DESCRIPTION OF THE PROJECT

The proposed development is described in HLA (2016a) and is a residential housing development consisting of n=41 housing units and associated site works and services. The overall site area is approximately 3.85ha.

A sustainable urban drainage system (SUDS) is proposed to collect, attenuate and treat storm water from the proposed development. Existing public services in the vicinity of the proposed development will be utilised to provide foul, storm and potable water facilities to the development.

The proposed development site not within a flood risk zone according to HLA (2026a).

Figure 2 Location of the Proposed Residential Development Site in Tuamgraney, Co. Clare.

4. RECEIVING ENVIRONMENT

4.1 Introduction

The proposed development site is located to the west of Lough Derg in Co. Clare in Tuamgraney Village. The site is located in an area zoned for residential use. The site is c. 2.2rkm upstream of the Lough Derg (Shannon) Special Protection Area, for the conservation of wild bird species. The site is to the east of Tuamgraney Village along a local road called the L41341.

The proposed development site comprises mostly improved agricultural grassland to the mid, north, west sections of the site. There is a dense hedgerow to the northern boundary along the Raheen road. There are three rows of Leyland Cypress Trees within the improved grassland, which result in significant shading in parts. There is another treeline and hedgerow to the western boundary. The site then slopes to the south, resulting in more waterlogged soil and the habitat changes to wet grassland. There are small sections of scrub in the south-west corner. Many of these areas to the south of the site were waterlogged with some standing water in parts. The rushes in areas of wet grassland are in short swards, as with the rest of the site, so it appears that the site may be lightly grazed. There was evidence of deer activity on the site as well as some hay, indicting the site may have been used for livestock recently.

The River Tuamgraney flows along the southern and eastern boundaries of the site. There is a drainage ditch to the south of the site which flows into the Tuamgraney River to the south-east corner. There is a small concrete building here with a corrugated roof that has some kind of pump inside. An area of water beside this pump house has significant growths of Fools watercress, before entering the Tuamgraney River. There are three drainage ditches to the mid-east of the site, which have little water even in winter. There are also some small areas of scrub along the eastern side of the site, but much of the eastern fields comprise wet grassland, again with short swards. Some areas are also waterlogged here. The eastern boundary comprises mainly an electric fence, and there is a large eucalyptus tree in this area. To the north-eastern boundary, there is a sparse treeline adjacent to Raheen Road.

4.2 Birds

The proposed development is located within 2km of the Lough Derg (Shannon) Special Protection Area PA (site code: 004058). Lough Derg is important for both breeding and wintering birds. This Natura 2000 site is designated as a SPA for the conservation of the Annex I listed (EU Birds Directive) bird species Tufted Duck (*Aythya fuligula*); Goldeneye (*Bucephala clangula*); Cormorant (*Phalacrocorax carbo*); Common Tern (*Sterna hirundo*); and the conservation and maintenance of Wetlands and Waterbirds within the site. The Slieve Aughty Mountains SPA (004168) is located c. 3.6km north of the proposed development site. This SPA is designated for the Annex I species Hen Harrier (*Circus cyaneus*) [A082].

There are a large number of bird records from the general area listed on the NBDC database. These records were reviewed and it was considered that none of the records were of particular relevance to the proposed development site. The records include a large number of common and widespread species, and also wetland species associated with nearby Lough Derg.

Habitat for birds on the site is mostly present in the form of the trees and hedgerows. These types of habitats provide nesting opportunities for a variety of common bird species throughout the Island. The wet grassland and Marsh type habitats does provide some foraging opportunities for common waders such as Snipe, which was flushed from the north-eastern field during the January 2022 site visit. Snipe were not recorded on the site during the February 2026 visit. Only common and widespread bird species were recorded during the surveys completed during January 2022, August 2022, August 2025, and

February 2026. None of the bird species associated with the aforementioned SPAs would ever be found on the site as the habitats present are unsuitable. Also, species like Whooper Swans (*Cygnus cygnus*) and geese that can use agricultural fields near lakes like Lough Derg would never use the proposed development site due to the small filed size and the presence of the large grove of Leyland Cypress trees, not to mention the local one off houses and associated dogs and other disturbance.

Birds recorded on the site mostly comprised corvid and passerine species which are common throughout the Irish Landscape. These include Magpie (*Pica pica*), Hooded Crow (*Corvus cornix*), Robin (*Erithacus rubecula*), Wren (*Troglodytes troglodytes*), Blackbird (*Tudus merula*), Wood Pigeon (*Columba palumbus*), Coal tit (*Periparus ater*), Blue tit (*Cyanistes caeruleus*), Great tit (*Parus major),* and Snipe (*Gallinago gallinago*). The site was visited in the winter months during both January 2022 and February 2026 and no important wintering species were recorded on the site (apart from a small number of Snipe in 2022). Snipe could turn up on any wet grassland area in Ireland in winter.

In Table 1, an evaluation of the importance of the proposed development site for the species and habitats associated with these SPAs is provided.

Table 1 Special Protection Areas for birds located within 5km of the proposed development site, and an evaluation of the importance of the proposed development site for these species and habitats.

Natura 2000 Site	Qualifying Interests	Importance of the proposed development site for this QI
Lough Derg (Shannon) SPA (004058)	Cormorant (*Phalacrocorax carbo*) [A017]	No habitat for this species on the site, unlikely to ever occur on the site. May fly overhead but would not be affected by developing the site.
	Tufted Duck (*Aythya fuligula*) [A061]	No habitat on the site, this species would never occur on the site.
	Goldeneye (*Bucephala clangula*) [A067]	No habitat on the site, this species would never occur on the site.
	Common Tern (*Sterna hirundo*) [A193]	No habitat on the site, this species would never occur on the site.
	Wetland and Waterbirds [A999]	This habitat does not occur on the proposed development site.

4.3 Water Quality, hydrology, and non-native invasive species

The River Tuamgraney (EPA code: 25T56) rises c. 3.1rkm upstream from the proposed development site. The river rises in a forestry area and drains forestry for much of its stretch long with agricultural land. The Water Framework Directive (WFD) status of the River Tuamgraney is “Moderate”, and the river is considered an “At Risk” waterbody. This indicates that the river is at risk of not meeting its objectives as set out in the WFD by 2027. Previous pressures on this river were forestry. The River flows into the River Graney (EPA maps: 25G04) c. 290rm downstream. This river is also considered “Moderate” and “At Risk”. Unlike the River Tuamgraney, the Environmental Protection Agency do carry out monitoring on the River Graney. An EPA monitoring station (Station code: 25G04 0400) which was rated Q3-4 in 2017 equivalent to WFD status “Moderate”. A further 840rm upstream on the 1st order Scarriff Stream (Station code: 25S08 0400) was rated Q3 in 2017 equivalent to WFD status “Poor”.

Lough Derg is the third largest lake in Ireland and is located on the River Shannon with shores in counties Clare, Galway and Tipperary. It is the most southern lake on the River Shannon, with Lough Ree and Lough Allen located further upstream. The Lake Water Framework Directive (WFD) status was noted as ‘Moderate’ for the period of 2013-2018. For the period of 2010-2015, the WFD lake status was noted as ‘Poor’. The current WFD risk rating for Lough Derg is ‘At Risk’, with hydromorphological conditions and fish status / potential noted as ‘Moderate’. Previous incidents have occurred in Lough Derg with algal blooms noted in years past, but general supporting chemistry conditions were rated as ‘Good’ by the WFD monitoring for the period 2013-2018.

The proposed housing development will be connected to Scarriff Wastewater Treatment Plant (WwTP). This WwTP discharges to the 5th order River Graney [Shannon] (EPA code: 25G04) 2.8rkm upstream from the Lough Derg SPA.

Scarriff WWTP has a Plant Capacity PE of 1397, and the treatment type is 3P - Tertiary P removal (Uisce Eireann, 2023). The plant was not complaint with its licence conditions according to the most recent Annual Environment Report (AER) published in 2023 (Uisce Eireann, 2023). Based on ambient monitoring results a deterioration in Ammonia, concentrations downstream of the effluent discharge was noted in the AER.

There are a number of invasive species threatening the ecology of Lough Derg and are noted to easily establish here. Zebra Mussel *Dreissena polymorpha* arrived at the lake in the 1990s and spread to many of its waterways. The freshwater invasive mussel improves water clarity and has resulted in a shifting of ecosystems here, resulting in increased light penetration in areas, meaning reduced green algae and therefore having consequences for naturally occurring wildlife, fish and aquatic species. Furthermore, the waste from these freshwater mussels have enriched the lakebed. There are a large number of invasive species colonizing Lough Derg, from past to present, and using the National Invasive Species Database on the National Biodiversity Data Centre online maps, the following species have been recorded at Lough Derg and on its shores:

- Freshwater Shrimp *Crangonyx pseudogracilis* (2004)
- Bloody-red Mysid *Hemimysis anomala* (2009)
- Least Duckweed *Lemna minuta* (2007)
- Asian Clam *Corbicula fluminea* (2011)
- Water Fern *Azolla filiculoides* (2012)
- Water violet *Hottonia palustris* (2009)
- Japanese knotweed *Fallopia japonica* (2009)
- Winter heliotrope *Petasites fragrans* (2017)
- Canadian pondweed *Elodea canadensis* (1988)
- Curly waterweed *Lagarosiphon major* (2009)
- Nuttall's Waterweed *Elodea nuttali* (2006)

No non-native invasive species were recorded on the proposed development site by Ecofact (2026b).

4.5 Description of the Natura 2000 Sites affected

4.5.1 Lough Derg (Shannon) SPA

The proposed development is located to the west Lough Derg (Shannon) SPA (site code: 004058). Lough Derg is important for both breeding and wintering birds. This site is designated as a SPA for the conservation of the Annex I listed (EU Birds Directive) bird species Tufted Duck (*Aythya fuligula*); Goldeneye (*Bucephala clangula*); Cormorant (*Phalacrocorax carbo*); Common Tern (*Sterna hirundo*); and the conservation and maintenance of Wetlands and Waterbirds within the site.

4.5.1.1 Annex I Habitats

The Wetland and Waterbirds habitat in the SPA is the full extent of the habitats used by the bird species designated as part of this Natura 2000 Site. This includes all wetland habitats including Lough Derg c. 2.2rkm downstream of the proposed development site. The Screening for Appropriate Assessment did identify the potential for impacts on this habitat.

4.5.1.2 Annex II Species

Cormorant are noted in the site synopsis for the SPA as being a nationally important colony here, breeding on the islands in Lough Derg. Cormorant are found foraging across Lough Derg and therefore would be likely to be present in Lough Derg c. 2.2rkm downstream. There are records of Cormorant on the NBDC maps from the 10km grid square R68 which encompasses the proposed development site, from the Bird Atlas 2007-2011 database. There is also a record of Cormorant c. 3km northwest on Lough O' Grady (not in the SPA) from and 1991 and 2011. This record is from a 100m grid square. There are also records from the two 2km grid squares east of Scarriff. The Screening for Appropriate Assessment did identify the potential for impacts on this species.

Tufted Duck, as noted in the site synopsis for the SPA, are known to breed in Lough Derg. While Tufted Duck do breed here, they are found in much larger numbers during the winter months. Tufted Duck are found foraging across Lough Derg and therefore would be likely to be present c. 2.2rkm downstream of the proposed development site. There are records of Tufted Duck on the NBDC maps from the 10km grid square R68 which encompasses the proposed development site, from the Bird Atlas 2007-2011 database. The Screening for Appropriate Assessment did identify the potential for impacts on this species.

Goldeneye are noted in the site synopsis for the SPA as being present in nationally important numbers in Lough Derg in winter. Goldeneye are found foraging across Lough Derg and therefore would be likely to be present downstream of the proposed development site during the winter months. The Screening for Appropriate Assessment did identify the potential for impacts on this species.

According to the site synopsis for the SPA, the site supports a nationally important breeding colony of Common Tern, with management of one of the islands in the lake for nesting purposes having increased the area of suitable habitat. Common Tern may be found foraging around Lough Derg and therefore would be likely to be present downstream of the proposed development site. There are historic records of Common Tern on the NBDC maps which encompasses the proposed development site, from the Bird Atlas 2007-2011 database. This is noted as a confirmed breeding record. The Screening for Appropriate Assessment did identify the potential for impacts on this species.

Table 2 Species listed as qualifying interests of the Lough Derg (Shannon) SPA.

Natura Code	Qualifying Interest
A017	Cormorant (*Phalacrocorax carbo*)
A061	Tufted Duck (*Aythya fuligula)*
A067	Goldeneye *(Bucephala clangula)*
A193	Common Tern *(Sterna hirundo*)
A999	Wetland and Waterbirds

5. IMPACT ASSESSMENT

At NIS stage, mitigation to offset potential negative impacts can be provided. In addition, the impact of the project / plan affecting the integrity of a Natura 2000 site is considered with respect to the conservation objectives of the site. Integrity is defined as: 'the coherence of the site's ecological structure and function, across its whole area, or the habitats, complex of habitats and/or populations of species for which the site is or will be classified'. Therefore, the integrity of a site is principally related to the structure and function of the site with regard to its Annex I habitats and Annex II species listed as the qualifying interests. The conservation status of these qualifying interests comprises the primary conservation objectives for all designated Natura 2000 sites.

5.1 Lough Derg (Shannon) SPA

The affected qualifying interests of the Lough Derg (Shannon) SPA are presented in Table 3 below with the potential impacts of the proposed development on each. The qualifying interests are discussed individually below in terms of the potential impacts that could arise from the proposed works.

Table 3 Potential impacts on the affected qualifying interests of the Lough Derg (Shannon) SPA.

	Natura 2000 Code	Qualifying Interest	Impacts
Annex I Habitats	A999	Wetland and Waterbirds	Water quality; invasive species
Annex II Species	A017	Cormorant (*Phalacrocorax carbo*)	Water quality; invasive species
	A061	Tufted Duck (*Aythya fuligula)*	Water quality; invasive species
	A067	Goldeneye *(Bucephala clangula)*	Water quality; invasive species
	A193	Common Tern *(Sterna hirundo*)	Water quality; invasive species

5.1.1 Annex I Habitats

5.1.1.1 Wetland and Waterbirds

5.1.1.1.1 Construction Phase

The proposed development is c. 2.2rkm upstream from Lough Derg (Shannon) SPA. This hydrological connection is via the 2nd order River Tuamgraney (EPA code: 25T56). Approximately c. 360rm downstream of the site this river enters the 5th order River Graney [Shannon] (EPA code: 25G04) which flows into Lough Derg. The boundary of the proposed development follows the course of the River Tuamgraney for c. 175m. This provides a potential pathway for water quality and invasive non-native impacts. These impacts could affect all qualifying interests of the SPA.

There is the potential for water quality issues to arise. This impact could affect the Wetland & Waterbird habitat in the SPA. Water quality impacts may arise from mechanical fluid pollution from machinery, e.g. oils and hydraulic fluids etc., concrete / cement spillages, as well as sediment pollution and run-off from the site works. These impacts could potentially enter the River Tuamgraney directly or through the drainage ditched onsite and travel to the SPA downstream reaching the Wetland & Waterbird habitat. Hydraulic fluids and oils can lead to significant mortality and impacts to aquatic life at varying degrees. Furthermore, sediment pollution and run-off can impact the natural sediment processes of the habitats that occur in the Lough Derg (Shannon) SPA, as well as impacting the Wetland & Waterbird qualifying interest by degrading habitats. It is noted that fencing and potentially walls will be built adjacent to the

River Tuamgraney. There is the potential for released of sediment and erosions to impact the river here and travel downstream to the SPA.

A pumping station will be required for the proposed development. It is considered that on its own or in combination with the current development, this pumping house would not cause significant impacts. This is due to the distance to the SPA from the proposed development site and that it will not affect loading on the WwTP.

Invasive species could be introduced or spread to the SPA also. Machinery, equipment or materials used for the construction could act as vectors for invasive species. If introduced at the proposed development site, invasive species could easily spread and become established in the SPA via the River Tuamgraney. Depending on the invasive species it could alter important habitat supporting waterbirds or their food supply, or even cause direct harm to protected species.

5.1.1.1.2 Operational Phase

Due to the presence of the watercourse directly adjacent to the site, there is a potential pathway for water quality impacts to arise. It is stated that surface water will be discharged to a drain. This is the River Tuamgraney and provides a hydrological connection to the Lough Derg (Shannon) SPA. The proposed residential development may result in surface water run-off entering the River Tuamgraney at the site either directly or through the drainage ditches located onsite. The onsite attenuation tanks will drain into the River Tuamgraney. This could comprise run-off from the access roads on the site, which could contain contaminants such as oils / fuels from cars parked at the houses. Household waste could also be present and may run-off into the adjacent watercourse. This could travel downstream and reach the Wetland & Waterbird habitat in the SPA. No information has been provided regarding surface water treatment during the operational phase. Therefore, the precautionary principle must be applied. Surface water drainage mitigation will be provided to ensure water quality is protected during the operational phase.

The development will be connected to the Scarriff WwTP. This is currently operating within its capacity and is compliant with its license despite recent breaches. In addition, a pumping house will be required. No details of this are provided at the time of writing however as this will not affect loading on the WwTP it is not considered a pathway for impacts.

5.1.2 Annex II Species

5.1.2.1 Cormorant

5.1.2.1.1 Construction Phase

The proposed development is c. 2.2rkm upstream from Lough Derg (Shannon) SPA. This hydrological connection is via the 2nd order River Tuamgraney (EPA code: 25T56). Approximately c. 360rm downstream of the site this river enters the 5th order River Graney [Shannon] (EPA code: 25G04) which flows into Lough Derg. The boundary of the proposed development follows the course of the River Tuamgraney for c. 175m. This provides a potential pathway for water quality impacts. These impacts could affect Cormorant in the SPA. Cormorant are very unlikely to occur at the proposed development site. However they do occur downstream in the Lough Derg (Shannon) SPA and may also occur on the River Graney [Shannon].

There is the potential for water quality issues to arise. This impact could affect Cormorant in the SPA. Water quality impacts may arise from mechanical fluid pollution from machinery, e.g. oils and hydraulic fluids etc., concrete / cement spillages, as well as sediment pollution and run-off from the site works.

These impacts could potentially travel from the River Tuamgraney on the site to the SPA downstream where Cormorant occur. Hydraulic fluids and oils can lead to significant mortality and impacts to aquatic life at varying degrees. This could impact the prey availability of Cormorant in the SPA as well as their habitat suitability. Concrete / cement in watercourses can significantly affect turbidity and alter pH levels, affecting habitats and the species that utilise them. Furthermore, sediment pollution and run-off can impact the natural sediment processes of the habitats that occur in the Lough Derg (Shannon) SPA, as well as impacting species indirectly by degrading habitats. Wetland and Waterbird habitats could be indirectly impacted by this. It is noted that fencing and potentially walls will be built adjacent to the River Tuamgraney. There is the potential for released of sediment and erosions to impact the river here and travel downstream to the SPA.

A pumping station will be required for the proposed development. It is considered that on its own or in combination with the current development, this pumping house would not cause significant impacts. This is due to the distance to the SPA from the proposed development site and that it will not affect loading on the WwTP.

Invasive species could be introduced or spread to the SPA also. Machinery, equipment or materials used for the construction could act as vectors for invasive species. If introduced at the proposed development site, invasive species could easily spread and become established in the SPA. Depending on the invasive species it could alter important habitat supporting waterbirds or their food supply, or even cause direct harm to protected species.

5.1.2.1.2 Operational Phase

Due to the presence of the watercourse directly adjacent to the site, there is a potential pathway for water quality impacts to arise.

It is stated that surface water will be discharged to a drain. This is the River Tuamgraney and it provides a hydrological connection to the Lough Derg (Shannon) SPA. The proposed residential development may result in surface water run-off entering the River Tuamgraney at the site. These could comprise run-off from the attenuation tanks. This water from the access roads on the site, could contain contaminants such as oils / fuels from cars parked at the houses. Household waste could also be present and may run-off into the adjacent watercourse. This could travel downstream and reach the Cormorant habitat in the SPA. No information has been provided regarding surface water treatment during the operational phase. Therefore, the precautionary principle must be applied. Surface water drainage mitigation will be provided to ensure water quality is protected during the operational phase.

The development will be connected to the Scarriff WwTP. This is currently operating within its capacity and is compliant with its license despite recent breaches. This is not considered to be a pathway for significant impacts. In addition, a pumping house will be required. No details of this are provided at the time of writing however as this will not affect loading on the WwTP it is not considered a pathway for impacts.

5.1.2.2 Tufted Duck

5.1.2.2.1 Construction Phase

Tufted Duck are very unlikely to use the proposed development site. However, the River Tuamgraney on the site does flow into the SPA c. 2.2rkm downstream, which could lead to indirect impacts on Tufted Duck. Water quality and invasive species impacts may arise. These impacts would be the same as those discussed for Cormorants, in section 5.1.2.1.1.

5.1.2.2.2 Operational Phase

The River Tuamgraney located immediately adjacent to the proposed development could still act as a vector for the transport of water quality pollutants, in particular from runoff of access roads in the residential development during the operational phase. Operational phase impacts on this species, from surface water pollution, are the same as those described above in section 5.1.2.1.2 for Cormorants.

5.1.2.3 Goldeneye

5.1.2.3.1 Construction Phase

Goldeneye are very unlikely to use the proposed development site. However, the River Tuamgraney on the site does flow into the SPA c. 2.2rkm downstream, which could lead to indirect impacts on Goldeneye. Water quality and invasive species impacts may arise. These impacts would be the same as those discussed for Cormorants, in section 5.1.2.1.1.

5.1.2.3.2 Operational Phase

The unnamed stream located immediately adjacent to the proposed development could still act as a vector for the transport of water quality pollutants, in particular from runoff of access roads in the residential development during the operational phase. Operational phase impacts on this species, from surface water pollution, are the same as those described above in section 5.1.2.1.2 for Cormorants.

5.1.2.4 Common Tern

5.1.2.4.1 Construction Phase

Common Tern are very unlikely to use the proposed development site. However, the River Tuamgraney on the site does flow into the SPA c. 2.2rkm downstream, which could lead to indirect impacts on Common Tern. Water quality and invasive species impacts may arise. These impacts would be the same as those discussed for Cormorants, in section 5.1.2.1.1.

5.1.2.4.2 Operational Phase

The unnamed stream located immediately adjacent to the proposed development could still act as a vector for the transport of water quality pollutants, in particular from runoff of access roads in the residential development during the operational phase. Operational phase impacts on this species, from surface water pollution, are the same as those described above in section 5.1.2.1.2 for Cormorants.

6. POTENTIAL FOR IN-COMBINATION EFFECTS

Cumulative impacts or effects are changes in the environment that result from numerous human-induced, small-scale alterations. Cumulative impacts can be thought of as occurring through two main pathways: first, through persistent additions or losses of the same materials or resource, and second, through the compounding effects as a result of the coming together of two or more effects (Bowers-Marriott, 1997).

The standard data Natura 2000 form for the Lough Derg SPA lists the threats and pressures currently having an impact on this protected site. According to the document, Fertilisation and nautical sports are currently having a high negative impact on the SPA. Fishing and hunting are listed as medium pressures at the designated site (NPWS, 2018).

As part of the Clare County Development Plan 2017-2023 there are several objectives regarding the development of Tuamgraney. There are three identified infill sites in the town center which were all previously residential and it is planned to infill them as well as addressing an unfinished housing development at Dún Carrig, Tuamgraney. There are also plans to increase tourism and industry in Tuamgraney. There is the potential for these further developments if in the vicinity of watercourses to act in combination with operational and construction phase water quality impacts identified.

A search for planning applications was carried out on the online National Planning Applications Database (NPAD). There are 5 granted applications for one-off houses which permission was granted for in 2012/2013 immediately west of the site. These houses have not been built and permission for all has now expired. There are no known major construction projects in the immediate proximity to the proposed site. There are proposed developments at Scarriff Community College such as resurfacing the existing AstroTurf, paths, erect fencing, install flood lights and all associated site works (Planning ref: 21118). There is also a granted application for the removal of portacabins, a new school building, rainwater harvesting tank, underground firefighting tanks, gas tank, new basketball course and all associated site works (Planning ref: 19553). There is a drain here that leads to the River Graney [Shannon] at the end of Raheen Rd near the boat mooring area. There is the potential for these construction activities to act in combination with operational and construction phase water quality impacts identified.

There are a number of invasive species threatening the ecology of Lough Derg and are noted to easily establish here. One of the major issues in Lough Derg is the Zebra Mussel *Dreissena polymorpha* which arrived at the lake in the 1990s and spread to many of its waterways. It is unlikely this species would be re-introduced due to the nature of this construction job. Overall, there are approximately 13 different invasive species colonizing the lake. Himalayan Balsam and Japanese Knotweed have both been recorded within 4km of the proposed works. The impacts invasive species are currently having on Lough Derg, could work in combination with the above construction phase non-native invasive species identified.

There is the potential for in-combination effects on the SAC in relation to water quality and invasive species. Due to the existing ‘At Risk’ water quality status of Lough Derg, as detailed in section 4.2.1., there is the potential that water quality impacts arising, both during the construction and operational phases, from the proposed development could act in-combination with existing background pressures on water quality. This can arise through run-off from the site entering Lough Derg, as well as operational phase pressures.

7. MITIGATION

Mitigation measures for the protection of the qualifying interests of the Lough Derg (Shannon) SPA have been prepared. The proposed housing development at Tuamgraney, Co. Clare has been identified as having the potential to cause water quality and invasive species impacts affecting the qualifying interests of these sites.

7.1 Detailed Method Statement and CEMP

A Construction and Environmental Management Plan (Hassett, Leyden & Associates, 2026a) has been drawn up detailing precisely how the works will be carried out in compliance with the necessary mitigation measures. This document provides the details of the works to be undertaken and how each process and each step of the works will be carried out to adhere to the mitigation measures.

The CEMP has been prepared following best practice procedure and guidelines, having due regard to the Inland Fisheries Ireland Guidelines. The CEMP also states that an Environmental Officer will be appointed. It is their responsibility to ensure the CEMP is implemented and adhered to along with the mitigation outlined in this NIS. They must report to the construction manager on the environmental performance of site activities (Hassett, Leyden & Associates, 2026a).

The relevant sections of the following guidelines should also be taken into account when carrying out the proposed works:

- IFI, (2016) *'Guidelines of protection of Fisheries during construction works in and adjacent to waters'*
- NRA, (2010) *'The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads'*
- CIRIA (2006) *'Control of Water Pollution from Linear Construction Projects- Site Guide (C649)'*
- CIRIA (2005) *'Environmental Good Practice – Site Guide (C650)'*
- IFI, (2010). *IFI Biosecurity Protocol for Field Survey Work*.

7.2 Avoidance

7.2.1 Footprint of works

The footprint of the works will be limited, and fencing will be used to delineate the works area. The site compound will be located at least 50m away from any watercourse or drain.

7.2.2 Timing of works

Works should be limited to daylight hours to avoid potential disturbance to nocturnal animals. Works should be limited to between 7am and 7pm. Tree/vegetation cutting or alterations / disturbance to the trees/vegetations, should only be undertaken outside of the bird nesting season, which runs from the 1st of March to the 31st of August each year.

These trees are considered to have low suitability for bat roosting habitat, but the NRA *'Guidelines for the treatment of bats during the construction of national road schemes'* (2005) should be followed as a precautionary measure, as bats are protected under Annex IV of the E.U. Habitats Directive.

7.3 Water Quality Protection

7.3.1 Construction Phase

A Water Quality Monitoring Programme (WQMP) will be produced and implemented during the works. Surface water will be sampled adjacent to the River Tuamgraney. Testing will be for pH and turbidity and/or Total Suspended Solids will be carried out daily. Other parameters will be monitored fortnightly. Any issues will be immediately reported along with corrective measures.

It is not proposed to store any oils/fuels on the proposed development site for the purposes of refueling (Hassett, Leyden & Associates, 2021). Machinery will be well-maintained and checked for leaks prior to its use on site. Spill kits will be used and any leaks on site will be cleaned immediately. Any oils or fuels which do spill will be removed by an experienced and authorised contractor. There is a procedure set out for spills in the CEMP which will be followed onsite in the event of any such incidents (Hassett, Leyden & Associates, 2026a).

During excavations, levelling, or site clearance required for the works, the duration that subsoil layers will be exposed to the effects of weather will be minimized. Typical seasonal weather variations will also be taken account of when planning excavations with the objective of minimizing soil erosion. A 5-day weather window prior to any site clearance works will be agreed in advance of the works to minimise any potential for flooding / excessively wet weather to reduce the potential for run-off from the site.

Disturbed subsoil layers will be stabilized as soon as practicable. Stockpiles of excavated subsoil material are anticipated to be minimal. Stockpiles will be covered and protected with sediment filter sock to base for the duration of the works and not located in areas where sediment laden runoff may enter existing surface water drains. Stockpiles will also be located so as not to necessitate double handling. Storage of material required for the yard will only be within site compound, covered and protected to ensure the risk of run-off is minimized. The waste from any vegetation removal will also have to be dealt with appropriately away from any watercourse or drain.

Silt fences will be erected in such a way that no run-off enters the River Tuamgraney either directly or via the drains onsite. Terrastop Premium Silt Fences, or an equivalent alternative, will be used to intercept any run-off from wet areas. The effectiveness of the silt fence will be monitored throughout the works and checks will be carried out to ensure its correct installation.

Any concrete / cement mixing that may be required will be carried out within a mixing area in the site compound and will be controlled by the contractor, with all wash water, tool washings and any waste / grey water stored securely and removed. Any waste material will be stored on site only temporarily, covered by appropriate tarp or similar material to prevent run-off. Following this, the waste will be taken off site and dealt with appropriately. There could be impacts from welfare facilities for employees and to mitigate this, portaloos should be provided and regularly maintained by a licensed facility and all sewage appropriately removed from the site to an authorized treatment plant. Construction staff will be aware of emergency procedures and there is an emergency response plan, as noted in the CEMP.

Dust mitigation will also be carried out. Trucks moving machinery will be covered with tarpaulin. Wheels and the underside of vehicles leaving the site will be inspected to avoid the soiling of roads. Speed restrictions will also be put in place to reduce dust generation. Concrete cutting works with saws will be undertaken in the contractor's compound or within an erected screen. Material handling and stockpile locations will be designed to minimise wind exposure. During dry weather access roads, public roads, stockpiles, waste pies and lorries leaving the site will be dampened. All complaints regarding dust and air quality will be recorded and the cause identified. Regular on-site inspections will occur for nuisance

dust. Stockpiles of topsoil to be re-used onsite will be no higher than 2m. Spoil and stockpiles will be located at least 15m from drainage systems (Hassett, Leyden & Associates, 2026a).

Excavated material not re-used onsite will be disposed of by a licensed facility in line with the current Irish Waste Management Legislation. If found contaminated soils will be thoroughly inspected and disposed of appropriately (Hassett, Leyden & Associates, 2026a).

A silt control pond of silt trap / settlement pond will be constructed in accordance with IFI guidelines. Water leaving this will be treated and filtered to remove hydrocarbons and sediment before being discharged. The pH of this will re regularly monitored. Dewatering of works area will be directed though the silt pond. This area will be monitored daily and if high levels of silt or other contaminant are noted in the pumped water all construction works will stop until the issue is rectified.

7.3.1.2 Surface Water Management Plan

The Surface Water Management details the measures implemented during the construction phase to prevent water quality issues arising. An earth berm with a temporary silt trap will be constructed prior to the works. Topsoil stripping near the River Tuamgraney will be undertaken in dry weather conditions with stockpiles located greater then 100m from a watercourse. All storage areas, machinery depots and site offices will be a minimum 50m from any watercourse. Material or fuel with high pollutant risks will be located at least 20m back from any watercourse. Foul drainage from site offices and facilities will be collected and disposed of to the main foul sewer. Oil booms and oil soakage pads will be located on-site to deal with accidental spillages and will be replenished immediately once used (Hassett, Leyden & Associates, 2026b).

7.3.2 Operational Phase

The proposed housing development will be connected to Scarriff Wastewater Treatment Plant (WwTP). This WwTP discharges to the 5th order River Graney [Shannon] (EPA code: 25G04) 2.8rkm upstream from the Lough Derg SPA.

Scarriff WWTP has a Plant Capacity PE of 1397, and the treatment type is 3P - Tertiary P removal (Uisce Eireann, 2023). The plant was not complaint with its licence conditions according to the most recent Annual Environment Report (AER) published in 2023 (Uisce Eireann, 2023). Based on ambient monitoring results a deterioration in Ammonia, concentrations downstream of the effluent discharge was noted in the AER.

This WwTP must remain complaint once the extra loading from the proposed development is in place. A Pre-connection Enquiry has been sent to Scarrif WwTP regarding this connection.

A Sustainable Urban Drainage Systems (SuDS) approach is recommended for the proposed development. This is outlined in the Surface Water Management Plan. There will be two attenuation ponds installed that will discharge to watercourse east of the site by hydro vales. All rainwater from roads, footpaths and roofs will be collected. Using Q-Bar calculations it has been decided to install a small attenuation tank to cater for 1 in 100 year storm events and a large attenuation tank to cater for the site. In the event of extreme flooding excess water will be discharger to the green areas onsite. All road surface water will pass through two fuel and oil separators prior to discharge. Final discharge manholes will incorporate silt-traps also (Hassett, Leyden & Associates, 2026b).

Furthermore, any herbicide / weed killer will be an ecologically safe product, including safe for pollinators and the aquatic environment, and will be outlined in the plan. Waste from landscaping

maintenance works will also be appropriately dealt with away from any watercourse. In addition, any landscaping or planting will be with species that are not considered invasive. It is also noted that details will be provided to each homeowner within the development in relation to operating and maintaining the individual property.

7.4 Waste Management

Waste material will be segregated with regards to the general waste segregation policy and transferred to a Materials Recovery Facility (MRF) by a fully licensed waste contractor. Cardboard will be segregated onsite and placed in a covered skip as will plasterboard. Excess excavated soil will be disposed of offsite by licensed contractors under the Waste Management Act of 1996, the Waste Management (Permit) Regulations of 1998 and the Waste Management (Collection Permit) Regulations of 2001. Plastic will be segregated and recycled. Uncontaminated timber will be recycled and stored in a designated skip. Scrap metal will also have a segregated skip. All waste insulation material will be segregated and recycled by the contractor or disposed of by a licensed facility. Signage onsite will be used to indicate waste streams and sub-contractors will be briefed (Hassett, Leyden & Associates, 2021).

7.5 Biosecurity

No invasive species were recorded at the site during the site survey, but precautions will be taken to ensure that no invasive species are introduced due to the proposed works. Biosecurity measures will follow NRA guidelines '*The Management of Noxious Weeds and Non-native Invasive Plant Species on National Roads'* (NRA, 2010) and the IFI guidelines '*Biosecurity Protocol for Field Survey Work'* (IFI, 2010). Machinery and equipment on the site will be steam cleaned before its arrival on site and afterwards, to prevent the potential spread of invasive species. Any hired equipment and machinery will be treated with an approved biocide / cleaning agent.

7.6 Landscaping

The proposed development site after construction would benefit from native planting and landscaping to improve biodiversity. The retention of existing hedgerows and treelines should be maintained as is outlined in the Clare County Development Plan. A Landscaping Drawing has been provided detailing that some trees and hedges will be retained. Any planting should include native species and include native pollinator-friendly plants. This would enhance the habitats present on the site. The buffer area left between the River Tuamgraney and the site if appropriate can be planting also with native species. The Landscaping Drawing indicated this will be planted with a wildflower meadow of 75% grass and 25% wildflower. Trees are also proposed to be planted on open grassed areas.

8. RESIDUAL IMPACTS

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. Favourable conservation status is defined for Annex I habitats and Annex II species in the Habitat Directive (1992):

Article 1 (e)

> Conservation status of a natural habitat means the sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species within the territory referred to in Article 2.
>
> The conservative status of a natural habitat will be taken as 'favourable' 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.

Article 1 (i)

> Conservation status of a species means the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within the territory referred to in Article 2.
>
> The conservation status will be taken as 'favourable' when: population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area 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.

The 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.

There are no specific conservation objectives for the Lough Derg Shannon SPA but the generic conservation objectives will be used (NPWS, 2020). The current assessment utilizes the site-specific conservation objectives and the national 'Status of EU Protected Habitats and Species in Ireland' Report (NPWS, 2019a; NPWS, 2019b; NPWS, 2019c).

The proposed housing development at Tuamgraney, Co. Clare is located c. 2.2rkm upstream from Lough Derg (Shannon) SPA, protected for the presence of Cormorant, Tufted Duck, Goldeneye and Common Tern as well as the Wetland and Waterbirds habitat that they utilise. The development includes 41 houses and no surface water management plan has been provided. There is the potential for direct, indirect, and cumulative impacts relating to water quality and invasive species. Water quality impacts may arise during the construction phase in relation to run-off and accidental spillages. During the operational phase water quality impacts relating to surface water management.

Mitigation measures provided include following the CEMP, limiting the footprint of the works, timing of the works, water quality protection measures, biosecurity protection measures and an invasive species management plan, an Operational Environmental Management Plan including biosecurity measures, lighting, landscaping, and measures to reduce disturbance. Mitigation measures provided will ensure that impacts are reduced as far as possible.

The implementation of the provided mitigation measures is considered to be sufficient to minimise any risk of impacts, to the SPA, to imperceptible in scale. Taking the mitigation into account there are no impacts arising from the proposed development which, could affected the conservation status of the Annex I habitats or Annex II species listed as qualifying interests of the SPA. The proposed development will comply with the required mitigation to ensure that there will be no residual impacts arising.

Table 4 Potential Impacts, Mitigation Measures and Residual Impacts for each of the affected Q.I.s.

Natura 2000 Site	Qualifying Interest	Impact	Mitigation Measures	Residual Impact
Lough Derg Shannon SPA	Wetland and Waterbirds	Water quality; invasive species	Detailed method statement and CEMP to be followed; fencing the works areas; site compound 50m away from watercourse or drain; works during daylight hours; oiling / fuelling of machinery only within site compound; oils / fuels required stored appropriately in bunded tanks; dust mitigation; machinery well-maintained and checked for leaks prior to use; duration that subsoils exposed minimised; weather windows agreed in advance of works; stockpiles minimal and protected with sediment filter sock to base; stockpiles located so as to avoid double handling; waste from site clearance / vegetation removal dealt with appropriately away from watercourses; waste management mitigation; silt fences on stream downstream of works prior to construction and monitored for effectiveness; tool washing / grey water stored securely until removal from site; designated concrete mixing area in site compound; waste on site stored only temporarily and covered; welfare facilities provided and regularly maintained by licensed facility; SuDS principles for operational phase; oil / water separator for operational phase; biosecurity guidelines followed; machinery and tools steam cleaned and checked for plant material before use on site; landscaping using native species	No residual impacts.
	Cormorant (*Phalacrocorax carbo*)	Water quality; invasive species	As above for Wetlands and Waterbirds.	No residual impacts.
	Tufted Duck (*Aythya fuligula)*	Water quality; invasive species	As above for Wetlands and Waterbirds.	No residual impacts.
	Goldeneye *(Bucephala clangula)*	Water quality; invasive species	As above for Wetlands and Waterbirds.	No residual impacts.
	Common Tern *(Sterna hirundo*)	Water quality; invasive species	As above for Wetlands and Waterbirds.	No residual impacts.

9. CONCLUSION STATEMENT

The provisions of Article 6 of the 'Habitats' Directive 92/43/EC (2000) defines 'integrity' as the: 'coherence of the site's ecological structure and function, across its whole area, or the habitats, complex of habitats and/or population of species for which the site is or will be classified'.

Mitigation measures proposed ensure that there are no residual impacts on the Lough Derg (Shannon) SPA. The potential impacts identified, including water quality and invasive species, will be successfully reduced to imperceptible in scale following the implementation of the mitigation measures in this NIS. It has therefore been concluded that following an examination, analysis and evaluation of the relevant information, including in particular the nature of the predicted impacts from the proposed development, and with the implementation of the mitigation measures proposed, that the proposed works do not pose a risk adversely affecting the integrity of any Natura 2000 site, either alone or in-combination with other plans or projects.

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PLATES

Plate 1 The typical improved agricultural grassland habitat found at the proposed development site.

Plate 2 The River Tuamgraney immediately adjacent to the site showing high canopy cover. This small

Plate 3 Area of the River Graney [Shannon] where the River Tuamgraney flows in

Plate 4 The River Graney [Shannon] where the outfall of the Scarriff WwTP is located.