Development at Cornode, Lough Derg,

nr Garrykennedy, Co. Tipperary

Remedial Natura Impact Statement

Report prepared for Colm Quigley

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1. INTRODUCTION

The purpose of the report is to examine the project for possible ecological impacts on the integrity of the Natura 2000 network, in particular on the closest site, the Lough Derg (Shannon) SPA (Site Code 4058). It accompanies an application for leave to apply for Substitute Consent under Section 177C of the Planning and Development Act 2000,

The proposed development is at the edge of a designated area and the application has to have due regard to Article 6 (3) of the EU Habitats Directive which states:

Article 6 (3): Any plan or project not directly connected with or necessary to the management of the [Natura 2000] 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 [Natura 2000] site in view of the [Natura 2000] site's conservation objectives.

This is transposed into national legislation by Regulation 31 of the European Communities (Natural Habitats) Regulations 1997.

The report will assess the possible impacts on the local Natura 2000 sites and consider any potential risks to the SPA and its conservation objectives. It includes a description of the flora and fauna of the development site to see if any ecological connection or parallels exist between the subject area and the local Natura sites.

The description is derived from a field visit in June 2024, having examined the available files and online sources of information for the local Natura 2000 sites. All work was undertaken by Roger Goodwillie, a full Member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and a practising ecologist for 40 years.

The sources of information used to collect data on the Natura 2000 sites include:

- Ordnance Survey of Ireland mapping and aerial photography available from www.osi.ie, Google Earth and Bing aerial photography.
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie including; the Natura 2000 network Data Form; Site Synopsis; Generic Conservation Objective data.
- Online databases of rare, threatened and protected species. Publicly accessible biodiversity datasets.
- Status of EU Protected Habitats in Ireland. (National Parks & Wildlife Service, 2013).

2. DESCRIPTION OF AREA

The shore of the lake is relatively steep at this point, partly rocky and covered by open woodland of birch *Betula pubescens*, oak *Quercus robur*, ash *Fraxinus excelsior* and grey willow *Salix cinerea* with a little wild cherry *Prunus avium*, sycamore *Acerpseudoplatanus*and rowan *Sorbus aucuparia*. The understory is rich in brambles, large ferns *Dryopteris dilatata*&*D. affinis* and ivy *Hedera helix* with some bracken *Pteridium aquilinum* and common gorse *Ulex europaeus* where the soils are thin. In the few places there are large woodland herbs, for example

Foxglove	*Digitalis purpurea*
Water figwort	*Scrophularia auriculata*
Common figwort	*S. nodosa*
Broad-leaved willowherb	*Epilobium montanum*
Nettle	*Urtica dioica*
Giant fescue	*Schedonorus giganteus*

The whole habitat shows signs of recent disturbance, probably related to the network of new roadways required for the construction of the cabins. The most intact woodland occurs at the northeast corner of the site (see photo below).

The cabins are set below the level of the permanent house and are still surrounded by bare ground. The lower one is situated beside a small harbour (photo overleaf).

Intact ash woodland in the NE corner of site

Lower cabin with harbour

2.2 Fauna

No evidence of ground mammals was seen but there are records of pine marten about 1km away, both east and west, and of red squirrel somewhat closer (NBDC data). Badgers are known in the area while fox, rabbit and hedgehog are very likely.

The birds seen on the site visit were limited by the time of year and consisted only of woodpigeon, song thrush, blackbird, robin, chaffinch and pied wagtail. At other seasons small species such as chiffchaff, blackcap, coal tit, wren, treecreeper, redpoll, goldcrest and long-tailed tit would be expected while sparrowhawk would occasionally be seen.

2.3 Evaluation

The development site has a moderate level of ecological interest as it contains deciduous woodland with its associated wildlife. It is included in a proposed NHA but not in the SPA. All species seen and expected are widespread ones and there is no likelihood of protected plants occurring.

There are no invasive alien plants on site such as Japanese knotweed.

3. SCREENING STAGE

3.1 Introduction

Appropriate assessment was introduced by the EU Habitats Directive as a way of determining during the planning process whether a project is likely to have a significant effect on the integrity of any of the Natura 2000 sites so far designated (i.e. the candidate SAC's and SPA's), or their conservation objectives. There are six sites within 15km of the proposed project that could theoretically be affected (see map at end). They are:

Name of Site	Site Code	Distance
Lough Derg (Shannon) SPA	4058	60m
Slieve Aughty SPA	4168	4.6km
Lough Derg NE shore SAC	2241	8.8km
Loughatorick South Bog SAC	0308	9km
Slieve Bernagh Bogs SAC	2312	10.5km
Lower River Shannon SAC	2165	11.6km

The AA Screening is prepared in accordance with the following guidance documents:

- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DEHLG 2009, Revised February 2010).
- EU Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC (EC, 2007).
- 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 (EC, 2002).
- Managing Natura 2000 Sites: The provisions of Article 6 of the 'Habitats' Directive 9. (EC 2000).
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPW 1/10 and PSSP 2/10.
- Guidelines for Good Practice Appropriate Assessment of Plans under Article 6(3) Habitats Directive (International Workshop on Assessment of Plans under the Habitats Directive, 2011).
- Guidance document on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC.
- The Status of EU Protected Habitats and Species in Ireland 2013 (Department of Arts, Heritage and the Gaeltacht, 2013). 2/43/EEC (EC, 2000.)
- Directive 92/43/EEC — Conservation of natural habitats — Special areas of conservation — Article 6(3) — Screening in order to determine whether or not it is necessary to carry out an assessment of the implications, for a special area of

conservation, of a plan or project — Measures that may be taken into account for that purpose. CJEU Case C-323/17.

- Appropriate Assessment Screening for Development Management OPR Practice Note PN01. March 2021

3.2 Identification of Relevant European Sites

Although six Natura sites are within 15km of the project only the adjoining Lough Derg SPA can realistically be affected by the development as it has a hydrological link to the site through groundwater or run-off. The Lough Derg NE shore SAC is upstream of Cornode while effluent reaching the Lower River Shannon SAC would be completely diluted. Both the other sites are in different sub-catchments of the Shannon so cannot be affected and are also outside the zone of potential influence.

3.3 Lough Derg SPA

The site synopsis describes the lake as being nationally important for breeding and wintering birds. The main breeding species are common tern, cormorant, great crested grebe and probably tufted duck and black-headed gull. In winter, it has internationally important numbers of mute swan and nationally important populations of tufted duck, goldeneye and coot (Crowe *et al* 2012) though there have been national declines in the duck numbers since then, probably related to climate change (Kennedy *et al* 2023). Other species in winter include whooper swan, great crested grebe, wigeon and lapwing. The lake is still used on occasions by Greenland white-fronted goose but in very small numbers. The boundary of the SPA at this point is the lakeshore as shown on the 6" O.S. maps.

Lough Derg also contains some of the habitats and species included in the Annexes of the EU Habitats Directive. There is a landlocked population of Sea Lamprey *Petromyzon marinus* while the Brook Lamprey *Lampetra planeri* is known to be common in the lower River Shannon catchment where all three Irish Lamprey species breed. The endangered fish species Pollan *Coregonus autumnalis pollan* is recorded from Lough Derg, one of only four sites (L. Neagh, L. Erne, L. Ree and L. Derg) in which it occurs. Lough Derg is also a well-known fishing lake with good trout (*Salmo trutta*) density and diversity (catchments.ie, 2017). Atlantic Salmon *Salmo sala*) also use the lake as a spawning ground to some extent.

The qualifying features of the lake are

Phalacrocorax carbo [breeding] - cormorant
Aythya fuligula [wintering] - tufted duck
Bucephala clangula [wintering] - goldeneye
Sterna hirundo [breeding] - common tern
Wetlands & Waterbirds

3.4 Screening Conclusion

The landward parts of the development have no real effect on the ecology of the lake but the clearance of lakeside scrub and woodland could be contrary to the maintenance of the SPA habitat. Disturbance and wastewater treatment could also be a source of concern and are examined further below.

The following Natura sites were screened out earlier – Lough Derg (NE shore) SAC, Slieve Aughty SPA, Slieve Bernagh Bogs SAC, Loughatorick South Bog SAC and Lower River Shannon SAC.

4. INFORMATION TO INFORM APPROPRIATE ASSESSMENT (Stage 2)

4.1 Qualifying features

As mentioned above the qualifying features of the Lough Derg SPA have to be examined in more detail. They are:

Phalacrocorax carbo [breeding] - cormorant
Aythya fuligula [wintering] - tufted duck
Bucephala clangula [wintering] - goldeneye
Sterna hirundo [breeding] - common tern
Wetlands & Waterbirds

All these could be relevant to the proposed development and their ecology, current changes and requirements are tabulated below.

Qualifying feature	Relevant ecology
Phalacrocorax carbo – cormorant [breeding]	Feeds on fish throughout whole lake (also River Shannon and sea). Nesting now restricted to Galway section, formerly Clare. Total population now 121-130 pairs. Decline of 25% on lake but increase in coastal populations of 4% (Burnell et al 2023). Also increase at Bunlicky Lake (Limerick), 6.8% per annum over 14 years (Berrow et al 2025) which suggests Lough Derg birds may be moving there
Aythya fuligula – tufted duck [wintering]	National population of wintering Tufted Duck in Ireland has decreased by 18% from 1994/95 - 2019/20, as monitored via the Irish Wetland Bird Survey (I-WeBS; Kennedy et al., 2022). During the baseline assessments to inform SPA designation, 776 Tufted Duck were estimated to be using this SPA (4 year mean of peak counts for baseline period 1995/96 - 1999/00; see NPWS, 2013). There is insufficient data available to provide an updated population estimate for this species within the SPA. Feeds on shellfish. Some tufted duck nest.

Bucephala clangula – goldeneye [wintering]	The national population of wintering Goldeneye in Ireland has decreased by 67% from 1994/95 - 2019/20, as monitored via the Irish Wetland Bird Survey (I-WeBS; Kennedy et al., 2022). During the baseline assessments to inform SPA designation, 157 Goldeneye were estimated to be using this SPA (4 year mean of peak counts for baseline period 1995/96 - 1999/00; see NPWS, 2013).
Sterna hirundo – common tern [breeding]	Present in summer, feeds on small fish along lake edges. A breeding seabird survey of this SPA was conducted in May 2024 and no Common Tern were recorded which indicates a complete population collapse (NPWS internal files). Common Tern has historically bred at this lough since at least the 1980s with 28-37 pairs recorded then (Whilde, 1985 and NPWS internal files). National population of nesting Common Tern has increased by 91% from 2,469 pairs in 1998-2002 to 4,728 pairs in 2015- 2021 (Burnell et al., 2023).Shore vegetation supplies fish food and shelter.
Wetlands & Waterbirds	Natural, unmanaged lakeshore vegetation (woodland/reedbed) supports maximum wildlife and food organisms for fish and birds. Potential impacts are changes in habitat quality, functioning and accessibility of the wetland habitat within the SPA. These would likely negatively impact the regularly occurring migratory waterbirds that utilise the wetland habitat.Cumulative clearance of shores because of residential and other developments is detrimental to overall functioning of ecology. Possible run-off from wastewater treatment could also alter terrestrial and aquatic vegetation.

4.2 Conservation objectives

The objectives are qualified by attributes and targets which would result in the effective conservation of the feature.

Cormorant: To restore the favourable conservation condition of the cormorant in Lough Derg (Shannon)

The targets for cormorant are that the population is stable or increasing, that nesting locations continue to be available and that the fish biomass continues to support the population.

Tufted duck & goldeneye: To maintain the Favourable conservation condition of these species at Lough Derg (Shannon) SPA.

Important targets for the ducks are that the long-term wintering population is stable or increasing, that there is no decline in habitat suitability of the area, that no barriers exist to duck movements, and that the food resource and the locations for feeding and roosting remain without significant disturbance.

Common tern: To restore the Favourable conservation condition of Common Tern in Lough Derg (Shannon) SPA.

The targets are again a stable or increasing population and the maintenance of sufficient food resources, nesting sites and feeding areas without significant disturbance. The birds

nest on shingle and open shores away from woodland and feed in shallow areas as near as possible to the colony. Former colonies occurred on the eastern shore of the lake in the northern half.

For the **wetland** habitat it is to maintain the favourable conservation condition of the wetland habitat at Lough Derg (Shannon) SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.

Two targets are given

- No significant loss to wetland habitat within the SPA, other than that occurring from natural patterns of variation
- No significant impact on the quality or functioning of the wetland habitat within the SPA, other than that occurring from natural patterns of variation

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

The favourable conservation condition of a habitat is achieved when:

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

4.3 Site Specific Pressures and Threats

Generally there is a continuing development of the Lough Derg shore with an increase in mooring facilities and summer boat usage. This is largely due to holiday homes and the number of vacant properties is relatively high (County Settlement Strategy, Appendix to County Development Plan). This is likely to increase further with the implementation of the Lough Derg Visitor Experience Development Plan 2020 – 2024.

4.3.1 Disturbance

Bird disturbance may result from boating and shore activities but will predominantly occur in summer when none of the wintering duck are present and when the cormorants (Siver Islands) and common terns (Bellevue) are located far away. Both breeding species are highly mobile and not territorial. They fish over a large area so that they can avoid particular locations if necessary.

Enough cover remains between the chalets and the lakeshore to minimise disturbance. In addition the project is for two chalets which are designed for short-term lets rather than year-round habitation. Use in the winter is unlikely or at least at a low level. Shore activities will also be limited then, reducing potential disturbance.

The woodland is secondary (not native) and is part of an almost continuous tree cover west of Garrykennedy. There is no wildlife species that depends on the absolute continuity of this habitat and all adjust to small scale clearing such as has occurred here. Most of the food organisms in the lake depend on aquatic vegetation rather than terrestrial types though there would be some input of flies and other insects from surrounding trees.

4.3.2 Habitat quality

Lake water quality is classified as moderate (midway on the on the 5-pt scale) in this part of the lake by the EPA.

No recent tree clearance is visible on the set of Google Maps from 2009-2021 in the Cornode/Garrykennedy area so that occurring around the chalets is very localised.

4.4 Assessment of potential effects

The potential effects of the proposed development are to decrease the local lake water quality by wastewater outflows and to cause further loss of shoreline vegetation. Both these influences could change lake ecology in the immediate area and lead to some decline in suitability for birds. As has been noted there has already been a decline in both breeding and wintering bird numbers; cormorants now nest exclusively in Co Galway while the common tern apparently no longer has a breeding colony on the lake. Both species have increased nationally so it may be more a relocation of individuals to another area (e,g, Bunlicky Lake) than a decline in habitat suitability at Lough Derg. A possible cause of population change is the ‘natural’ one caused by introduced species of shellfish which are currently affecting the lake (see Minchin et al 2022) and probably altering the fish populations.

Onshore vegetation is more important to fish populations and breeding wildfowl than to wintering birds which spend most of their time far out on the water. Coarse fish breed amongst water plants where there is shelter and prey items for their fry while ducklings of all species depend on insects they can pick off the water surface. Removing shoreline trees would reduce the amount of available food for these species. This impact is a cumulative one and the effects from individual sites are impossible to prove.

Such removal is detrimental to all forms of wildlife and the natural ecology of the lake, as well as increasing the exposure of the lakeshore to wave attack and the subsequent necessity for shore protection.

4.5 Associated Mitigation

These possible effects can be mitigated by an effective wastewater treatment system and no change to the woodland lakeshore fringe.

In the proposals the wastewater treatment system is a tertiary packaged plant, discharging to a polishing filter with imported subsoil and gravel at a higher level. Tertiary treatment of waste destroys both organic matter and the resulting nutrients so that no significant outflow occurs to the groundwater or thereby to the lake. The packaged units proposed comply to the current EPA standards.

The proposed development does not involve any change in lakeside facilities or any further clearance of vegetation.The small harbour to the north seems to have been present for many years. Offshore the water is relatively deep and there are no extensive reedbeds, which occur higher up the lake and would suit both breeding coarse fish and feeding terns.

4.6 Residual effects

Once the mitigation measures are operative no significant impact is envisaged on the habitat conditions or the bird populations using Lough Dergfrom this development.

4.7 Cumulative effects

Since the proposed development is not going to have significant effects on the SPA, it cannot add to impacts from other nearby projects.

5. CONCLUSION

The proposed development has no likelihood of having significant impacts on the nearby site, the Lough Derg SPA or any other Natura 2000 site.

This is a finding of no significant effects and means that the proposed development, as applied for, by itself or in combination with other plans and projects would not adversely affect the integrity of the European site network or their conservation objectives.

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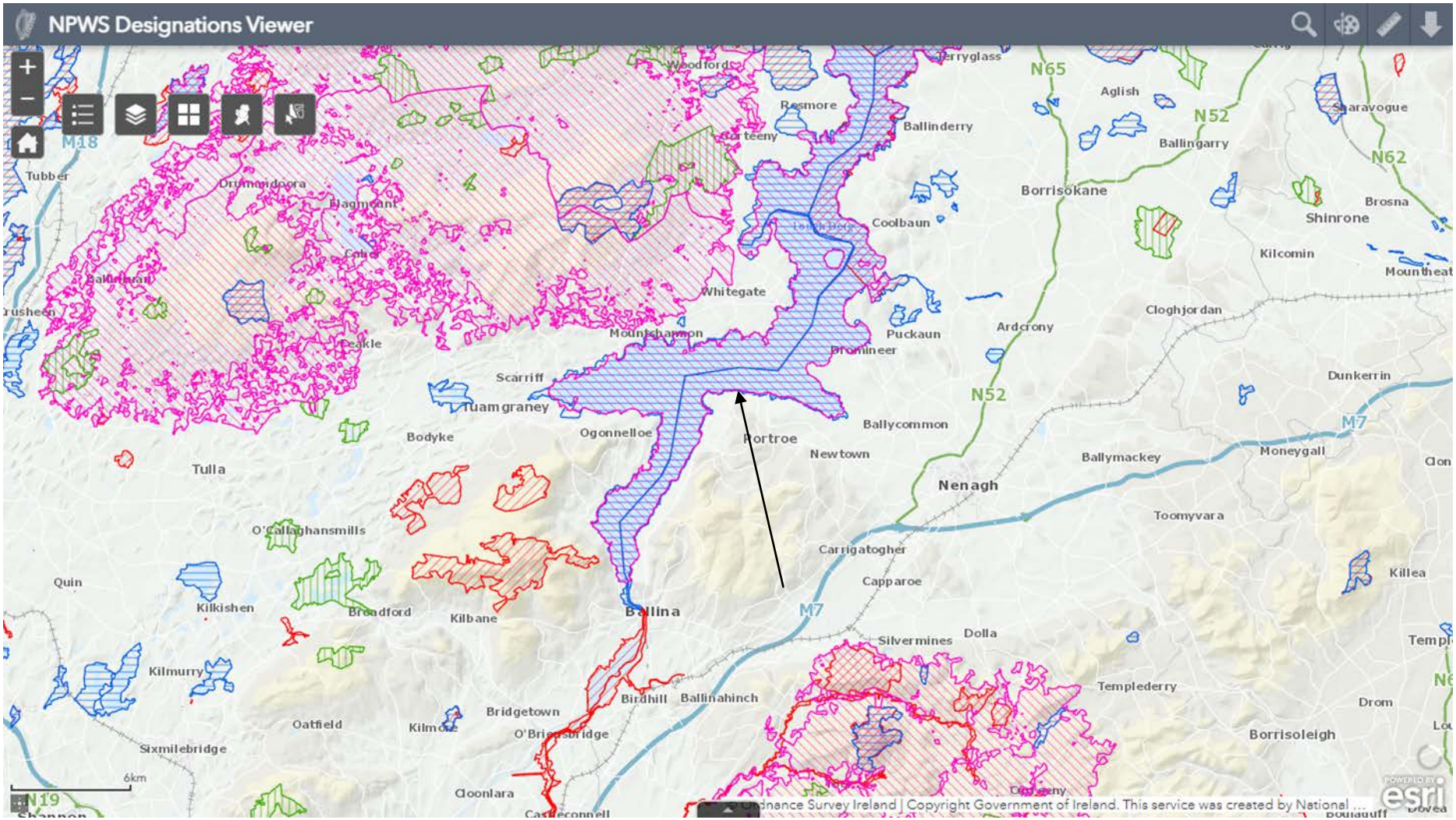

Location of project in relation to Natura 2000 sites in the area