FLYNN FURNEY
ENVIRONMENTAL CONSULTANTS

Natura Impact Statement

Proposed Residential Development at Lisdaran, Co. Cavan

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1 Introduction

This Stage 2 Appropriate Assessment is to determine whether the proposed residential development at Lisdaran, Co Cavan will adversely affect the integrity of the Natura 2000 site i.e. Lough Oughter and Associated Loughs SAC and the Lough Oughter Complex SPA. This involves the identification of potential adverse effects of development and their location in relation to the Natura 2000 sites. It involves the identification of the habitats and species within the site, and an assessment of the significance of impacts on their conservation status. Negative impacts on the integrity of these sites will require the implementation of avoidance or mitigation measures to avoid progression to Stages 3 and 4 of the Appropriate Assessment processes.

1.1 Legislative Context and Overall Assessment Methodology

The processes are set out under Articles 6(3) and 6(4) of the Habitats Directive and are commonly referred to as 'Appropriate Assessments' (which refers to Stage 2 in the sequence under the Habitats Directive Article 6).

Article 6 of the Habitats Directive sets out provisions, which govern the conservation, and management of Natura 2000 sites. Article 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect Natura 2000 sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment:

"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 and projects, shall be subjected to appropriate assessment of its implications for the site given the site's conservation objectives. In light of the conclusions of the assessment of the implication 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"

Where it is obvious or highly likely that a significant impact or impact will be incurred to the Natura 2000 Site, an Appropriate Assessment is required. The proposed development has been screened and the potential for it to negatively impact the Lough Oughter and Associated Loughs SAC and Lough Oughter Complex SPA could not be screened out. The client, in this instance Genesis Planning, are therefore responsible for the completion of an Appropriate Assessment (NIS) of the works. The competent authorities in this instance are Cavan County Council. National Parks and Wildlife Service (NPWS) and Inland Fisheries Ireland (IFI) may also be called upon as part of this review.

The proposed work involves the excavation of soil and the pouring of concrete for foundations or other hard surfaces. Heavy machinery and various chemicals will be used during construction which has effects on erosion and sediment, soil stabilisation, and pollutant discharge into waterways. Other possible discharges with negative impacts include:

- Wastewater from washout of concrete, unless managed by an appropriate control.
- Wastewater discharge as a result of painting, the release of oils, curing compounds, and other construction materials.
- The discharge of fuels, oils, and other pollutants used in vehicle and equipment operation and maintenance.

During the operational phase, a decrease in the permeable surface area could increase polluted surface run-off (excess nutrients, hydrocarbons, household surfactants etc.) entering waterways. Increased traffic on the local third-class road (Loreto Road) and access road can result in pollution input to associated drains, subsequently affecting water quality within the boundaries of the Natura sites.

2 Ecological Assessment

2.1 Conservation Objectives

The Conservation Objectives for the Lough Oughter SAC are as follows:

- To restore the favourable conservation condition of Natural eutrophic lakes with *Magnopotamion*

or *Hydrocharition* - type vegetation in Lough Oughter and Associated Loughs SAC

- To maintain the favourable conservation condition of Bog woodland* in Lough Oughter and and Associated Loughs SAC
- To maintain the favourable conservation condition of Otter (*Lutra lutra*) in Lough Oughter and Associated Loughs SAC

The Conservation Objectives for the Lough Oughter Complex SPA are as follows:

- To maintain or restore the favourable conservation condition of the wetland habitat at Lough Oughter Complex SPA as a resource for the regularly occurring migratory waterbirds that utilise it.

The Habitats Directive (EU, 1992) describes how favourable conservation status of a species can be described as being achieved when: "population data on the species concerned indicate that it is maintaining itself, and the natural range of the species is neither being reduced nor 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 can be described as being achieved when: 'its natural range, and area it covers within that range, is stable or increasing, and the ecological factors that 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''.

2.2 Qualifying Features, Sensitivities and Predicted Impacts

The importance of the Lough Oughter and Associated Loughs SAC and Lough Oughter Complex SPA under the Habitats Directive is defined by its qualifying features or interests (Qis). The QIs of the sites are given in Table 1, along with the specific sensitivities/ main threats relevant to each feature and the predicted impacts of the proposed development. The environmental sensitivities for each site have been derived from the baseline assessments of conservation status carried out by National Parks and Wildlife Service (NPWS) as part of the report to the EU Commission on The Status of EU Protected Habitats and Species in Ireland, submitted in 2007.

Table 1 Annex I habitats and Environmental Sensitivities associated Lough Oughter SAC and Lough Oughter Complex SPA

Qualifying Interests	Reasons for Inclusion	Potential Impacts from Development	Overall Conservation Objective and Article 17 Report Summary
SAC Qualifying Interests			
Natural eutrophic lakes with *Magnoptmion* or *Hydrochariton*-type vegetation	This is a qualifying interest of the Lough Oughter and Associated Loughs SAC. Natural eutrophic lakes have nutrient levels that are higher than those of oligotrophic, dystrophic, or mesotrophic lakes, resulting in higher natural productivity and they are typically species rich. However, many such lakes have been damaged by over-enrichment with nutrients, resulting in hypertrophic conditions and a reduction in species richness. The application site is upstream of several lakes which contain examples of this habitat. The closest of these is Coalpit Lough, which then leads to Derrygid Lough. To protect this habitat and the species that it contains, mitigation measures will be required during all phases of the	Possible impacts include: • A deterioration in water quality in the Cavan 36 River and designated habitats downstream due to contamination of local watercourses with silt, hydrocarbon, or aggregate runoff. • Natural eutrophic lakes are at risk of over-	Conservation Objective: To restore/maintain the favourable conservation condition of this species. Article 17 Summary (Both Species) Future Prospects – Inadequate Overall Conservation Status – Unfavourable

	proposed development.	enrichment with nutrients, resulting in hypertrophic conditions and a reduction in species richness. • Increased long-term diffuse source pollution due to increased traffic and road use on-site and connecting roads and other forms of soluble pollution, carried to the watercourse surface water or stormwater drainage. This in turn could affect species that depend on this habitat.	

Otter *(Lutra Lutra)*	The otter occurs throughout the Lough Oughter system. The presence of this species is positively correlated with good water quality and deterioration of same will lead to impacts upon this species. Otters have two basic requirements – aquatic prey and safe refuges where they can rest. In freshwater areas, the diet of the otter comprises a variety of fish from Sticklebacks to Salmon and Eels, whilst Crayfish and Frogs can also be important. Impacts that reduce the availability or quality of, or cause disturbance to, their terrestrial or aquatic habitats are likely to affect otters. The main threats to Otters in Ireland are thought to be: (1) habitat destruction, including river drainage and the clearance of bank-side vegetation; (2) pollution, particularly organic pollution resulting in fish kills; (3) disturbance of habitat due to recreational activities, and (4) accidental deaths (NPWS, The Otter Threat Response Plan, 2009). The site has been surveyed for Otters (February, May, 2026). No signs of Otter activity were found. No Otter holts exist within the area proposed	Possible impacts on this species due to: • A deterioration in water quality locally due to run-off from the construction of the development. Increased long-term diffuse source pollution due to increased traffic and road use on-site and connecting roads as well as other forms of soluble pollution, carried to the watercourse surface water or stormwater drainage. This could impact the diet of the Otter or lead to other	Conservation Objective: To maintain/restore the favourable conservation condition of this species. Article 17 Summary Future Prospects – Favourable Overall Conservation Status - Favourable

	for development. There is negligible feeding/foraging habitat for this species within the area under survey. Therefore, no direct impacts may be predicted. There is one record for the Otter downstream of the application site. It is known that the territory of the Otter is quite large. The territory of female Otters in mesotrophic rivers is approximately 7.5 +/- 1.5km in length (Ó'Néill, L., 2008), whilst the territories of male Otters in mesotrophic and oligotrophic rivers are approximately 13.2 +/- 5.3km in length, with a high degree of variability as territorial males respond quickly to social perturbation. Therefore, as it is likely for otters to occur within the zone of influence of the application site (downstream), mitigation measures will be included as part of this assessment to protect the overall status of the otter within this SAC.	stresses on this species.	
SPA Special Conservation Interests			
Whooper swan (*Cygnus*	The Whooper Swan is a winter visitor to the wetlands of Lough Erne and Lough Oughter SPA between October and	Potential impacts upon this species are low,	Long Term Population Trend –

cygnus)	April. The main pressures/threats on this species in Ireland are of medium impact and they include utility and service lines and wind turbines. Although impacts upon this bird from the proposed development are unlikely, mitigation measures should be undertaken to prevent any potential indirect impacts upon this species arising from changes in water quality locally.	however, any decrease in water quality locally may result in this species avoiding the site.	Increasing Short Term Population Trend – Increasing
Great Crested Grebe (*Podiceps cristatus*)	Lough Oughter is a very important wintering site in Ireland for Great Crested Grebe. Great Crested Grebes are a widespread breeding species, and they are resident in Ireland; one population of the nominate subspecies breeds and winters in the north and west Europe (Wetlands International, 2006). It is thought likely that the majority that breed within Ireland are residents, with individuals breeding at inland wetlands (lakes) and moving to coastal sites for the winter period. Great crested grebes are largely piscivorous and make short dives for their prey in the depth range of 2-4 m. (NPWS, 2014 Foyle). In Ireland, numbers have declined since the mid-2000s	Potential impacts upon this species are low, however, any decrease in water quality locally may result in this species avoiding the site.	Long Term Population Trend – Unknown Short Term Population Trend – Fluctuating

	(Boland and Crowe, 2012). The main threat to this species is fishing and the harvesting of aquatic resources. Water quality is also important, as eutrophication could alter the food chain and lead to decreases in fish stocks.		
Wetlands and waterbirds	The wetlands around Lough Oughter SAC/SPA include areas of reed bed, riparian woodland, and wet grassland habitats. These habitats are important for listed species and pollution control. The biggest threats to these habitats include direct loss through development and drainage.	Possible general impacts due to: • Eutrophication • Habitat Loss • Pollution	

3 Schedule of Mitigation

Table 1 examines the Annex I habitats and Annex II species for which the SAC and SPA have been given their designation. It considers whether impacts to any of these habitats or species are likely due to the proposed works.

3.1 Description of Possible impacts

The nature of the potential impacts is discussed below.

- The proposed development at Lisdaran is located on a site with a hydrological connection to the Lough Oughter and Associated Loughs SAC and the Lough Oughter Complex SPA. Consequently, potential impacts on these designated sites from both the construction and operation of the development cannot be ruled out. This assessment focuses solely on aspects of the project that could affect the integrity and conservation objectives of the Natura 2000 sites and their protected species. Various factors were considered at this stage, with some discounted and others carried forward for further Appropriate Assessment where relevant. The following areas were examined for potential impacts of the proposed development on the identified Natura 2000 sites:

- Deterioration of water quality in designated areas due to pollution from surface water runoff during site preparation and construction.

- Decline in water quality after construction, attributed to an increase in impermeable surfaces leading to heightened surface runoff, which coincides with elevated surface pollution from traffic and other human activities associated with the operational phase.

- Cumulative impacts alongside other proposed or existing plans and developments during both construction and operation.

Lough Oughter South has been identified as being at risk of failing to meet the objectives of the Water Framework Directive (WFD) and is designated as a nutrient-sensitive area. This designation is based on an

assessment of monitoring data, pressure data, and the measures already implemented. Water bodies classified as "At Risk" are given priority for the application of remedial measures.

3.1.1 Direct Impacts

Without mitigation measures, ecological risks may arise during the construction phase of this project. The introduction of suspended solids, organic materials, and other pollutants into surface waters could directly affect Annex II species. Insufficient protection of waterways may also lead to long-term consequences, particularly given the high concentration of developments along the watercourse.

Both short-term and long-term contamination from pollutants such as fuels, oils, lubricants, and hydraulic fluids can result in significant fish kills. These substances are toxic to aquatic ecosystems, negatively impacting certain species and their food sources. Accidental spills or leaks of oil and other pollutants can severely affect fisheries, and their persistence in aquatic environments can degrade water quality and ecological integrity for years. Additionally, excavations and exposed soils may lead to substantial sediment runoff into waterways, increasing siltation. This can smother fish eggs, raise fish mortality rates, reduce food availability, and obstruct fish movement.

Natural eutrophic lakes are a qualifying interest of the Lough Oughter and Associated Loughs SAC. These lakes naturally have higher nutrient levels than other types of lakes, supporting increased biological productivity. However, excessive nutrient enrichment—potentially resulting from fertiliser use for landscaping or inadequate waste disposal—could lead to hyper-trophic conditions, reducing species richness and altering the ecological balance.

3.1.2 Indirect Impacts

Indirect impacts may occur due to changes in prey species caused by alterations in water quality. Fluctuations in turbidity and water conditions can negatively affect certain invertebrate species that fish depend on for food. The gradual build-up of silt in sand or gravel beds, which serve as spawning habitats for Salmon and Trout, can disrupt their breeding cycles and potentially lead to population declines. This, in turn, may have cascading effects on mammal species such as Otters.

3.1.3 Cumulative Impacts

The potential for cumulative impacts arising from other significant existing or permitted infrastructure is assessed here. Cumulative impacts encompass the combined effects of the multiple developments or activities on a range of receptors. Potential cumulative impacts associated with the existing and permitted significant infrastructure within the same water catchments as the proposed development should be considered.

As part of the Appropriate Assessment, in addition to the proposed works, other relevant projects and plans in the region must also be considered. This step aims to identify at this stage any possible significant in-combination or cumulative effects/ impacts of the proposed works on the Natura 2000 sites with other such plans and projects.

3.1.4 Future Plans/Other Projects

Cavan County Council's online planning portal (https://www.eplanning.ie/CavanCC/searchtypes) was searched for planning applications within this area. Planning permission has been granted in the area for numerous other developments, mostly residential developments and road projects. Some of these include:

1. **Planning no. 01599**: Proposal to build 11 fully serviced two-storey houses, including site development works such as access roads, drainage systems, effluent treatment, water mains, and public lighting.
2. **Planning no. 21601**: Plan to construct a three-storey Medical Centre with extended access roads, parking spaces, drop-off areas, bicycle spaces, and connections to public foul drainage and water systems. A Natura Impact Statement (NIS) was submitted as part of this application.
3. **Planning no. 08618**: A large residential development, comprising 197 units (a mix of apartments, duplexes, terraced, semi-detached, and detached houses), 381 parking spaces, a creche, and 16 serviced sites. The project includes new vehicular access points, footpaths, cycleways, landscaping, and infrastructure works, such as water supply, drainage, and a pumping station. Demolition of an existing two-storey house is also part of the plan.

4. **Planning no. 19236**: A two-phase plan to build a fully serviced, 160-bed, two-storey nursing home, with upgrades to the site entrance, access roads, parking, and the installation of a pumping station connected to public drainage and water services. An NIS was submitted for this project.
5. **Planning no. 23138**: Revised plans for the nursing home development, reducing the number of beds from 160 to 112, with corresponding adjustments to the building layout and associated works.

Where applicable, these developments were accompanied by Appropriate Assessment reports. Regarding current and future planning applications, Cavan County Council, as the competent authority, will screen each application for Appropriate Assessment (AA). Any new application will be assessed individually to determine the need for screening for AA (NIS), ensuring compliance with the requirements of Article 6 of the Habitats Directive.

The cumulative effects of these developments must be taken into account. Multiple sites in this area have the potential to impact the SAC and SPA during construction and due to an increase in man-made pollutants resulting from concentrated anthropogenic activity. Development leads to more intensive land use and a corresponding rise in pollutant generation. Runoff carries these pollutants directly into waterways, creating nonpoint source pollution, which poses the most significant threat to water quality. As permeable surfaces in the area are significantly reduced due to the construction of various developments, which coincide with a large-scale increase in impermeable surfaces, a rise in polluted surface runoff is expected unless adequate riparian buffer zones, attenuation systems, and appropriate Sustainable Drainage Systems (SuDS) measures are implemented.

3.2 Mitigation

A review of the elements of the proposed works indicates that there is a potential for impacts to qualifying interests of the Lough Oughter and Associated Loughs SAC and Lough Oughter Complex SPA if appropriate mitigation measures are not undertaken. Mitigation measures designed to ensure compliance with the Habitats Directive Article 6 requirements are given below.

Table 2 Summary of Impacts

Qualifying Interest	Potential Impact
Natural eutrophic Lakes (SAC)	A decline in water quality in the Cavan River and designated downstream habitats due to contamination from silt, hydrocarbons, or aggregate runoff. This could, in turn, impact species that rely on these habitats.
Whooper Swan *Cygnus Cygnus* (SPA)	Potential impacts upon this species are low, however, any temporary decrease in water quality may locally result in this species avoiding the site. Impacts to prey species due to changes in water quality
Great Crested Grebe *Podiceps cristatus* (SPA)	Potential impacts upon this species are low, however, any temporary decrease in water quality may locally result in this species avoiding the site. Impacts to prey species due to changes in water quality
Wigeon *Anas Penelope* (SPA)	Potential impacts upon this species are low, however, any temporary decrease in water quality may locally result in this species avoiding the site. Impacts to prey species due to changes in water quality
Wetlands and Waterbirds	The wetlands around Lough Oughter and Associated Loughs SAC and Lough Oughter Complex SPA include areas of reed bed, riparian woodland, and wet grassland habitats. These habitats are important for listed species and pollution control. The biggest threats to these habitats include direct loss through development and drainage.
Otter *Lutra lutra*	Deterioration in water quality due to run-off from development

(SAC)	construction or increased runoff long-term could impact the diet of the otter or lead to other stress on this species.

As shown in the table above, all potential impacts on qualifying interests are linked to water quality. Several of these impacts are common across all listed Annex II species and habitats, with all concerning a reduction in water quality or effects on spawning habitats and/or prey species.

During the primary activities on-site, best practice environmental control measures will be integrated into the construction methodology. These will be detailed in a Construction Environmental Management Plan (CEMP), which will be agreed upon with the Local Authority prior to the start of works. It should be a contractual requirement for the contractor to implement Best Practice Construction and Biosecurity Methods for the site. Before development begins, the site engineer and contractors should be fully briefed on the ecological sensitivity of the site and its connection to designated areas. They must familiarise themselves with the mitigation measures outlined in this NIS, and a signed statement acknowledging these measures should be submitted to the Local Authority along with the Notice of Commencement. Site preparation and construction should adhere to best practices and comply with the relevant guidelines from Inland Fisheries Ireland for the Protection of Fisheries Habitats during Construction and Development Works and River Sites (www.fisheriesireland.ie), with particular attention to controlling silt, aggregate, and hydrocarbons. Guidelines in the CIRIA (Construction Industry Research and Information Association) publications, including C532 – Control of Water Pollution from Construction, should also be followed.

All site-specific mitigation measures should be detailed in a Construction Environmental Management Plan. These should adhere to the relevant guidelines as follows:

- Guidelines for The Crossing of Watercourses During the Construction Of National Roads Schemes. NRA, Dublin.
- National Roads Authority (2010) The Management of Noxious Weeds and Non-Native Invasive

Plant Species on National Roads. NRA, Dublin.

- Inland Fisheries Ireland (2016) Guidelines on protection of fisheries during construction works in and adjacent to waters. IFI, Dublin.
- Kilfeather, P.J. (2007) Maintenance and protection of fisheries resources during road construction and improvement. Southern Regional Fisheries Board, Clonmel.
- SEPA (1996) SEPA Guidelines for Water Pollution Prevention from Civil Engineering Contracts. Scottish Environmental Protection Agency, Edinburgh.

3.2.1 Control of Pollutants During Construction

- The site shall be operated under an environmental management system (EMS).
- Site operatives shall be trained in the use of pollution control and containment measures, including spill-kits.
- The work areas must be kept to the minimum area required to carry out the proposed works and the area should be marked out and cordoned off in advance of work commencement.
- The drainage ditches on-site should be cordoned off before the commencement of the development. Vegetation along the riparian zones of the drains will be preserved.
- Any waste arising from the construction works must be disposed of to a licensed waste facility by a licensed waste haulier. Topsoil must not be stored in or near the woodlands and must be removed from the site regularly. Cavan County Council must be notified regarding the location of this material.
- The works area either side of drains shall be surrounded with silt fencing (Terrastop™, or similar), installed correctly and secured to the ground to prevent the wash-out of suspended solids from the site to watercourses. This will be set back from the riparian corridor of the watercourse by at least 5 m to allow the retention of a buffer-zone of riparian vegetation along the watercourse which will slow the release of sediment to the watercourse in the event of fencing failure.
- All silt fencing will be inspected daily, cleaned and build up to the top of the white line will be carefully emptied to an appropriate area.
- Weather conditions should be assessed prior to undertaking excavation or infill operations to

avoid silt runoff.

- The generation of runoff from stockpiles of soils, excavated during construction, will be prevented from entering watercourses by buffer distances and removing the material off-site as soon as possible to designated storage areas.
- There must be no direct or indirect discharge of any surface water or groundwater to any water body during construction activities.
- Works must not take place in periods of heavy precipitation.
- Bare soil will be seeded as soon as possible with grass seed or native wildflower seed (local source if possible). This will minimise erosion into local drains and watercourses.
- Wet concrete is corrosive and can cause serious pollution to watercourses. Best practice in bulk-liquid concrete management must be employed addressing pouring and handling, secure shuttering, adequate curing times, etc.
- Wash water from cleaning ready-mix concrete wagons and mixers may be contaminated. Wagons and mixers must be washed off-site or in a bunded, designated area.
- Concrete batching will take place off-site.
- Cement dust must be controlled as it is alkaline and harmful to the surrounding ecology. Activities that result in the creation of cement dust should be controlled by dampening down areas.
- Raw or uncured waste concrete should be disposed of by removal from the site in a location in a manner that shall not impact any watercourse.
- All fuels, lubricants, and hydraulic fluids will be kept in secure bunded areas remotely from any watercourse. The bunded area will accommodate 110% of the total capacity of the containers within it. Containers will be properly secured to prevent unauthorised access and misuse.
- All refuelling will take place with fuel collars or with in-tank refuelling nozzles.
- An effective spillage procedure will be put in place with all staff properly briefed.
- All plant and machinery shall be serviced before coming to site.
- Emergency repairs of plant will be carried out by mechanics who will use appropriate drip trays and catcher tanks to drain hydraulic or oil lubrication systems.
- All other plant repairs will be carried out offsite.

- Any waste oils or hydraulic fluids must be collected, stored in appropriate containers, and disposed of offsite in an appropriate manner.
- Storage areas, machinery depots, and site offices will be located at least 30m from the nearest watercourse and in a bunded area capable of storing 110% of the container/tank capacity.
- All refuelling and lubrication of equipment will take place on sealed and bunded surfaces to avoid the potential for accidental spillage of hydrocarbons. A drip tray will be used for refuelling operations. The vehicles and equipment will not be left unattended during refuelling. Spill kits and hydrocarbon absorbent packs will be stored in the cab of each vehicle and operators will be fully trained in the use of this equipment.
- Sufficient oil absorbent material will be available to cope with oil or hydraulic fluid loss equal to the total content of the largest item of plant.
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- All plants and machinery will be regularly maintained and serviced to minimise the release of hydrocarbons.
- Spill kits should be present within or immediately nearby all plant and machinery.
- Oil booms and oil soakage pads will be kept on-site to deal with any accidental spillage in yellow spill kit bins, labelled as such and secured closed with cable ties to prevent them being used for refuse.
- Waste oils and hydraulic fluids will be collected in leak-proof containers and removed from the site for disposal or recycling.
- The construction compound will include adequate staff welfare facilities including foul drainage.
- Foul drainage discharge from the construction compound will be taken off-site to a licensed facility until a connection to the public foul drainage network has been established.
- Road surface re-works will be carried out with more permeable surface material such as asphalt and avoid the laying of impermeable surfaces such as tarmac.
- When works are close to a sensitive watercourse monitoring for suspended solids concentrations is to be carried out. Live water sampling, with a remote probe, is the ideal way to record constant data. This should be commenced before construction work begins in order to

establish a range of background levels on these watercourses. Works may be suspended in the case of the maximum level being exceeded. If the trigger level is reached, the site should be inspected and control measures examined to ensure that the increase in suspended solids concentrations is not as a result of site works. Records of monitoring should be kept.

- Excavation and vegetation removal will be minimised in all areas adjacent or close to watercourses. Any proposed excavation or vegetation removal shall be agreed with the project ecologist. Insofar as possible, where this is required, the project ecologist shall direct the construction of temporary/permanent bunds in order to divert or catch runoff from the area.

3.2.2 Control of Pollutants Post-Construction

- During operation, only clean surface water should be directed into local watercourses, via suitable soil and silt interceptors. An attenuation system to include a hydrocarbon and silt interceptor on the storm network will be implemented as outlined in the project description.
- A surface water drainage design should be carried out in accordance with the GDSDS and SuDS methodologies and implemented as part of a treatment train approach.
- Bicycle spaces on-site and walking access routes will be implemented to encourage the use of alternative transport means and reduce traffic.
- All hedgerows and treelines will be preserved and integrated into the development, with only minimal loss where unavoidable. All losses of vegetation will be replaced appropriately, as advised by the project ecologist. During the landscaping of the site, only native trees and shrubs will be used.
- Site verges and public green spaces will be managed at a low-intensity level to provide maximum habitat availability for pollinators and prevent pesticide run-off, ideally having these spaces managed as meadows would be ideal. This will be something that will need to be carried over to the management of the estate and relevant to the company/authority that will be responsible for cutting lawns, caring for the trees etc.
- Riparian buffer zones should be implemented along drains that run adjacent to access roads to avoid non-point source pollution. A riparian area is the strip of land alongside watercourses. This

buffer can be planted by a variety of vegetation – trees, bushes, grasses, etc. Riparian buffers reduce the momentum and magnitude of surface runoff, thereby reducing soil and sediment losses, allowing nutrient removal, and enabling uptake of nutrients in the runoff water. It is recommended that riparian buffers should be at least 2 m wide.

- As there will be a significant increase in traffic on the local third-class roads connecting to the site access road, the road running adjacent to the drains should be surveyed and proper SuDs methods implemented to avoid long-term impacts.
- Wastewater treatment systems will follow the EPA's 2021 Code of Practice for Domestic Wate Water Treatment Systems which provides information on design operation and maintenance.
- Consideration is to be given to the installation of rain gardens dotted throughout the site, as a part of the landscaping plan, and the substitution of the stormwater attenuation tanks with fenced, open and vegetated attenuation ponds with the same, or greater, capacities. This would still allow for the retention and release of stormwater runoff, with the benefit of creating new habitat, storing carbon, and adding an extra layer of treatment to the stormwater.

3.2.3 Implementing Best Practice

An Environmental Operating Plan (EOP) shall be devised before the commencement of any works.

To oversee the implementation of the EOP the Contractor will be required to appoint a suitably qualified person, or persons, to the role of Ecological l Clerk of Works (ECoW) to monitor the construction works. The ECoW will be required to work closely with the Contractor's Site Supervisor to monitor activities and ensure that all relevant environmental legislation is complied with and that the requirements of the EOP are implemented

All site contractors should be briefed regarding the environmental sensitivity of the site, including the importance of the European designated site. Toolbox talks should be held to inform site staff of the best practices required in these areas.

When working near watercourses or other sensitive areas, the ECoW shall carry out daily inspections of the site of works.

3.3 NIS Conclusion

This Natura Impact Statement has considered the potential for significant impacts arising from the proposed development of Lisdaran residential development. The potential to adversely affect any Natura 2000 site; about their qualifying interests and conservation objectives has been examined. The proposed development will not include works within the SAC or SPA but is hydrologically connected to these sites.

The potential for direct, indirect, and cumulative impacts affecting the above designations has therefore been assessed in this NIS. The appraisal undertaken in this NIS has been informed by project-specific site surveys and specialist reporting concerning the ecological communities and habitats potentially affected by the proposed development, to provide a scientific basis for evaluations.

Measures for impact reduction have been incorporated into the project proposal, including avoidance, in addition to mitigation measures proposed in the NIS for the avoidance and reduction of impacts on the qualifying interests and conservation objectives of the designated Natura 2000 site within the study area.

With the implementation of these measures, the proposed residential development at Lisdaran will not result in direct, indirect, or cumulative impacts which would have the potential to adversely affect the qualifying interests/special conservation interests of the Natura 2000 sites within the study area or the range, population densities or conservation status of the habitats and species for which these sites are designated (i.e. conservation objectives).

It may therefore be concluded that the proposed project, with the implementation of the prescribed mitigation measures, will not give rise to significant impacts, either individually or in combination with other plans and projects, in a manner that adversely affects the integrity of any designated site within the Natura 2000 network.

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