
Natura Impact Statement

Spillage and Sprinkler-Water Retention Pond at Hazelwood Distillery, Hazelwood Demesne, Calry, Co. Sligo

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Ecology Ltd - Consultant Ecologists
276 Harold's Grange Road, Dublin 16
Website: www.nmecology.com
Email: info@nmecology.com
Tel: 087-6839771

Executive Summary

This *Natura Impact Statement* (NIS) has been prepared by NM Ecology Ltd on behalf of Hazelwood Demesne Ltd (the applicant), as part of a planning application. The proposed development will involve the construction of a spillage and sprinkler-water retention pond, with associated berm and laying of services. The pond will be part of the safety and fire management system for the distillery: if a spillage occurred or if the sprinkler system was triggered during a fire, the water would be collected in floor-level drains and stored temporarily in the pond, where it could be pumped into tankers and removed from the site.

The footprint of the proposed development will be located immediately adjacent to, but outside of, the *Lough Gill SAC*. In accordance with their obligations under the *European Communities (Birds and Natural Habitats) Regulations 2011* (SI 477/2011), the planning authority (in this case Sligo County Council) must assess whether the proposed development could cause 'likely significant effects' on this or any other Natura 2000 sites. This document provides supporting information to assist the authority with an Appropriate Assessment, including: a description of the proposed development, a review of the site's environmental setting, details of Natura 2000 sites within the potential zone of impact, an appraisal of *source-pathway-receptor* relationships, and an assessment of potential impacts.

The development will be adjacent to some broadleaf woodland that is a qualifying interest of the SAC. However, it will not be necessary to remove any trees, so the development will not cause any direct impacts on the SAC.

The Garvogue River, which is part of the SAC, is located approx. 100 m to the west of the Site. During the construction of the proposed development there is a risk that pollutants (suspended sediments, concrete/cement and hydrocarbons) could cause indirect impacts on aquatic habitats and fauna in the river. In response, a range of mitigation measures will be implemented during the construction of the project in order to retain and manage any pollutants within the boundary of the proposed development site. Subject to the successful implementation of these measures, we conclude that the proposed development will not have significant impacts on any Natura 2000 sites.

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1 Introduction

1.1 Background to Appropriate Assessment

Approximately 10% of the land area of Ireland is included in the European Network of Natura 2000 sites, which includes Special Protection Areas (SPAs) to protect important areas for birds, and Special Areas of Conservation (SACs) to protect habitats and non-avian fauna. Legislative protection for these sites is provided by the *European Council Birds Directive (79/409/EEC)* and *E.C. Habitats Directive (92/43/EEC, as amended)*, which are transposed into Irish law by the *European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477/2011)*.

In accordance with Article 42 of the national regulations, planning authorities must consider the potential impacts of any development on the integrity of the Natura 2000 network. The first stage of this process is a simple screening exercise to determine whether the development has potential to affect any Natura 2000 sites. If there is a viable risk of impact (adopting a precautionary approach), the development should proceed to the second stage of the process, which is known as 'Appropriate Assessment' (AA). In Section 3.1 of *Appropriate Assessment of Plans and Projects in Ireland*, the second stage of the AA process is described as follows:

"This stage 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 proponent of the plan or project will be required to submit a Natura Impact Statement [...] to identify and characterise any possible implications for the site in view of the site's conservation objectives, taking account of in-combination effects. This should provide information to enable the competent authority to carry out the appropriate assessment. If the assessment is negative, i.e. adverse effects on the integrity of a site cannot be excluded, then the process must proceed to Stage 4, or the plan or project should be abandoned. The Appropriate Assessment is carried out by the competent authority, and is supported by the Natura Impact Statement."

This document is a Natura Impact Statement, which provides supporting information to assist the local authorities with an Appropriate Assessment, and includes the following sections: a description of the proposed development, details of Natura 2000 sites within the zone of impact, an appraisal of potential pathways for indirect effects, an assessment of potential impacts, mitigation measures, and a conclusion.

1.2 Statement of authority

This report was written by Nick Marchant, the principal ecologist of NM Ecology Ltd. He has an MSc in Ecosystem Conservation and Landscape Management from NUI Galway and a BSc in Environmental Science from Queens University Belfast. He is a member of the Chartered Institute of Ecology and Environmental Management, and operates in accordance with their code of professional conduct.

He has thirteen years of professional experience, including ten years as an ecological consultant, one year as a local authority biodiversity officer, and two years managing an NGO in Indonesia. He provides ecological assessments for developments throughout Ireland and Northern Ireland, including wind farms, infrastructural projects (roads, water pipelines, greenways, etc.), and a range of residential and commercial developments.

1.3 Methods

Guidelines and general approach

This report has been prepared with reference to the following guidelines:

- *Appropriate Assessment of Plans and Projects in Ireland* (Department of the Environment, Heritage and Local Government, 2010)
- *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4), E.C., 2002*
- *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal* (Chartered Institute of Ecology and Environmental Management, 2019)

In accordance with Section 3.3.6 of *Appropriate Assessment of Plans and Projects in Ireland*, the report accompanying an Appropriate Assessment includes the following components:

1. Describes the plan or project in sufficient detail to make clear its size, scale and objectives.
2. Describes the baseline conditions, conservation objectives, and relevant ecological and environmental issues in relation to the relevant Natura 2000 sites.
3. Identifies potential adverse impacts of the plan or project on the Natura 2000 sites.
4. If possible, explains how those effects will be avoided through mitigation.
5. Sets out a timescale and identifies the mechanisms through which the mitigation measures will be secured, implemented and monitored

Desk and field studies

Internet-based resources were accessed from the following sources:

- Plans and specifications for the proposed development

- Qualifying interests and conservation objectives of Natura 2000 sites from www.npws.ie
- Bedrock, soil, subsoil, surface water and ground water maps from the Geological Survey of Ireland webmapping service (www.gsi.ie/mapping.htm), the National Biodiversity Data Centre (<http://maps.biodiversityireland.ie/>), and the Environmental Protection Agency web viewer (<http://gis.epa.ie/Envision/>)
- The *Sligo County Development Plan 2017 - 2023*, the *Sligo & Environs Local Area Plan 2010-2016* (which has been extended, pending an update), and details of permitted or proposed developments from the local authority's online planning records

All web-based resources were accessed between January and April 2020.

2 Description of the proposed development

2.1 Proposed development

The proposed development will be a spillage and sprinkler-water retention pond, which will form part of the safety and fire management systems for the distillery. If a spillage occurred, or if a fire caused the activation of the sprinkler system, the excess water would then be channelled into floor-level drainage within the facility, and would flow by gravity into the retention pond. The pond would temporarily store the runoff until it can be removed from the site. The drainage system will prevent the spread of fire to the retention pond. Overall, this system will prevent the spread of inflammable material (e.g. alcohol), the flooding of the facility, or the flow of contaminated runoff into the surrounding area.

Construction phase

The pond will be located to the west of the distillery building, in an area that previously contained storage tanks used by previously owners of the facility (Figure 1). The surface area of the pond will be 1,262m², and the volume will be 3,428m³. A berm of 3m height and width will be constructed to the west of the pond. Pipelines between the distillery and pond will be installed in trenches. Although the boundary of the proposed development site overlaps with the SAC boundary, the footprint of the development will be entirely outside the SAC.

Operational phase

In the event of a spillage or fire the pond may contain contaminants such as alcohol, ingredients, waste products, charred materials and / or fire-fighting foam. When the spill / fire has been controlled, a specialist waste contractor will be engaged to inspect the material present and advise on the waste management requirements. Contaminated waste would be removed by tanker and treated off-site at a specialist waste management facility.

At all other times, the pond will remain empty. It will accumulate rainwater over time, which will be harvested for use within the distillery.

2.2 Other nearby developments (potential in-combination effects)

The proposed development site is included in the green belt of the *Sligo and Environs Development Plan 2010-2016* (which has been extended, pending an update), for which the planning objective is to “prevent encroachment of development in environmentally-sensitive and visually vulnerable areas”. It is noted that Hazelwood House and the associated factory building are currently being converted to a whiskey distillery, and that some associated construction and planning works are ongoing. However, the greenbelt zoning will prevent any other major developments in the vicinity of the site, so future development in the area would be small in scale and unlikely to cause cumulative / in-combination impacts with the proposed development.

Live and recently-approved planning applications in the vicinity of the site were reviewed on the online planning records of Sligo County Council. All nearby applications were related to the Hazelwood Distillery, including the main planning approval (planning reference 15296) and the construction of an on-site waste water treatment plan (planning reference 18412).

3 Receiving environment

3.1 Environmental setting

The Hazelwood Demesne is located on a peninsula between Lough Gill (to the south and east) and the Garvogue River (adjacent to its western boundary). The main property (Hazelwood House) is a three-storey 18th century Palladian-style residence. In the 1960s, a large factory was built to the south of the property. The residence and factory have been used for a range of public services and private industry, but all activity ceased in 2006. In May 2016, the applicant received planning permission for the development of a whiskey distillery and visitors centre.

Hazelwood House and the factory are surrounded by a large expanse of ancient / long-established broadleaved woodland, which extends along the valley of the Garvogue River to the north-east of the site. With the exception of the Hazelwood Demesne, the rest of the peninsula is owned by Coillte and is managed for public amenity and nature conservation. It is one of the largest and longest-established expanses of broadleaved woodland in Sligo.

The proposed development site is located approx. 50 m to the west of the factory building. It formally contained some fuel / chemical storage tanks, which are visible on historical aerial photography (Figure 1). However, these tanks were decommissioned and removed between 2006 and 2009, and the ground was reinstated with gravel and building rubble (Figure 2).

In the surrounding area, there is woodland to the west and south of the proposed development site, a decommissioned waste water treatment plant to the north, and some amenity grassland and mature trees to the east.



Figure 1: Aerial photography of the proposed development site in January 2006, obtained from the 'Historical Imagery' tool in Google Earth



Figure 2: Building rubble and gravel at the location of former storage tanks

3.2 Geology, groundwater and soils

The underlying bedrock is a dark, fine-grained, cherty, limestone, which is a regionally-important, karstified aquifer. Subsoils are shale / sandstone till, and soils are acid brown earths / brown podzolics (deep, well-drained, derived from acidic materials) with some surface water gleys in the east of the site (deep, poorly-drained, derived from acidic materials). Considering the relatively flat profile of the proposed development site and the high permeability of the bedrock and soils, it is expected that most rainwater would percolate to ground rather than flowing over land.

3.3 Hydrology

The proposed development will be located approx. 100 m to the east of the Garvogue River at its closest point. The Garvogue River and Lough Gill are part of the Garvogue Water Management Unit, which is fed by a large catchment to the north, east and south of the lake. The Garvogue River is the main outlet from Lough Gill, and flows north-west through Sligo town, reaching the transitional waters of Sligo Harbour / Garvogue Estuary approx. 5.5 km downstream, and ultimately reaching coastal waters in Sligo Bay a further 6.5 km to the west.

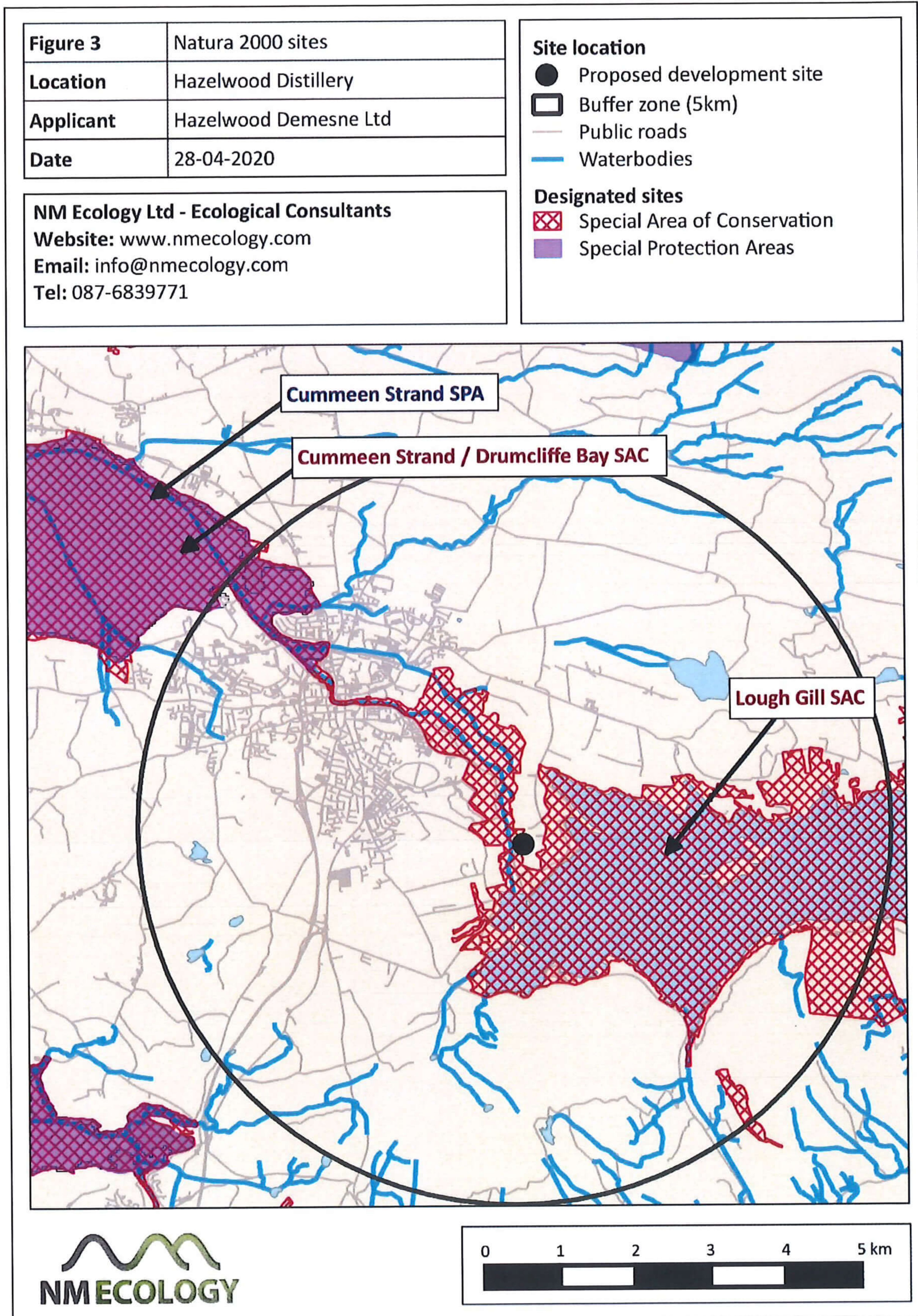
Under the Water Framework Directive status assessments 2010-2018, Lough Gill is currently of Moderate status, the Garvogue River is of Poor status, the transitional waters of Sligo Harbour are of Moderate status, and the coastal waters are of Good status.

4 Description of Natura 2000 sites

4.1 Identification of Natura 2000 sites within the zone of impact

Potential impacts on Natura 2000 sites were assessed within a potential zone of impact of 5km. A map of relevant sites is shown in Figure 3, and details are provided in Table 1.




The location of the proposed development site relative to the *Lough Gill* Special Area of Conservation is shown in Figure 4. However, it should be noted that the measurements in this figure are approximate, and that it is provided only for indicative reasons. The accompanying architect's drawings provide a much higher degree of precision, and should be primary reference point for the exact location of the proposed development.




| | |
|------------------|---------------------------|
| Figure 4 | Proximity to SAC Boundary |
| Location | Hazelwood Distillery |
| Applicant | Hazelwood Demesne Ltd |
| Date | 29-04-2020 |

NM Ecology Ltd - Ecological Consultants
 Website: www.nmecology.com
 Email: info@nmecology.com
 Tel: 087-6839771

Site location

-  Planning boundary
-  Sprinkler water retention pond
-  Berm

Designated sites

-  Special Area of Conservation

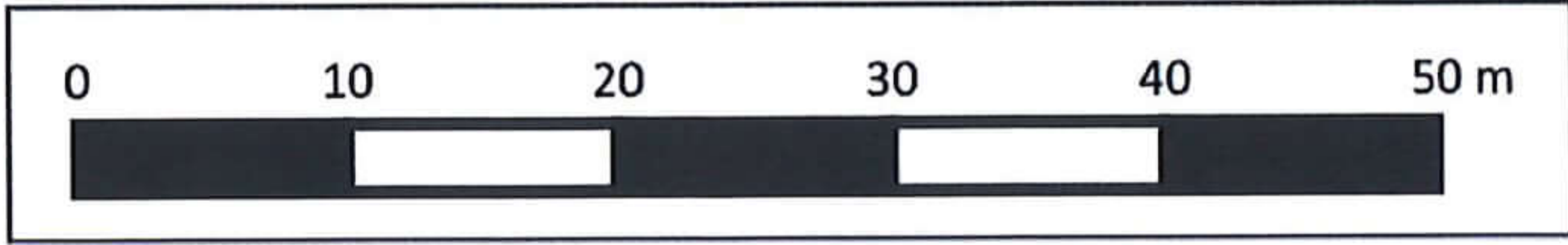


Table 1: Natura 2000 sites within 5km of the proposed development site

| Site name | Distance | Qualifying Interests |
|--|-------------------|--|
| Lough Gill SAC (site code 1976) | 100 m W | Annex I Habitats: natural eutrophic lakes; old sessile oak woods; alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> Annex II Species: white-clawed crayfish, sea lamprey, brook lamprey, river lamprey, Atlantic salmon, otter |
| Cummeen Strand / Drumcliff Bay SAC (627) | 3.5 km downstream | Annex I Habitats: estuaries; mudflats and sandflats; embryonic shifting dunes; shifting dunes with <i>Ammophila arenaria</i> ; fixed coastal dunes with herbaceous vegetation; <i>Juniperus communis</i> formations on heaths or calcareous grasslands; petrifying springs with tufa formation (Cratoneurion) Annex II Species: narrow-mouthed whorl snail, sea lamprey; river lamprey; common seal |
| Cummeen Strand SPA (4035) | 3.9 km downstream | Habitats: coastal wetlands Special conservation interests: wintering populations of light-bellied brent goose, oystercatcher and redshank |

4.2 Identification of potential pathways for indirect impacts

Indirect impacts on designated sites can occur if there is a viable pathway between the source (the proposed development site) and the receptor (the habitats and species for which a site has been designated). The most common pathway for impacts is surface water, for example if a pollutant is washed into a river and carried downstream into a designated site. Other potential pathways are groundwater, air (e.g. sound waves or airborne dust), or land (e.g. flow of liquids, vibration). The zone of effect for hydrological impacts can be several kilometres, but for air and land it is rarely more than one hundred metres. The magnitude of impacts (e.g. the concentration of pollutants) usually decreases as the distance between source and receptor increases. An appraisal of potential pathways between the proposed development and nearby Natura 2000 sites is provided below.

The proposed development site is immediately adjacent to the boundary of the *Lough Gill* SAC (Figure 4). The ground slopes from west (high ground) to east (low ground), so there could be pathways to the SAC via land, air, surface water and / or groundwater.

There is also a risk of indirect impacts on the *Cummeen Strand* SPA and *Cummeen Strand / Drumcliffe Bay* SAC, both of which are downstream on the Garvogue River. However, as the *Lough Gill* SAC is much closer to the proposed development site than the *Cummeen Strand* SAC / SPA, any indirect impacts on the former would be of greater magnitude than the latter. Therefore, for the purposes of this report, impacts will be assessed primarily in relation to the

Lough Gill SAC, but the conclusions would also apply to the *Cummeen Strand* SAC / SPA, even though the sites will not be discussed explicitly.

4.3 Distribution of qualifying interests of the *Lough Gill* SAC

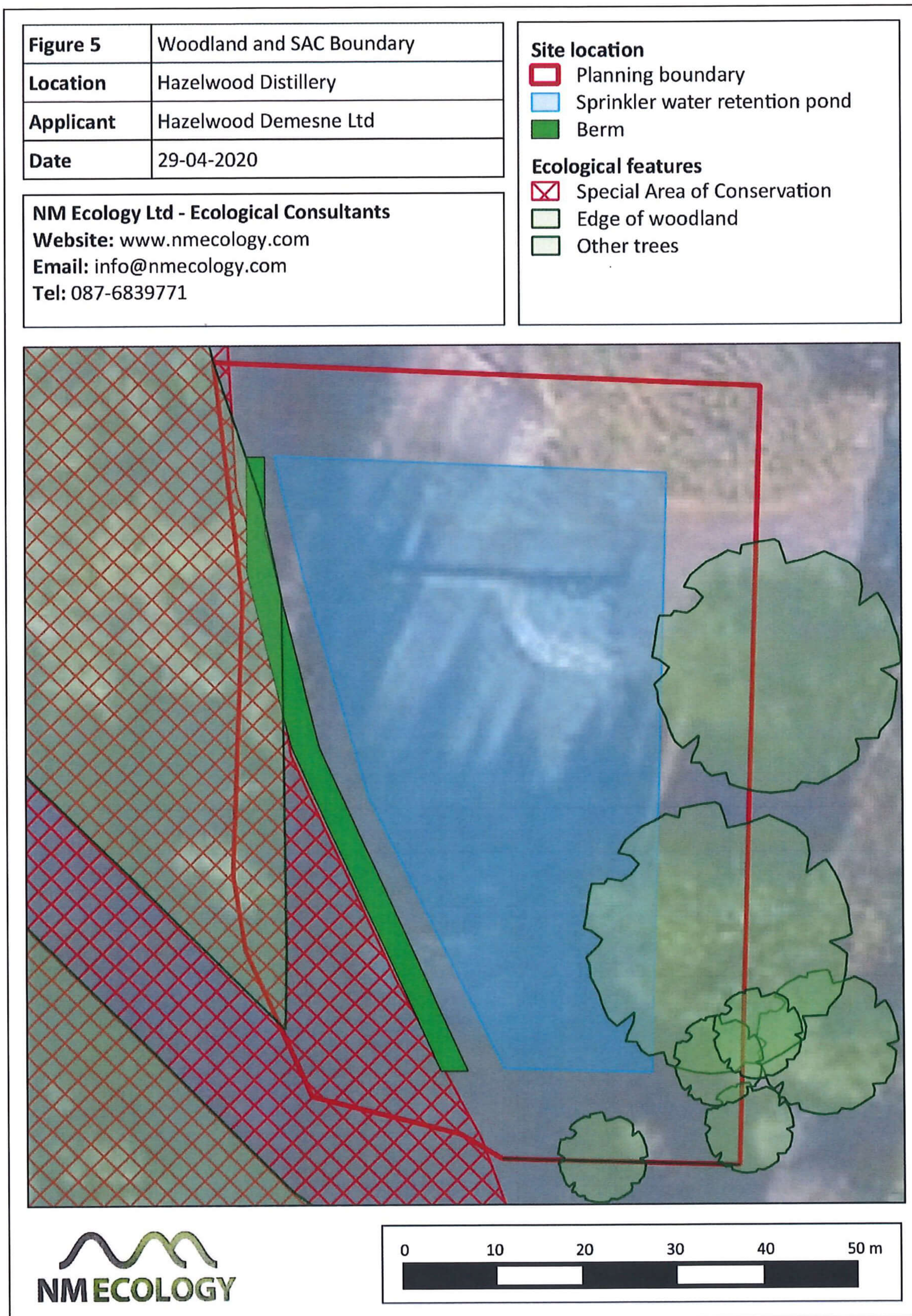
The SAC has been designated for the protection of three habitats: natural eutrophic lakes, old sessile oak woods, and alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*. The 'natural eutrophic lake' refers to both Lough Gill and the Garvogue River; the latter is approx. 100 m to the west of the proposed development site. The 'old sessile oak woods' and 'alluvial forests' refer to the ancient / long-established broadleaved woodland around the margins of the lakes.

Broadleaved woodland within the SAC adjoins the western boundary of the proposed development site, and the limbs of some trees overhang the boundary. There are also some isolated mature trees to the east of the proposed development site, but they are outside the boundary of the SAC, and would not meet the criteria for Annex I habitats. For ease of reference, the distribution of woodland and trees in relation to the SAC boundary is shown in Figure 5.

The SAC has been designated for the protection of a number of aquatic species: Atlantic salmon, sea, brook and river lamprey, white-clawed crayfish and otter. The primary habitats for all of these species are the lake and rivers. The fish and crayfish are exclusively aquatic, but otters also occupy holts and other breeding / resting places in terrestrial habitats near the water's edge. The author has surveyed the proposed development site on a number of occasions since 2015, and has never recorded any holts (or other breeding / resting places) in the vicinity of the proposed pond. This is likely to be due to anthropogenic activity and development in the adjacent factory over recent decades.

4.4 Conservation objectives

The standard conservation objective for all SACs and SPAs in Ireland is "*to maintain or restore the favourable conservation condition of the qualifying interests for which the SAC / SPA has been selected*". In addition, the Department of Culture, Heritage and the Gaeltacht have produced detailed conservation objectives for the Natura2000 sites listed above. They can be viewed on the website of the National Parks and Wildlife Service (<http://www.npws.ie/protected-sites>), but are not reproduced here in the interests of brevity.



4.5 Conclusion of Stage 1: Screening Statement

In Section 3.2.5 of *Appropriate Assessment of Plans and Projects in Ireland* (NPWS 2010), it is stated that the first stage of the AA process can have three possible conclusions:

1. AA is not required

Screening, followed by consultation and agreement with the NPWS, establishes that the plan or project is directly connected with or necessary to the nature conservation management of the site

2. No potential for significant effects/AA is not required

Screening establishes that there is no potential for significant effects and the project or plan can proceed as proposed.

3. Significant effects are certain, likely or uncertain

The plan or project must either proceed to Stage 2 (AA), or be rejected.

Having considered the particulars of the proposed development, we conclude that this application meets the third conclusion, because significant effects are uncertain. Due to the proximity of the proposed development site to the *Lough Gill* SAC, and the potential pathways for indirect impacts, there is a risk of both direct and indirect impacts. There may also be a risk of in-combination effects with other nearby developments (refer to Section 2.2). Therefore, in accordance with the precautionary principle, it is suggested that Appropriate Assessment will be required. Potential impacts are considered in further detail in Section 5, and mitigation measures are outlined in Section 6.

5 Assessment of potential impacts

5.1 Direct effects on the qualifying interests of the SAC

The boundary of the proposed development site partially overlaps with the SAC, but the footprint of the proposed development will be outside of the SAC boundary. There will be no works within the SAC boundary, so there will be no habitat loss or fragmentation.

Part of the berm to the west of the pond will be underneath the canopy of the adjacent woodland, but no trees will be removed during its construction. There is a fence between the woodland and surfaced area, which approximately follows the SAC boundary. All work will take place within the fenceline, so none of the woodland habitat (either inside or outside the SAC boundary) will be directly affected.

Similarly, there will be no direct impacts on any of the Annex II species (fish, crayfish or otters) of the SAC. There are no otter holts in the vicinity of the proposed development, and all other species would be restricted to the Garvogue River, which is approx. 100 m away.

5.2 Indirect effects – pollution of nearby habitats

Construction phase

The construction of the proposed development will involve a range of groundworks, notably the removal of existing building rubble and gravel, the excavation of underlying soils, the construction of an earth berm, and trenching for the installation of underground pipes to connect the pond with the distillery. These activities have potential to generate pollutants, including:

- Suspended silt or other sediments, which can reduce water quality in watercourses, and harm aquatic fauna;
- Concrete and cement, which are composed of highly alkaline, corrosive fine sediments that are very harmful for aquatic fauna;
- Hydrocarbons (oil, petrol, diesel, etc), solvents and other chemicals, which can be toxic to aquatic fauna.

The site slopes towards the Garvogue River, so it is possible that pollutants could reach the *Lough Gill* SAC via surface water, groundwater, land or air. It is noted that the SAC has been designated for the protection of a range of aquatic habitats and species, all of which could be vulnerable to pollution. However, the woodland habitats would not be significantly affected.

A hypothetical impact assessment of potential pollution incidents is difficult, because any potential impacts would vary depending on: the type of pollutant, the quantity of material entering the river, the rate at which it would occur, and the time of year. It is expected that minor pollution incidents would dissipate before they reach the river, or that trace quantities of pollutant would be diluted to negligible concentrations before they could affect any aquatic fauna. However, if a precautionary approach is adopted (as stipulated in the legislation), it is possible that a large-scale pollution event could cause significant impacts on the conservation status of habitats or species within the SAC. Therefore, mitigation measures will be required during construction works in order to prevent any pollution incidents.

Operational phase

In the event of a spillage or fire the pond may contain contaminants such as alcohol, ingredients, waste products, charred materials and / or fire-fighting foam. When the spill / fire has been controlled, a specialist waste contractor will be engaged to inspect the material present and advise on the waste management requirements. Contaminated waste would be removed by tanker and treated off-site at a specialist waste management facility. This will

ensure that no contaminated material can reach the SAC, and thus will prevent any impacts on its qualifying interests.

As the pond will not be covered, it will accumulate rainwater over time. This will be harvested for use within the distillery, and will not be discharged to any nearby waterbodies.

In summary, there will be no risk of significant impacts on the SAC during the operation of the proposed development.

5.3 Other development nearby (potential in-combination effects)

Two other approved developments were identified in the surrounding area: the Hazelwood Distillery and Visitor's Centre (planning reference 15296), and an associated waste water treatment plan (planning reference 18412). Natura Impact Statements (prepared by NM Ecology Ltd) were submitted as part of both planning applications, and it was concluded that the developments would not have significant impacts on Natura 2000 sites, subject to the implementation of mitigation measures. Construction work for the Hazelwood Distillery and Visitor's Centre is ongoing, and the construction of the WWTP is expected to commence in coming years.

If a precautionary approach is adopted, it is possible that multiple concurrent construction projects could lead to small-scale in-combination effects on water quality in the Garvogue River. Therefore, it will be necessary to implement appropriate mitigation measures during the construction of the proposed development in order to prevent any pollution incidents.

6 Mitigation and Monitoring

6.1 Pollution-prevention measures (construction phase)

The following mitigation measures have been designed to avoid or minimise any negative impacts on water quality in the Garvogue River by preventing fine sediments, concrete / cement, hydrocarbons or any other pollutants from reaching the watercourse. All are standard pollution control measures that are regularly used on construction sites in Ireland, and confidence in their success is high. They have been developed with reference to the following guidelines:

- *Guidelines on protection of fisheries during construction works in and adjacent to waters* (Inland Fisheries Ireland, 2016)
- *Pollution prevention guidelines: PPG5 - works and maintenance in or near water* (UK Environment Alliance, 2007)
- *Managing concrete wash waters on construction sites: good practice and temporary discharges to ground or to surface waters* (UK Environment Agency 2011).

The implementation and monitoring of all mitigation measures will be the responsibility of the site foreman. The contractor will be required to employ an Ecological Clerk of Works prior to the commencement of construction works, who will assist with the interpretation and implementation of the mitigation strategy. However, it will be the responsibility of the foreman to ensure that the strategy is implemented effectively. Liability for any pollution incidents will be assigned to the foreman and their construction company.

Suspended sediments

The term 'suspended sediments' refers to any silt, mud or other fine sediment that becomes dissolved in water. Water can be contaminated by suspended sediments (SS) from open earthworks and excavations (either from rainfall or groundwater seepage), from rainfall on soil/sediment stockpiles, or from the tyres / tracks of construction vehicles. In order to retain all contaminated waters within the boundary of the proposed development site, the following measures will be implemented:

- Due to the proximity of the proposed development site to the SAC boundary, the construction contractor must ensure that no pollutants can travel overland into the SAC. To achieve this, a silt fence will be installed along the fenceline on the western boundary of the construction area. The lower 200 – 300 mm of the membrane will be buried vertically underground, or if this is impeded by tree roots, it will be held in place using sandbags. The fence will be held up by support poles at intervals of 2 m. The silt fence will be maintained for the duration of works.
- Excavation works will be suspended if high intensity local rainfall events are forecast (e.g. >10 mm/hr, >25 mm in a 24 hour period, or high winds).
- If any excavations need to be dewatered, the SS-contaminated water will be retained and treated within the boundary of the proposed development site. It will be collected and pumped into a settlement tank / pond (or similar feature), left undisturbed until sediments have settled, and then discharged via a buffered outflow to a soakaway in the east of the site (i.e. as far as possible from the river)
- Stockpiles of mud, sand or other fine sediments will be stored alongside the distillery building, i.e. as far as possible from the river. Stockpiles will be levelled, compacted and covered with thick plastic membranes in order to limit wind/rainwater erosion.
- Dust suppression measures will be implemented, as outlined in Section 8 of the IFI guidelines. However, water will not be abstracted from the Garvogue River for dust suppression purposes, because some of the qualifying interests of the SAC – notably lamprey – have been recorded within a few metres of the river bank.

Concrete and cement

These products are highly toxic to fauna, particularly fish and other aquatic / marine species. It is expected that some pouring and/or mixing of concrete or cement will be required during

construction works, so the following measures will be implemented in order to retain all cement-based materials within the boundaries of the proposed development site:

- Concrete pouring / mixing will only take place in dry weather conditions. It will be suspended if high-intensity local rainfall events are forecast (e.g. >10 mm/hr, >25 mm in a 24 hour period or high winds);
- If any on-site mixing of concrete is required, it will be carried out adjacent to the distillery building, i.e. as far as possible from the Garvogue River. If any cement-based products will be stored on site, they will be kept in a sheltered area within or adjacent to the distillery building, and will be covered (e.g. with a thick plastic membrane);
- Ready-mix lorries and larger plant will not be cleaned on-site; they will be taken to an appropriate off-site facility with capacity to treat contaminated wash waters;
- If any on-site cleaning of tools or concrete-batching plant is required, it will take place beside the distillery building. Wash waters will be discharged to an on-site soakaway area located as far as possible from the watercourse.

Hydrocarbons and chemicals

Hydrocarbons (oil, petrol, diesel, etc) and solvents are toxic to fauna. These chemicals can enter surface water or groundwater if they are accidentally spilled (e.g. during re-fuelling of machinery), or from leaking containers. In order to retain such materials within the boundaries of the proposed development site, the following measures will be applied throughout the construction works:

- Any fuel, oil or chemical containers will be kept alongside the distillery building, i.e. as far as possible from the river. These pollutants are hazardous and must be stored in a designated bunded area that has sufficient capacity to retain any spills;
- Any on-site re-fuelling will take place alongside the distillery building in a bunded / impermeable area. Immobile plant will be refuelled over drip-trays;
- While in operation, diesel pumps, generators or other similar equipment will be placed on drip trays to catch any leaks; and
- A spill kit will be kept on site. If any spills occur, appropriate measures will be taken to intercept cement, hydrocarbons or chemicals on-site before they can reach the river

7 Conclusion

The proposed mitigation measures have been selected to avoid or minimise the risk that pollutants could reach the Garvogue River in sufficient quantities to cause significant impacts upon habitats or species in the *Lough Gill SAC*. The site foreman will be responsible and liable for the implementation and monitoring of the proposed mitigation.

These measures will substantially reduce the likelihood and magnitude of pollution events, thus preventing a significant negative impact upon the conservation status of the qualifying

interests of the SAC. As a result, we conclude that the proposed development will not cause any significant negative impacts upon the integrity of any Natura 2000 sites.

8 References

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