Section B General Attachments

Attachment B.1 Applicant Details

Donegal County Council holds Waste Licence ref. W0062-1 for Churchtown Landfill Site. The site closed on 31st August 2000.

Donegal County Council is currently in the process of purchasing the site.

Attachment B.2 Location of Activity

The landfill facility at Churchtown occupies an area of approximately 9.7 hectares in the townland of Churchtown, near Lifford, Co. Donegal.

The site is located approximately 3km south west of Lifford and bordered to the northwest by the N15, the main Lifford to Ballybofey Road. The ground to the northeast and southwest of the site is the low lying and gently undulating flood plain of the River Finn both areas being used for grazing. The southeastern boundary is formed by the River Finn. Site Location and Layout are shown on Drawings IBR01015/100 and IBR1015/103.

Attachment B.3 Relevant Planning Authority and Public Authority

Consent type:

Planning Permission

Please refer to Appendix B.2 for confirmation in writing from the planning authority that the activity does not involve development or that the activity constitutes development but is exempted development.

Appropriate Assessment

Please refer to Appendix B.3 for Appropriate Assessment screening report.

Licences and permits

Waste Licence ref. W0062-1 for Churchtown Landfill Site

Exemptions

None

Attachment B.6 Notices and Advertisements

Please refer to Drawing IBR01015/102 Location of Site Notice (Appendix B.2) for location of the site notices



A copy of the site notice and newspaper advertisement are provided in Appendix B.9. The newspaper advertisement was placed in the Donegal Democrat on Thursday May 11th 2017.

Attachment B.7 Type of Waste Activity

The site closed on 31st August 2000 and has been restored. A willow bed and an Integrated Constructed Wetland (ICW) have recently been installed on top of the landfill. This waste licence review is required to accommodate surface water discharge monitoring. No waste will be handled at the site.

Existing Licence	Review Licence
Licensed waste disposal activities, in accordance with the Third Schedule of the Waste Management Act, 1996 Class 1: Deposit on, in or under land (including landfill). Note 1 Class 4: Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons. Class 13: Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced. Note 1: This activity is limited to the disposal of inert waste only at the facility.	to 2011 disposal operations D 1 Deposit into or on to land (e.g. landfill, etc.) D 4 Surface impoundment (e.g. placement of liquid or sludgy discards into pits, ponds or
	€°

Attachment B.8 Seveso II Regulations.

The EC (Control of Major Accident Hazards involving Dangerous Substances) Regulations (S.I. No. 74 of 2006) do not apply to the proposed activity.



Appendix B.1 Confirmation in writing from the Planning Authority







19/04/2017

Con McLaughlin Senior Engineer

RE: IBR1015 Planning Churchtown Landfill Site - waste licence review

Dear Con,

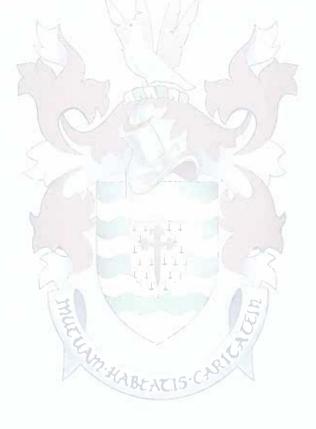
I can confirm that the activity undertaken in relation to the above matter constitutes Exempted Development for the purposes of the Planning & Development Act 2000 (as amended). The activity constitutes development and is specifically exempted by Art.7(2) of the Planning & Development Regulations, 2001 (as amended) in that it had the purpose of giving effect to conditions attached to a licence granted under the Waste Management Act 1996.

I trust that this clarifies the matter?

Regards,

Euann Quinn Senior Planner,

Community, Enterprise & Planning Services

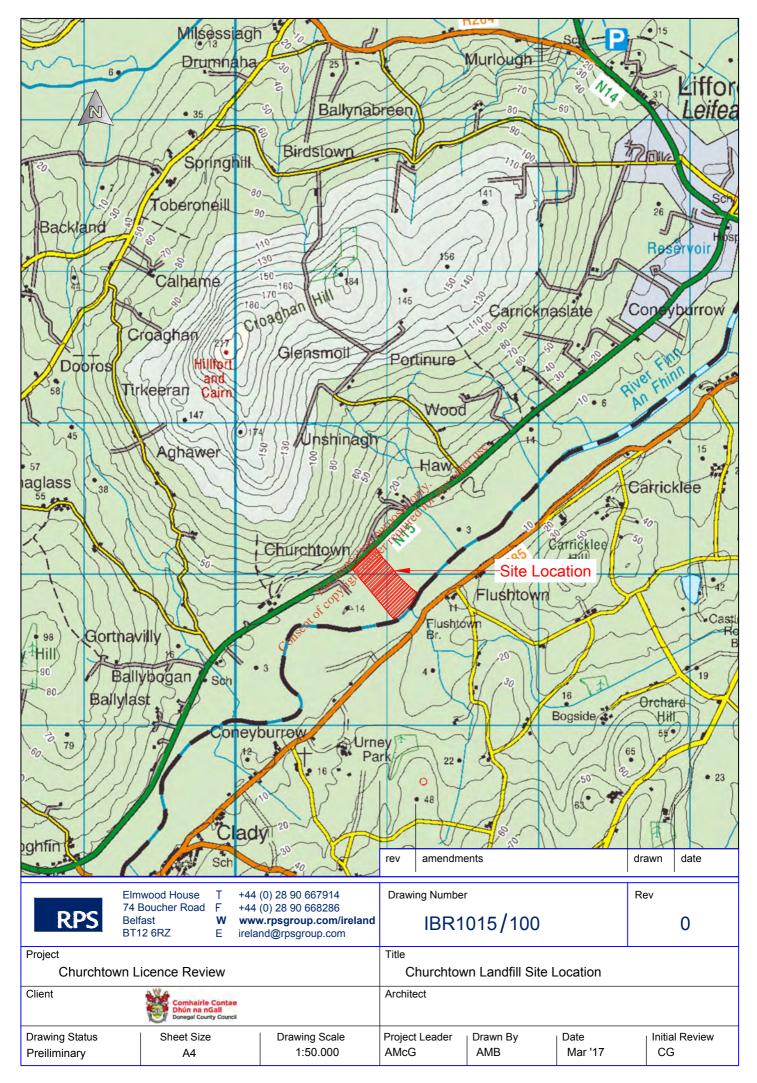


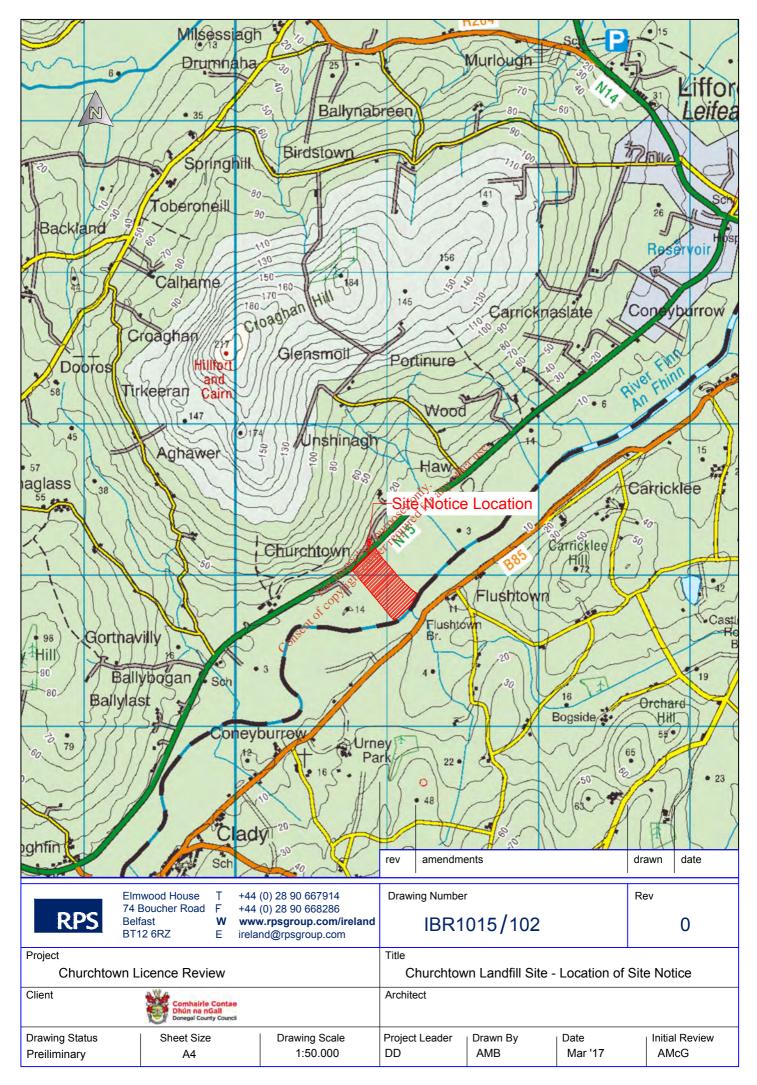
Cuir freagra chuig: Áras an Chontae, Leifear, Contae Dhún na nGall, Éire F93 Y622 Please reply to: County House, Lifford, Co. Donegal, Ireland F93 Y622

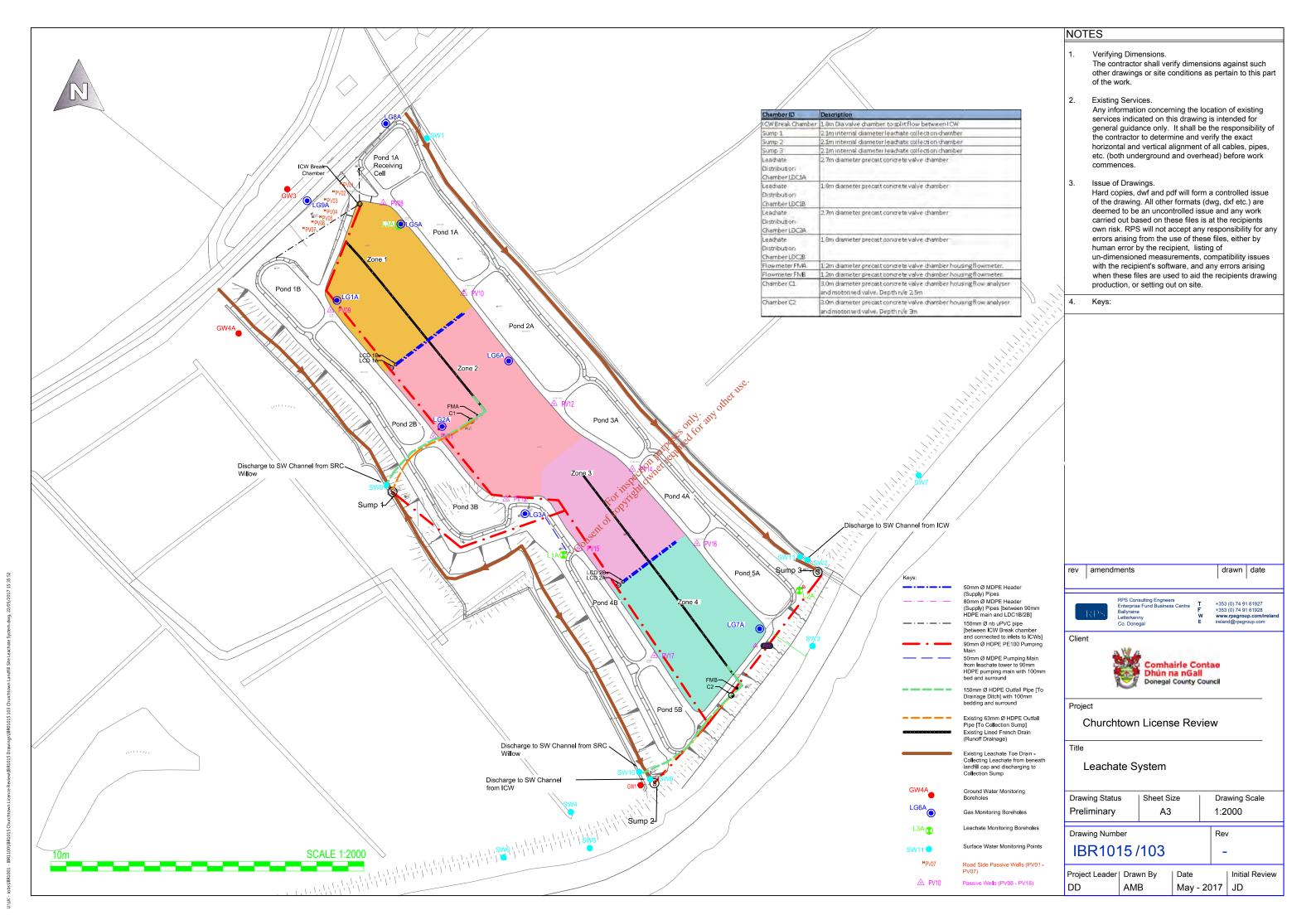
Appendix B.2 **Drawings**

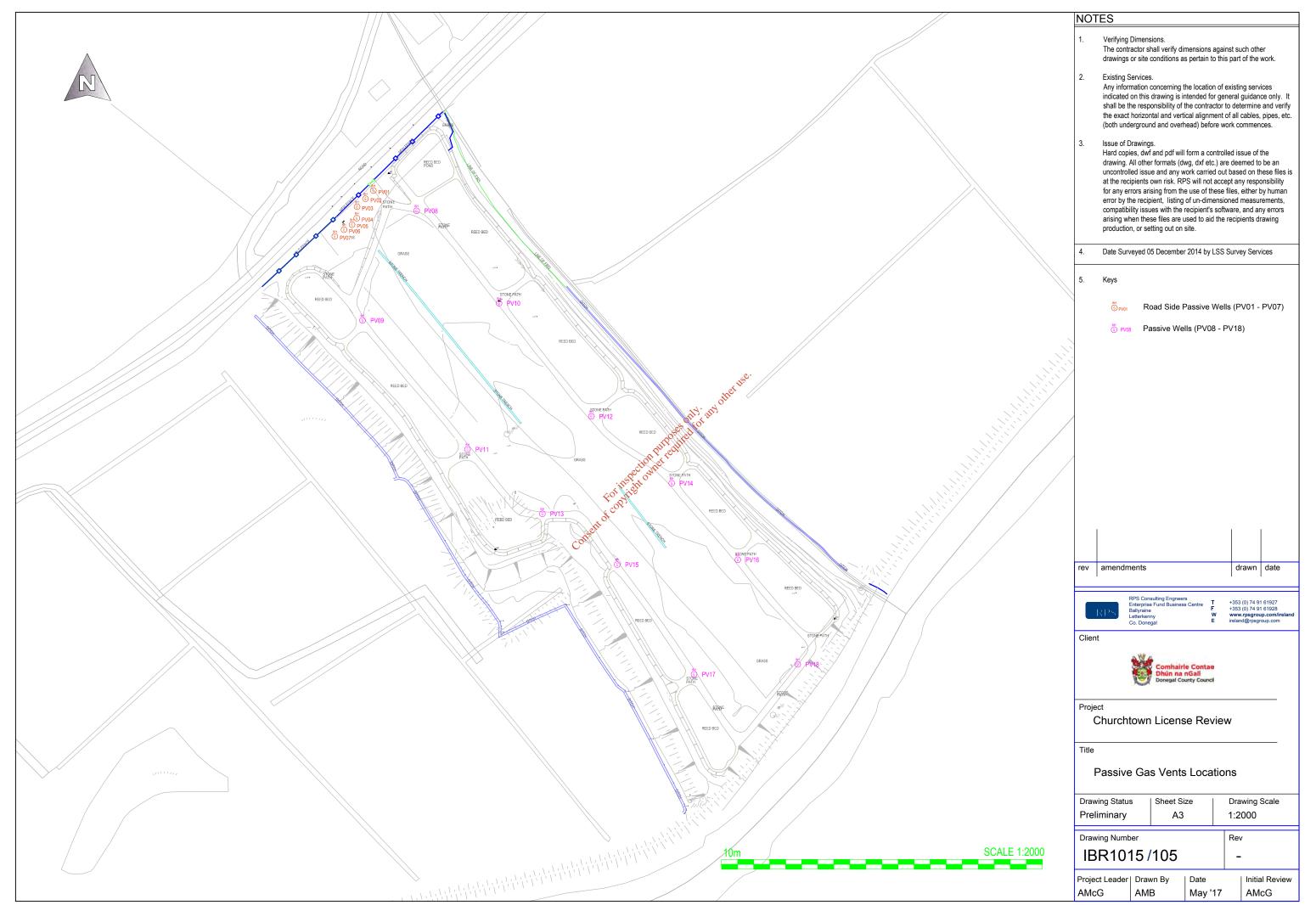












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Appendix B.3 Screening for Appropriate Assessment report







Appropriate Assessment Screening Statement for Discharge from Churchtown Landfill Site

DOCUMENT CONTROL SHEET

Client	Donegal Co	Donegal County Council countries					
Project Title	Churchtown	Churchtown Landfilt Discharge AA Screening					
Document Title	Appropriate	Appropriate Assessment Screening Statement					
Document No.	IBE1329 D0	IBE1329 D01					
This Document	DCS	TOC	Text	List of Tables	List of Figures	No. of Appendices	
Comprises	1	1	20	1	1	2	

Rev.	Status	Author(s)	Reviewed By	Approved By	Office of Origin	Issue Date
V01	Draft	Gary O'Connell	M Magee	M Magee	Letterkenny	-
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1 INTRODUCTION

1.1 APPROPRIATE ASSESSMENT OF NATURA 2000 SITES

Article 6(3) of Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as "The Habitats Directive", states that any plan or project likely to have significant effects on a Natura 2000 site must undergo the process of appropriate assessment. Proposed plans or projects can only be approved if it has been ascertained that they will not adversely affect the integrity of the Natura 2000 site(s) concerned or, in the case of a negative assessment where there are no alternative solutions, the scheme can only be approved for reasons of overriding public interest.

This report details the screening for appropriate assessment for the proposed discharge from the leachate management system at Churchtown Landfill Site (**Figure 1.1**) to the River Finn, required under the licence review for the existing waste licence (W0062-1) which currently does not have ELVs for discharge to surface water.

1.2 PROJECT SETTING AND BACKGROUND

Donegal County Council submitted a proposal for the restoration of Churchtown Landfill site on 24th January 2014. This was approved by the EPA and included for the following:

- Re-grading of waste profiles on site.
- A clay cap to a minimum depth of 0.5m with a permeability of 1x10⁻⁸ m/s.
- A 300mm layer of topsoil will then be placed over the clay cap to allow for a suitable soil for the plantation of the willow.
- Management of leachate and surface water.
- The use of short rotation coppice willow (SRC willow) on Churchtown Landfill site and using the plants to biofilter the leachate collected.
- Inclusion of an Integrated Constructed Wetland (ICW).

These works will require the discharge of treated leachate to the River Finn via two surface water perimeter drains, and as such a licence review is required to establish appropriate Emission Limit Values (ELVs) for the proposed discharge to surface water. These ELVs have been suggested based on a mass balance assessment of the discharge and the potential to impact on water quality in the River Finn and any nearby waterbodies with which the river is hydraulically connected. The ELVs have been proposed based on the available assimilative capacity in the River Finn at the point of discharge and the maximum load to be discharged under maximum effluent flow conditions.

Churchtown Landfill Discharge

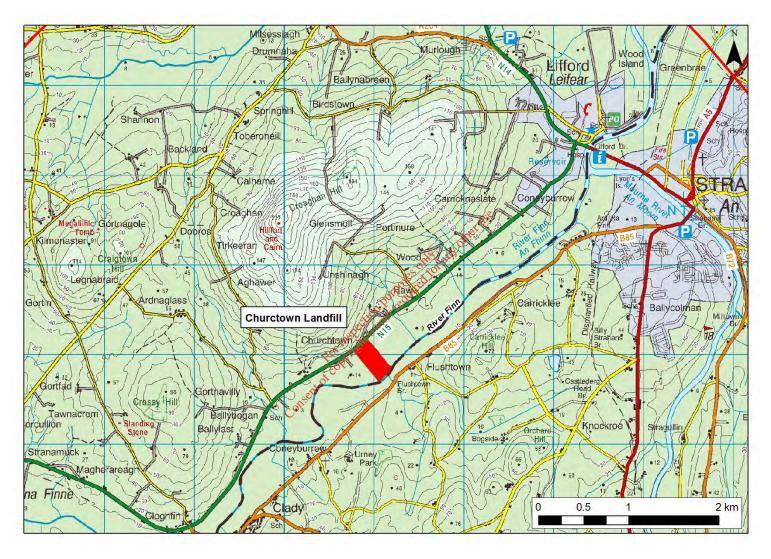


Figure 1.1; Location map of Churchtown Landfill Site



2 REQUIREMENTS OF A HABITATS DIRECTIVE ASSESSMENT

2.1 INTRODUCTION

The Habitats Directive provides legal protection for habitats and species of European importance. The main aim of the Habitats Directive is "to contribute towards ensuring biodiversity through the conservation of natural habitats of wild fauna and flora in the European territory of the Member States to which the treaty applies" (92/43/EEC). Actions taken in order to fulfil the Directive must be designed to "maintain or restore, at a favourable conservation status, natural habitats and species of wild fauna and flora of Community interest" (92/43/EEC).

The Directive provides for the creation of protected sites, SACs, for a number of habitat types and certain species of flora and fauna. The Directive also seeks to establish Natura 2000, a network of protected areas throughout Europe. SACs, together with SPAs designated under the Birds Directive (79/409/EEC), form the Natura 2000 network. The Directive was incorporated into Irish law by the European Communities (Natural Habitats) Regulations (S.I. No. 94 of 1997) under Regulation 31 (Annex 1.2).

An assessment is required under the Habitats Directive for any plan or project likely to have significant effect on a Natura 2000 site. Article 6, paragraphs 3 and 4 of the Habitats Directive state as follows:

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

6(4) If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety,

to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.

This means that, where the implementation of the proposed development is likely to have a significant effect on a Natura 2000 site, the Competent Authority must ensure that an appropriate assessment is carried out in view of that site's conservation objectives. The proposed development can only be approved if it has been ascertained that it will not adversely affect the integrity of the Natura 2000 sites concerned or, in the case of a negative assessment and where there are no alternative solutions, the scheme can only be approved for reasons of overriding public interest.

2.2 GUIDANCE

This appropriate assessment of the proposal to undertake improvement works at the Donegal Oil Depot has been carried out using the following guidance:

- Department of Environment Heritage and Local Government Circular NPW 1/10 and PSSP 2/10
 on Appropriate Assessment under Article 6 of the Habitats Directive Guidance for Planning
 Authorities March 2010.
- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities,
 Department of the Environment, Heritage and Local Government 2009;
 http://www.npws.ie/en/media/NPWS/Publications/CodesofPractice/AA%20Guidance.pdf
- Managing Natura 2000 Sites: the provisions of Article 6 of the Habitats Directive 92/43/EEC,
 European Commission 2000;
 http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/provision_of_art6_e_n.pdf
- 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; http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/natura 2000 assessen.pdf
- Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission.
 http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/guidance art6 4 en .pdf
- Guidance document on the implementation of the birds and habitats directive in estuaries and coastal zones with particular attention to port development and dredging. http://ec.europa.eu/environment/nature/natura2000/management/docs/guidance_doc.pdf



Based on these guidelines, the assessment process is a four-staged approach as described below. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

Stage 1 Screening for Appropriate Assessment

Screening is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3) of the Habitats Directive:

- i) whether a plan or project is directly connected to or necessary for the management of the site, and
- ii) whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a Natura 2000 site.

If the effects are deemed to be significant, potentially significant, or uncertain, or if the screening process becomes overly complicated, then the process must proceed to Stage 2.

Stage 2 Appropriate Assessment

This stage considers whether the plan or project, alone of incombination 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. 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.

Stage 3 Alternative Solutions

This stage examines any alternative solutions or options that could enable the plan or project to proceed without adverse effects on the integrity of a Natura 2000 site. The process must return to Stage 2 as alternatives will require appropriate assessment in order to proceed. Demonstrating that all reasonable alternatives have been considered and assessed, and that the least damaging option has been selected, it is necessary to progress to Stage 4.

Stage 4 Imperative Reasons of Overriding Public Interest (IROPI)/Derogation

Stage 4 is the main derogation process of Article 6(4) which examines whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project that will have adverse effects on the integrity of a Natura 2000 site to proceed in cases where it has been established that no less damaging alternative solution exists. Compensatory measures must be proposed and assessed. The Commission must be informed of the compensatory measures. Compensatory measures must be practical, implementable, likely to succeed, proportionate and enforceable, and they must be approved by the Minister.

2.3 OTHER LEGISLATION

Natural Heritage Areas (NHA) are sites of national significance, proposed Natural Heritage Areas (pNHA) are sites that have been proposed but not formally designated. When formally designated, a pNHA is legally protected from damage under Irish legislation in the form of the Wildlife (Amendment) Act 2000. However, as this Appropriate Assessment report deals only with Natura 2000 sites the NHAs and pNHAs are not considered further in this study, other than in the description of the study area.

The EU Birds Directive (Council Directive 79/409/EEC on the Conservation of Wild Birds) is the main mechanism for protecting, management and control of bird species and defines rules for their exploitation. According to Article 4 of the Birds Directive "species mentioned in Annex I shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution". The key element of the Birds Directive is that it provides for the creation of the Special Protection Areas (SPAs) for the protection of Annex I species as well as for regularly occurring migratory species not listed in Annex I. The Birds Directive is implemented in Ireland under the Wildlife Act (1976) and the Wildlife (Amendment) Act (2000). This legislation is of key importance when considering such a screening statement as the Natura 2000 network upon which appropriate assessment is based consists of both SPAs and SACs.



3 STAGE 1 - SCREENING

The screening stage involves the following:

- Description of plan or project, and local site or plan area characteristics.
- Identification of relevant Natura 2000 sites and compilation of information on their qualifying interests (Appendix A).
- Assessment of likely effects direct, indirect and cumulative.
- · Screening conclusions.

3.1 SITE LOCATION AND DESCRIPTION OF PROPOSED WORKS

3.1.1 Site Location

Churchtown Landfill site is located in the townland of Churchtown outside Lifford, Co. Donegal (see **Figure 1.1**). The site is bounded by the N15 to the northwest and the River Finn to the southeast.

3.1.2 Description of Proposed Works

A willow bed and an Integrated Constructed Wetland (ICW) has been installed on top of the landfill. There are two separate ICW systems ICW Area A and ICW Area B (denoted Ponds 1A-1E and Ponds 1B-5B in the drawings respectively). Due to the layout and location of the willow bed the volumes of leachate is split between the two ICW areas. The volume of leachate to be treated through each ICW is relative to the treatment area within each ICW system.

The use of willow bed and two separate ICWs, which will discharge to perimeter surface water drains, was deemed most practical for the site, both in terms of cost, construction and maintenance. These wetlands form part of a pilot study within the ANSWER/WaterPro Project to assess the use of biofiltration systems in the treatment of contaminated water and leachate of which Donegal County Council is a partner.

The WaterPro Project is designed to help meet the aims of this Interreg IVA project in part by using SRC Willow, both on local farms irrigated with wastewater effluent and also to irrigate leachate from Churchtown Landfill Site. This will help provide Biomass for heating/power generation on a cyclical basis.



A Specified Engineering Work (SEW) for these restoration works was submitted and agreed with the Agency in 2014 with works completed in 2016. This waste licence review is to include emission limit values for discharge to surface water.

Leachate Extraction

Leachate is extracted from 3 No. Pumping stations (Sump 1, 2 and 3) on site. A common 90mm HDPE leachate pumping main has been laid through the full length of the site within an existing site access road as shown on Drawing IBR1015/103. Sump 1, 2 and 3 are connected to the 90mm pumping main adjacent to each extraction point.

Treatment System

The Willow Plantation (area is approx 400m long with widths varying from 50m - 70m) is divided into four zones with two main irrigation feed points each located centrally between Zone 1 and 2 and Zone 3 and 4. The connection to willow plantations is via 80mm leachate pumping main via an isolating valve, a strainer and a Flowmeter. The Willows are planted in double rows.

Each ICW pond is above a 0.5 m clay cap and is bunded using imported subsoil material that provides containment and processing of the influent contaminated waters. Each pond is comprised of a dense vegetation cover and shallow water depth (100-200mm). The base area of each pond is level, with a level difference occurring from one pond to the next Gravity flow is provided through the system from Pond 1 to the outlet of Pond 5. Each pond is connected by means of 150mm diameter interconnecting pipes. The pipes are placed at the bottom of the pond floor and water levels can be managed within each pond by adjusting bends on the outlet pipe of each pond.

The irrigation distribution system, flowmeters, flow analyser and motorised valves are contained within 3.0m diameter precast concrete chambers.

Leachate Treatment

The primary treatment option for the extracted leachate is to the willow plantation. Leachate is pumped to the willow plantation before discharge to surface water. If treated leachate levels are unacceptably elevated, the leachate is pumped into the nearest pumping station chamber (No 1 or 2) to be treated further by circulating via the willow/ICW's before discharging to surface water.

Willow Plantation Treatment

The Willow plantation is supplied with leachate on a timed basis (Currently applied 5am and 5pm daily to Zone 1 and 2 and Zone 3 and 4). A number of factors dictate leachate treatment and application rates within Willow Plantation and are as follows:

- 1. Precipitation
- 2. Temperature

3. Visual inspection manual intervention.

A rainfall meter and temperature probe have been installed to enact the controls required of the leachate dosing system to the Willow Plantation zones and ICW's. Temperature, precipitation and trigger levels have been set to allow for activation and deactivation of leachate pumping and dosing to Willow Irrigation zones and ICW's accordingly. The maximum daily flow to date to the willow is 15m³ to Zone 1 and 2 and 15 m³ to Zone 3 and 4.

A system main pressure is maintained to allow for sufficient treatment via the irrigation laterals installation. The two outlets from the Willow plantation are being monitored by Ammonia analysers and flowmeters and recorded on the SCADA system. When any sample reaches a limit of 3 mg/l ammonia, a motorised valve will shut and divert flow via gravity into the nearest pumping station chamber (No1 or 2) for recirculation in the willow/ICWs. This scenario shall continue until sample has reached acceptable limits. Collected runoff effluent meeting the required parameters is discharged to adjacent surface water drains as shown on the drawings. All values are recorded, alarmed and trended on the SCADA system. Discharge flow from each monitoring chamber is recorded and monitored including leachate applied to the treatment zones, treated flows to surface water drains and flows redirected back to the system for re-distribution and additional freatment.

Integrated Constructed Wetland Treatment (ICWs)

Wetlands, both natural and constructed, have applicate ability to cleanse water through physical, chemical and biological processes. The main treatment processes include;

- Uptake and transformation of contaminants/nutrients by micro-organisms and plants.
- Breakdown and transformation of contaminants/pollutants by micro-organisms and plants.
- Filtration and chemical precipitation through contact with substrate and plant litter.
- Settling of suspended particular matter.
- Chemical transformation of pollutants
- Absorption and ion exchange on the surface of plants, sediment, and litter (of particular relevance to the capture and storage of phosphorous).
- Predation and natural die-off of pathogens (e.g. *E. coli* and *Cryptosporidium*)

Flow of leachate to ICWs is controlled on the pumping main with an actuated valve within a precast concrete chamber along with flow measurements via flow meter. Flow of leachate to ICWs is via a weir chamber and flow split on a 60/40 percentage basis relative to their areas (60% to A series ponds and remaining 40% to B series ponds).

The maximum volume of leachate pumped from below the Churchtown landfill to ICW's is c. 50m³/day. The leachate flows is split between ICW area A and ICW area B with ICW Area A receiving 2/3 of the flow (c. 33m³/day) and ICW Area B receiving 1/3 of the flows (c. 17m³/day).

Where leachate is available over and above the treatment capacity of the willow plantation (either through seasonal increases in leachate generation, wet/frosty weather conditions or manual operator intervention) leachate can be diverted to the ICWs as a secondary alternative. The system also allows the site operator to intervene and permit periodic irrigation of the ICWs when sufficient leachate is available during dry weather which would ordinarily be applied to the willow plantation in order to maintain the ICWs.

The SCADA system monitors all site equipment and runs the entire plant automatically. The leachate pumping main is controlled at different pressures depending on what it is supplying, either ICWs or Willow Plantation irrigation system.

Leachate is monitored at three monitoring wells located within the waste body, designated as L1, L2 and L3.

Discharge Rates

Discharge rates from the ICW systems will be variable depending on the volumes to be treated and on climatic conditions. With higher rates of discharge during the winter months and reduce or no discharges during the summer months.

The maximum volume of leachate applied to the willow and ICWs to date is 80 m³/day. This was monitored by the sampling of the effluent from the system for ammonia to ensure this volume of leachate was treated. Precipitation and potential evapotranspiration (mm) has been taken from Malin Head, Co Donegal. The annual total mean precipitation and potential evapotranspiration averaged per day has been used to calculate the maximum flow (m³/day) based on the above assumptions. This gives an estimated maximum flow of 136 m³/day, as shown in **Table 3.3** below.

This maximum flow rate has been used in the assimilation capacity. As previously stated discharge rates from the willow and ICW systems will be variable depending on the volumes to be treated and on climatic conditions. With higher rates of discharge during the winter months and reduced or no discharges during the summer months.

Table 3.1; Total rainfall in millimetres for Malin Head

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2017	56.7	85.1	96.9	41.1	25.6								305.4
2016	166.3	130.7	72.7	52.9	65.6	72.4	109.9	79.9	94.7	37.6	113.9	76.0	1072.6
2015	176.0	85.8	123.1	64.7	137.0	56.1	132.7	111.0	29.7	71.9	222.9	272.9	1483.8
2014	162.2	189.9	71.6	33.4	86.8	48.6	86.0	95.3	23.0	131.4	134.4	150.5	1213.1
mean	119.7	87.4	88.4	64.7	58.4	70.2	80.8	95.4	96.4	120.6	108.6	116.4	1107.0

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Table 3.2; Potential Evapotranspiration (mm) for Malin Head

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2017	21.8	24.2	38.5	54.6	n/a								139.1
2016	24.2	26.5	39.0	51.4	75.7	71.5	72.7	60.3	47.1	37.2	26.2	24.0	555.8
2015	24.3	19.0	36.5	52.3	62.1	73.5	71.1	65.1	50.1	33.7	27.3	26.1	541.1
2014	20.5	24.7	36.9	58.2	63.2	75.0	82.4	68.7	47.3	36.4	17.3	24.3	554.9
mean	20.8	25.9	34.4	50.7	68.6	74.0	70.8	60.8	46.6	32.0	23.0	19.7	527.3

Table 3.3; Estimated maximum flow

Area m²	Leachate m ³	Rainfall mm	Potential Evapotranspiration mm	Flow m³/day
Willow 24,000	30	72.79	34.67	68.12
ICW 11,165	50	33.86	16.13	67.73

SW9 and SW11 are the two discharge outlets from the ICW. The proposed emission limit values (ELVs) are provided in **Table 3.4** below.

Table **3.4**; **Proposed Emission Limit Values**

Parameter	Limit gerighter
рН	6-9 Cot itight
BOD	20 mg/l
Suspended Solids	30 mg/k ⁿ
Total P (as P)	2 mg/l
Total Ammonia (as N)	3 mg/l

It is the proposed maximum discharge via the perimeter surface water drains, which accept the effluent form the ICW and the willow plantation (80m³/day during low flows and 136 m³/day during mean flows), with which this screening for appropriate assessment is based upon.



3.2 IDENTIFICATION OF RELEVANT NATURA 2000 SITES AND COMPILATION OF INFORMATION ON THEIR QUALIFYING INTERESTS

3.2.1 Desktop assessment and review of available information

The Habitats Directive contains a list of habitats (Annex I) and species (Annex II) for which SACs must be established by Member States. Similarly, the Birds Directive contains lists of important bird species (Annex I) and other migratory bird species for which SPAs must be established. Those that are known to occur at a site are referred to as 'qualifying interests' and are listed in the Natura 2000 forms which are lodged with the EU Commission by each Member State. A 'qualifying interest' is one of the factors (such as the species or habitat that is present) for which the site merits designation. The location of the Churchtown Landfill is on the banks of the River Finn SAC, site code IE0002301 (Figure 3.1).

This site comprises almost the entire freshwater element of the River Finn and its tributaries - the Corlacky, the Reelan sub-catchment, the Sruhamboy, Elatagh, Cummirk and Glashagh, and also includes Lough Finn, where the river rises. Lough Derg and a section of the River Derg, and the tidal stretch of the Foyle north of Lifford to the border, are also part of the site. The underlying geology is Dalradian Schists and Gneiss for the most part though grantzites and Carboniferous Limestones are present in the vicinity of Castlefinn. The hills around Lough Finn are also on quartzite, with the mountains of Owendoo and Cloghervaddy of grants resiste and other intrusive rocks rich in silica. The rivers in the western, upland part of the site from mainly through peat based soils, while eastwards of the Ballybofey area the main Finn change passes though fairly intensive agricultural land. In addition to rivers, lakes, bog and heath, the site includes native broad-leaved and mixed woodland, scrub, wet grassland and freshwater marsh. Intertidal mudflats and extensive reedbeds occur along the River Foylewith improved grassland and arable land also included. The Finn passes through a number of medium sized towns, notably Lifford, Castlefinn, Stranorlar and Ballybofey.

The Department of the Environment, Heritage and Local Government guidance on appropriate assessment states that a distance of 15km is currently recommended in the case of plans, and for projects, the distance can be further reduced. However, given that the outcome of the mass balance assessment of the River Finn's assimilative capacity to receive the discharge determined that no impact is expected from the discharge on the River Finn itself (see **Appendix B**), it can be accepted that adjacent SACs will not experience any impact from the proposal, regardless of any hydraulic connection to the River Finn SAC.

Churchtown Landfill Discharge

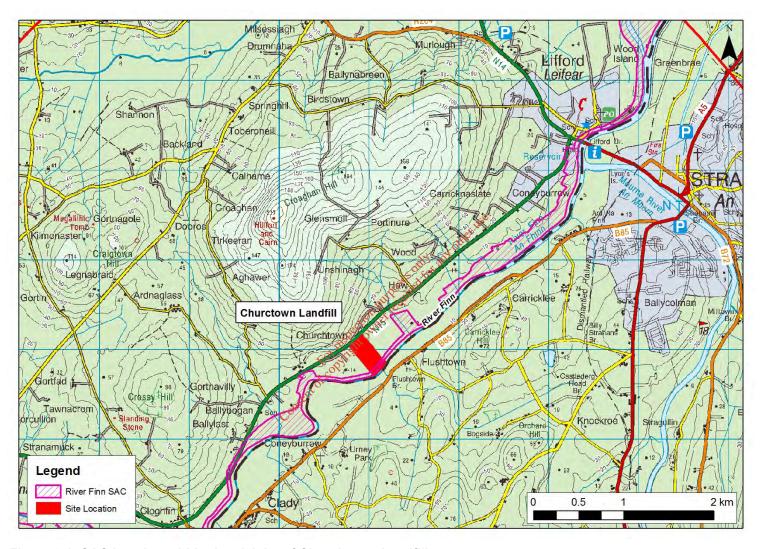


Figure 3.1; SAC location within the vicinity of Churchtown Landfill

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Details in relation to the qualifying features of the SAC are described in **Table 3.5**. The information contained in this table is based on the findings in Ireland's Article 17 Report to the European Commision 'The Status of EU Protected Habitats and Species in Ireland' (NPWS, 2013). The background documents associated with this report provide an assessment of the status of the habitats and species that Ireland is required to protected under the Habitats Directive. The conservation status for listed habitats and species is assessed across the whole national territory, and therefore, site by site assessments are not available at this time due to gaps in monitoring data.

The NPWS, Natura 2000 site synopsis can be found in **Appendix A**. The features of interest and Conservation Objectives of the site, along with an analysis of the potential effects that the proposed development may have, are described in **Table 3.6**.

Site Specific Conservation objectives are not available for the River Finn SAC however the generic conservation objectives are:

"to maintain or restore the favourable conservation condition of the Annex I habitat (s) and/or species and the Annex II species for which the SAC has been selected";

	Description dilet it
Code	Description
3110	Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>)
4010	Northern Atlantic wet heaths with Erica tetralix
7130	Blanket bogs (* if active bog)
7140	Transition mires and quaking bogs of the control of
1106	Salmon
1355	Otter
(* denotes	s a priority habitat)

Churchtown Landfill Discharge

Table 3.5; Description of River Finn SAC (Site Code - 002301)

Qualifying Interests	Site Sensitivity	Conservation Status ¹	Threats*
Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>)	Surface and ground water dependent. Moderately sensitive to hydrological change. Moderate sensitivity to pollution.	Bad	Diffuse nutrient losses from agriculture and forestry are the most likely causes of enrichment in this lake habitat, and developing solutions to prevent or reduce such losses is a considerable challenge. Damage to peatland can result in hydrological changes in lakes, increased water colour and turbidity, changes in sediment characteristics, acidification and even enrichment.
Northern Atlantic wet heaths with Erica tetralix	Surface and ground water dependent. Moderately sensitive to hydrological change and pollution.	Bad	There are ongoing losses in habitat Area due to afforestation and agricultural improvement. The quality of the habitat has been impacted by overgrazing and trampling, burning, invasive non-native species, drainage and erosion. Stock reductions implemented through commonage framework plans have led to an increase in height and cover of dwarf shrubs and reduction in extent of bare peat at many sites.
Blanket bogs (priority if active bog)	Surface and groundwater dependent. Medium sensitivity to hydrological change. Sensitive to pollution as well as overgrazing, erosion and accretion	Bad	The main threats to blanket bog include overgrazing and trampling, drainage, afforestation, mechanical peat-extraction, burning and windfarm and other infrastructural development. Reductions in sheep numbers on upland commonages over the last decade has had a major positive impact on overgrazed areas, however recovery is a slow process and restoration measures are required to prevent further erosion of blanket bog.
Transition mires and quaking bogs	Surface and ground water dependent. Medium sensitivity to hydrological change and pollution.	Bad For in the factory it is	The current distribution and range maps provide a more refined estimate of the national habitat extent since 2007, but further survey is needed. Some losses of fen habitat are considered to have occurred since the Directive came into force, though the magnitude of the loss is unknown. The main pressures were identified as peat extraction, wetland reclamation and infilling.
Salmon (Salmo salar)	Surface and marine water dependent. Sensitive to hydrological change and pollution, particularly for juveniles and smolts.	Inadequate	There are numerous threats to the freshwater habitat and vigilance is required to ensure the maintenance of good quality habitat which salmon require to thrive. The salmon population is still low in comparison to previous decades and so, in the absence of a recovery, the Overall Status is assessed as Inadequate.
Otter (Lutra lutra)	Surface and marine water dependent. Sensitive to hydrological change. Sensitive to pollution.	Favourable	The main threats to the otter include habitat destruction (including river drainage and the clearance of bank-side vegetation); pollution, particularly organic pollution resulting in fish kills; and accidental deaths (road traffic and fishing gear).

¹ http://www.npws.ie/en/PublicationsLiterature/ConservationStatusReport/

3.3 SCREENING APPRAISAL

The features of interest and Conservation Objectives of the Natura 2000 sites, along with an analysis of the potential effects the proposed development may have on these sites, are described in **Table 3.6**. The information requirements and assessment criteria of screening specified in the European guidance on Appropriate Assessment (European Commission Environment Division's *Assessment of plans and projects significantly affecting Natura 2000 sites*, 2001) have served as the basis for the following screening appraisal.

The proposal is not directly connected with, or necessary to, the conservation management of the River Finn SAC.



Table 3.6 Screening Matrix – River Finn	(SAC)
Brief description of the project or plan	Discharge of treated leachate from leachate management system at Churchtown Landfill site
Brief description of the Natura 2000 Site	This site comprises almost the entire freshwater element of the River Finn and its tributaries - the Corlacky, the Reelan sub-catchment, the Sruhamboy, Elatagh, Cummirk and Glashagh, and also includes Lough Finn, where the river rises. Lough Derg and a section of River Derg, and the tidal stretch of the Foyle north of Lifford to the border, are also part of the site. The underlying geology is Dalradian Schists and Gneiss for the most part though quartzites and Carboniferous Limestones are present in the vicinity of Castlefinn. The hills around Lough Finn are also on quartzite. The mountains of Owendoo and Cloghervaddy are of granite felsite and other intrusive rocks rich in silica. The rivers in the western, upland part of the site flow mainly through peat based soils, while eastwards of the Ballybofey area the main Finn channel passes though fairly intensive agricultural land. In addition to rivers, lakes, bog and heath, the site includes native broad-leaved and mixed woodland, scrub, wet grassland and freshwater marsh. Intertidal mudflats and extensive reedbeds occur along the River Foyle. Improved grassland and arable land are included for water quality reasons. The Finn flows through a number of medium sized towns, notably Lifford, Castlefinn, Stranolar & Ballybofey.
Describe the individual elements of the project likely to give rise to impacts on the Natura 2000 Site	The discharge has potential to impact on water quality and hence the attainment of the conservation objectives for the SAC.
Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura 2000 Site by virtue of: - Size and scale - Land-take - Distance from the Natura 2000 Site or key features of the Site - Resource requirements (water abstraction etc.) - Emissions (disposal to land, water or air) - Excavation requirements - Transportation requirements - Duration of construction, operation, etc.	 The location of the discharge point is within the River Finn SAC. The discharge will include treated leachate and rainfall run-off falling on the site only and will be subject to monitoring to ensure compliance with ELVs as set out in the licence. The site will be bunded to ensure that all surface water generated within the SRC willow will be contained, all discharges will be directed to the designated discharge points and runoff from the SRC willow will be prevented from directly entering the River Finn. The N15 is the point of access for site.

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IBE1329/Letterkenny Screening Statement

Table 3.6 Screening Matrix – River Finn (SAC)

Describe any likely changes to the Site arising as a result of:

- Reduction of habitat area
- Disturbance to key species
- Habitat or species fragmentation
- Reduction in species density
- Changes in key indicators of conservation value (water quality etc.)
- Climate change

Describe any likely impacts on the Natura 2000 Site as a whole in terms of:

 Interference with the key relationships that define the structure of the Site

Describe from the above those elements of the project or plan, or combination of elements, where the impacts are likely to be significant or where the scale or magnitude of impacts is not known

This screening for appropriate assessment relates to the discharge from the landfill site and its potential impact on water quality and the surrounding Natura 2000 sites. As shown by the mass balance assessment, no impact is predicted.

Although the discharge will be within the River Finn SAC, the mass balance assessment shows that no impact will be experienced provided ELVs are met. It should be noted that this assessment is conservative in nature in that the mass balance has been undertaken of the ELVs at low flow conditions in the River Finn, i.e. the 95 percentile flow estimates. During low flow conditions it is unlikely that there will be a discharge from the leachate management system and therefore a more appropriate flow statistic to use in the receiving waters during discharge periods is the mean flows. When this flow is considered the mass balance assessment indicates that there would be an imperceptible increase in concentrations that would not be undetectable.

The assessment indicates that there is limited potential for an impact on the integrity of the River Finn SAC to arise as a result of the treated discharge from the Churchtown Landfill site, based on the proposed ELVs. The proposed works will reduce the risk to the SAC from the existing site due to the controlled treatment and discharge of any leachate.

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3.4 SCREENING CONCLUSIONS - FINDING OF NO SIGNIFICANT EFFECTS

The likely impacts that will arise from the discharge to the River Finn have been examined in the context of a number of factors that could potentially affect the integrity of the Natura 2000 network. The main risk is associated with the water quality in the River Finn, which is designated as an SAC (River Finn SAC IE0002301) and is considered as one of the key indicators of the conservation status of these sites. The proposed works will improve the quality of any discharge which may already be entering the channel by controlling site run-off and providing a level of leachate treatment. This in turn will help improve local water quality and contribute to the required attainment of the assigned WFD objectives for the Finn River waterbody.

The mass balance assessment indicates that the ELVs proposed for the main contaminants of concern in the discharge under the licence review will not have an impact on the River Finn SAC, and as such will not impact other nearby Natura 2000 sites, such as the River Foyle and Estuaries SAC and the Lough Foyle SPA further downstream which have a direct hydrological connectivity with the River Finn.

On the basis of the findings of this Screening for Appropriate Assessment, it is concluded that the proposed discharge:

- (i) is not directly connected with or necessary to the management of a Natura 2000 site and
- (ii) will not have significant effects on the qualifying habitats and species of the River Finn SAC provided proposed discharge ELVs are adhered to.

4. REFERENCES

Council Directive 79/409 EEC on the Conservation of Wild Birds

Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora

Department of the Environment, Heritage and Local Government (2009). Appropriate Assessment of Plans and Projects in Ireland, Guide for Planning Authorities, Dublin.

European Commission (2000a) Communication from the Commission on the Precautionary Principle, Office for Official Publications of the European Communities, Luxembourg.

European Commission (2000b) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg.

European Commission (2001) 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, Office for Official Publications of the European Communities, Luxembourg.

European Commission (2008) Guidance document of Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission, Office for Official Publications of the European Communities, Luxembourg.

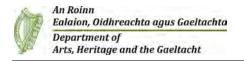
European Communities (Natural Habitats) Regulations (S.I. No. 94 of 1997)

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APPENDIX A

National Parks and Wildlife Service

River Finn SAC Site Synopsis, Generic Conservation Objectives & Natura 2000 Standard Data Form



Site Name: River Finn SAC

Site Code: 002301

This site comprises almost the entire freshwater element of the River Finn and its tributaries the Corlacky, the Reelan sub-catchment, the Sruhamboy, Elatagh, Cummirk and Glashagh, and also includes Lough Finn, where the river rises. The spawning grounds at the headwaters of the Mourne and Derg Rivers, Loughs Derg and Belshade and the tidal stretch of the Foyle north of Lifford to the border are also part of the site. The Finn and Reelan, rising in the Bluestack Mountains, drain a catchment area of 195 square miles. All of the site is in Co. Donegal. The underlying geology is Dalradian Schists and Gneiss for the most part though quartzites and Carboniferous Limestones are present in the vicinity of Castlefinn. The hills around Lough Finn are also on quartzite. The mountains of Owendoo and Cloghervaddy are of granite felsite and other intrusive rocks rich in silica. There are many towns along the river but not within the site, including Lifford, Castlefinn, Stranolar and Ballybofey.

The site is a Special Area of Conservation (SAG) selected for the following habitats and/or species listed on Annex I / II of the Ext. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes).

[3110] Oligotrophic Waters containing very few minerals

[4010] Wet Heath

[7130] Blanket Bogs (Active)

[7140] Transition Mires

[1106] Atlantic Salmon (Salmo salar)

[1355] Otter (Lutra lutra)

Upland blanket bog occurs throughout much of the upland area of the site along the edges of the river. However, more extensive examples are found at Tullytresna and in the Owendoo/Cloghervaddy bogs. The blanket bog is dominated by Common Cottongrass (*Eriophorum angustifolium*), Deergrass (*Scirpus cespitosus*), Purple Moorgrass (*Molinia caerulea*) and bog mosses (*Sphagnum* spp.). Pool and hummock systems are a feature of the flatter areas, with Heather (*Calluna vulgaris*), mosses (*Racomitrium lanuginosum*, *Sphagnum capillifolium* and *S. papillosum*), lichens (e.g. *Cladonia portentosa*) and the liverwort *Pleurozia purpurea* occurring abundantly on the hummocks. The scarce bog boss *S. imbricatum* is a component of some hummocks. *Sphagnum magellanicum* is found in wet flats by pools, while *S. cuspidatum* occurs abundantly within the pools themselves.

Towards the base of the northern slope and on the southern slope at Tullytresna flushes occur with bright green lawns of bog mosses and abundant rushes, particularly Soft Rush (*Juncus effusus*) and Jointed Rush (*J. articulatus*). On the summit is an undulating system of hummocks and hollows, and Heather is more common.

A valley bog fills the low lying areas to the north-east of Lough Finn which is dominated by Deergrass, cottongrass, Purple Moor-grass and Heather. Mossy hummocks occur in the wetter areas.

Transition mires (or quaking bogs or scraws) occur at several locations, usually at the interface between bog and lake or stream. In Owendoo/Cloghervaddy there are many examples of small lakes south of Belshade. Some of the lakes contain floating scraws of the bog moss *S. recurvum*, Bottle Sedge (*Carex rostrata*), Bog-sedge (*C. limosa*) and Bogbean (*Menyanthes trifoliata*). West of Owendoo River there is an extensive area of scraw with a similar suite of species but in differing abundances. Quaking areas are also associated with blanket bog at Cronamuck and Cronakerny. At Cronamuck, a small, level flushed area occurs at the base of a slope leading into a flushed stream. Diversity, including diagnostic species, is good.

Wet heath is associated with the blanket bog throughout the site and is found on the shallow peats and better drained slopes. In Owendoo Cloghervaddy this is mostly characterised by Cross-leaved Heath (*Erica tetyalix*), Heather, Mat-grass (*Nardus stricta*), Heath Rush (*Juncus squarrosus*) and Tormentil (*Potentilla erecta*). The heath often grades into flush vegetation dominated by Black Bog-rush (*Schoenus nigricans*).

Lowland oligotrophic lakes are found at Loughs Finn, Belshade and Derg, as well as in many of the smaller lakes within the site. Lough Derg is a large oligotrophic lake situated north of Pettigo. An extensive area of blanket bogs and conifer plantations make up the lake catchment Typical species seen at the three lakes include a sparse covering of Shoreweed (*Littorella uniflora*) along the lake shores, Water Lobelia (*Lobelia dortmanna*), the moss *Fontinalis antipyretica*, Bog Pondweed (*Potamogeton polygonifolius*) and Water Horsetail (*Equisetum fluviatile*), with Bulbous Rush (*Juncus bulbosus*) and Broad-leaved Pondweed (*P. natans*) in the margins.

On the tidal stretches within the site the main habitats are the river itself, mudflats and the extensive reedbeds that have colonised the former mudflats. The habitats found are typically freshwater in nature. The large reedbeds are dominated by Common Reed (*Phragmites australis*), with some Bulrush (*Typha latifolia*), Reed Canary-grass (*Phalaris arundinacea*) and Tufted Hair-grass (*Deschampsia cespitosa*). Succession is demonstrated nicely within a small area, with the change from mudflats to reedbeds, and on to willow (*Salix* spp.) and Alder (*Alnus glutinosa*) scrub.

Other habitats present within the site include a fringe of wet grassland/marsh along some river stretches dominated by rushes, grading into species-rich marsh in which sedges are common. Among the other species found in this habitat are Yellow Iris (*Iris pseudacorus*), Water Mint (*Mentha aquatica*), Purple Loosestrife (*Lythrum salicaria*) and Soft Rush. Around Lough Derg wet fen type vegetation occurs in places with

Purple Moor-grass, Bog-myrtle (*Myrica gale*), Jointed Rush and Meadowsweet (*Filipendula ulmaria*). There is also some Royal Fern (*Osmunda regalis*), Wild Angelica (*Angelica sylvestris*) and Marsh-marigold (*Caltha palustris*).

Where banks are steeper, particularly around Lough Derg and along the deep mountain valley of the upper stretches, dry, steep slopes support Great Wood-rush (*Luzula sylvatica*), Heather, Bell Heather (*Erica cinerea*), Bilberry (*Vaccinium myrtillus*) and Bracken (*Pteridium aquilinum*). There are areas of scrub surrounding parts of the lake margins, along the channels and on the ungrazed islands. These are composed of Alder, willows, Rowan (*Sorbus aucuparia*) and Silver Birch (*Betula pendula*). Understorey plants include abundant ferns and mosses. The rare Narrow-leaved Helleborine (*Cephalanthera longifolia*) occurs on the shores of Lough Derg. This species is listed in the Irish Red Data Book and is protected under the Flora (Protection) Order, 1999.

Small pockets of conifer plantation, close to the lakes and along the strip both sides of the rivers, are included in the site.

Lough Finn holds a population of Arctic Char (*Salvelinus alpinus*). This fish is a relative of salmon and trout, and represents an arctic-alpine element in the Irish fauna. In Ireland this fish occurs only in a few cold, stony, oligotrophic lakes. It is listed in the Irish Red Data Book as threatened. The Arctic Char in Lough Finn are unusual in that they are dwarfed. These only occur in one other lake in Ireland, Lough Coornasahom, Co. Kerry and they are therefore of national importance. Arctic Char are very sensitive to water quality and therefore changes in the catchment such as afforestation should be avoided to maintain this population. Lough Derg is also important for Arctic Char, though the species was last recorded there in 1990/91.

The Finn system is one of Ireland's premier salmon waters. Although the Atlantic Salmon (*Salmo salar*) is still fished commercially in Ireland, it is considered to be endangered or locally threatened elsewhere in Europe and is listed on Annex II of the E.U. Habitats Directive. Commercial netting on the Foyle does not begin until June and this gives spring fish a good opportunity to get into the Finn. The Finn is important in an international context in that its populations of spring salmon appear to be stable, while they are declining in many areas of Ireland and Europe. The salmon fishing season is 1st March to 15th September. Fishing for spring salmon is best east of Stranolar while the grilse run through to the upper reaches. The grilse run peaks here, depending on water, usually in mid June. The estimated rod catch from the Finn is approximately 500-800 spring salmon and 4,000 grilse annually, producing about 40% of the total Foyle count. The Loughs Agency has a management regime in place called the 'control of fishing regulations'. If enough salmon are not past the counter at Killygordon at a certain key date then both the angling and commercial fishing can be closed for set periods.

The site is also important for Otter (*Lutra lutra*), another species listed on Annex II of the E.U. Habitats Directive. It is widespread throughout the system. In addition, the site also supports many more of the mammal species occurring in Ireland. Those

which are listed in the Irish Red Data Book include the Badger and the Irish Hare. Common Frog, another Red Data Book species, also occurs within the site.

Golden Plover, Peregrine and Merlin, threatened species listed on Annex I of the E.U. Birds Directive, breed in the upland areas of the site. The Red Listed species Red Grouse occurs on the site, while the scarce Ring Ouzel, another Red List species, is also known to occur.

Agriculture, with particular emphasis on grazing, is the main land use along the Finn and its tributaries. Much of the grassland is unimproved but improved grassland and silage are also present, particularly east of Ballybofey. The spreading of slurry and fertiliser poses a threat to the water quality of this salmonid river, particularly in this region as the river is subject to extensive flooding. Fishing is a main tourist attraction on the Finn and there are a large number of Angler Associations, some with a number of beats. Fishing stands and styles have been erected in places. The River Finn is a designated Salmonid Water under the E.U. Freshwater Fish Directive. Other aspects of tourism such as boating are concentrated around Lough Finn.

Afforestation is ongoing, particularly along the western sections of the site adjacent to the headwaters and around the shores of Lough Dergi Recent planting has been carried out along the Cronamuck River. Forestry poses a threat in that sedimentation and acidification occurs. Sedimentation can cover the gravel beds resulting in a loss of suitable spawning grounds.

The site supports important populations of a number of species listed on Annex II of the E.U. Habitats Directive, and several habitats listed on Annex I of this Directive, as well as examples of other important habitats. Blanket bog is a rare habitat type in Europe and receives priority status on Annex I of the E.U. Habitats Directive. The overall diversity and ecological value of the site is increased by the presence of populations of several rare or threatened birds, mammals, fish and plants.

Conservation objectives for River Finn SAC [002301]

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

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

The favourable conservation status of a species is achieved when:

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

Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:

Code	Description					
3110	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)					
4010	Northern Atlantic wet heaths with Erica tetralix					
7130	Blanket bogs (* if active bog)					
7140	Transition mires and quaking bogs					
* denotes a priority habitat						

Code	Common Name	Scientific Name
1106	Salmon	Salmo salar
1355	Otter	Lutra lutra



Citation: NPWS (2016) Conservation objectives for River Finn SAC [002301]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

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NATURA 2000 - STANDARD DATA FORM

For Special Protection Areas (SPA), Proposed Sites for Community Importance (pSCI), Sites of Community Importance (SCI) and for Special Areas of Conservation (SAC)

SITE **IE0002301**

SITENAME River Finn SAC

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- 1. SITE IDENTIFICATION
- 2. SITE LOCATION
- 3. ECOLOGICAL INFORMATION
- 4. SITE DESCRIPTION
- 6. SITE MANAGEMENT
- 7. MAP OF THE SITE

1. SITE IDENTIFICATION

		<u></u> .						
1.1 Type	1.2 Site code	ditert	Back to top					
В	IE0002301	only any						
1.3 Site name								
River Finn SAC	River Finn SAC							
1.4 First Compilation	date vocani	1.5 Update date						
2003-06	Consente	2015-12						

1.6 Respondent:

Name/Organisation: National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht

Address: 7 Ely Place, Dublin 2, Ireland

Email: datadelivery@ahg.gov.ie

Date site proposed as SCI: 2003-06

Date site confirmed as SCI: No data

Date site designated as SAC: No data

National legal reference of SAC designation: No data

2. SITE LOCATION

2.1 Site-centre location [decimal degrees]:

Back to top

Longitude

-7.95360253

Latitude

54.78797089

2.2 Area [ha]:

2.3 Marine area [%]

5501.79

0.0812209

2.4 Sitelength [km]:

0.0

2.5 Administrative region code and name

NUTS level 2 code Region Name

IEZZ	Extra-Regio
IE01	Border, Midland and Western

2.6 Biogeographical Region(s)

Atlantic (%)

3. ECOLOGICAL INFORMATION

ingled for any other use. 3.1 Habitat types present on the site and assessment for them

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Annex I Habitat types						Site assessment			
Code	PF	NP	Cover [ha]	Cave	Data quality	A B C D	B C D A B C		
				Course		Representativity	Relative Surface	Conservation	Global
3110 B			880.29		M	В	В	В	В
4010 B			165.05		М	В	С	С	С
7130 B	X		880.29		M	В	С	С	В
7140 8			55.02		М	В	С	В	В

- PF: for the habitat types that can have a non-priority as well as a priority form (6210, 7130, 9430) enter "X" in the column PF to indicate the priority form.
- **NP:** in case that a habitat type no longer exists in the site enter: x (optional)
- Cover: decimal values can be entered
- Caves: for habitat types 8310, 8330 (caves) enter the number of caves if estimated surface is not available.
- Data quality: G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation)

3.2 Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Sp	Species					Population in the site					Site assessment			
G	Code	Scientific Name	s	NP	Т	T Size Unit Cat. D.qual.		A B C D	A B C					
						Min	Max				Pop.	Con.	lso.	Glo.
В	A052	Anas crecca			w	573	573	i		G	С	В	С	В
В	A050	Anas penelope			w	64	64	i		G	С	В	С	С
В	A053	Anas platyrhynchos			w	349	349	i		G	С	В	С	В
В	A043	Anser anser			w	1	349	l		М	В	В	С	В
В	A061	Aythya fuligula			w	87	87	i		G	С	В	С	В
В	A067	Bucephala clangula			w	78	78	i		G	С	В	С	В
В	A067	Bucephala clangula			w	133	133	i		G	С	В	С	В
В	A037	Cygnus columbianus bewickii			w	1	13	i		G &	С	В	С	С
В	A038	Cygnus cygnus			w	1	571	i i p p	any other	M	В	В	С	В
В	A098	Falco columbarius			p	1	2	Sped for		G	С	В	С	С
В	A103	Falco peregrinus			p	2	Owner re	р		G	С	В	С	С
В	A183	Larus fuscus			r .	600000	500	р		G	В	Α	С	Α
М	1355	Lutra lutra			p	3,007			Р	М	С	Α	С	Α
В	A069	Mergus serrator		ුර	W	27	27	i		G	С	В	С	В
В	A160	Numenius arquata			w	457	457	i		G	С	В	С	В
В	A140	Pluvialis apricaria			w	371	371	i		G	С	В	С	С
F	1106	Salmo salar			r				С	М	С	Α	С	Α
В	A162	Tringa totanus			w	56	56	i		G	С	В	С	С
В	A282	Turdus torquatus			r	1	2	p		G	С	В	С	С
В	A142	Vanellus vanellus			w	401	401	i		G	С	В	С	С

- Group: A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Type:** p = permanent, r = reproducing, c = concentration, w = wintering (for plant and non-migratory species use permanent)
- **Unit**: i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see reference portal)
- Abundance categories (Cat.): C = common, R = rare, V = very rare, P = present to fill if data are

- deficient (DD) or in addition to population size information
- Data quality: G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); VP = 'Very poor' (use this category only, if not even a rough estimation of the population size can be made, in this case the fields for population size can remain empty, but the field "Abundance categories" has to be filled in)

3.3 Other important species of flora and fauna (optional)

Species			Population in the site			Motivation								
Group	CODE	Scientific Name	s	NP	Size		Unit	Cat.	Spe	ecies nex	Otl	ner :egoi	ries	
					Min	Max		C R V P	IV	V	Α	В	С	D
В		Ardea cinerea			24	24							Х	
Р		Cephalanthera longifolia									X			
В		Cygnus olor			30	30							X	
R		Lacerta vivipara											X	
В		<u>Lagopus</u> <u>lagopus</u>									X			
В		Lagopus lagopus					othering	ç. 					X	
М		Lepus timidus hibernicus				oses only	in 3				X			
М		Lepus timidus hibernicus			ection pu	Possible for a security of the						X		
М		Lepus timidus hibernicus		For	tight o								X	
М		Meles meles		atof									Х	
М		Meles meles	Const								Х			
А		Rana temporaria									X			
А		Rana temporaria											Х	
F		Salvelinus alpinus									Х			

- Group: A = Amphibians, B = Birds, F = Fish, Fu = Fungi, I = Invertebrates, L = Lichens, M = Mammals, P = Plants, R = Reptiles
- CODE: for Birds, Annex IV and V species the code as provided in the reference portal should be used in addition to the scientific name
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Unit**: i = individuals, p = pairs or other units according to the standard list of population units and codes in accordance with Article 12 and 17 reporting, (see reference portal)
- Cat.: Abundance categories: C = common, R = rare, V = very rare, P = present
- Motivation categories: IV, V: Annex Species (Habitats Directive), A: National Red List data; B: Endemics; C: International Conventions; D: other reasons

4. SITE DESCRIPTION

4.1 General site character

Habitat class	% Cover
N23	1.0
N22	1.0
N14	15.0
N06	27.0
N02	6.0
N12	5.0
N10	10.0
N16	1.0
N07	25.0
N19	1.0
N20	1.0
N08	7.0
Total Habitat Cover	100

Other Site Characteristics

This site comprises almost the entire freshwater element of the River Finn and its tributaries - the Corlacky, the Reelan sub-catchment, the Sruhamboy, Elatagh, Cummirk and Glashagh, and also includes Lough Finn, where the river rises. Lough Derg and a section of River Derg, and the tidal stretch of the Foyle north of Lifford to the border, are also part of the site. The underlying geology is Dalradian Schists and Gneiss for the most part though quartzites and Carboniferous Limestones are present in the vicinity of Castlefinn. The hills around Lough Finn are also on quartzite. The mountains of Owendoo and Cloghervaddy are of granite felsite and other intrusive rocks rich in silica. The rivers in the western, upland part of the site flow mainly through peat based soils, while eastwards of the Ballyberey area the main Finn channel passes though fairly intensive agricultural land. In addition to rivers, lakes, begand heath, the site includes native broad-leaved and mixed woodland, scrub, wet grassland and freshwater marsh. Intertidal mudflats and extensive reedbeds occur along the River Foyle. Improved grassland and arable land are included for water quality reasons. The Finn passes through a number of medium sized towns, notably Lifford, Castlefinn, Stranolar and Ballybofey.

4.2 Quality and importance

This extensive site contains good examples of the Annex 1 habitats lowland oligotrophic lakes, blanket bog, transition mires and wet heath. Water quality of the lakes is good, as is that in most of the rivers and streams (majority classified as unpolluted). The blanket bog, which is best developed in the Owendoo/Cloghervaddy area, is typical upland bog and is fairly extensive in area. The Finn is an important system for Salmo salar, being an excellent grilse river with extensive spawning habitats. The Finn system sustains one of the only stable spring salmon populations in the country. The rivers and lakes support important populations of Lutra lutra. The upland habitats support a number of important bird species, notably Falco peregrinus and Falco columbarius (Annex I species) and Lagopus lagopus and Turdus torquatus (both Red Data Book species). Lough Derg supports the largest colony of Larus fuscus in Ireland. The section of the River Foyle within the site, along with a contiguous stretch in of the river in Northern Ireland, supports important populations of waterfowl in autumn and winter, with an internationally important population of Cygnus cygnus, and nationally important numbers of Anser anser, Anas crecca and Phalacrocorax carbo. Salvelinus alpinus occurs in Lough Finn and possibly Lough Derg. A Red Data Book plant species, Cephalanthera longifolia, is known from the site.

4.3 Threats, pressures and activities with impacts on the site

The most important impacts and activities with high effect on the site

Negative Impacts								
	arra	I/AntiAnall	inside/outside [i o b]					

Positive Impacts							
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i o b]				

	[code]	[code]	
Н	A04.01		i
M	E03.01		i
L	F05.04		i
M	H01.05		i
Н	C01.01		i
M	K01.01		i
Н	B02.02		i
L	E04		i
Н	C01.03.01		i

Μ	1	B02.01.01	i
Μ	1	J02.05	i
Н		B02.01.01	i

Rank: H = high, M = medium, L = low

Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification, T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions

i = inside, o = outside, b = both

4.5 Documentation

Bracken, J. J. and O'Grady, M. E. (1992). A review of freshwater fisheries research in Ireland. In Feehan, J. (ed.) Environment and Development in Ireland, pp 499-510. The Environmental Institute, UCD, Dublin. Colhoun, K. (2001). I-WeBS Report 1998-99. BirdWatch Ireland, Dublin. Central Fisheries Board (2001). Irish Salmon Catches 2000. http://www.cfb.ie/: February 2001. Creme, G.A., Walsh, P.M., O'Callaghan, M. and Kelly, T.C. (1997). The changing status of the lesser black-backed gull Larus fuscus in Ireland. Biology and Environment, Proceedings of the Royal Irish Academy 97B: 149-156, Doris, Y., McGarrigle, M.L., Clabby, K.J., Lucey, J., Neill, M., Flanagan, M., Quinn, M.B., Sugrue, M. and Lehane, M. (1999). Water quality in Ireland 1995-1997. Statistical Compendium of River Quality Data. Electronic Publication on Disk. Environmental Protection Agency, Wexford. Doris, Y., Clabby, K.M., Lucey and Lehane, M. (2002). Water Quality in Ireland 1998-2000. Statistical Compendium of River Quality Data. Electronic Publication on Disk. Environmental Protection Agency, Wexford. Douglas, C. Dunnells, D., Scally, L. and Wyse Jackson, M. (1990). A Survey to Locate Blanket Bogs of Scientific Interest in Counties Donegal, Cavan, Leitrim and Roscommon. Unpublished report to the National Parks and Wildlife Service, Dublin. Flanagan, P.J. and Toner, P. F. (1975). A Preliminary Survey of Irish Lakes. An Foras Forbartha, Dublin. Hunt, J., Derwin, J., Coveney, J. and Newton, S. (2000). Republic of Ireland. Pp. 365-416 in Heath, M.F. and Evans, M.I., (eds.) Important Bird Areas in Europe: Priority Sites for Conservation 1: Northern Europe. Cambridge, UK: BirdLife International (BirdLife Conservation Series No. 8). Lloyd, C. (1982). Inventory of Seabird Breeding Colonies in Republic of Ireland. Unpublished report, Forest and Wildlife Service, Dublin. Loughs Agency (2000). Mr P. Boylan provided information in a letter to Duchas dated the 4th September 2000. Loughs Agency, 2001. Personal correspondence from Dan by Loughridge to Marie Dromey, Duchas. McGarrigle M.L., Bowman J.J., Clabby K.J., Lucey J., Cunningham P., MacCarthaigh M., Keegan M., Cantrell B., Lehane M., Clenaghan C. & Toner P.F. (2002). Water Quality in Ireland 1998-2000. Environmental Protection Agency, Wexford. Merne, O.J. (1989). Important Bird Areas in the Republic of Ireland. In: Grimmett, R.F.A. and Jones, T.A. (eds.). Important Bird Areas in Europe. ICBP Technical Publication No. 9, Cambridge. Mooney, E., Goodwillie, R.N. and Douglas, C. (1991). Survey of Mountain Blanket Bogs of Scientific Interest. Unpublished draft to the National Parks & Wildlife Service, Dublin. O'Reilly, P. (1998). Trout and Salmon Rivers of Ireland: an Anglers Guide. Merlin Unwin Books, London. Praeger, R.L. (1934) . The Botanist in Ireland. Hodges, Figgis & Co, Dublin. Reynolds, J.D. (1998). Ireland's Freshwaters. The Marine Institute, Dublin 1998. Sheppard, R. (1993). reland's Wetland Wealth. IWC, Dublin. Young, R. (1973). A Preliminary Report on Areas of Scientific Interest in County Donegal. An Foras Forbartha, Dublin.

6. SITE MANAGEMENT

6.2 Management Plan(s): An actual management plan does exist:	Back to top
Yes	
No, but in preparation	
X No	

7. MAP OF THE SITES

INSPIRE ID:

IE.NPWS.PS.NATURA2000.SAC.IE0002301

Map delivered as PDF in electronic format (optional)

Yes X No

Reference(s) to the original map used for the digitalisation of the electronic boundaries (optional).

Consent of copyright owner required for any other use.

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APPENDIX B

Assimilative Capacity and Mass Balance Assessment

Consent of Conference Conference of Property of Part of Par

Existing Environment

Churchtown Landfill Site is situated on the north bank of the Finn River (EU Code UKGBNI1NW010104074). Being a cross-border waterbody, this stretch of the Finn is not currently assigned a WFD ecological status by EPA and is subject to further consultation with their NIEA counterparts. NIEA however have assigned a Moderate ecological status to the waterbody as of 2015 based on biological elements of Moderate status for Benthic Invertebrates and Fish. In terms of Priority Substances and Specific Pollutants, only Cypermethrin was not achieving at least Good status conditions.

The Finn is designated as an economically significant salmonid river under the Register of Protected Areas set out in the Water Framework Directive (WFD) (Directive 2000/60/EC). The river also has a Natura 2000 Special Area of Conservation (SAC) designation under the Habitats Directive (Qualifying Interests: 3110 - Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae), 4010 - Northern Atlantic wet heaths with Erica tetralix, 7130 - Blanket bogs, 7140 - Transition mires and quaking bogs, 1106 - Salmon and 1355 - Otter), as does the River Foyle and Tributaries SAC (Qualifying Interests: 3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation, 1106 - Salmon and 1355 - Otter mmediately downstream.

Assessment of the Impact of the Discharge

As part of the Waste Licence Application to the Environmental Protection Agency (EPA), Leachate Emission Limit Values have been proposed as follows;

Table 18 Proposed Emission Limit Values

Parameter	Limit	EQS (95%-ile)
рН	6-9	6-9
BOD	20 mg/l	2.6 mg/l
Suspended Solids	30 mg/l	N/A
Orthophosphate	2 mg/l	0.075 mg/l
Total Ammonia (as N)	3 mg/l	0.14 mg/l

The assimilative capacity was calculated to measure the receiving water body's ability to assimilate the pollutants, based on the above emission limit values, whilst still maintaining an acceptable level of water This measurement is only indicative however and was supported with a Mass Balance calculation to determine the resultant concentration in the receiving water based on the above emission

limit values. The results of these calculations for the receiving waters of the discharge are shown below and an assessment of the impact on the receiving water quality has been made in accordance with the European Communities Environmental Objectives (Surface Waters) Regulations, 2009 (S.I. No. 272 of 2009), as amended.

Calculations have been applied to those parameters which have been assigned an Environmental Quality Standard (EQS) in the above regulations (S.I. No. 272 of 2009). Whilst Suspended Solids does not have an EQS under the Surface Water Objectives, a limit of 35 mg/l was used, as per the Guidance, "Procedures and Training on the Licensing of Discharges to Surface Waters and to Sewer for Local Authorities (Local Authority Services National Training Group [LASNTG], 2011)".

A calculation for the 'percentage of headroom used', which is utilised when determining whether or not a licence should be reviewed, is shown below. The guidance, "Procedures and Training on the Licensing of Discharges to Surface Waters and to Sewer for Local Authorities" states that if less than 25% of the headroom is used then a review of the licence is not required.

It should be noted that this assessment of the ELVs is to review in nature in that the mass balance

It should be noted that this assessment of the ELVs is conservative in nature in that the mass balance has been undertaken at low flow conditions in the River Finn, i.e. the 95 percentile flow estimates. During low flow conditions it is unlikely that there will be a discharge from the leachate management system and therefore an assessment has also been undertaken using the mean flow in the receiving waters as a more appropriate flow statistic.

The results of these calculations are collated below in Table 2 and Table 3.

Table 2; Assimilative Capacity and Mass Balance calculations for the Finn River receiving waterbody based on low flows and monitored discharge

Table 2; Assimilative Capaci	ey arra ma	Daran Co		Contaminant of			buccu on	ion none	una monto	ou diodila	igo
	BOD	Susp. Solids	Ortho- P	Nitrogen - ammoniacal	Cadmium	Chromium VI	Copper	Lead	Mercury	Nickel	Zinc
Discharge vol (m³/day)	80	80	80	80	80	80	80	80	80	80	80
Discharge vol. (m³/sec)	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009
Q95 flow (m ³ /sec)	0.816	0.816	0.816	0.816	0.816	0.816	0.816	0.816	0.816	0.816	0.816
U/S Background Conc. (mg/l)	0.940	5.00	0.012	0.0428	0.00004	0.0017	0.0025	0.0002	0.00002	0.0007	0.0047
Dilution Factor	882	882	882	882	882	115 [©] 882	882	882	882	882	882
					٠,٠,٠	other					
EQS - AA (mg/l)	1.5	35	0.035	0.065	0.00008	0.0034	0.005	0.0012	0.00007	0.004	0.008
ELVs (mg/l)	20.000	30	2.000	3.000	170° ired						
Leachate (worst case)				ر ال	0.00010	0.0337	0.045	0.0199	0.00127	0.014	0.157
				especial of	inc.						
Assim Capacity	39.481	2115.07	1.622	<of 1.565<="" th=""><th>0.0028</th><th>0.120</th><th>0.176</th><th>0.071</th><th>0.0035</th><th>0.233</th><th>0.233</th></of>	0.0028	0.120	0.176	0.071	0.0035	0.233	0.233
				of cop							
				~	ce assessme	nt					
Resultant Concentration	0.9616	5.0283	0.0143	0.0462	0.00004	0.0017	0.0025	0.0002	0.00002	0.0007	0.0049
% increase	2.3%	0.6%	18.8%	7.8%	0.2%	2.1%	1.9%	11.2%	7.1%	2.2%	3.7%
				Headroon	n calculations						
Headroom available	0.5600	30.000	0.0230	0.02220	0.00004	0.00170	0.0025	0.0010	0.00005	0.0033 0	0.0033 0
% headroom utilised	3.9%	0.1%	9.8%	15.1%	0.2%	2.1%	1.9%	2.2%	2.8%	0.5%	5.2%

*Denotes adjusted background concentration

Table 3; Assimilative Capacity and Mass Balance calculations for the Finn River receiving waterbody based on mean flows and max. discharge

Table 3, Assimilative Capac				Contaminant of							
	BOD	Susp. Solids	Ortho- P	Nitrogen - ammoniacal	Cadmium	Chromium VI	Copper	Lead	Mercury	Nickel	Zinc
Discharge vol. (m³/day)	136	136	136	136	136	136	136	136	136	136	136
Discharge vol. (m³/sec)	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009
Q30 flow (m ³ /sec)	17.436	17.436	17.436	17.436	17.436	17.436	17.436	17.436	17.436	17.436	17.436
U/S Background Conc. (mg/l)	0.940	5.00	0.012	0.0428	0.00004	0.0017	0.0025	0.0002	0.00002	0.0007	0.0047
Dilution Factor	11078	11078	11078	11078	11078	11078	11078	11078	11078	11078	11078
					A &	other					
EQS - AA (mg/l)	1.5	35	0.035	0.065	0.00008	0.0034	0.005	0.0012	0.00007	0.004	0.008
ELVs (mg/l)	20.000	30	2.000	3.000	at 10 sorted ?						
Leachate (worst case)				بر مان	0.00010	0.0337	0.045	0.0199	0.00127	0.014	0.157
				specto di	, de						
Assim Capacity	843.62 3	45194.1	34.649	33,444	0.0603	2.561	3.766	1.506	0.0753	4.971	4.971
				at of the							
			Ċ.	ന് ^{ട്ട്} Mass Balan	ce assessme	nt					
Resultant Concentration	0.9410	5.0013	0.0121	0.0430	0.00004	0.0017	0.0025	0.0002	0.00002	0.0007	0.0047
% increase	0.1%	0.0%	0.9%	0.4%	0.0%	0.1%	0.1%	0.5%	0.3%	0.1%	0.2%
				Headroom	calculations						
Headroom available	0.5600	30.00	0.0230	0.02220	0.00004	0.00170	0.0025	0.0010	0.00005	0.0033	0.00330
% headroom utilised	0.2%	0.0%	0.5%	0.7%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.2%

*Denotes adjusted background concentration

Low flow (Q95) calculations

Upstream background concentrations were taken from measurements recorded at monitoring point SW6 immediately upstream of the discharge location.

In most cases, where upstream background concentrations were not available or were already in excess of the respective EQS, an adjusted background concentration was used as per the LASNTG guidance. This provides an indication of the likely impact of the discharge based on the assumption that the waterbody is already achieving Good status.

In the case of Ammoniacal Nitrogen, an adjusted background concentration was calculated as a mean of the EPA monitoring results further upstream on the Finn at Castlefin Bridge (Site code - 01F01-1100). In the case of Cadmium, Chromium and Copper, where measured background concentrations also exceeded the EQS, an adjusted background concentration is derived by halving the Annual Average EQS value. (It should be noted that the EQS provided for Chromium is applicable to Chromium VI, whereas monitoring results measure Total Chromium. The Surface Water Regulations indicate that where Total Chromium does not exceed the EQS for Chromium VI, no further study is deemed necessary. In this case, an adjusted background concentration is derived from the EQS for Chromium VI and does not result in an issue with regard to the mass balance assessment and headroom utilised when considering the Total Chromium monitoring results, and as such, further speciation studies should not be required.)

The proposed ELVs as listed above were used as the maximum allowable discharge concentration in order to provide a conservative assessment the metals which are not currently subject to ELVs, the worst-case scenario from the leachate mentitoring results was used as the discharge concentration.

Where there is assimilative capacity at the point of discharge in a water course, this does not infer that it is acceptable to allow a discharge to utilise the full amount of this capacity. Other downstream discharges may be relying on the dilution effects of the upstream flows to comply with the water quality standards.

In order to assess this increase in concentration, the headroom (difference in concentration between the background concentration and the EQS Standard) should be calculated and the percentage of this headroom utilized by the increase in concentration is derived. The Guidance states that if the discharge alone will not use >25% of the headroom then the discharge may be permitted.

Based on these calculations it can be seen that none of the parameters will utilise in excess of 25% available headroom, provided that:

- (i) Upstream concentrations are indicative of good status, and;
- (ii) Discharge concentrations do not exceed the proposed ELVs

As such, the discharge can be deemed to not impact on the River Finn waterbody and will not prevent its attainment of its required WFD objectives.

Mean flow (Q30) calculations

As mentioned above, the assessment when taking the 95 percentile low flow statistics into consideration is conservative in nature given that during low flow conditions it is unlikely that there will be a discharge from the leachate management system. Therefore an estimated maximum discharge flow of 136m³/sec has been calculated (using the rainfall and evapotranspiration data available for Malin Head, as outlined in Chapter 3.1.2 of the AA Screening Statement) and has been assessed using an estimate of the mean flows (Q30) in the Finn as a more appropriate flow statistic.

When this flow is considered the mass balance assessment indicates that there would be an imperceptible increase in concentrations that would not be detectable, i.e. less than the limit of detection for many laboratories.

Consent of convinding owner required for any other use.

Appendix B.6 Site Notice, Newspaper Advertisement and Planning Authority Notice



Ref: IBR1015 Status: Final Date: May 2017



Call 074 97 40160

SSS G

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Public Notices

Public Notices

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Public Notices

Public Notices

APPLICATION FOR AQUACULTURE
LICENCES UNDER THE FISHERIES
(AMENDMENT) ACT. 1997 (NO. 23)
APPLICATION FOR FORESHORE LICENCES
UNDER THE FORESHORE ACT, 1933 (NO. 12)

NOTICE IS HERBY GIVEN IN 1920 INC.

NOTICE IS HERBY GIVEN IN ARCHITECTURE AND INC.

Glasha, Candonagh, Co. Donegal, has applied to the Minister for Agriculture. Food and the Marine for Aquaculture Licences to carry out aquaculture as described in the attached table on areas of foreshore in Trawbreaga Bay, Co. Donegal.

NOTICE IS ALSO GIVEN that the same applicants have applied to the Minister for Agriculture, Food and the Marine for Foreshore Licences for the areas of foreshore to be used for these aquaculture activities. Any person may, during the period of 4 weeks from the date of publication of this notice, make written submissions or observations to the Minister for Agriculture, Food and the Marine, (quoting relevant reference-see table below) in relation to a) the Aquaculture Licence application(s) and b) the Foreshore Licence application(s). Any such submissions or observations should be furnished to the Department of Agriculture, Food and the Marine (Aquaculture and Foreshore Management Division), National Seafood Centre, Clonakilty, Co. Cork, within have also

All submissions or observations received on foot of public notice procedures may be made available to the applicants for comment.

Details of the applications, including, individual site maps, drawings of the proposed works, structures and a copy of the Appropriate Assessment (Habitats) may be inspected at Carndonagh Garda Station(restricted opening) Buncrana (open 24 hours). These documents may also be viewed on the Department's website.

http://www.agricultura.gov.ie/seafood/

Type of Application Species, Method

1 site -T12/447A

Date of public

PUBLIC NOTICE

APPLICATION FOR FORESHORE LICENCES UNDER THE FORESHORE ACT. 1933 (NO. 12) LICENCES UNDER THE FISHERIES. (AMMENDMENT) ACT. 1997 (NO. 23) APPLICATION FOR AQUACULTURE

NOTICE IS HEREBY GIVEN that Shaun McKinney, Harbour View, Greencastle Co. Donegal, has applied to the Minister of Agriculture, Food and the Marine for Aquaculture Licences to carry out aquaculture as described on the attached table on areas of foreshore in Trawbreaga Bay, Co. Donegal.

NOTICE IS ALSO GIVEN that the same applicants have applied to the Minister for Agriculture, Food and the Marine for Foreshore Licences for the areas of foreshore to be used for these aquaculture

Any person may, during the period of 4 weeks from the date of publication of this notice, make written submissions or observations to the Minister for Agriculture, Food and the Marine, (quoting T12/355) in relation to a) the Aguaculture Licence application(s) in relation to 3) the Aguaculture Licence application(s) and b) the Foreshore Licence application(s). Any such Submissions or observations should be furnished to the Department of Agriculture, Food and the Marine (Aquaculture and Foreshore Management Division), National Seafood Centre, Clonakilly, Co. Cork, within

sions or observations received on foot of compounds procedures may be made available to nts for comment.

Details of the applications, including, individual site maps, drawings of the proposed works, structures and a copy of the Appropriate Assessment (Habits) may be inspected at Carndonagh Garda Station(restricted opening) Buncrana (open 24 hours). These documents may also be viewed on the

a a	of sites and site references	Method	Application
T12/355 1	1 site T12/355	Pacific Oysters using bags and trestles	Renewal

ation: 11th May 2017

APPLICATION FOR AQUACULTURE LICENCES UNDER THE FISHERIES (AMENDMENT) ACT, 1997 (NO. 23) PUBLIC NOTICE

NOTICE IS HEREBY GIVEN that Andrew Davis, Ballycrampsie, Malin, Co. Donegal, has applied to the Minister for Agriculture, Food and the Marine for Aquaculture Licences to carry out aquaculture as described in the attached table on areas of foreshore in Trawbreaga Bay, Co. Donegal. APPLICATION FOR FORESHORE LICENCES UNDER THE FORESHORE ACT, 1933 (NO. 12)

NOTICE IS ALSO GIVEN that the same applicants have applied to the Minister for Agriculture, Food and the Marine for Foreshore Licences for the areas of foreshore to be used for these aquaculture activities.

Any person may, during the period of 4 weeks from the date of publication of this notice, make written submissions or observations to the Minister for Agriculture, Food and the Marine, (quoting **T12.488**) in relation to a) the Aquaculture Licence application(s) and b) the Foreshore Licence application(s). Any such submissions or observations should be furnished to submissions or observations should be furnished to the Department of Agriculture, Food and the Marine (Aguaculture and Foreshore Management Division), National Seafood Centre, Clonakilty, Co. Cork, within that period.

All submissions of abservations received on foot of public notice procedures may be made available to the applicants for comment.

Details of the applications, including, individual site maps, drawings of the proposed works, structures and a copy of the Appropriate Assessment (Habitats) may be inspected at Carndonagh Garda Station(restricted opening) Buncrana (open 24 hours). These documents may also be viewed on the Department's Website.

lacultureforeshorelicenceapplications/ Donegal http://www.agriculture.gov.ie/seafood/ aquacultureforeshoremanagement/ aquaculturelicensing/

of No	Number of sites and site references	Species, Method	Type of Application
2/488	1 site - T12/488	site - T12/488 Pacific Oysters using bags and trestles	New

Date of Publication: 11th May 2017

Comhairle Contae Dhún na nGall Donegal County Council

APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR THE REVIEW OF A WASTE LICENCE

NOTICE IS HEREBY GIVEN in accordance with the provisions of the Waste Management Act, 1996 and Articles 6 and 7 of the Waste Management Licensing Regulations (SI No. 395 of 2004). that Donegal County Council, County House, Lifford Co Donegal, will apply to the Environmental Protection Agency (EPA), Johnstown Castle Estate, County Wexford, for a review of the waste licence (Ref No W0062-01) for the Churchtown Landfill Site, Churchtown, Lifford, Co. Donegal. The review is required to accommodate surface water discharge monitoring. The National Grid Reference for the facility is 230985E 395986N.

The classes of activity concerned are specified in the Third Schedule of the Waste Management Act, 1996, as amended:-

D 1 Deposit into or on to land (e.g. landfill, etc.)
D 4 Surface impoundment (e.g. placement of liquid or sludgy discards into pits, ponds or lagoons, etc.)

D 15 Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced).

The principal activity is D4 of the Third Schedule as given above.

The Application for the review of the Waste Licence and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the application, will, as soon as is practicable after receipt by the Agency, be available for inspection on the Agency's website, and inspection or purchase, at the EPA Headquarters, Johnstown Castle Estate, County Wexford and at the Principal Offices of Donegal County Council, County House Lifford Co Donegal.

Mr. Michael McGarvey, Acting Director of Services, Water, Environment and Emergency Services, Donegal County Council

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DONEGAL COUNTY COUNCIL Comhairle Chontae Dhún Na nGall

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D 15 Storage pending any of the operations numbered D to D 14 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced).

The principal activity is D4 of the Third Schedule as given above.

The Application for the review of the Waste Licence and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the application, will, as soon as is practicable after receipt by the Agency, be available for inspection on the Agency's website, and inspection or purchase, at the EPA Headquarters, Johnstown Castle Estate, County Wexford and at the Principal Offices of Donegal County Council, County House Lifford Co Donegal.

Mr. Michael McGarvey, Acting Director of Services, Water, Environment and Emergency Services, Donegal County Council



DONEGAL COUNTY COUNCIL Comhairle Chontae Dhún Na nGall

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The classes of activity concerned are specified in the Third and Fourth Schedules of the Waste Management Act, 1996, as amended :-

THE PRINCIPLE ACTIVITY TO BE CARRIED OUT ON THE SITE IS:

<u>D 1</u> Deposit into or on to land (e.g. landfill, etc.)

<u>D 4</u> Surface impoundment (e.g. placement of liquid or sludgy discards into pits, ponds or lagoons, etc.) <u>D 15</u> Storage pending any of the operations numbered <u>D 1 to D 14</u> (excluding temporary storage (being preliminary storage according to the definition of collection' in section 5(1)), pending collection, on the site where the waste is produced).

The principal activity is D4 of the Third Schedule as given above.

The Application for the review of the Waste Licence and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the application, will, as soon as is practicable after receipt by the Agency, be available for inspection on the Agency's website, and inspection or purchase, at the EPA Headquarters, Johnstown Castle Estate, County Wexford and at the Principal Offices of Donegal County Council, County House Lifford Co Donegal during normal working hours (Monday to Friday, excluding public holidays).

Mr. Michael McGarvey, Acting Director of Services, Water, Environment and Emergency Services, Donegal County Council





RPS Consulting Engineers, The Enterprise Fund Business Centre, Ballyraine, Letterkenny, Co Donegal, Ireland T +353 (0)74 916 1927 T +44 (0)28 9068 0540 F +353 (0)74 916 1928 E ireland@rpsgroup.com W rpsgroup.com/ireland

For the attention of Planning Department Donegal County Council County House The Diamond Lifford Co. Donegal F93 Y622

23rd May 2017

Our Ref: IBR1015 File Ref: IBR1015 –D

RE: CHURCHTOWN WASTE LICENCE REVIEW

Dear Sir /Madam

In accordance with article 9 of the Waste Management (licensing) Regulations 2004 as amended, we hereby wish to notify the planning department, that Donegal County Council are undertaking a review of the waste licence (Ref No W0062-01) for the Churchtown Landfill Site, Churchtown, Lifford, Co. Donegal. The review is required to accommodate surface water discharge monitoring.

The classes of activity concerned are:

- D 1 Deposit into or on to land (e.g. landfill, etc.)
- D 4 Surface impoundment (e.g. placement of liquid or sludgy discards into pits, ponds or lagoons, etc.)
- D 15 Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced).

The Application for the review of the Waste Licence and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the application will, as soon as is practicable after receipt by the Agency, be inspected on the Agency's website or inspected at or obtained from the headquarters of the Environmental Protection Agency and at the Principal Offices of Donegal County Council, County House Lifford Co Donegal during normal working hours (Monday to Friday, excluding public holidays).

We trust this is in order, however if you have any queries, please do not hesitate the contact the undersigned.

Yours sincerely

Angela McGinley for RPS

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