

***This Report has been cleared for submission to the Director by Programme Manager:  
Marie O'Connor***

**Signed:** *Gráinne Dylesby* **Date:** *8<sup>th</sup> October 2020*



**INSPECTOR'S REPORT ON AN WASTE LICENCE REVIEW, LICENCE REGISTER NUMBER W0062-02**

**TO: DR. EIMEAR COTTER**

**FROM: MICHELLE REDDY**

**DATE: 08 OCTOBER 2020**

Applicant:	Donegal County Council
Location/address:	Churchtown Landfill, Churchtown, Lifford, Co. Donegal
Application date:	26 May 2017

Classes of Activity (under Waste Management Act 1996 as amended):	Third Schedule D01 Deposit into or on to land (e.g. landfill, etc.) D04 Surface impoundment (e.g. placement of liquid or sludgy discards into pits, ponds or lagoons, etc.) D15 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).
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The provisions of the Industrial Emissions Directive only apply to the operational phase of the landfill. Churchtown Landfill has not been operational since August 2000 and entered the aftercare phase prior to 7 January 2014. Therefore Churchtown landfill does not fall within the scope of the Industrial Emissions Directive.

Activity description/background: Proposal to provide for the authorisation of discharge of treated landfill leachate to the River Finn.

Additional information received: Yes 17 July 2019

No of submissions received: One. NIEA (Northern Ireland Environment Agency)

EIA Screening: 12 February 2019  
EIAR submitted: No

NIS submitted: Yes 17 July 2019

Site visit: 27 August 2019

Site notice check: 21 May 2019

## 1. Introduction

Donegal County Council is the owner of the site. Landfilling began in 1987 and the site ceased operations on the 31<sup>st</sup> August 2000. The site is an unlined site, historically operated on a dilute and disperses principal, whereby solid waste was tipped directly onto the underlying excavated surface with leachate allowed to percolate directly through the soils with no engineered liner installed. The existing facility boundary covers an area of 9.7 hectares.

Churchtown landfill is situated on the lower alluvial flood plains of the River Finn. The river forms the boundary to the south east of the site and is designated as a protected area (Salmonid). The River Finn delineates the boundary between the North of Ireland and the Republic of Ireland. There were transboundary consultations undertaken with the Northern Ireland Environment Agency as there were transboundary impacts identified. The Northern Ireland Environment Agency responded stating they had no comments. Churchtown Landfill has been identified as a significant pressure to waterbodies.

Donegal County Council was granted a waste licence; Reg. No. W0062-01, on 19<sup>th</sup> May 2000 for the closure, capping and restoration of the landfill facility.

Donegal County Council has applied to the Agency for a Waste licence review.

<b>Proposed change</b>	<b>Details/comment</b>		
Site related change	The applicant seeks authorisation of a discharge of treated landfill leachate from the SRC Willow bed and Integrated Constructed Wetlands (ICW) to the adjacent waterbody, the River Finn.		
New emission points	<b>Discharge location</b>	<b>Easting</b>	<b>Northing</b>
	Discharge from Willow		
	D1	230908.077	395942.728
	D3	231069.698	395759.633
	Discharge from ICWs		
	D2	231076.621	395754.966
D4	231172.307	395897.031	

## 2. Licence History

Licence	Details	Date
W0062-01	<i>Original Waste licence issued. There have been no reviews or transfers of this licence.</i>	<i>19 May 2000</i>
W0062-01 (A)	<i>Technical Amendment in relation to bringing the licence into compliance with the European Communities Environmental Objectives (Surface Waters) Regulations 2009 and 2012 and the European Communities Environmental Objectives (Groundwater) Regulations 2010 and 2012.</i>	<i>15 January 2013</i>

## 3. Compliance and Complaints Record

There have been no complaints in relation to the operation of this facility under the current licence (W0062-01). Two non-compliances were recorded in 2017, summarised as follows:

- Leachate breakouts at two locations due to issues with electrical control equipment; and
- Discharges to surface water via one or more of four discharge points which were not authorised.

The requirement for Financial Provision is being progressed by the Agency's Waste and Financial Provisions Team under waste licence Reg. No. W0062-01 and this will continue to be required for Churchtown landfill under the revised licence, as the site has been identified as a significant pressure to groundwater.

## 4. Planning

The licensee has provided a determination by Donegal County Council Planning Department that the activity constitutes an exempted development in accordance with the Planning and Development Regulations, 2001 as amended. There are no planning permissions or planning applications associated with the area within the facility boundary.

## 5. EIA Screening

In accordance with Section 40(2A) of the Waste Management Act 1996 as amended, the Agency must ensure that before a licence or revised licence is granted, that the application is made subject to an environmental impact assessment (EIA), where the activity meets the criteria outlined in Section 40(2A)(b) and 40(2A)(c). In accordance with the EIA Screening Determination, the Agency has determined that the activity is not likely to have a significant effect on the environment, and an EIA is not required.

## 6. Emissions to Air

There are no emissions to air of environmental significance from this facility.

Low levels of gas generation in Churchtown landfill will not support the use of a gas flare. Landfill gas is monitored in the 8 wells (LG1 to LG3 and LG5 to LG9). These wells are all located within the waste except for LG8 and LG9 which are located at the northern boundary.

18 passive landfill gas vents were installed at the facility in 2017; Roadside Passive wells (PV01-07) and Passive wells (PV08-PV18). Monitoring results following the installation of passive vents show methane levels in LG9 have decreased to approximately zero.

The presence of a cut off trench ensures that there is very rarely an exceedance of methane (1.0% v/v) or CO<sub>2</sub> (1.5% v/v) levels. Considering the measures in place to manage passive emissions of landfill gas where landfill gas concentrations have been determined to be low, it is unlikely that such emissions will have a significant impact on the environment.

## **6.1 Climate Impact**

Climate change is a significant global issue which affects weather and environmental conditions) which consequently affects human resources and amenities as well as biodiversity and habitats. Climate change is caused by warming of the climate system by enhanced levels of atmospheric greenhouse gases (GHG) due to human activities. Landfilling of waste results in the production of significant quantities of greenhouse gases, in particular methane, however as discussed above there are very low levels of gas generation at Churchtown landfill and the introduction of waste to the facility ceased in 2000.

Given the small quantity of climate altering substances that could be released from the activity, in a national context, I consider that the impact of any emissions from the facility on climatic considerations should be minimal.

## **6.2 Dust**

Dust generation is associated mainly with vehicle movements within the facility during dry weather. The RD provides for site roads and other relevant areas to be sprayed with water to minimise dust emissions.

The existing waste licence (W0062-01) requires the licensee to carry out dust monitoring at three locations around the site. Dust is not a significant issue at the installation and based on this assessment I consider that dust emissions from the operation of the activity are not likely to have a significant effect on the environment and therefore Schedule F.2 Dust and Schedule G.3 Dust Deposition Limits of the existing licence (Reg. No. W0062-01) is no longer required given the landfill has been remediated.

## **7. Discharges to Water and Ground**

This section addresses the following:

- Emissions to Waters
- Emissions to ground/groundwater
- Storm water discharges

### **7.1 Discharges to Waters**

#### **7.1.1 Emissions to Waters**

#### Willow Bed and Constructed Wetlands System

A short rotation coppice (SRC) willow bed and an Integrated Constructed Wetland (ICW) has been installed on top of the landfill. The main purpose of the willow bed and constructed wetland system is to treat the leachate generated at the landfill.

Leachate is extracted from 3 pumping stations (Sump 1, 2 and 3) on site. A 90mm HDPE leachate pumping main has been laid through the full length of the site. Sump 1, 2 and 3 are connected to the 90mm pumping main adjacent to each extraction point.

A rainfall gauge and temperature probe have been installed to allow temperature, precipitation and trigger levels to be set for the activation and deactivation of leachate pumping and dosing to the willow bed and ICW accordingly.

The willow bed, which is approximately 400m long with widths varying from 50m - 70m, is divided into four zones with two main irrigation feed points, each located centrally between Zones 1 and 2 and Zones 3 and 4. The willow bed is supplied with leachate on a timed basis (currently applied at 5am and 5pm daily). Where leachate is available over and above the treatment capacity of the willow bed, leachate can be diverted to the ICW as a secondary alternative. The maximum daily flow to the willow bed is 15m<sup>3</sup> to Zone 1, 2, 3 & 4.

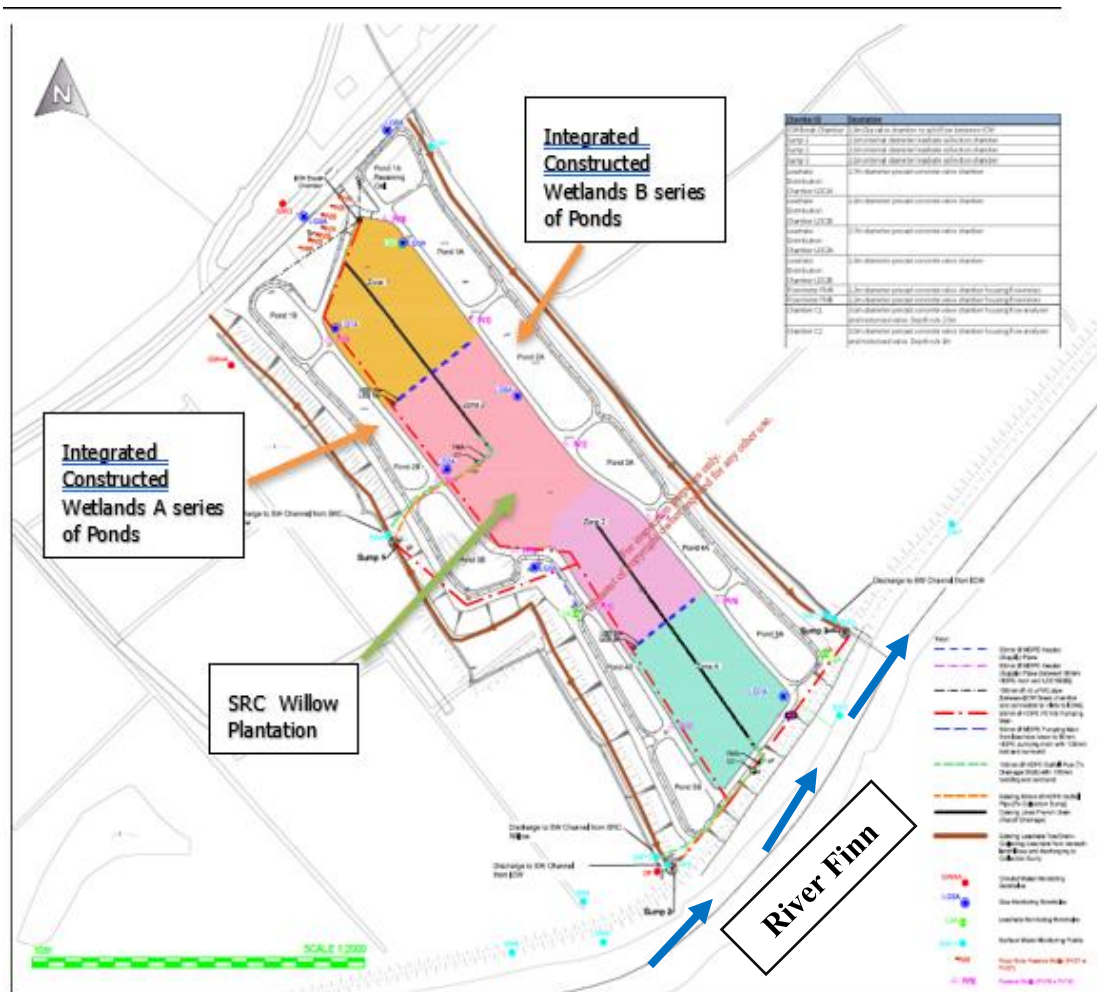
There are two discharge outlets from the willow bed, D1 and D3. The two outlets from the willow bed are monitored by ammonia analysers and flow meters. When any sample reaches a limit of 3mg/l a motorised valve will shut and divert flow to the nearest pumping station chamber to be treated further by recirculation in the willow bed /Integrated Constructed Wetlands before discharging to surface water.

An elevated 1m high bund around the perimeter contains all surface water generated within the willow bed and directs all discharges to the designated discharge points and prevents runoff from the willow bed directly entering the River Finn.

There are two separate Integrated Constructed Wetland (ICW) systems: ICW Area A and ICW Area B. The system is comprised of 11 ponds (Pond 1A Receiving cell, 1A, 2A, 3A, 4A, 5A, Pond 1b, 2B, 3B, 4B and 5B- See Figure 1) to which leachate is pumped for treatment. Flow of leachate to the ICWs is via a weir chamber and flow split on a 60/40 percentage basis relative to their areas (60% to the A series ponds and 40% to the B series ponds). The maximum volume of leachate pumped from the Churchtown Landfill to ICWs is ~ 50m<sup>3</sup>/day.

Each ICW pond is above a 0.5m clay cap and is banded 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 inter-connecting pipes. The pipes are placed at the bottom of the pond floor and water levels are managed within each pond by adjusting bends on the outlet pipe of each pond. There are two discharge outlets from the ICW D2 and D4.

The irrigation distribution system, flow meters, flow analyser and motorised valve are contained within 3.0m diameter precast concrete chambers. The maximum volume of leachate applied to the willow bed and ICWs to date is 80m<sup>3</sup>/day. The licensee has provided an estimated maximum flow of 136m<sup>3</sup>



**Figure 1 Site layout of the Willow bed and Integrated Constructed Wetlands. (As per Licence Application W0062-02)**

The proposed method for removal of heavy metals contained in the detritus and necromass of the wetland system is desludging. Desludging is dependent on the cell number, cell area and influent loading. The initial wetland cell will require cleaning out first, however the licensee states that this is not expected for at least 10 years. Sediment will be removed from the ponds as required when the pool volume has become reduced significantly or the ponds have become eutrophic. Sediment build up in the wetland will include metals accumulated. The management of sediment will be dependent on the contamination concentrations and the proposed reuse or disposal. The licensee has stated samples will be taken from the cells for total metal concentration analyses with the following metals to be analysed: Boron, Cadmium, Chromium, Copper, Cyanide, Iron, Lead, Magnesium, Manganese, Mercury, Potassium, Sodium and Zinc.

The proposed discharge from the SRC willow and ICW is to the River Finn (UKGBNI1NW010104074) and directly into the River Finn SAC (Site code:002301). The River Finn is also designated as a protected area (Salmonid). Approximately 3km downstream the River Finn conflues with the Mourne River to form the River Foyle and flows into the River Foyle and tributaries NISAC (UK0030320).

There are three Waste Water Treatment Plants upstream of the discharge from Churchtown landfill located at Ballybofey (D0120-01), Killygordon (D0518-01) and

Castlefinn (D0514-01) and one downstream at Lifford (D0352-01). There are no drinking water abstractions downstream of the discharge from Churchtown landfill.

The River Finn delineates the boundary between the Northern Ireland and the Republic of Ireland. Being a cross-border waterbody the Water Framework Directive ecological status of the stretch of the River Finn at the point of discharge from Churchtown landfill is unassigned; therefore, this water body has been placed at review – waterbodies that are at review are not considered to be At Risk of not meeting their environmental objectives but require further evidence to determine if the environmental objectives are being met.

However, it is noted that the River Finn (IE\_NW\_01F011100) at Castlefinn Bridge (RS01F011100) ~7km upstream of Churchtown landfill has been assigned a moderate status under the Water Framework Directive (WFD) and a Q value of Good (2016). The Northern Ireland Environment Agency (NIEA) has assigned the stretch of the River Finn (UKGBNI1NW010104074) at the point of discharge from Churchtown landfill a moderate status under the Water Framework Directive and the overall objective for this waterbody is to restore to good status by 2027. Based on the above, for the purposes of this assessment, a status of “Moderate” is being used.

Table 1. below gives details on facility’s direct emissions to waters, the processes which contribute to the emissions, the type of on-site treatment (if any), and the proposed maximum daily flows (where relevant). Figure 2 below shows the location of the discharges to water.

**Table 1: Emissions to water.**

<b>Process emissions</b>				
Emission Reference	Proposed / Existing	Process Description	Abatement	Proposed max. flow (m <sup>3</sup> /day)
D1	Proposed	Treatment in the SRC willow plantation	Either willow treatment or ICW systems	136
D3	Proposed			
D2	Proposed	Treatment in the Integrated Constructed Wetlands (ICW) systems		
D4	Proposed			

A hydrogeological risk assessment submitted as part of the application suggests limited impact by the contamination coming from the overburden on the quality of the water in the River Finn in the immediate vicinity of the landfill.

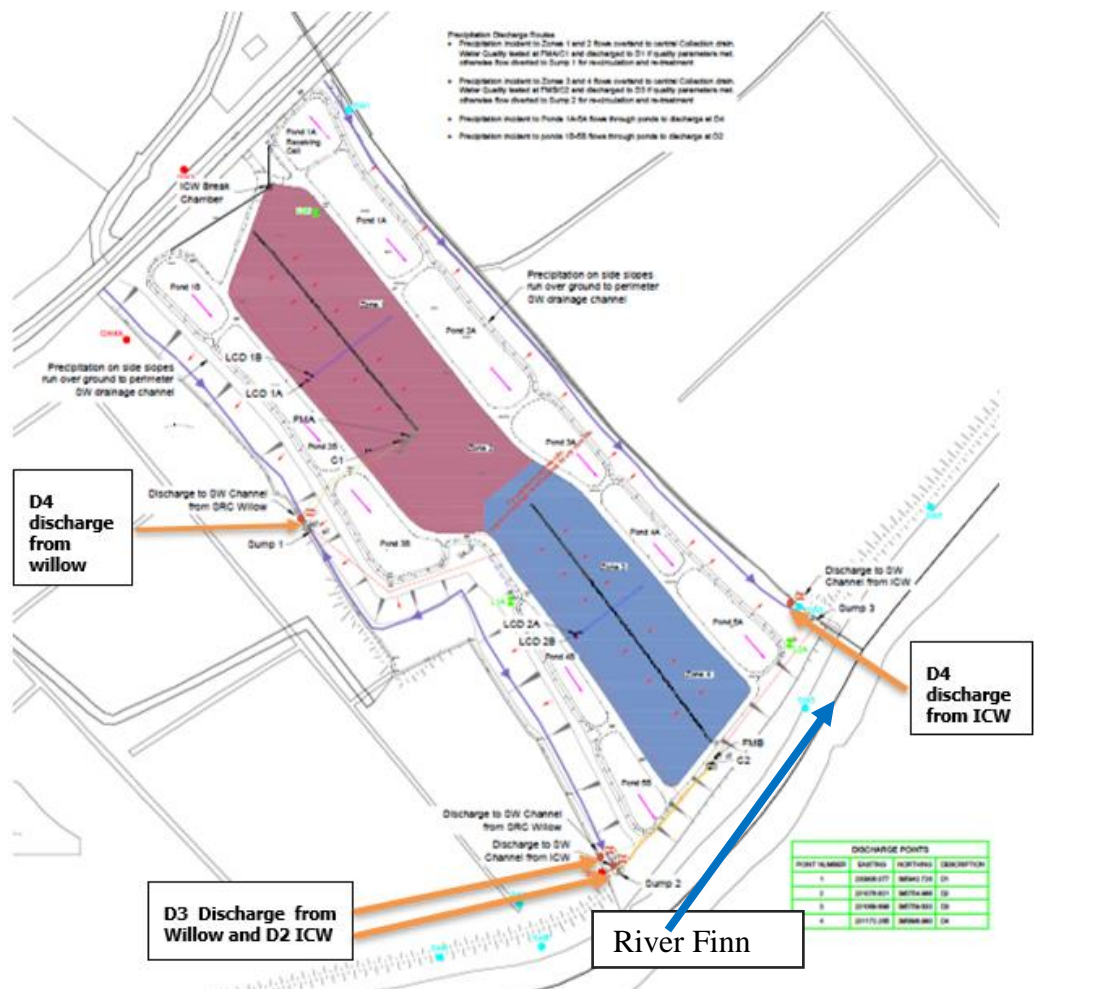
Elevated concentrations of ammonia (as N) relative to the EQS for good status were recorded at SW3 (0.263mg/l) and SW7 (0.305mg/l) in June 2018.

Having reviewed surface water monitoring data upstream and downstream on the River Finn it has been noted that there is a small increase in certain parameters between upstream SW6, mid-stream of the landfill SW3 and downstream of landfill in SW7 as seen below in Table 2.

**Table 2: Increase in parameters in surface water in vicinity of the landfill.**

Parameter	SW6 Upstream	SW3 (mid-stream)	SW7 downstream
Zinc	3.6	6.2	5.1
copper	0.007	0.027	0.012
BOD	<1	1.8	1.2
Ammonia N	0.013	0.028	0.039

A slight deterioration in quality is noted within the discharge zones into the River Finn, however the scale of the impact is considered to be low due to the large assimilative capacity of this water system. The extent of the impact is reducing over time with monitoring results showing an improvement in trends.



**Figure 2 Location of discharges to water from ICWs and Willow bed. (As per Licence Application W0062-02)**

**Assessment and mitigation**

The mass balance calculations below are based on the 95%ile flow of 1.96 m<sup>3</sup>/s in the receiving water, the mean background concentration of each parameter in the receiving water (taken from 2019 Aquarius data) based on sampling at the EPA monitoring station Castlefinn Bridge (RS01F01110), the proposed maximum effluent



discharge rate of 136m<sup>3</sup>/day (0.0016m<sup>3</sup>/s) and the maximum concentration of each parameter in the effluent proposed in the RD (see table below).

The key parameters for the receiving waters, as determined by this assessment, are biological oxygen demand (BOD), Orthophosphate (MRP) and Ammonia. (see Table 3 below).

**Table 3. Key parameters and ELVs for the receiving waters**

Parameter	Background Concentration (mg/l)	Proposed ELVs (mg/l)	Contribution from the emission Note <sup>1</sup> (mg/l)	Predicted total concentration in receiving water (mg/l)	EQS good status (mg/l)
BOD	1.575	<b>25</b>	0.0201	1.594	2.6 <sup>Note 1</sup>
Ammonia	0.0526	<b>3</b>	0.0024	0.0550	0.14 <sup>Note 1</sup>
Orthophosphate	0.0165	<b>2</b>	0.0016	0.0181	0.075 <sup>Note 1</sup>
Suspended Solids		<b>25</b>			≤25 <sup>Note 2</sup>

**Note 1:** European Communities Environmental Objectives (Surface Waters) Regulations 2009 as amended.

**Note 2:** Standard required by the Water Framework Directive for the protection of Salmonid Waters

The EO Surface Water Regulations set environmental quality objectives for the receiving water for orthophosphate (0.075mg/l), ammonia (0.14mg/l) and BOD (2.6mg/l). As can be seen from table above, these emission limit values aim to achieve compliance with the relevant environmental quality standards.

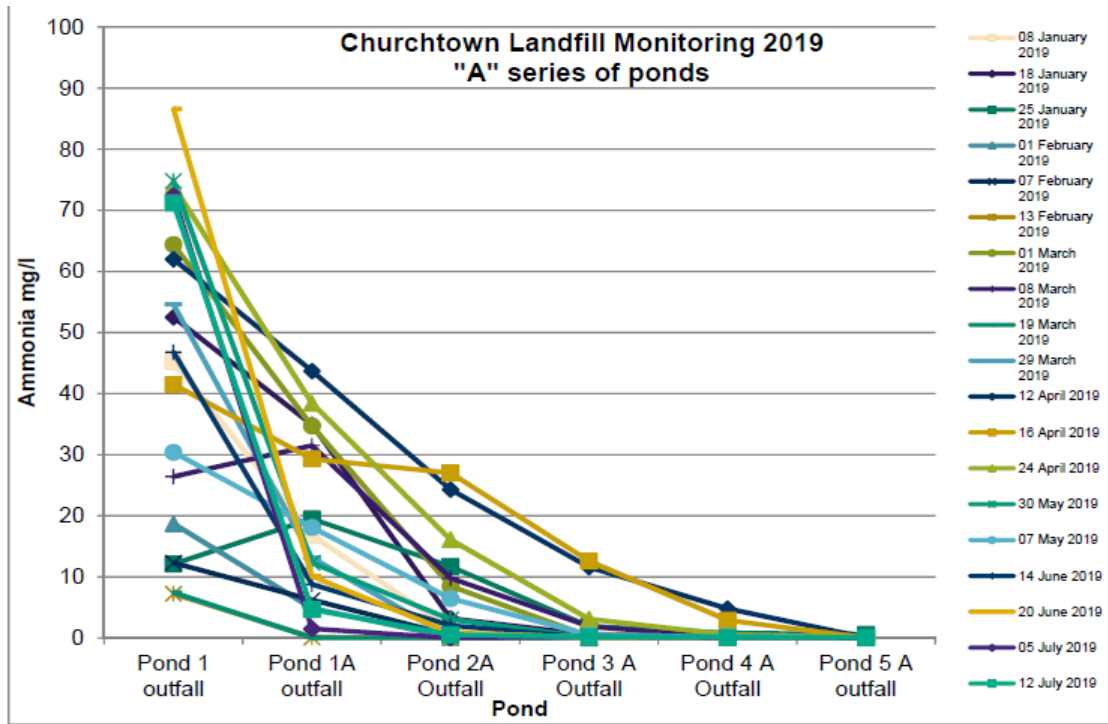
The River Finn is designated as a Salmonid Water. For this reason, certain additional ELVs have been assessed to afford the protection required for Salmonid Waters designated on the Water Framework Directive's (WFD) Register of Protected Areas. As can be seen from the table above, these emission limit values aim to achieve compliance with the relevant environmental quality standards.

There are two proposed discharges of treated leachate from the Willow bed (Reference Numbers D1 and D3) and two proposed discharges of treated leachate from the Integrated Constructed Wetlands (Reference Number D2 and D4). Emission limits for these four discharges have been set out in Schedule B.2. These emission limit values reflect the thresholds in the European Communities Environmental Objectives (Surface Waters) Regulations 2009, as amended.

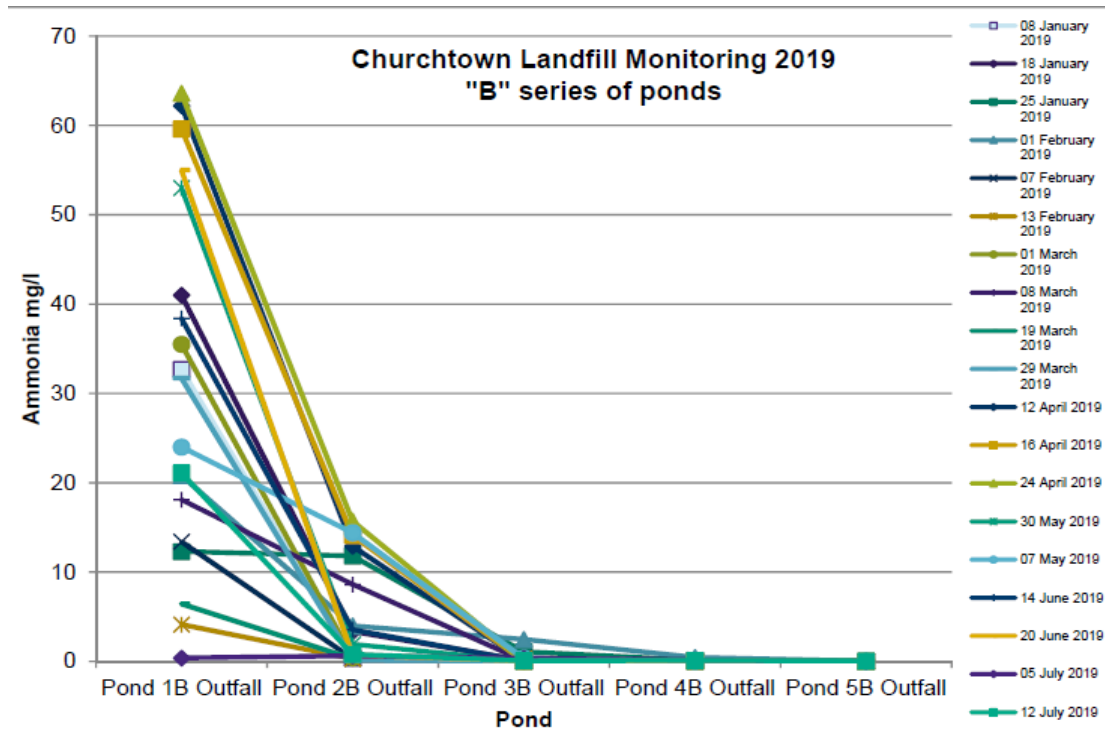
All limits specified for the proposed emission are considered compliant with the requirements of the EO Surface Waters Regulations, including the WFD's requirements for Protected Areas.

### ***Quality of the treated effluent***

The monitoring results submitted by the licensee demonstrate that, overall the ICWs and Willow bed are capable of improving the quality of the treated effluent. Existing monitoring of D2 and D4 (the two discharge outlets from the ICW) for ammonia in 2019 are shown in Graph 1 and Graph 2 below. Ammonia concentrations are below the proposed ELV in Pond 5A and 5B.



**Graph 1 Ammonia concentrations in the "A" series of ponds and outlets (As per Licence Application W0062-02)**



**Graph 2 Ammonia concentrations in the "B" series of ponds and outlets. (As per Licence Application W0062-02)**

Existing monitoring of D1 and D3 (the two discharge outlets from the willow) for ammonia in 2019 show that the Ammonia concentrations are well below the proposed ELV of 3mg/l as can be seen in Table 4 below.

**Table 4: Willow Discharge**

Date	Northern Willow (D1) Ammonia mg/l	Southern Willow (D3) Ammonia mg/l	Limit mg/l
01/03/2019	0.011	0.015	3
29/03/2019	0.852	0.011	3
16/04/2019	0.015	0.015	3
30/05/2019	0.051	0.019	3
20/06/2019	0.674	0.021	3
12/07/2019	<0.015	0.084	3

The wetland system is capable of a significant reduction in metal concentrations, however the available data does not include monitoring results demonstrating the reduction in metal concentrations in the discharge. The available data does not indicate whether there is absorption of the metals in the wetlands. However, the RD includes extensive monitoring requirements to determine the effectiveness of the system in respect of metals in the treated leachate.

### 7.1.2 Storm water discharges to waters

The existing landfill is capped with a permanent low permeability clay liner in conjunction with the willow and constructed wetlands. A 0.15 to 0.45-metre-thick topsoil and 0.5m clay cap with a permeability of  $10^{-8}$  m/s is installed at the facility. The willow bed is situated in the centre and above the capped waste zones with a

series of constructed wetlands along the western and eastern side of the willow bed. This whole area is contained within a 1m high bund and all storm water arising from this area is treated in the willow/ constructed wetlands before it is discharged hence preventing runoff from the willow bed entering the River Finn. All rainfall that falls on the outer slopes of the landfill is collected in the existing land drains which run along the eastern and western boundaries of the site prior to discharge to the River Finn at discharge points D2 and D4.

## **7.2 Emissions to Sewer**

There are no process emissions to sewer at the facility.

## **7.3 Discharges to ground/groundwater**

### **7.3.1 Emissions to ground/groundwater**

The landfill is unlined hence there is potential for the landfill leachate to infiltrate into groundwater. The capping reduces infiltration of rainfall into the landfill which reduces the quantity of leachate generated. Also, a leachate abstraction system which pumps leachate into the constructed wetland system minimises the potential for leachate infiltration into groundwater.

The RD requires the licensee to demonstrate compliance with the Environmental Objectives (Groundwater) Regulations 2010; any actions required shall be implemented within a period agreed by the Agency. Schedule C.6 specifies monitoring requirements for groundwater.

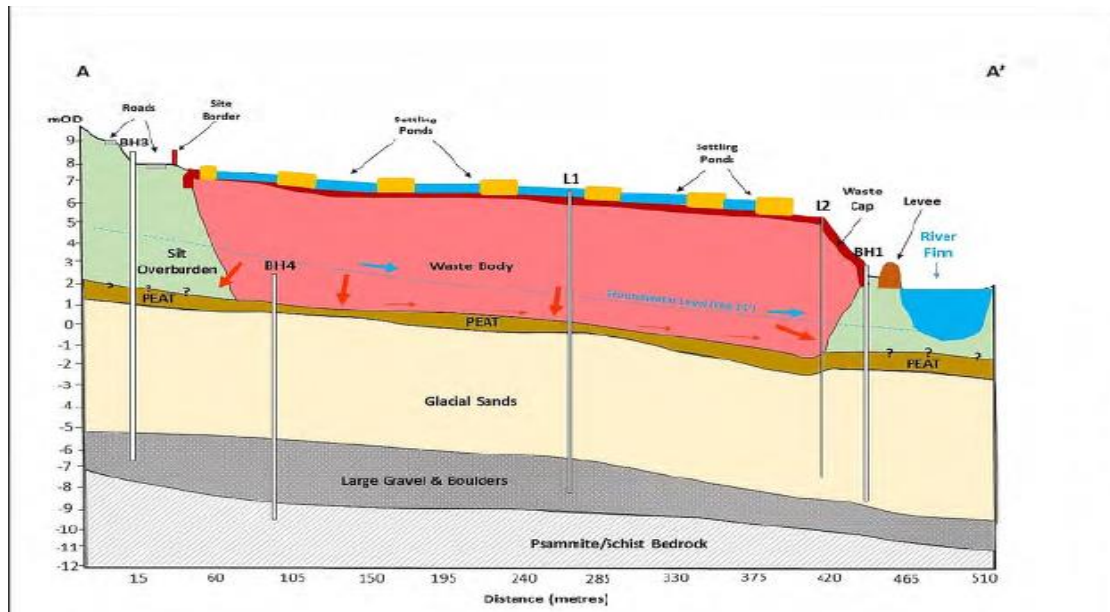
### **7.3.2 Groundwater quality and monitoring**

The site is underlain by the Waste Facility (W0062-01) GWB <sup>1</sup> (IE\_NW\_G\_085) and has been assigned a WFD Groundwater status of 'Good' for the years 2013-2018 which is an improvement from an assigned status of 'Poor' for the years 2010-2015. I understand that the contamination appears to be in the overburden and not the bed rock (Groundwater body) hence the improved WFD groundwater status.

Groundwater in both the overburden and the bedrock aquifer under the site flows towards the south east and discharges to the River Finn. Figure 3. below shows the conceptual site model.

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<sup>1</sup> The name of the Groundwater body underneath the site is Waste Facility (W0062-01) GWB.



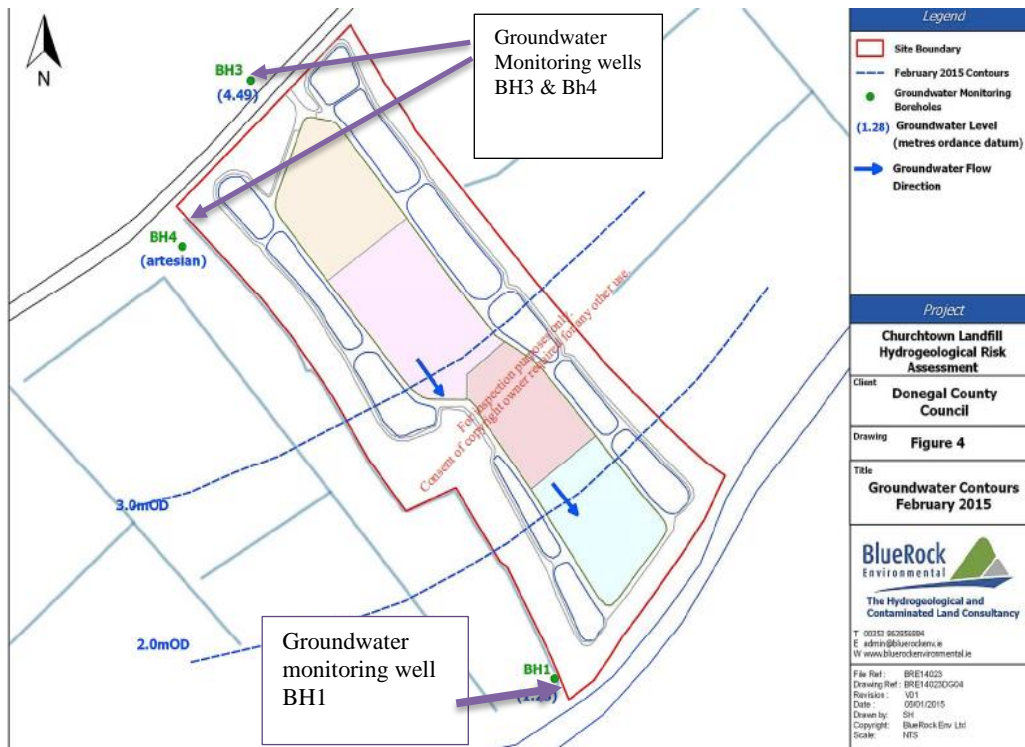
**Figure 3 Conceptual Site Model (As per Licence Application W0062-02)**

Groundwater beneath the facility is polluted due to historical contamination by leachate generated at the unlined landfill. Sampling of groundwater provides an indication of the type and level of contaminants which are leaching from the waste. These include the following contaminants of concern: Ammoniacal Nitrogen, Chloride, Sulphate, Zinc, Sodium and Manganese.

Groundwater monitoring is currently undertaken at three wells at the site. Two of these are up gradient wells, BH3 installed in the overburden and BH4 in bedrock. BH1, a down gradient well in the overburden, which is located to the southern corner of the site.

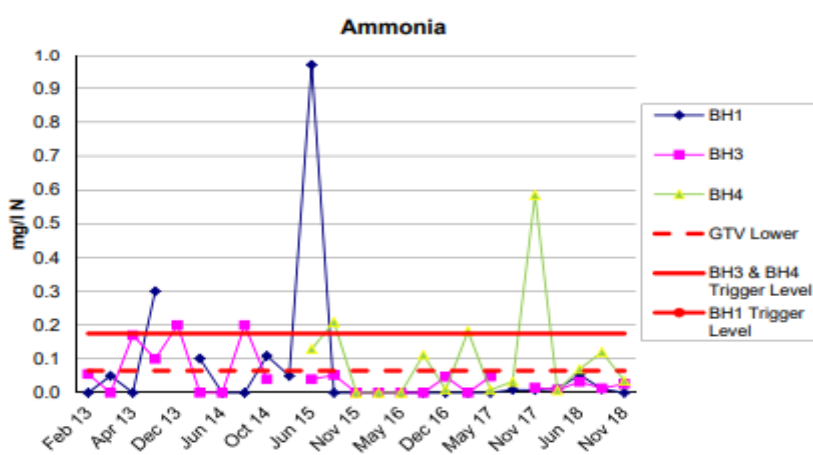
Ammoniacal nitrogen concentrations in leachate up to 210mg/l were reported during 2019 (leachate well L1) and up to 240mg/l in 2018 (Leachate well L1). There is a possible plume of leachate-impacted groundwater migrating downgradient within the waste and within the overburden. This single down gradient well is not ideally located as it is not likely to intercept the core of any leachate migrating off site.

Figure 4 below shows the groundwater flow direction and location of the groundwater monitoring wells.



**Figure 4 Groundwater flow and location of groundwater monitoring wells (As per Licence Application W0062-02)**

While elevated ammoniacal nitrogen was not detected in any of the wells during Q1-Q 3 (2018), there is a gap in the monitoring well network in the down gradient area. Due to the fact the main waste body is in the middle of the site and the groundwater flow is towards the south east, it is considered that monitoring at BH3, BH4 and BH1 might not be reflective of the actual impact that the waste body is having on groundwater quality. It is recommended in the RD that two additional overburden wells should be installed between the landfill and the river downgradient in addition to BH1. Trends for Ammoniacal Nitrogen N in groundwater are provided in Graph 3 below.



**Graph 3 Trends for Ammoniacal Nitrogen in groundwater (As per Licence Application W0062-02)**

## **8. Noise**

Standard noise conditions and emission limit values which apply at noise sensitive locations are included in the existing licence W0062-01, including a requirement to carry out a noise monitoring. Given that the landfill has been remediated and there is no current activity on site, it is considered that Schedule F.3 Noise and Schedule G.1 Noise Emissions of the existing licence (Reg. No. W0062-01) is no longer required and therefore is not included in the RD.

## **9. Prevention of Accidents**

Condition 9 of the RD requires procedures to be put in place to prevent accidents with a possible impact on the environment and to respond to emergencies so as to minimise the impact on the environment. In particular the RD requires that the licensee submits an Environmental Liabilities Risk assessment (ELRA). (see Fit and Proper Person Assessment section below for further details).

## **10. Appropriate Assessment**

Appendix 1 lists the European Sites assessed, their associated qualifying interests and conservation objectives along with the assessment of the effects of the activity on the European Sites.

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the activities, individually or in combination with other plans or projects are likely to have a significant effect on any European Site. In this context, particular attention was paid to the European Site(s) at River Finn SAC (Site Code: 002301) and River Foyle and Tributaries NISAC (Site Code: UK0030320).

The activities are not directly connected with or necessary to the management of any European Site and the Agency considered, for the reasons set out below, that it cannot be excluded, on the basis of objective information, that the activities, individually or in combination with other plans or projects, will have a significant effect on any European Site and accordingly determined that an Appropriate Assessment of the activity was required, and for this reason determined to require the applicant to submit a Natura Impact Statement.

- There is a discharge of treated landfill leachate directly into the adjacent River Finn SAC (Site Code: 002301) and River Foyle and Tributaries NISAC (Site Code: UK0030320).

An Inspector's Appropriate Assessment has been completed and has determined, based on best scientific knowledge in the field and in accordance with the European Communities (Birds and Natural Habitats) Regulations 2011 as amended, pursuant to Article 6(3) of the Habitats Directive, that the activities, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site, in particular River Finn SAC (Site Code: 002301) and River Foyle and Tributaries NISAC (Site Code: UK0030320), having regard to their conservation objectives and will not affect the preservation of these sites at favourable conservation status if carried out in accordance with this recommended decision and the conditions attached hereto for the following reasons:

- The RD requires the licensee to meet emission limit values set in Schedule B.2 Emissions to Water for D1, D2, D3 and D4 to ensure that the discharges

will not negatively impact water quality and ensure the continued protection of water-dependent species. A continued monitoring programme of water quality is required to monitor the quality of treated leachate to the River Finn; and,

- The licence applies measures for the control and effective operation of the integrated constructed wetland systems and the SRC willow plantation.

In light of the foregoing reasons no reasonable scientific doubt remains as to the absence of adverse effects on the integrity of those European Site(s) River Finn SAC (Site Code: 002301) and River Foyle and Tributaries NISAC (Site Code: UK0030320).

## **11. Fit and Proper Person Assessment**

The Fit & Proper Person test requires three elements of examination:

### Technical Ability

The licensee has provided details of the qualifications, technical knowledge and experience of key personnel. The licence application also includes information on the on-site management structure. It is considered that the licensee has demonstrated the technical knowledge required.

### Legal Standing

Neither the licensee nor any relevant person has relevant convictions under the the Waste Management Act 1996, as amended, or under any other relevant environmental legislation.

### Financial Provision/Strength

#### *ELRA, CRAMP & FP*

The licence category and proposed installation/facility was assessed for the requirements of Environmental Liabilities Risk Assessment (ELRA), Closure, Restoration and Aftercare Management Plan (CRAMP) and Financial Provision (FP), in accordance with Agency guidance. Under this assessment and following consultation with OEE, it has been determined that ELRA, CRAMP and FP were required due to the site being identified as a significant pressure to waterbodies.

Approval of Financial Provision and the submission of ELRA and CRAMP, is required under the RD.

### Fit & Proper Conclusion

It is my view and having regard to the provisions of section 40(8) of the Waste Management Act 1996 as amended, and the Conditions of the RD, that the applicant can be deemed a Fit & Proper Person for the purpose of this review.

## **12. Submissions**

There was one submission made on this application received from Dr Eugene Kelly, Waste Permitting Team, Northern Ireland Environment Agency on the 9<sup>th</sup> June 2017 in response to the transboundary consultation. The submission states that the Northern Ireland Environment Agency has no comments on the waste licence review for Churchtown Landfill.



### 13. Cross Office Consultation

In preparing this Inspector's Report, I consulted with the following staff in relation to the matters outlined.

Dr Mathew Craig	Office of Environmental Assessment	Hydrogeology
Mr Nigel Hayes	Office of Environmental Assessment	WFD status
Mr Pat Chan Mr Stuart Huskisson	Office of Environmental Enforcement	Financial Provisions
Ms Maeve Rochford	Office of Environmental Enforcement	Groundwater contamination
Mr John Gibbons	Office of Environmental Enforcement	Facility
Ms Rebecca Quinn	Office of Environmental Assessment	Flow in River Finn

### 14. EPA Charges

The annual enforcement charge recommended in the RD is €10,500, which reflects the anticipated enforcement effort required and the cost of monitoring.

### 15. Recommendation

The Agency, in considering an application for a licence or the review of a licence, shall have regard to Section 40 of the Waste Management Act 1996, as amended. The Agency shall not grant a licence or revised licence unless it is satisfied that emissions comply with relevant emission limit values and standards prescribed under regulation. In setting such limits and standards, the Agency must ensure they are established based on the stricter of both, the limits and controls required under BAT, and those required to comply with any relevant environmental quality standard.

The RD specifies the necessary measures to provide that the facility shall be operated in accordance with the requirements of Section 40(4) of the Waste Management Act 1996 as amended, and has regard to the Appropriate Assessment and EIA screening. The RD gives effect to the requirements of the Waste Management Act 1996, as amended and has regard to submissions made.

I recommend that a Proposed Determination be issued subject to the conditions and for the reasons as drafted in the RD.

Signed



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Michelle Reddy

**Procedural Note**

In the event that no objections are received to the Proposed Decision on the application, a licence will be granted in accordance with Section 43(1) of the Waste Management Act 1996 as amended, as soon as may be after the expiration of the appropriate period.

## Appendices

### Appendix 1 Appropriate Assessment

Appendix 1: Assessment of the effect(s) of the activity on European site(s) and proposed mitigation measures.

Site Code	Site Name	Qualifying Interests (* denotes priority habitat)	Conservation Objectives	Assessment
SAC002301	River Finn SAC	<p><b>Habitats</b></p> <p>3110 Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)</p> <p>4010 Northern Atlantic wet heaths with Erica tetralix</p> <p>7130 Blanket bogs (*if active bog)</p> <p>7140 Transition mires and quaking bogs</p> <p><b>Species</b></p> <p>1106 Salmon (<i>Salmo salar</i>)</p> <p>1355 Otter (<i>Lutra lutra</i>)</p>	<p><i>NPWS (2017) Conservation objectives for River Finn SAC [002301]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. [31/05/2017]</i></p>	<p>Water emissions: The main potential for impact would arise from changes in water quality which could affect the habitats and species (fish, mammals and benthic invertebrates) directly or could affect the water dependent prey on which the qualifying species depend</p> <p>Mitigation measures proposed include emission limit values specified in the RD for D1, D2, D3, D4 and monitoring requirements. Refer to the Section7 on Discharges to Water of this report.</p> <p>Potential for accidents to arise: There is the potential for an accident/hazardous and emergency situation arising from the operation of this facility which could affect the habitats and species. Mitigation measures include bunding, accident prevention and emergency response requirements. Refer to section 9 above.</p>
UK0030320	River Foyle And Tributaries SAC	<p><b>Habitats</b></p> <p>Water courses of plain to montane levels with the <i>Ranunculus fluitans</i> and <i>Callitriche-Batrachion</i> vegetation</p> <p><b>Species</b></p> <p>Atlantic Salmon (<i>Salmo salar</i>)</p> <p>Otter (<i>Lutra lutra</i>)</p>	<p><i>As per DOENI (2017) River Foyle &amp; Tributaries SAC UK0030320 Conservation Objectives Version 3. Department of Environment, Northern Ireland DOENI [27/07/2017]</i></p>	<p>Water emissions: The main potential for impact would arise from changes in water quality which could affect the habitats and species (fish, mammals and benthic invertebrates) directly or could affect the water dependent prey on which the qualifying species depend.</p>

Site Code	Site Name	Qualifying Interests (* denotes priority habitat)	Conservation Objectives	Assessment
				<p>Mitigation measures proposed include emission limit values specified in the RD D1, D2, D3 and D4 and monitoring requirements. Refer to the Section 7 on Discharges to Water of this report.</p> <p>Potential for accidents to arise: There is the potential for an accident/hazardous and emergency situations arising from the operation of this facility which could affect the habitats and species. Mitigation measures include bunding, accident prevention and emergency response requirements. Refer to section 9 above.</p>

## Appendix 2 Relevant Legislation

<p>The following European instruments are regarded as relevant to this application assessment and have been considered in the drafting of the Recommended Determination.</p>
<p>Environmental Impact Assessment (EIA) Directive (2011/92/EU as amended by 2014/52/EU)</p>
<p>Habitats Directive (92/43/EEC) &amp; Birds Directive (79/409/EC)</p>
<p>Water Framework Directive [2000/60/EC]</p>
<p>Waste Framework Directive (2008/98/EC)</p>
<p>Groundwater Directive (80/68/EEC) and 2006/118/EC</p>
<p>Environmental Liability Directive (2004/35/CE)</p>