ATTACHMENT 1-2 NON-TECHNICAL SUMMARY ATTACHMENT

1.1 Background and Nature of the Activity

Ballynacarrick Landfill Site is located at Ballynacarrick, Ballintra, Co Donegal and occupies an area of approximately 9 hectares. The facility, as shown on Drawing IBR1279/LR100 Site Geographical Location (Appendix A), is located in a rural setting and surrounding land use is agricultural. The site lies approximately 3km southeast of Ballintra and 7km south of Laghey, Co Donegal. The National Grid Reference for the facility is 193531E 367597N.

Ballynacarrick Landfill Site operated from c.1980 until closure in July 2012 due to the capacity of the facility being exhausted. The site was initially operated as an unlined landfill with peat removed in the eastern part of the site to the top of the glacial deposits, and waste was tipped directly onto the surface of the glacial till.

An engineered cell was constructed 2002, with an extension to the west of the site being developed in 2004/05. The extension consisted of two engineered cells (Phase 1 and Phase 2). The site has been progressively restored on a phased basis in accordance with the Waste Licence (Ref: W0024-04) since 2004 with the final restoration being completed in 2013. The site layout is shown on Drawing IBR1279-LR101 Existing Site Plan.

Since the granting of the Waste Licence a significant investment in the restoration of the site, including the installation of leachate management infrastructure, has been made by Donegal County Council (DCC). Leachate management infrastructure has been installed progressively as the site has been developed and restored in accordance with the current waste licence issued by the Environmental Protection Agency (Licence Ref: W0024-04).

Current leachate management infrastructure is shown on Drawing IBR1279-LR105 Service Plan Leachate Management. The following is a summary of the works carried out to date:

- Landfill capping across the site to minimise leachate generation;
- Culverting of all surface waters across the site entering the site to a down gradient off-site location into an unnamed stream;
- Abstraction of leachate from a number of locations onsite, including abstraction boreholes, toe drains and sump chambers for management in an onsite treatment facility;
- Diversion of contaminated groundwater from the groundwater drainage blanket underlying Phases 1 and 2 cells to the onsite treatment facility;
- A leachate treatment facility consisting of 2 Nr glass lined steel tanks, one of which contains activated sludge and is aerated overnight in order to provide preliminary treatment prior to disposal offsite to a
- Waste Water Treatment Works (WwTW) in Letterkenny by tankers.

The two glass lined steel tanks store leachate in a service area to the south of the site entrance. These tanks were installed in 2002 and 2005 in order to manage and treat leachate prior to removal from the site to a wastewater treatment works.
Tank 1 has a diameter of 7m and was installed in 2002 by Irish Industrial Tanks and currently acts as a balance tank and provides additional storage capacity for leachate during wet weather. A second, larger storage and treatment tank (Tank 2) with a diameter of 20.5m was installed in 2005 by TAL Ltd on a piled platform to support the tank. An aerator is located within the centre of this tank to provide pre treatment of leachate from the site in conjunction with activated sludge, prior to disposal offsite at a WwTW in Letterkenny.

An Integrated Constructed Wetland (ICW) will be installed at the landfill facility to provide an effective, sustainable and self-sufficient leachate management and treatment system which minimises, and where possible eliminates, the requirement to export leachate from the site to Letterkenny WwTW for final treatment.

This waste licence review is required to increase the existing boundary area and add a new emission point to surface water. The site is located within Donegal County Council planning authority and the activity constitutes development but is exempted development.

An Environmental Impact Assessment (EIS) has not been prepared in support of this application. An Appropriate Assessment Screening has been prepared and this document is contained as appendices to this application. The site is closed and therefore no wastes will be treated, recovered or disposed of at the facility.

1.2 Class of Activity

Licensed Waste Disposal Activities, in accordance with the Third Schedule of the Waste Management Acts 1996 as amended

D5 previously Class 5	Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment.
D8 previously Class 6	Biological treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1. to 10.of this Schedule. [Principal Activity]
D15 previously 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.

Licensed Waste Recovery Activities, in accordance with the Fourth Schedule of the Waste Management Acts 1996 to 2010

R3 previously Class 2	Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).
R4 previously Class 3	Recycling or reclamation of metals and metal compounds.
R5 previously Class 4	Recycling or reclamation of other inorganic materials.
R13 previously Class 13	Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.

1.3 Plant, Methods, Processes, Ancillary Processes, Abatement, Recovery and Treatment Systems and Operating Procedures for the Activity

The site has unlined and lined cells and is now closed. The site currently has

- Leachate extraction and on-site leachate treatment system, and
- Landfill gas extraction system and enclosed landfill gas flare.

A ICW will be installed at the facility. Leachate from the on-site leachate treatment plant will be pumped up into a stilling chamber in advance of Pond 1, which will be utilised to direct a steady flow of leachate into ICW Pond 1 for treatment. All further flows of effluent into subsequent remaining ICW ponds will be under gravity. Due to the separation distance between Ponds 3 and 4 however, and nature of the majority of the intervening lands as landfill with variable settlement potential, a secondary backup pumping system is proposed to be

provided to permit temporary pumping of effluent from Pond 3 to Pond 4 in the event that the gravity pipeline connection becomes restricted. Retention times will be subject to the degree of control of effluent depths within the ponds by the operator and degree of incident rainfall but is expected to be approximately 45-60 days. The volume to be emitted from the ICW will be a maximum of 120m^3/day.

1.4 Provide Information For The Purpose Of Enabling The Matters Specified In Paragraphs (a) to (g) Of Section 40(4) Of The Act

(a) any emissions from the recovery or disposal activity in question (''the activity concerned'') will not result in the contravention of any relevant standard, including any standard for an environmental medium, or any relevant emission limit value, prescribed under any other enactment,

Donegal County Council will operate the facility to comply with emission standards and limits set out in the Waste licence were applicable.

(b) the activity concerned, carried on in accordance with such conditions as may be attached to the licence, will not cause environmental pollution,

The site has unlined and lined cells and has been restored with a cap and leachate treatment system installed. The facility will be operated to ensure that the operations post restoration will not cause any environmental harm.

(c) the best available technology not entailing excessive costs will be used to prevent or eliminate or, where that is not practicable, to limit, abate or reduce an emission from the activity concerned,

The site has unlined and lined cells but has been restored with a cap and leachate treatment system. Donegal County Council will employ BAT to limit, abate or reduce an emission from the activity concerned,

(d) if the applicant is not a local authority, the corporation of a borough that is not a county borough, or the council of an urban district, subject to subsection (8), he or she is a fit and proper person to hold a waste licence,

Donegal County Council is a local authority.

(e) the applicant has complied with any requirements under section 53

As a Local Authority, Donegal County Council is fully committed to the on-going investment as required by this facility to ensure that it is properly managed environmentally.

1.5 Source, Location, Nature, Composition, Quantity, Level And Rate Of Emissions Arising From The Activity And, Where Relevant, The Period Or Periods During Which Such Emissions Are Made Or Are To Be Made

Treated leachate will be pumped to the ICW before discharge to surface water. There will be one discharge outlet from the ICW (D1). The proposed emission limit values (ELVs) are provided in Table 1

Table 1 Proposed Emission Limit Values

Parameter	Limit
pH	6-8
BOD	<20mg/l
COD	<50mg/l
Suspended Solids	<15mg/l
Orthophosphate	<0.1mg/l

Parameter	Limit
Total Ammonia (as N)	<2mg/l
Cadmium	<0.5µg/l
Chromium	<1µg/l
Copper	<5µg/l
Lead	<1µg/l
Mercury	<0.5µg/l
Nickel	<20µg/l
Zinc	<50µg/l

1.6 Assessment Of The Effects, Of Any Existing Or Proposed Emissions On The Environment, Including Any Environmental Medium Other Than That Into Which The Emissions Are, Or Are To Be, Made, And Of Proposed Measures To Prevent Or Eliminate Or, Where That Is Not Practicable, To Limit Or Abate Such Emissions

A screening for appropriate assessment report for the proposed discharge from the leachate management system/ICW has been completed. The report concluded that the proposed discharge:

- The outcome of the Stage 1 screening appraisal was that the possibility of likely significant effects in relation to suspended sediments and pollution could not be excluded for the Durnesh Lough SAC and Durnesh Lough SPA site could not be excluded in the absence of mitigation measures and in the absence of best practice measures intended to avoid or reduce harmful effects on those European sites.
- The conservation objectives of the sites concerned were evaluated and analysed as part of a Stage 2 appraisal for appropriate assessment, and mitigation measures were applied to avoid or reduce the harmful effects of the project on the European sites. The Stage 2 appraisal has concluded that no adverse effect upon the integrity of any European site will arise as a result of the Proposed Development alone or in-combination with other projects, with the application of mitigation measures, and no reasonable scientific doubt remains as to the absence of such effects.

Assimilative capacity was calculated to measure the receiving water body's ability to assimilate the Pollutants based on the proposed emission limit values. Although the discharge will be directed towards Durnesh Lough SAC, the mass balance assessment shows that no impact will be experienced provided ELVs are met. During low flow conditions when there is potential for impacts to utilise >25% of the headroom available for a number of parameters (BOD, ammoniacal-nitrogen, Cadmium, Mercury, Nickel and Zinc), no discharge from the ICW will occur and there will be significant capacity to attenuate leachate until normal flow levels return in the watercourse. 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 the headroom utilised will remain below 11% for all parameters, with an imperceptible increase in some of the parameters. The assessment indicates that there is limited potential for an impact on the integrity of Durnesh Lough SAC and therefore as a result of the treated discharge from the Ballynacarrick Landfill site, based on the proposed ELVs.

1.7 Monitoring And Sampling Points And Proposed Arrangements For The Monitoring Of Emissions And The Environmental Consequences Of Any Such Emissions

Groundwater, surface water, leachate and landfill gas is currently being undertaken quarterly for parameters as listed in Waste Licence W0062-04. One additional monitoring points (D1) has been included to monitor discharges from the ICW system. The outlet from the ICW will be monitored by a flowmeters and recorded on the SCADA system. During low flow conditions no discharge from the ICW will occur to surface water until normal flow levels return in the watercourse. Grab samples will be taken from D1 for analysis.

1.8 Describe The Existing Or Proposed Measures, Including Emergency Procedures, To Prevent Unauthorised Or Unexpected Emissions And Minimise The Impact On The Environment Of Any Such Emissions

An Environmental Management System (EMS) was submitted to the EPA during 2004 and approved. All, reports/records in relation to the facility are maintained. Donegal County Council will maintain EMS for the aftercare of the site.

1.9 Proposed Measures For The Closure, Restoration, Remediation Or Aftercare Of The Facility

The site is closed and has been restored. Donegal County Council is meet current foreseeable aftercare costs.

1.10 Financial Provision

As a Local Authority, Donegal County Council is fully committed to the on-going investment as required by this facility to ensure that it is properly managed environmentally. A costed Environmental Liabilities Risk Assessment (ELRA) has been completed for the facility and a Form of Assurance has been submitted to Office of Environmental Enforcement.

1.11 Annex To Council Directive 80/68/EEC Of 17 December 1979, Describe The Existing Or Proposed Arrangements Necessary To Give Effect To Articles 3, 4, 5, 6, 7, 8, 9 And 10 Of The Aforementioned Council Directive

The site is closed. The site has unlined and lined cells and has been capped. A Hydrogeological Risk Assessment (HRA) undertaken in 2015 and was submitted to the EPA. The HRA found that high background ammonia levels are likely to be attributable to peatland in the area. The HRA also identified three plumes nearby groundwater boreholes GW2, GW5 and GW10.

A series of proposed mitigation measures and additional investigation have been proposed in the HRA report to address the data gaps at the site, to facilitate a more detailed understanding of the hydrogeological regime and to assess the risk posed to downgradient receptors. The HRA will be finalised in 2024.

1.12 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.

1.13 Indicate relevant BAT guidance documents and title of the relevant BREF document

- BAT Guidance Notes for the Waste Sector: Landfill Activities