


Signed:  Date: 03/09/2014



**OFFICE OF CLIMATE, LICENSING,
RESOURCES & RESEARCH**

**REPORT OF THE TECHNICAL COMMITTEE
ON OBJECTIONS TO LICENCE CONDITIONS**

TO:	Directors
FROM:	Technical Committee - Environmental Licensing Programme
DATE:	3 rd September 2014
RE:	Objection to a Proposed Decision (PD) issued to Waterford City and County Council for a facility at the Dungarvan Waste Disposal Site, Ballynamuck Middle, Dungarvan, County Waterford, Licence Register W0032-03.

Application Details

Type of facility:	The facility comprises a: <ul style="list-style-type: none"> • closed and capped landfill with an operational constructed wetland which treats leachate from the facility; • waste transfer station; • civic amenity site; and • green waste area.
Classes of Activity (P = principal activity):	3 rd Schedule: Classes D4, D13, D15 (P). 4 th Schedule: Classes R3, R4, R5, R11, R13.
Quantity of waste managed per annum (application):	11,520 tonnes
Classes of Waste:	Hazardous and non-hazardous municipal waste, garden waste.
Location of facility:	Ballynamuck Middle, Dungarvan, County Waterford.
Licence application received:	23 January 2009
PD issued:	6 June 2014

1. Company and background to this report

The application relates to an existing landfill and transfer station operated by Waterford City and County Council (waste licence register no. W0032-02). The facility is licensed by the Agency to accept 11,520 tonnes of waste per annum. The review of this waste licence is concerned with authorising the discharge of treated leachate from the constructed wetland system to the Colligan Estuary.

This report relates to a valid first party objection received by the Agency in relation to the Proposed Decision (PD) issued to Waterford City and County Council on 6 June 2014.

Consideration of the objection

The issues raised in the objection are summarised below. The original objection should be referred to at all times for greater detail and expansion of particular points.

Objector's Name	Date Received
Waterford City and County Council	3 July 2014

The Technical Committee (TC), comprising of Caroline Murphy (Chair) and Michael Owens, has considered all of the issues raised in the objection and this report details the Committee's comments.

Objection: Schedule B.2 Emissions to Water

The licensee objects to the setting of an emission limit value (ELV) of 1mg/l for ammonia (as N) at the emission point from the last constructed wetland pond to the Colligan Estuary (emission point reference no. SWE6) for the following reasons:

- the ELV of 5mg/l proposed in the application was based on the assimilative capacity of the adjacent waterbody; and
- the report '*Leachate Abstraction and Treatment System – Description and Performance*' (July 2013) submitted with the application outlines how the assimilative capacity of the waterbody allows a discharge of over 100mg/l of ammonia with no predicted adverse effects on the environment of the river.

The licensee proposes an ELV of 5mg/l ammonia (as N) for emission point reference number SWE6.

Technical Committee's Evaluation:

The constructed wetland discharges into the Colligan Estuary. A standard for total ammonia isn't specified for transitional water bodies in the European Communities Environmental Objectives (Surface Waters) Regulations 2009, as amended. The Colligan and the Ballyconnery Upper Rivers merge to form the Colligan Estuary less than 350m upstream of emission point SWE6. A standard of ≤ 0.140 mg N/l for total ammonia is specified for river water bodies in the above Regulations¹.

As discussed in the Inspector's Report an ELV of 1mg/l for ammonia (as N) will result in a predicted downstream concentration in the Colligan Estuary of 0.020 mg/l. Based on the same analysis it can be predicted that:

Proposed ELV Total Ammonia (as N) (mg/l)	Predicted downstream concentration Total Ammonia (as N) (mg/l)
2	0.024
3	0.029
4	0.034
5	0.039

¹ Good status, 95 percentile.

The proposed ELVs listed above result in predicted downstream concentrations which are below the standard outlined in the Surface Water Regulations (≤ 0.140 mg N/l total ammonia).

The Annual Environmental Report (AER) for 2013 stated that the total ammonium values measured in the outlet of the constructed wetland from January to November 2013 ranged from 0.01 to 3.126 mg/l N. The average total ammonium value over this time period was 0.88mg/l N.

2013 AER							
Total ammonium concentration (mg/l N) in the final effluent from the wetlands							
<1	0.821	0.240	0.240	0.140	0.050	0.044	0.010
1 – 2	1.730	1.087	1.006				
2 – 3	2.163						
>3	3.126						

As demonstrated in the above table over 80% of the final effluent samples taken in 2013 contained < 2 mg/l N total ammonium. Samples taken in January and February 2013 (highlighted in bold) contained > 2 mg/l N total ammonium; however, subsequent samples taken in the same month contained < 2 mg/l N total ammonium. The data shows that the wetland system is consistently capable of producing a final effluent with < 3 mg/l N total ammonium. As such, allowing for minor exceedences and recognising the capacity of the waterbody to assimilate ammonia discharges, the Committee recommends an ELV of 4mg/l N total ammonia² at emission point SWE6.

Recommendation:

- Amend *Schedule B.2* as follows:

Delete the ELV of 1mg/l for ammonia (as N) and replace with 4mg/l total ammonia (as N).

3. Overall Recommendation

It is recommended that the Board of the Agency grant a licence to the applicant

- (i) for the reasons outlined in the Proposed Decision, and
- (ii) subject to the conditions and reasons for same in the Proposed Decision, and
- (iii) subject to the amendments proposed in this report.

Signed:

Caroline Murphy, Inspector
for and on behalf of the Technical Committee

² Total ammonia ($\text{NH}_3 + \text{NH}_4^+$) and total ammonium ($\text{NH}_3 + \text{NH}_4^+$) are equivalent parameters.

Parameters of Water Quality Interpretation and Standards (EPA, 2001).