OFFICE OF CLIMATE, LICENSING, RESOURCES & RESEARCH

INSPECTORS REPORT ON A WASTE WATER DISCHARGE LICENCE APPLICATION

To:	Dara Lynott, Director
From:	Yvonne English, Deirdre French, Donal Grant, Éimer Godsil and Michael Martin. Environmental Licensing Programme
Date:	30/03/2015
RE:	Application for a Waste Water Discharge Licence from Irish Water, for the agglomeration named Ballybay and Environs, Reg. No. D0207-01.

Application & Agglomeration Details	
Agglomeration Name:	Ballybay and Environs (Appendix 1)
County:	Monaghan
Schedule of discharge licensed:	Discharges from agglomerations with a population equivalent of 2,001 to 10,000.
Licence application received:	13/11/2008
Notices under Regulation 18(3)(b)[1] issued:	12/05/2009, 09/08/2010
Information under Regulation 18(3)(b) received:	07/08/2009, 25/02/2011
Site notice check:	24/11/2008
Submission(s) Received:	None
Design Population Equivalent:	7283
Actual Population Equivalent:	3135
Type of treatment:	Secondary
Wastewater treatment plant (WWTP) description:	The WWTP provides secondary treatment with phosphorus reduction. The treatment plant utilises the activated sludge process and consists of: inlet works with screening and grit removal, two aeration tanks, two settlement tanks, chemical dosing for phosphorus removal and sludge thickening tank.

[1] Wastewater Discharge (Authorisation) Regulations, 2007, as amended.

Discharges to waters

The following table outlines the main considerations in relation to discharges to waters from this agglomeration.

Table 1: Discharges to waters

Primary discharge point	
Receiving water name	River Dromore
Type of receiving water	Freshwater
Normal flow	1500 m^3/day
Maximum flow	3000 m^3/day
Storm water overflow(s)	
Storm water overflow(s)	Yes (3)
Receiving water name(s)	River Dromore (1 no.) Lough Major (2 no.)

Schedule A: Discharges & Discharge Monitoring of the recommended licence (RL) specifies the Emission Limit Values (ELVs) to which the discharge from the Ballybay agglomeration must conform. Monitoring of the discharges will take place as per this schedule of the RL.

1. Receiving waters and impact

The following table summarises the main considerations in relation to the River Dromore downstream of the primary discharge.

Table 2: Receiving waters

Characteristic	**Classification**	**Comment**
Receiving water name	River Dromore	(WFD Code: IE_NW_36_30)
Designations	None	
Receiving water monitoring stations	Ballybay WWTP upstream monitoring point (EPA RS Code: RS36D020160) Ballybay WWTP downstream monitoring point (EPA RS Code: RS36D020170)	Distance u/s of SW001 on River Dromore – 50 meters Distance d/s of SW001 on River Dromore – 45 meters
Biological quality rating (Q value)	Q2 – 3 (2013) RS36D020150 – Br in Ballybay Q3 (2013) RS36D020300	200 meters upstream of WWTP on River Dromore 3.5 km downstream of WWTP on River Dromore
WFD status	Poor (2010 – 2012)	Restore 2021

The Woodford Water Management Unit Action Plan (WMUAP) identifies the WWTP in Ballybay as a point pressure on the River Dromore catchment.

Mass balance calculations were carried out using the monitoring information provided by the applicant. The 95%ile flow in the river at the primary discharge is $0.03m^3/s$. The mass balance calculations are based on the 95%ile flow in the receiving water, the mean background concentration of each parameter in the receiving water, the normal effluent discharge rate and the maximum permitted concentration of the parameter in the effluent (Table 3).

Table 3: Mass Balance Calculations.

Parameter	Background Concentration (mg/l)	Proposed ELVs for discharge from SW001 (mg/l)	Contribution from primary discharge (mg/l)	Predicted downstream concentration (mg/l)	Relevant standard (mg/l)
BOD	1.1	5	1.83	2.53	2.6[Note 2]
Orthophosphate	0.06	0.08	0.029	0.069	0.075[Note 2]
Total Ammonia	0.07	0.2	0.073	0.118	0.14 [Note 2]

Note 2: European Communities Environmental Objectives (Surface Waters) Regulations 2009, as amended.

The European Communities Environmental Objectives (Surface Water) Regulations, 2009, as amended, set environmental quality objectives for the receiving water for orthophosphate (0.075mg/l), ammonia (0.14mg/l) and BOD (2.6mg/l). An emission limit value of 0.08mg/l is recommended for orthophosphate, 0.2mg/l for ammonia and 5mg/l for BOD in the RL. The limits are set based on the mass balance calculations. The WWTP has conventional activated sludge treatment with phosphorus removal which can achieve standards of 0.5-0.8mg/l for orthophosphate and 2 - 5mg/l for ammonia in the discharge. Based on this information the emission limit values for orthophosphate and ammonia in the RL are not achievable with the current treatment.

The RL has set emission limit values (ELVs) of 25mg/l for BOD, 125 mg/l for chemical oxygen demand (COD) and 35 mg/l for suspended solids (SS) from date of grant of licence, these limits are in accordance with UWWT Regulations, 2001, as amended. The RL specifies ELVs of 5mg/l for BOD, 0.08mg/l for orthophosphate and 0.2mg/l for ammonia, effective from 31/12/2019, this is to ensure that the Dromore River achieves good status by 2021. The proposed limits are necessarily stringent in order to achieve the requirements of the European Communities Objectives (Surface Water) Regulations, 2009, as amended and are unlikely to be achieved utilising existing infrastructure.

Condition 5.6 of the RL requires, within 12 months of date of grant of licence, the completion of a detailed assessment to determine the most appropriate measure for the achievement of 'good status' in the receiving water which demonstrates compliance with the Environmental Objectives (Surface Waters) Regulations 2009, as amended. Condition 5.6.1 requires that assessment should specifically identify;

1. improvements to the existing waste water works to achieve compliance with the emission limit values specified in Schedule A.1: Primary Waste Water Discharge & Monitoring of this licence, or
2. an alternative primary discharge point with sufficient assimilative capacity for the discharge, or
3. connection to another agglomeration.

Following the completion of the assessment the licensee shall notify the Agency of the proposed option for achieving 'good status' in accordance with Condition 5.6.2. Once this option has been choosen the licensee shall apply for a review of the waste water discharge licence to allow the Agency to examine the potential impacts of the proposal on the receiving water.

2. Ambient Monitoring

Schedule B: Ambient Monitoring of the RL specifies the parameters, analysis method and frequency for which ambient monitoring of the primary discharge shall be carried out. The requirements for ambient monitoring in *Schedule B: Ambient Monitoring* are sufficient to ensure that there will be no deterioration in the status of the receiving water as a result of the discharge.

3. Combined Approach

The Wastewater Discharge (Authorisation) Regulations, 2007, as amended, specify that a 'combined approach' in relation to licensing of waste water works must be taken, whereby the emission limits for the discharge are established on the basis of the stricter of either or both, the limits and controls required under the Urban Waste Water Treatment Regulations, 2001, as amended, and the limits determined under statute or Directive for the purpose of achieving the environmental objectives established for surface waters, groundwater or protected areas for the water body into which the discharge is made. The RL as drafted gives effect to the principle of the Combined Approach as defined in Wastewater Discharge (Authorisation) Regulations, 2007, as amended.

4. Programme of Improvements

There is a programme of improvements in place for the agglomeration. The works to be carried out include: the construction of a storm water tank, inlet works, secondary treatment and nutrient reduction. The RL, as drafted, requires that the appropriate works be completed by 31/12/2019 in order to ensure compliance with the emission limit values as set out in *Schedule A: Discharges & Discharge Monitoring* of the RL.

5. Compliance with EU Directives

In considering the application, regard was had to the requirements of Regulation 6(2) of the Wastewater Discharge (Authorisation) Regulations, 2007, as amended, notably:

Table 4: Compliance with EU Directives/Regulations

Compliance with Directives/Regulations	Description and Conditions in RL
Urban Waste Water Treatment Directive [91/271/EEC]	Compliant in 2013.
Water Framework Directive [2000/60/EC]	Good status to be achieved by 2021.
EC Environmental Objectives (Surface Water) Regulations 2009 (S.I. No. 272 of 2009), as amended	Schedule A of RL sets ELVs to contribute towards achieving environmental quality objectives.
Drinking Water Abstraction Regulations	There is 1 drinking water abstraction downstream in White Lough. Condition 4 requires risk assessment for the protection of downstream abstraction points.
Bathing Water Directive [2006/7/EC]	No bathing waters present.
Dangerous Substances Directive [2006/11/EC]	Condition 4 requires screening for priority substances.
Environmental Impact Assessment Directive [85/337/EEC]	An EIS was not required for Ballybay WWTP.
Environmental Liability Directive	Condition 7.2 of RL.

Birds Directive [79/409/EEC] & Habitats Directive [92/43/EEC]

The Ballybay and Environs WWTP discharges directly into the River Dromore, which forms a tributary of the Annalee River, before entering into the Lough Oughter & Associated Loughs SAC[2] (Site Code: 000007). The site is protected for a priority habitat listed under Annex 1 of the Habitats Directive. It is also selected for protection of species listed under Annex II of the same directive.

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the activity, individually or in combination with other plans or projects, is likely to have a significant effect on a European Site. In this context, particular attention was paid to the European sites at the Lough Oughter & Associated Loughs SAC (Site Code: 000007) and Kilroosky Lough Cluster SAC (Site Code: 001786). The Agency considered, for the reasons set out below, that the activity is not directly connected with or necessary to the management of these sites as European sites and that it can be excluded, on the basis of objective information, that the activity, individually or in combination with other plans or projects will have a significant effect on a European site, and accordingly the Agency determined that an Appropriate Assessment of the activity was not required.
This determination is based on the following:

- The quality of the effluent discharged from the agglomeration;
- The absence of hydrological connectivity between the discharges from the agglomeration and the Kilrooskey Lough Complex SAC;
- In addition, the Lough Oughter & Associated Loughs SAC is located approximately 30 km downstream of the primary discharge and the downstream receiving water (Annalee River (IE_NW_36_2417)) is classified as having good water quality status under the Water Framework Directive, thereby protecting the water-dependent qualifying interests of the SAC.

[2] SAC: Special Area of Conservation designated under the *Habitats Directive,* Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

6. Cross Office Liaison

Advice and guidance issued by the Waste Water Technical Working Group (TWG) was followed in the assessment of this application. Advice and guidance issued by the TWG is prepared through a detailed cross-office co-operative process, with the concerns of all sides taken into account. The Board of the Agency has endorsed the advice and guidance issued by the TWG for use by licensing inspectors in the assessment of wastewater discharge licence applications.

7. Submissions

No submissions were received in relation to this application.

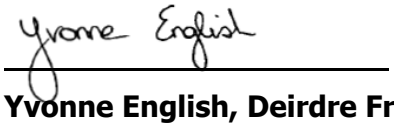
8. Charges

The RL sets an annual charge for the agglomeration at €3,016.50 and is reflective of the monitoring and enforcement regime being proposed for the agglomeration.

9. Recommendation

I recommend that a Final Licence be issued subject to the conditions and for the reasons as set out in the attached Recommended Licence.

Signed



Yvonne English, Deirdre French, Donal Grant, Eimer Godsil, Michael Martin

Environmental Licensing Programme

Appendix 1: Map showing location of Ballybay WWTP and associated primary discharge point.