



**OFFICE OF CLIMATE,
LICENSING & RESOURCE USE.**

**INSPECTORS REPORT ON A WASTE WATER DISCHARGE LICENCE
APPLICATION**

To:	Dara Lynott, Director
From:	Loretta Joyce Environmental Licensing Programme
Date:	8 th October 2014
RE:	Application for a Waste Water Discharge Licence from Irish Water for the Ballydehob agglomeration, Co. Cork Reg. No. D0467-01.

Application Details	
Schedule of discharge licensed:	Discharges from agglomerations with a population equivalent of 500 to 1000
Licence application received:	22/06/2009
Notices under Regulation 18(3)(b) issued:	20/04/2010, 10/03/2014
Information under Regulation 18(3)(b) received:	21/06/2010, 26/08/2010, 10/10/2011, 30/06/2014
Site notice check:	10/07/2009
Submissions Received:	None

1. Agglomeration

This application relates to the Ballydehob agglomeration in County Cork. The application was originally made by Cork County Council and subsequently transferred to Irish Water on 1st January 2014 under the Water Services (No. 2) Act 2013.

The agglomeration had a population equivalent (p.e.) of 326 (winter) and 687 (summer) in 2011 and the design capacity of the WWTP is 700 p.e. A projected increase to 699 (summer) p.e. by 2020, provided by the applicant, is used in the mass balance below. There are no identified sources of industrial waste water in the agglomeration.

The WWTP has primary treatment only and consists of a septic tank. The applicant has prepared a preliminary report for a new WWTP on the same location as the current WWTP, to provide secondary treatment with a Phase 1 design capacity of 1,163p.e. The proposed WWTP will either consist of a packet treatment plant or the following; an inlet pumping station, screening, grit removal, aeration tank, settling tank, picket fence thickener and storm water holding tank. The proposed WWTP will have design limits of 25mg/l BOD, 125mg/l COD and 35mg/l Suspended Solids.

Ballydehob Sewerage Scheme is not listed on the Proposed Irish Water Capital Investment Plan 2014-2016.

2. Discharges to waters

Primary Discharge

The primary discharge (SW001) is the gravity outfall from the WWTP to Roaring Water Bay. A foreshore licence was granted on 23/01/1986 (File Ref. MS51/8/793) for the primary discharge.

The applicant's 2012 treated effluent monitoring results are shown in Table 1.

Table 1. WWTP monitoring results 2012 (only 2 samples)

Parameter	BOD (mg/l)	COD (mg/l)	Suspended solids (mg/l)	Ammonia (mg/l)	Orthophosphate (mg/l)
Average Effluent	54	138	60	7.7	0.70

Secondary Discharges

There are no existing secondary waste water discharges from the agglomeration.

Storm water overflows

There is one storm water overflow (SW002) from the WWTP and it discharges to Roaring Water Bay, adjacent the WWTP.

Emergency overflows

There is one emergency overflows from Ballydehob pumping station, located 340m further landward of SW001.

3. Receiving waters and impact

The following tables summarise the main considerations in relation to the receiving waters.

Table 2. Receiving waters

Characteristic	Description	Comment
Receiving water name and type	Roaring Water Bay IE_SW_140_0000	Ballydehob Bay
Relevant designations within 10km	Roaring Water Bay and Islands SAC (Site Code: 000101) Roaring Water Bay Shellfish Area, PA2_0014 Pearl Mussel location in Roaring Water Bay	SW001 discharges directly into SAC 900m south of SW001 6km south of SW001
Drinking water abstraction within 10 km d/s	None	
Trophic Status	Roaring Water Bay Ilen Estuary, 9km east	Unpolluted (draft), 2010-2012 Unpolluted (draft), 2010-2012 Unpolluted, 2007-2009
WFD Status	Moderate	2009

WFD Risk Category	1a, water body at significant risk of failing objectives	2008
WFD Objective	Restore good status	2021 deadline
WFD protected areas	Roaring Water Bay Shellfish Area, PA2_0014	

The draft assessment for 2010-2012 indicates that the trophic status classification for Roaring Water Bay is 'Unpolluted'. Based on draft EPA monitoring from 2010-2012, the median salinity is 34.2 -34.8psu, therefore the EQS, which is salinity dependent, is 0.25-0.314mg/l N. The median value for Dissolved Inorganic Nitrogen (DIN) in 2010-2012 was 0.265mg/l (winter) and 0.034mg/l (summer).

Given that there is only primary treatment at the existing WWTP, the RL proposes an interim percentage reduction of at least a 20% reduction of the BOD in the incoming waste water and of at least a 50% reduction of the Suspended Solids in the incoming waste water, from date of grant of licence.

There are no water quality standards set for BOD, SS or COD in coastal waters in the Environmental Objectives Regulations 2009, as amended. Given that Roaring Water Bay Shellfish Area is located 900m south of SW001, the RL requires ELVs of 25mg/l BOD, 35mg/l Suspended Solids and 125mg/l COD from 31st December 2019. These ELVs are achievable from conventional activated sludge plants.

The RL specifies ELVs for the major constituents of DIN, 35mg/l Total Oxidised Nitrogen (TON) and 15mg/l Ammonia, from 31st December 2019. Standards of 20mg/l TON and 5mg/l Ammonia are achievable from conventional activated sludge plants. Un-ionised Ammonia, which accounts for about 2% of Total Ammonia in seawater, is toxic to fish.

A completely stirred tank reactor (CSTR) modelling approach was used to determine the highest pollutant concentration from the discharge at low tide. Based on a projected loading of 699 p.e. and a DIN concentration in the treated effluent of 50mg N/l, the DIN in the receiving water is predicted to be 0.015mg N/l which complies with the good status standard, 0.25-0.314mg/l N, in the Environmental Objectives Regulations 2009, as amended.

The Roaring Water Bay Pollution Reduction Programme Characterisation Report lists Ballydehob WWTP as not at risk and notes that there is surplus capacity in the WWTP.

4. Site Visit

I visited a number of agglomerations in County Cork on 6th March 2014 and met with a representative of Irish Water. I did not visit the Ballydehob agglomeration but discussed Ballydehob WWTP and primary discharge with the representative of Irish Water.

5. Ambient Monitoring

Schedule B.2 Receiving Water Monitoring of the RL specifies biannual monitoring of Roaring Water Bay.

The location identified by the applicant is aSW-1u (grid ref. 099021E 035445N) and is not considered suitable as it is 350m further landward than SW001.

There is already a Coastal Monitoring Station, CW05003183RW1008 Ballydehob Ambient, 50m north of SW001, at Ballydehob pier and this has been included in *Schedule B.2* of the RL, to replace the location identified by the applicant.

6. Programme of Improvements

The applicant has prepared a proposal for a new WWTP as discussed above. A new plant will be required to achieve ELVs of 25mg/l BOD, 125mg/l COD, 35mg/l Suspended Solids, 35mg/l TON and 15mg/l Ammonia by 31st December 2019.

7. Compliance with EU Directives

In considering the application, regard was had to the requirements of Regulation 6(2) of the Waste Water (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]	Appropriate treatment was required by 31st December 2005.
Water Framework Directive [2000/60/EC]	Restore Good status. Discharge is to a coastal water. Not designated salmonid river. Roaring Water Bay Shellfish Area is located 900m south of SW001. Condition 5.6, 5.7 & 5.8 require an assessment of the impact of the discharges from the WWTP on shellfish.
EC Environmental Objectives (Surface Water) Regulations 2009, S.I. No. 272 of 2009, as amended	Schedule A of RL sets ELVs to contribute towards good status water quality standards.
Drinking Water Abstraction Regulations	No drinking water abstractions d/s
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 Ballydehob WWTP.
Environmental Liability Directive [2004/35/CE]	ELRA not required for discharges to coastal waters of <2,000 p.e.

8. Habitats Directive (92/43/EC) & Birds Directive (79/409/EEC)

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(s). In this context, particular attention was paid to the European Site at Roaring Water Bay and Islands SAC (Site Code: 000101) and the Agency considered, for the reasons set out below, that the activity is not directly connected with or necessary to the management of that site as a European Site and that it cannot be excluded, on the basis of objective scientific information following screening under this Regulation, that the activity, individually or in combination with

other plans or projects, will have a significant effect on a European Site and accordingly determined that an Appropriate Assessment of the activity was required. It has been determined that the activity does have the potential for significant effects on a European Site due to poor effluent quality and the direct hydrological connectivity of the discharge to a European Site.

An 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 and 2013, pursuant to Article 6(3) of the Habitats Directive, that the activity, individually or in combination with other plans or projects, will not adversely affect the integrity of a European Site(s) in particular Roaring Water Bay and Islands SAC (Site Code: 000101), having regard to its conservation objectives and will not affect the preservation of the site at favourable conservation status if carried out in accordance with this Licence and the conditions attached hereto for the following reasons: the RL requires a new WWTP and sets stringent ELVs which are applicable from 31st December 2019, to contribute towards good status water quality standards required by the Environmental Objectives Regulations 2009, as amended; the RL requires biannual ambient water quality monitoring; the limited volume of the discharge and the dilution available in the receiving water.

In light of the foregoing reasons, no reasonable scientific doubt remains as to the absence of adverse effects on the integrity of Roaring Water Bay and Islands SAC (Site Code: 000101).

9. Submissions

No submissions were received in relation to this licence application.

10. Charges

The RL sets a reduced annual charge for the agglomeration of €2,962.77 and is reflective of the monitoring and enforcement regime being proposed for the agglomeration, as only primary treatment is currently being provided.

11. 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



Loretta Joyce
Inspector
Environmental Licensing Programme

Figure 1.0: Ballydehob Agglomeration D0467-01

