This report has been cleared for submission to Director/Board by Karen Creed. Liz Leacy, 16/01/2015 10:25

OFFICE OF CLIMATE, LICENSING & RESOURCE USE

INSPECTORS REPORT ON A WASTE WATER DISCHARGE LICENCE APPLICATION

To:	Dara Lynott, Director	
From:	Michelle Reddy	Environmental Licensing Programme
Date:	16th January 2015	
RE:	Application for a Waste Water Discharge Licence from **Irish Water**, for the agglomeration named **Buttevant**, Reg. No. D0303-01.	

Application & Agglomeration Details	
Agglomeration Name:	Buttevant (Appendix 1)
County:	Cork
Schedule of discharge licensed:	Discharges from agglomerations with a population equivalent of 1,001 to 2,000.
Licence application received:	27/02/2009
Notices under Regulation 18(3)(b)[1] issued:	22/12/2009, 15/07/2010, 30/07/2014
Information under Regulation 18(3)(b) received:	01/06/2010, 30/07/2010, 04/07/2011, 12/09/2014
Site notice check:	20/03/2009
Site Visit:	23/07/2014
Submission(s) Received:	None
Design Population Equivalent:	3150
Actual Population Equivalent:	1700
Type of treatment:	Tertiary
Plant description:	The plant consists of inlet works, grit trap and grit classifier, ferric dosing, 2 sequential batch reactors, balance tank, storm tank, picket fence thickener and outlet.

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

1. 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	Awbeg River
Type of receiving water	Freshwater
Normal flow	205m^3/day
Storm water overflow(s)	
Storm water overflow(s)	Yes (3)
Receiving water name(s)	Freshwater, Awbeg River.

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

2. Receiving waters and impact

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

Table 2: Receiving waters

Characteristic	**Classification**	**Comment**
Receiving water name	Awbeg River	WFD Code: IE_SW_18_2677
Designations	SAC Blackwater River (Cork/Waterford) Munster Blackwater (main channel) containing *Margaritifera margaritifera*	SAC Site Code:002170 Munster Blackwater Catchment
Receiving water monitoring stations	Awbeg (Buttevant) (Main Channel) Buttevant Br EPA RS Code: RS18A050700 Awbeg (Buttevant) (Main Channel) 1.8km d\s of Buttevant Br EPA RS Code: RS18A050800 Awbeg (Buttevant) (Main Channel) Cahermee Br EPA RS Code: RS18A050900	0.5km u/s of SW001 on River Awbeg 1.3km d/s of SW001 on River Awbeg 4km d/s of SW001 on River Awbeg
Biological quality rating (Q value)	Q3 Poor Status (2012) Buttevant br. Q3-4 Moderate Status (1990)	0.5km u/s of WWTP on River Awbeg 1.3km d/s of WWTP on

	1.8km d\s of Buttevant Br Q3-4 Moderate Status (2012 Cahermee Bridge	River Awbeg 4km d/s of WWTP on River Awbeg.
WFD status	Moderate	Restore 2021
WFD Risk Category	1a	At risk of not achieving good status

The Blackwater-Awbeg Water Management Unit Action Plan (WMUAP) identifies the waste water treatment plant (WWTP) in Buttevant as a point pressure on the Awbeg River. A new WWTP has since been built and commenced operation in 2009.

The primary discharge (SW001) is located within the Blackwater (Cork/Waterford) SAC which has been designated partly on the basis that the Freshwater Pearl Mussel, *Margaritifera margaritifera* is a qualifying interest. The first schedule of the *European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations S.I No. 296 of 2009 (Pearl Mussel Regulations 2009)* lists the 27 designated Freshwater Pearl Mussel sites. The Blackwater (Munster) River is one of these designated freshwater peal mussel sites.

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	0.9310	25	0.142	1.073	2.6 Note 2
Orthophosphate	0.0311	0.8	0.0045	0.0356	0.075 Note 2
Total Ammonia	0.0424	5	0.0292	0.0716	0.14 Note 2

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

Mass balance calculations were carried out using the monitoring information provided by the applicant. The 95%ile flow in the River Awbeg is 0.4m^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).

The limit of 0.075mg/l for orthophosphate, 0.14mg/l for ammonia and 2.6mg/l of BOD in the receiving water are statutory limits set in the European Communities Environmental Objectives (Surface Water) Regulations, 2009, as amended. An emission limit value of 0.8 mg/l is recommended for orthophosphate, 5mg/l for ammonia and 25mg/l for BOD in the RL. An ELV of 25mg/l is recommended for suspended solids due to the presence of the Freshwater Pearl Mussel (*Margaritifera margaritifera*) 30km downstream of the discharge in the River Blackwater of which the Awbeg River is a tributary.

Given that the Awbeg River is assigned high status based on monitoring at station RS18A051300 Kilcummer Bridge located approximately 0.5km above the confluence of the Awbeg River and Blackwater River,it can be concluded that the discharge from the Buttevant agglomeration is not impacting on the Freshwater Pearl Mussels in the Blackwater River just below the confluence. Good rather than high status standards

in the European Communities Environmental Objectives (Surface Waters) Regulations 2009, as amended, were used in the mass balance calculations.

The limits are set based on the mass balance calculations. The WWTP has been upgraded in recent years and consists of a sequencing batch reactor (SBR) with ferric dosing which can achieve standards of 0.5-0.8mg/l for orthophosphate, 2-5mg/l for ammonia and 15-35mg/l for BOD in the discharge. Based on this information the emission limit values for orthophosphate, ammonia and BOD in the RL are achievable. No improvement works are required to meet the specified emission limit values. All ELVs will apply immediately.

The ELVs as set are aimed at providing a high degree of protection to the receiving water and these limits will assist in the water body achieving compliance with the Water Framework Directive requirements by 2021.

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

The WWTP in Buttevant provides tertiary treatment for wastewater from the Buttevant agglomeration. Condition 5.1 of the RL requires the licensee to prepare and submit to the Agency a programme of infrastructural improvements to maximise the effectiveness and efficiency of the waste water works. The conditions and emission limit values specified in the RL will ensure no deterioration in the quality of the receiving waters as a result of the discharge and will not stop the Awbeg River achieving compliance with the Water Framework Directive requirements by 2021.

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 2012
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 good status water quality standards.
Drinking Water Abstraction Regulations	There are no drinking water abstractions downstream
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 Buttevant WWTP.
Environmental Liability Directive	Condition 7.2 of RL

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

The Buttevant WWTP discharges directly via the Awbeg River into the Blackwater River (Cork/Waterford) SAC[2] (site code: 002170). The site is protected for priority habitats 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(s). In this context, particular attention was paid to the European Sites at Blackwater River (Cork/Waterford) SAC and the Agency considered, for the reasons set out below, that the activity is not directly connected with or necessary to the management of the site as a European Site and that it can be excluded on the basis of objective scientific 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 is not required.

This determination is based on the current effluent quality discharged into the Awbeg River from the Buttevant agglomeration and the quality of the receiving water downstream of the primary discharge.

The WWTP is operating well within design capacity (54%) is of modern infrastructure with tertiary treatment and generating a high quality effluent.

[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.

The most recent EPA water quality sampling data from 2012 indicates that the Awbeg River displays poor (Q3) ecological conditions at Buttevant Bridge RS18A050700 approximately 0.5km upstream of the primary discharge point. The Awbeg River displays moderate (Q 3-4) ecological conditions approximately 4km downstream of the primary discharge at Cahermee Bridge RS18A050900 with improving ecological conditions continuing further downstream. Kilcummer Bridge RS18A051300 located approximately 0.5km above the confluence of the Awbeg River and Blackwater River displays high Q 4-5 ecological conditions which would conclude that no significant effects on the Blackwater River (Cork/Waterford) SAC are envisaged. The ELVs are set to ensure compliance with EC Environmental Objectives (Surface Water) Regulations 2009, as amended therefore ensuring there is no impact on the Awbeg River.

6. Cross Office Liaison

Advice and guidance issued by the Waste Water Technical Working Group (WWTWG) was followed in my assessment of this application. Advice and guidance issued by the WWTWG 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 WWTWG for use by licensing inspectors in the assessment of wastewater discharge licence applications.

7. Submissions

No submissions were received in relation to this application.

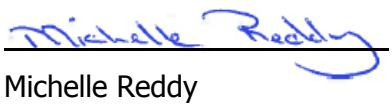
8. Charges

The RL sets an annual charge for the agglomeration at *€5,530.68,* 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



Michelle Reddy

Environmental Licensing Programme

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