This memo has been cleared for submission to the Director by Karen Creed
Signed: _____ Date: 19-7-12
Máire Buckley

OFFICE OF CLIMATE, LICENSING & RESOURCE USE

INSPECTORS REPORT ON A WASTE WATER DISCHARGE LICENCE APPLICATION

To:	DIRECTORS		
From:	Marie O'Connor/Éimer Godsil/Patrick O'Brien	**Environmental Programme**	**Licensing**
Date:	13 July 2012		
RE:	Application for a Waste Water Discharge Licence from **Cork County Council, Southern Division,** for the agglomeration named **Dripsey**, Reg. No. **D0426-01**		

Application Details	
Schedule of discharge licensed:	Discharges from agglomerations with a population equivalent of 500 to 1,000.
Regulation 28(2) issued:	02 February 2011, 11 April 2011, 13 June 2011, 15 August 2011, 11 October 2011, 05 December 2011, 02 Feburary 2012, 02 April 2012, and 18 June 2012.
Supplementary material submitted by applicant:	15 May 2012
Licence application received:	22 June 2009
Site notice check:	14 July 2009
Site visit:	14 October 2010
Submission(s) Received:	None

1. Agglomeration

Dripsey is a settlement located approximately 19km west of Cork City and 1km north of the River Lee at the Inniscarra Lake/Reservoir. The settlement consists of three nodes of development namely; Model Village, Upper Dripsey and Lower Dripsey but only the Model Village is serviced by a public sewer and thus within the agglomeration boundary for the purposes of this application. The current population equivalent (p.e.) is 390 with projected future population for the Model Village of 602

p.e.. Although the Local Area Plan (LAP) identified the lack of public sewer in Upper Dripsey as a deterrent to development, there are no plans to connect it to the wastewater works.

The effluent arises mainly from domestic sources with less than 2% attributed to non-domestic i.e. shop, public house and post office. There are no IPPC or Waste licensed activities discharging to the agglomeration or to the Dripsey River upstream or downstream of the agglomeration. O'Regan Quarry Products Limited (W0255-01) discharges to a tributary of the Dripsey River upstream of the agglomeration.

A gravity combined sewer collects the wastewater but the applicant also states that there is significant infiltration into the system. The wastewater treatment plant (WWTP) was built in the early 1990's with a design of 600 p.e. and consisted of a septic tank, however this was upgraded and now treatment consists of a primary settlement tank and a rotating biological contactor (RBC) plus a final settling tank. There are no storm water overflows or pumping stations in the system. The WWTP is inspected twice a week by a curator.

An upgrade of the plant to 1,200 p.e. was proposed in two phases and the Preliminary Report received approval from the DoECLG under the Water Services Investment Plan (WSIP) Serviced Land Initiative, however this was withdrawn in 2009 and the proposal is now mentioned in the Water Services Investment Programme 2010-2012 as a 'Scheme at Planning Stage'. Cork County Council have indicated that they intend to apply for planning permission for a 1,200p.e. plant to replace the existing plant however, this is a longer term project and there are no plan to carry out further works on the existing plant.

2. Discharges to waters

The Primary discharge (SW001) is to the Dripsey River (SW_19_1713) and there are no storm water overflows or emergency/pumping station overflows associated with the waterworks.. The effluent quality is not monitored routinely by the applicant as the agglomeration is below 2000 p.e. and thus it is not mandatory under the Urban Wastewater Treatment Regulations (S.I. 254 of 2001) as amended. Monitoring carried out for the application during November 2008 and May 2009 indicated average values of 24/50/19 mg/l for BOD/COD/SS respectively.

The applicant estimated a hydraulic load for the design capacity of 600 p.e. as 135m^3/day and at a current population of 390 p.e. the estimated flows, as stated in the application, of 88m^3/day are realistic. However, the applicant states that there are no storm water overflows on the system. A storage capacity of 3 x DWF should be made available at a minimum. The RD requires an assessment of the capacity of the system to cater adequately for storm water flows (Condition 5.2(a)(i)).

3. Receiving waters and impact

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

Table 1.0 Receiving waters

Characteristic	Classification	Comment
Receiving water name and type	Dripsey River SW_19_1713	Tributary of the Lee River, discharges into Inniscarra Lake/Reservoir
Resource use	None	No downstream drinking water abstraction points on the River Dripsey. Drinking water abstraction point (Code:0500PUB3401) on Inniscarra Lake/Reservoir ~6.5 km d/s of discharge point
Amenity value	General	
Applicable Regulations	Surface Water Regs [Note1]	Discussed below
Designations	Dripsey River : None River Lee (Inniscarra Reservoir) : Drinking Water	Abstraction point ~6.5 km below Dripsey discharge point
EPA monitoring stations	Upstream 19D060300 (Luskin's Bridge) Downstream 19D060400 (Dripsey Bridge)	Approx. 2.5 km u/s of discharge Approx. 1 km d/s of discharge
Biological quality rating (Q value)	19D060300 Q4-5 19D060400 Q4-5	Unpolluted (2011) Unpolluted (2011)
WFD status	Good Status	As per Lower Lee-Owenboy, Waste Water Management Unit Action Plan (WMUAP)
WFD Objective	Protect	As per Lower Lee-Owenboy, Waste Water Management Unit Action Plan (WMUAP)
WFD protected areas	None	

Note 1: European Communities Environmental Objectives (Surface Water) Regulations 2009, S.I. No. 272 of 2009.

The Dripsey River is within the South Western River Basin District (SRBD) and the Lower Lee-Owenboy Water Management Unit. It discharges into the Inniscarra Lake /Reservoir approximately 5.5km upstream of the intake.

The water quality upstream and downstream of the WWDA discharge has been consistently Q4 since 2002.

Specific localised flow data is not available, however the applicant estimated the 95%ile flow at 0.240m^3/sec (20,736m^3/day) and this is consistent with the Hydrotool output. The application states that this will result in 153 dilutions being available as the discharge rate from the WWTP is estimated at 135m^3/day (based on a 600 p.e.).

The background monitoring data available for the Dripsey River is based on three samples in 2008/2009. It indicates that the river meets the required standards but the values are insufficient for the purposes of determining the impact of the discharge from the agglomeration. For that reason the 'Notional Clean River Values' are used in the table below.

Table 2.0 summarises the impact of the discharge as described in the application and using the Notional Clean River values and the design capacity of 600 p.e. (135m^3/day) to calculate the contribution of the discharge.

Table 2.0 Assimilative Capacity

Parameter	Back ground Concen tration (mg/l)	Notional Clean River Values Note 1	Proposed ELVs for discharge from SW001 (mg/l)	Contribution from primary discharge (mg/l)	Predicted downstream concentration (mg/l)	Relevant standard (mg/l)
BOD	2.0	0.26	25	0.16	0.42	<2.6 Note 2
PO_4-P	<0.05	0.005	5	0.032	0.037	<0.075 Note 2
Total Ammonia - N	<0.1	0.008	10	0.065	0.073	0.14 Note 2

Note 1: Notional clean river values used for AC calculation based on 1/5th of the mean "High Status" standard in the EC Environmental Objectives (Surface Waters) Regulations 2009.

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

The table shows that if the emission limit values set in the RL are complied with in the predicted maximum discharge from the agglomeration the 'good status' of the Dripsey River as set out in the EO Regulations should be maintained. Using the Notional Clean River background values the predicted concentrations reach just a fraction of what is permitted in the Surface Water Regulations. Monitoring data submitted and the treatment plant installed (rotating biological contactor (RBC)) indicates that the emission limit values should be capable of being achieved at the discharge. A typical RBC can achieve values in the range of 4.5-9 mg/l o-PO_4 and 5-10mg/l Ammonia. A limited set of monitoring data submitted with the application for these parameters indicates that it can achieve the values proposed in the RL.

4. Ambient Monitoring

The RL requires monitoring of the receiving water for a range of parameters both upstream and downstream of the primary discharge. This is to verify that no deterioration of the receiving water quality is occurring due to the discharge.

Schedule B.4: Ambient Monitoring of the RL specifies the parameters, analysis method and frequency for which ambient monitoring upstream and downstream of the primary discharge point (SW1) must be carried out. The requirements for

ambient monitoring in Schedule *B.4: Ambient Monitoring* are sufficient to verify that there is no deterioration of the receiving water quality due to the discharge.

5. Combined Approach

The Waste Water Discharge Authorisation Regulations, 2007 (S.I. No. 684 of 2007) 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 (S.I. No. 254 of 2001) as amended where applicable, 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 S.I. No. 684 of 2007.

6. Discharges from agglomerations where no treatment or insufficient treatment is in place

The treatment which is provided i.e. primary settlement tank, Rotating Biological Contactor (RBC) and final holding tank provides a level of treatment for that is capable of meeting the requirements of the RL. The previous RBC had collapsed and a new one was installed and is operational since December 2009 and the ELV's in the RL are being achieved.

As was mentioned previously the proposals to upgrade the plant are delayed as it was approved under the discontinued Services Land Initiative Scheme. Under the WSIP 2010 -2012 the project is in as 'Schemes at Planning Stage' and no funding has been made available for the works as they are now proposing to replace the existing plant when funding is made available.

The RL, in Condition 1.7, requires an annual assessment of the organic and hydraulic capacities within the waste water works and should this indicate that capacity would be exceeded a review of the licence would be necessary.

7. Programme of Improvements

The applicant states that there is a significant amount of infiltration into the system. Condition 5.2(b) of the RL requires an assessment to minimise the amount of infiltration before 2015. The applicant also states there are no storm water overflows or emergency overflows associated with the water works (there was no assessment of the capacity of holding tanks etc. provided in the application). The RL, with specific note to Conditions 4.11, 5.2 and 5.4, requires an assessment of the waste water works (as per the DoECLG guidelines regarding storm water overflows) plus an assessment of storm water holding capacity and the provision of adequate systems before 2015. These measures aim to improve the level of treatment provided thus aiding the receiving water body in maintaining good status. Provision for storm water overflows to be installed at a future date has been made in Schedule A.4 of the RL.

8. 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 (S.I. No. 684 of 2007). The Groundwater Directive (80/68/EEC) and Bathing Water Directive

(2006/7/EC) do not apply to the discharge at this location. Other relevant directives and regulations are dealt with below:

Drinking Water Abstraction Regulations

The drinking water abstraction point in the Inniscarra lake/Reservoir is approximately 6.5km downstream of the discharge point and ~5km downstream of the confluence of the Dripsey River with the Lee/Inniscarra Lake. The reservoir covers an area of approximately 489 Hectares, which offers significant dispersion capacity and the Dripsey River has current good status (Q4-5) before it meets the confluence.
At the abstraction point the raw water intake and treated water is tested weekly for Cryptosporidium and Giardia. The risk assessment completed by Cork County Council for this abstraction does not identify the Dripsey discharge as a risk. A copy of the Cryptosporidium Risk Assessment Score sheets was submitted with the application and it shows that the supply was classified as 'high risk' but is now 'moderate' risk due to the upgrading of the sand filters in 2008/2009. Agriculture and agricultural practices are deemed to be the highest contributors to the score.

There is no overall indication in the application or from OEE Enforcement that the Dripsey Agglomeration discharge has an adverse effect on the intake water for the drinking water plant.

Water Framework Directive [2000/60/EC]

The RL, as drafted, transposes the requirements of the Water Framework Directive.

The Water Management Unit (WMU) Action Plan for the Lower Lee-Owenboy catchment set an objective of 'Good Status' by 2009 and those limits specified in the RL are determined with the aim of maintaining the 'Good' water quality status.

The WMU Action Plan also identifies that the Dripsey WWTP requires the implementation of ***'an appropriate performance management system'***. Condition 4 of the RL requires that control and monitoring measures are put in place with documented procedures.

European Communities Environmental Objectives (Surface Water) Regulations 2009, S.I. No. 272 of 2009

The Dripsey Agglomeration currently complies with the environmental quality standards set in the Surface Water Regulations 2009. Those limits specified in the RL are set with the aim of not causing or exacerbating a breach in the standards as outlined in these Regulations.

Urban Waste Water Treatment Directive [91/271/EEC]

The Dripsey Agglomeration is stated as currently serving a 390 p.e., with design capacity of 600 p.e. and thus the requirements of the Urban Waste Water Treatment Directive are to provide 'appropriate treatment'. A collection system and RBC treatment plant has been provided. The RL, as drafted, has regard to the requirements of the Urban Waste Water Treatment Directive.

Bathing Water Directive [2006/7/EC]

There are no designated bathing waters on any of the receiving waters downstream of the WWTP.

EC Freshwater Fish Directive [2006/44/EC]

The Dripsey River is not designated a salmonid waterway however the Lee River which it flows into, approx. 1.5 km downstream, has such a designation. The Dripsey River (below the agglomeration discharge point) has achieved Q4-5 status and there is no indication that the water quality of the Lee River/Reservoir is negatively impacted by the input from the Dripsey river.

Shellfish Waters Directive [2006/113/EC]

There are no designated shellfish waters located in the downstream vicinity of the discharges.

Dangerous Substances Directive [2006/11/EC]

There are no industrial discharges into the agglomeration and the applicant has provided sampling results for 19 dangerous substances in the primary discharge for the purposes of the licence application. The measured concentrations are not considered significant. Sampling results of receiving waters (taken as part of the application) has shown compliance with the Dangerous Substances Directive.

Environmental Liabilities Directive (2004/35/EC)

Condition 7.2 of the RL as drafted, satisfies all the requirements of the Environmental Liabilities Directive in particular those requirements outlined in Article 3(1) and Annex III of 2004/35/EC.

Environmental Impact Assessment Directive [85/337/EEC]

An EIS was not submitted with the licence application as it was not required at any stage of the planning process for the WWTP. However, should one be required as part of any programme of improvements/new WWTP, it will be dealt with as per Condition 1.8 of the RL.

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

The primary discharge point (SW01) discharges to the Dripsey River which is a tributary of the River Lee that flows into Cork Harbour, a designated SPA (site code: 004030). Cork Harbour SPA is an internationally important wetland site and is among the top five sites in the country for wintering waterfowl, where it provides shelter for over 20,000 birds. Shelduck is the most common species of duck, accounting for 9.6% of the national total. There are also large populations of Teal and Wigeon. Other bird species of national importance are Dunlin, Curlew, Cormorant, Great Crested Grebe, Lapwing and Greenshank, as well as an internationally important population of Redshank. The extensive mudflats and salt marshes of Cork Harbour

are home to many species of Green Alga, as well as Cordgrass, Sea Puslane, Sea Aster, Thrift, Sea Lavender, Mayweed, and Sea Arrowgrass.

A screening (Stage 1) for Appropriate Assessment of the discharge from the agglomeration was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the discharges, individually or in combination with other plans or projects is likely to have a significant effect on the SPA.

The screening assessment undertaken demonstrates that the discharge is not likely to have significant effects, in terms of maintaining favourable conservation status of the qualifying interests, on the European Site having regard to its conservation objectives, for the following reasons;

- Cork Harbour SPA is 30km downstream of the discharge
- The River Lee is a large river with high dilution capabilities
- Results of ambient monitoring upstream and downstream showing no impact from the existing discharge, which is not predicted to increase significantly
- Dripsey agglomeration is a small catchment area serving 390 p.e. at present with a maximum in this proposal of 600p.e..

In accordance with the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), pursuant to Article 6(3) of the Habitats Directive, the discharge will not adversely affect the integrity, in terms of maintaining favourable conservation status of the qualifying interests of the SPA, having regard to its conservation objectives.

Cross Office Liaison

Advice and guidance issued by the Technical Working Group (TWG) was followed in my 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. The information contained on the OEA GIS system was used in the assessment of the application data.

Submissions

No submissions were received in relation to this application.

Charges

The RL sets an annual charge for the agglomeration at €4,157.75 and is reflective of the monitoring and enforcement regime being proposed for the agglomeration.

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

Marie O'Connor

Marie O'Connor

Office of Climate, Licensing and Resource Use