

This Report has been cleared for submission to the Director for approval, by the Senior Inspector Patrick Byrne.  
Signed: N. Keavey Date: 03/12/2013



OFFICE OF CLIMATE,  
LICENSING & RESOURCE USE.

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

<b>To:</b>	Dara Lynott, Director
<b>From:</b>	Loretta Joyce Environmental Licensing Programme
<b>Date:</b>	03/12/2013
<b>RE:</b>	Application for a Waste Water Discharge Licence from Monaghan County Council for the <b>Rockcorry</b> agglomeration, <b>Reg. No. D0454-01.</b>

#### Application Details

Schedule of discharge licensed:	Discharges from agglomerations with a population equivalent of 500 to 1000
Licence application received:	22/06/2009
Notice under Regulation 18(3)(b) issued:	21/07/2011
Information under Regulation 18(3)(b) received:	19/09/2013
Site notice check:	16/07/2009
Site visit:	29/06/2011 (J.Cope), 16/04/2013 (L.Joyce)
Submissions Received:	None

#### 1. Agglomeration

This application relates to the Rockcorry agglomeration in County Monaghan. The agglomeration had a population equivalent (p.e.) of 550 in 2011. A projected increase of 20% is used in the mass balance below. There are no identified sources of industrial waste water in the agglomeration.

The waste water treatment plant (WWTP) was constructed pre 2003 with a design capacity of 1,000 p.e. to provide effluent treatment to a 10mg/l:10mg/l BOD:SS standard.

The plant provides tertiary treatment and consists of inlet works, primary settlement tanks, biofilter, clarifiers, ferric dosing and storm water holding tank. There is a flow meter and final effluent composite sampler in place at the WWTP.

#### 2. Discharges to waters

##### Primary Discharge

The primary discharge (SW-1) is the gravity outfall from the WWTP to the Drumlona River, adjacent to the WWTP and has a flap valve, which closes when the river rises in storm conditions. At 95%ile flow in the river (0.019 m<sup>3</sup>/sec), there are approximately 9.8 dilutions available for the projected normal waste water discharge (0.001944 m<sup>3</sup>/sec). The 95%ile river flow was provided by the Office of Environmental Assessment. The applicant's 2011 treated effluent monitoring results are shown in Table 1, along with the WWTP design standards.

**Table 1. WWTP monitoring results 2011-2012 (average based on 3-12 samples)**

Parameter	BOD (mg/l)	COD (mg/l)	Suspended solids (mg/l)	Ammonia (mg/l)	Orthophosphate (mg/l)
Average effluent	9	56	28	5.9	0.87
WWTP Design standards	10	-	10	-	-

#### Secondary Discharges

There is one secondary waste water discharge from the agglomeration which only activates during storm conditions when the flap valve on the primary discharge closes. The treated effluent is pumped to the Drumlona River approx. 5m downstream of the primary discharge location but at a higher level when river level exceeds the primary discharge point.

#### Storm water overflows

There is one storm water overflow (SWO) at the WWTP and it discharges to the Drumlona River via the primary discharge or secondary discharge point.

#### Emergency overflows

There are no emergency overflows in the agglomeration.

### **3. Receiving waters and impact**

The Drumlona River forms part of the North Western International River Basin District. The following table summarises the main considerations in relation to the receiving waters.

**Table 2. Receiving waters**

Characteristic	Description	Comment
Receiving water name and type	Drumlona River IE_NW_36_237	The Drumlona River flows into Drumlona Lough, 1.5km d/s
Relevant designations within 10km	None	
Drinking water abstraction within 10 km d/s	None	
EPA monitoring stations & Biological quality rating (Q value)	U/s station RS36D090050 located on Drumlona River 450m u/s  D/s station RS36D090100 located on Drumlona River 600m d/s	
WFD status	Poor	2011
WFD Risk Category	1b, water body at	2008

	significant risk of failing objectives	
WFD Objective	Restore good status	Exemption until 2021
WFD protected areas	RPA drinking water groundwater	

Ambient water quality monitoring data for the Dromlona River provided by the applicant is summarised in Table 3 below. The results show that Ammonia levels deteriorate downstream of the primary discharge. BOD and Orthophosphate levels upstream of the primary discharge do not comply with the good status water quality standards specified in the European Communities Environmental Objectives (Surface Waters) Regulations 2009, as amended.

**Table 3. Water Quality in Dromlona River in 2012 (average based on 5 samples)**

Parameter	10m u/s of SW001	180m d/s of SW001	Water Quality Standards Note 1
<b>BOD</b>	<b>1.6</b>	1.4	≤ 1.5 mg/l (mean)
<b>Orthophosphate (as P)</b>	<b>0.07</b>	<b>0.07</b>	≤ 0.035 mg/l (mean)
<b>Ammonia (as N)</b>	0.03	0.05	≤ 0.065 mg/l (mean)

Note 1: Good status under European Communities Environmental Objectives (Surface Waters) Regulations 2009 as amended;

Table 4 below summarises the mass balance calculations which show the contribution from the primary discharge on the receiving water at a projected loading of 660 p.e. (550 p.e. plus 20%) in 2016. The calculations use the 'notionally clean river' approach (a hypothetically clean stretch of river) provided by the Office of Environmental Assessment.

**Table 4. Mass Balance Calculations**

Parameter (mg/l)	Proposed ELVs for Primary discharge	Contribution from Primary discharge	Contribution from notionally clean background Note 1	Predicted Downstream concentration	Water Quality Standards Note 2
BOD	10	0.9294	0.2358	1.1652	≤ 2.6
Orthophosphate (as P)	1.5 (interim)	0.1394	0.0045	0.1439	≤ 0.075
	0.7 (from 2019)	0.0651		0.0696	
Ammonia (as N)	6 (interim)	0.5576	0.0073	0.5649	≤ 0.14
	1 (from 2019)	0.0929		0.1002	

**Note 1:** The notionally clean background concentrations are 0.26 mg/l BOD, 0.005 mg/l ortho-phosphate (as P) and 0.008 mg/l ammonia (as N).

**Note 2:** Good status under the European Communities Environmental Objectives (Surface Waters) Regulations 2009, as amended.

The calculations show that the predicted downstream concentrations of BOD would comply with the good status standards in the Environmental Objectives Regulations 2009, as amended, based on an ELV of 10mg/l, which is the design limit of the WWTP. Average BOD in the discharge was 9.08mg/l in 2011-2012 which indicates that this can be achieved.

The predicted downstream concentration of Orthophosphate as P using an ELV of 1.5mg/l Orthophosphate as P, would not comply with good status standards in the Environmental Objectives (Surface Water) Regulations 2009, as amended. The RL proposes an interim ELV of 1.5mg/l Orthophosphate as P and applies 0.7mg/l Orthophosphate as P from 31<sup>st</sup> December 2019. Average Orthophosphate as P in the discharge was 0.87mg/l indicating that the interim ELV can be achieved. Plant operational improvement or upgrade will be required to achieve an ELV of 0.7mg/l Orthophosphate as P. Plants with chemical dosing for phosphorus removal can achieve 0.5 to 0.8mg/l Orthophosphate as P.

Predicted downstream concentration of Ammonia as N using an ELV of 6mg/l Ammonia as N, would not comply with good status standards in the Environmental Objectives (Surface Water) Regulations 2009, as amended. The RL proposes an interim ELV of 6mg/l Ammonia as N and applies 1mg/l Ammonia as N as P from 31<sup>st</sup> December 2019. Average Ammonia as N in the discharge was 5.9mg/l indicating that the interim ELV can be achieved. Plant operational improvement or upgrade will be required to achieve an ELV of 1mg/l Ammonia as N. Nitrogen removal filters can achieve 0.5 to 2mg/l Ammonia.

Rockcorry WWTP is listed as a point pressure in the Woodford Water Management Unit Action Plan with risks related to insufficient assimilative capacity for BOD and evidence of impact downstream. Investigation of combined sewer overflows is listed as an improvement measure listed against this WWTP.

#### **4. Site Visit**

I visited Rockcorry agglomeration on 16/04/2013 and met with a representative of Monaghan County Council. I visited the WWTP and observed the primary and secondary discharge points and receiving water.

#### **5. Ambient Monitoring**

*Schedule B.2 Receiving Water Monitoring* of the RL specifies quarterly monitoring of the Drumlona River for a number of specified parameters.

- Upstream: The location identified by Monaghan County Council is aSW-1u (grid ref.264471E 318863N) is approximately 10m upstream of SW001 and has been included as new National monitoring station (Station Code: RS36D090080).
- Downstream: The location provided by Monaghan County Council aSW-1d, (grid ref.264363E 318431N) is approximately 530m downstream of SW001 and has been included as new National monitoring station (Station Code: RS36D090100).

## 6. Programme of Improvements

There are no planned improvements proposed by the applicant for Rockcorry WWTP. Plant upgrade and/or operational improvement will be required to achieve an ELV of 0.7mg/l Orthophosphate as P and 1mg/l Ammonia as N from 31<sup>st</sup> 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 5. Compliance with EU Directives/Regulations**

<b>Compliance with Directives/Regulations</b>	<b>Description and Conditions in RL</b>
Urban Waste Water Treatment Directive [91/271/EEC]	Appropriate treatment was required by 31st December 2005.
Water Framework Directive [2000/60/EC]	Exemption from achievement of good status until 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 good status water quality standards.
Drinking Water Abstraction Regulations	No drinking water abstractions present
EC Freshwater Fish Directive [2006/44/EC]	Not a designated salmonid river
Bathing Water Directive [2006/7/EC]	No bathing waters present
Shellfish Waters Directive [2006/113/EC]	No shellfish 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 Rockcorry WWTP.
Environmental Liability Directive [2004/35/CE]	Condition 7.2 of RL satisfies the requirements of the Directive.

## 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). The Agency considered, for the reasons set out below, that the activity is not directly connected with or necessary to the management of 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.

It has been determined that the activity does not have the potential for significant effects on any European Site due to lack of hydrological connectivity with a European Site.

## 9. Submissions

No submissions were received in relation to this licence application.

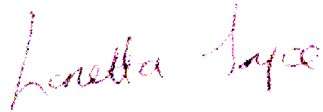
## **10. Charges**

The RL sets an annual charge for the agglomeration at €4,152.18 and is reflective of the monitoring and enforcement regime being proposed for the agglomeration.

## **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



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Loretta Joyce  
Inspector  
Environmental Licensing Programme



# Rockcorry Agglomeration D0454-01

