

Annual Environmental Report 2015

Agglomeration Name:	Rockcorry
Licence Register No.	D0454-01



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Section 1. Executive Summary and Introduction to the 2015 AER

1.1 Summary Report on 2015

This Annual Environmental Report has been prepared for D0454-01, Rockcorry, in County Monaghan, in accordance with the requirements of the wastewater discharge licence for the agglomeration. No specified reports are included as an appendix to the AER.

The agglomeration is served by a wastewater treatment plant with a Design PE of 1000. The treatment process includes the following:-

- Preliminary Treatment (Screening)
- Primary Treatment (Settlement Tanks)
- Secondary Treatment (Percolating Filters)
- Nutrient Removal (Chemical dosing for Phosphorus Removal)

The final effluent from the Primary Discharge Point was compliant with the Emission Limit Values in 2015.

669,500kgs (total weight) sludge was removed from the wastewater treatment plant in 2015 as liquid sludge. Sludge was transferred to Monaghan WWTP.

There were no major capital or operational changes undertaken in 2015.

An Annual Statement of Measures is included in Appendix 1.

Section 2. Monitoring Reports Summary

2.1 Summary report on monthly influent monitoring

Table 2.1 Influent Monitoring Summary

2.1.1 Monthly Influent Monitoring	BOD (mg / l)	COD (mg / l)	SS (mg / l)	TP (mg / l)	TN (mg / l)	Hydraulic Loading (m3/d)	Organic Loading (PE/Day)
Number of Samples	6	6	6	6	6		
Annual Max.	363	829	4853	8.2	65	373	422
Annual Mean	177.12	398.33	720.40	3.05	18.63	88	228

Significance of results

The annual mean hydraulic loading is less than the peak Treatment Plant Capacity as detailed further in Section 3.2

The annual maximum hydraulic loading is less than the peak Treatment Plant Capacity as detailed further in Section 3.2.

The annual mean organic loading is less than the Treatment Plant Capacity as detailed further in Section 3.2.

The annual maximum organic loading is less than the Treatment Plant Capacity as detailed further in Section 3.2.

2.2 Discharges from the agglomeration

Table 2.2 - Effluent Monitoring

2.2.1 Effluent Monitoring Summary	BOD (mg/l)	COD (mg/l)	TSS (mg/l)	Ortho P (mg/l)	Ammonia NH3 (mg/l)	pH
WWDL ELV (Schedule A) where applicable	10	100	35	1.5	6	6 to 9
ELV with Condition 2 Interpretation included	20	200	87.5	1.8	12	No allowable exceedances
Number of sample results	7	7	7	7	7	7
Number of sample results above WWDL ELV	1	0	0	0	2	0
Number of sample results above ELV with Condition 2 Interpretation	0	0	0	0	0	0
Annual Mean (for parameters where a mean ELV applies)	N/A	N/A	N/A	N/A	N/A	N/A
Overall Compliance (Pass/Fail)	Pass	Pass	Pass	N/A	Pass	Pass

A primary wastewater discharge and a secondary wastewater discharge are identified in the WWDL for the Rockcorry agglomeration. Treated effluent from the plant is discharge via the primary or secondary discharge points depending on the receiving river levels. There is less than 10m between the primary and secondary discharge locations. The final effluent is sampled on the outfall pipe prior to discharge to the river and so there is a single effluent sampling location for the agglomeration regardless of which discharge point is in operation.

Significance of results

The WWTP was compliant with the ELVs set in the wastewater discharge licence. The impact on receiving waters is assessed further in Section 2.3.

2.3. Ambient Monitoring Summary

Table 2.3. Ambient Monitoring Report Summary Table

Ambient Monitoring Point from WWDL (or as agreed with EPA)	Irish Grid Reference	EPA Feature Coding Tool code	Receiving Waters Designation (Y/N)				WFD Status	Does assessment of the ambient monitoring results indicate that the discharge is impacting on water quality?
			Bathing Water	Drinking Water	FWPM	Shellfish		
Upstream monitoring point	E264471, N318863	RS36D090080	N	N	N	N	Poor	
Downstream monitoring point	E264363, N318431	Rs36D090100	N	N	N	N	Poor	Yes, due to ammonia.

The results for the upstream and downstream monitoring are included in Appendix 7.2 Ambient Monitoring Results.

Significance of results

The WWTP was compliant with the ELVs as set in the wastewater discharge licence as detailed in Section 2.2

- The discharge from the wastewater treatment plant does have an observable negative impact on the water quality.
- The discharge from the wastewater treatment plant doesn't have an observable negative impact on the Water Framework Directive status.

2.4 Data collection and reporting requirements under the UWWTD

The electronic submission of data was completed on 15/01/2016

2.5 Pollutant Release and Transfer Register (PRTR) - report for previous year

A PRTR is not required as the agglomeration is less than 2000 PE.

Section 3. Operational Reports Summary

3.1 Treatment Efficiency Report

	cBOD (kg/yr)	COD (kg/yr)	SS (kg/yr)	Total P (kg/yr)	Total N (kg/yr)
Influent mass loading (kg/year)	4,989	11,219	20,291	86	525
Effluent mass emission (kg/year)	275	1,364	301	24	688
% Efficiency (% reduction of influent load)	94%	88%	99%	72%	0%

3.2 Treatment Capacity Report

Table 3.2 - Treatment Capacity Report Summary

Hydraulic Capacity – Design / As Constructed (dry weather flow) (m3/year)	82,855
Hydraulic Capacity – Design / As Constructed (peak flow) (m3/year)	248,565
Hydraulic Capacity – Current loading (m3/year)	32,057
Hydraulic Capacity – Remaining (m3/year)	216,508
Organic Capacity - Design / As Constructed (PE)	1,000
Organic Capacity - Current loading (PE)	228
Organic Capacity – Remaining (PE)	772
Will the capacity be exceeded in the next three years? (Yes / No)	No

3.3 Extent of Agglomeration Summary Report

In this section Irish Water is required to report on the amount of urban waste water generated within the agglomeration. It does not include any waste water collected and created in a private system and discharged to water under a Section 4 Licence issued under the Water Pollution Acts 1977 (as amended).

Table 3.3 - Extent of Agglomeration Summary Report

	% of total load generated in the agglomeration
Load generated in the agglomeration that is collected in the sewer network	100%
Load collected in the agglomerations that enters treatment plant	Unknown
Load collected in the sewer network but discharges without treatment	Unknown

Load generated in the agglomeration that is collected in the sewer network is the total load generated and collected in the municipal network within the boundary of the agglomeration.

Load collected in the agglomerations that enters treatment plant is that portion of the previous figure which enters the waste water treatment plant.

Load collected but discharged without treatment is that portion of the first figure which is discharged without treatment.

The data in Table 3.3 is estimated based on influent monitoring as detailed in Section 2.1 above.

3.4 Complaints Summary

A summary of complaints of an environmental nature is included below.

Table 3.4 - Complaints Summary Table

Number	Date & Time	Nature of Complaint	Cause of Complaint	Actions taken to resolve issue	Closed (Y/N)
None					

3.5 Reported Incidents Summary

A summary of reported incidents is included below.

Table 3.5.1 - Summary of Incidents

3.5.1 Incident Type (e.g. Non-compliance, Emission, spillage, pollution incident)	Incident Description	Cause	No. of Incidents	Corrective Action	Authorities Contacted. Note 1	Reported to EPA (Yes/No)	Closed (Yes/No)
ELV Exceedence	Breach of ELV - Ammonia of 7.5mg/IN	Unknown	1	Additional monitoring	Yes - IFI	Yes	Yes

Note 1: For shellfish waters notify the Marine Institute (MI) Sea Fisheries Protection Authority (SFPA) Food Safety Authority (FSAI) and An Bord Iascaigh Mhara (BIM). This should also include any other authorities that should be contacted arising from the findings of any Licence Specific Reports also e.g. Drinking Water Abstraction Impact Risk Assessment, Fresh Water Pearl Mussel Impact Assessments etc.

Table 3.5.2 - Summary of Overall Incidents

Number of Incidents in 2015	1
Number of Incidents reported to the EPA via EDEN in 2015	1
Explanation of any discrepancies between the two numbers above	N/A

3.6 Sludge / Other inputs to the WWTP

Other inputs to the waste water treatment plant are summarised in Table 3.6 below.

Table 3.6 - Other Inputs

Input Type	m3/year	PE/year	% of load to WWTP	Included in Influent Monitoring (Y/N)?	Is there a leachate/sludge acceptance procedure for the WWTP? (Y/N)	Is there a dedicated leachate/sludge acceptance facility for the WWTP? (Y/N)
Domestic /Septic Tank Sludge	0	0		N/A		
Industrial / Commercial Sludge	0	0		N/A		
Landfill Leachate (delivered by tanker)	0	0		N/A		
Landfill Leachate (delivered by sewer network)	0	0		N/A		
Other (specify)	0	0		N/A		

Notes:

1. Other Inputs include; septic tank sludge, industrial /commercial sludge, landfill leachate and any other sludge that is collected and added to the treatment plant.
2. Sludge that is added to a dedicated sludge reception facility at a waste water treatment plant not included in Table 3.6. Only include sludge which is added to the waste water treatment process stream. Enter zero where there are no inputs.

Section 4. Infrastructure Assessments and Programme of Improvements

4.1 Storm water overflow identification and inspection report

There is no Storm water overflow in Rockcorry. The storm water overflow SW003 mentioned in the licence is in fact the secondary discharge point SW002.

Table 4.1.1 - SWO Identification and Inspection Summary Report

WWDL Name / Code for Storm Water Overflow	Irish Grid Ref.	Included in Schedule A3 of the WWDL	Significance of the overflow (High/Med/Low)	Compliance with DoEHLG criteria	No. of times activated in 2015 (No. of events)	Total volume discharged in 2015 (m3)	Total volume discharged in 2015 (P.E.)	Estimated / Measured data
None								

Table 4.1.2 - SWO Identification and Inspection Summary Report

How much sewage was discharged via SWOs in the agglomeration in the year (m3/yr)?	N/A
How much sewage was discharged via SWOs in the agglomeration in the year (p.e.)?	N/A
What % of the total volume of sewage generated in the agglomeration was discharged via SWOs in the agglomeration in 2013?	N/A
Is each SWO identified as non-compliant with DoEHLG Guidance included in the Programme of Improvements?	N/A
The SWO assessment includes the requirements of relevant WWDL Schedules (Yes/No)	N/A
Have the EPA been advised of any additional SWOs / changes to Schedules A/C under Condition 1 ?	No

4.2 Report on progress made and proposals being developed to meet the improvement programme requirements.

The Improvement Programme report included in Appendix 7.3 addresses the **Specified Improvement Programmes** as detailed in Schedules A3 and C of the WWDL. It also details other improvements identified through assessments required under the licence

Table 4.2.1 - Specified Improvement Programme Summary

Specified Improvement Programmes	Licence Schedule	Licence Completion Date	Date Expired	Status of Works	% Construction Work Completed	Licensee Timeframe for Completing the Work	Comments
Schedule C Specified Improvement Programme of the Licence	C	31/12/2019	No	Not reported	0%		Upgrade, as necessary the Waste Water Treatment Plant to comply with ELVs.

A summary of the status of any improvements identified by under Condition 5.2 is included below.

Table 4.2.2 - Improvement Programme Summary

Improvement Identifier / Name	Improvement Description	Improvement Source	Progress (% complete)	Expected Completion Date	Comments
N/A	N/A	WWTP assessment (Condition 5.2).	N/A	N/A	
		Sewer Integrity Tool (Condition 5.2).			SNIT has not been completed but will be submitted following submission of 2015 AER.
N/A	N/A	Secondary discharges assessment (Condition 5.2).	N/A	N/A	
N/A	N/A	SWO assessment (Condition 4 & 5.2).	N/A	N/A	
N/A	N/A	Pearl Mussel Impact Assessment	N/A	N/A	

		(Condition 4)			
	Chemical Dosing	Improved Operational Control	0%	Unknown	Flow (and load) proportional dosing should be investigated. Priority 2
	Flow related	Improved Operational Control	0%	Unknown	Inlet level adjustment would decrease storm tank fill frequency. Priority 2
	Operational Shortfall	Improved Operational Control	0%	Unknown	Inlet flow trends need to be reviewed so that 3 x DWF is allowed through to treatment. Priority 2
	Other	Improved Operational Control	0%	Unknown	Crude sampling should be undertaken to determine process loadings. Priority 2

Table 4.2.3 - Sewer Integrity Risk Assessment Tool Summary

The Improvement Programme should include an assessment of the integrity of the existing wastewater works for the following:	Risk Assessment Rating (High, Medium, Low)	Risk Assessment Score	Comment
Hydraulic Risk Assessment Score	Unknown	Unknown	SNIT has not been completed but will be submitted following the submission of 2015 AER.
Environmental Risk Assessment Score	Unknown	Unknown	SNIT has not been completed but will be submitted following the submission of 2015 AER.
Structural Risk Assessment Score	Unknown	Unknown	SNIT has not been completed but will be submitted following the submission of 2015 AER.
Operation & Maintenance Risk Assessment Score	Unknown	Unknown	SNIT has not been completed but will be submitted following the submission of 2015 AER.
Overall Risk Score for the agglomeration	Unknown	Unknown	SNIT has not been completed but will be submitted following the submission of 2015 AER.

Section 5. Licence Specific Reports

Licence Specific Reports Summary Table

Licence Specific Report	Required in this AER or outstanding from previous AER	Included in this AER	Reference to previous AER containing report or relevant section of this AER
Priority Substances Assessment	No	No	Included in 2014 AER
Drinking Water Abstraction Point Risk Assessment	No	No	N/A
Habitats Impact Assessment	No	No	N/A
Shellfish Impact Assessment	No	No	N/A
Pearl Mussel Report	No	No	N/A
Toxicity/Leachate Management	No	No	N/A
Toxicity of Final Effluent Report	No	No	N/A

Licence Specific Reports Summary of Findings

Licence Specific Report	Recommendations in Report	Summary of Recommendations in Report
Priority Substances Assessment	Yes	No further screening required

5.1 Priority Substances Assessment

The Priority Substances Assessment report is included in the 2014 AER. A summary of the findings of this report is included below.

Table 5.1 - Priority Substance Assessment Summary

	<i>Licensee self- assessment checks to determine whether all relevant information is included in the Assessment.</i>
Does the assessment use the Desk Top Study Method or Screening Analysis to determine if the discharge contains the parameters in Appendix 1 of the EPA guidance	Desk Top Study <i>and</i> Screening Analysis
Does the assessment include a review of Trade inputs to the works?	Yes
Does the assessment include a review of other inputs to the works?	No
Does the report include an assessment of the significance of the results where a listed material is present in the discharge? (e.g. impact on the relevant EQS standard for the receiving water)	Yes
Does the assessment identify that priority substances may be impacting the receiving water?	No
Does the Improvement Programme for the agglomeration include the elimination / reduction of all priority substances identified as having an impact on receiving water quality?	No

Section 6. Certification and Sign Off

Table 6.1 - Summary of AER Contents

Does the AER include an executive summary?	Yes
Does the AER include an assessment of the performance of the Waste Water Works (i.e. have the results of assessments been interpreted against WWDL requirements and or Environmental Quality Standards)?	Yes
Is there a need to advise the EPA for consideration of a technical amendment / review of the licence?	No
List reason e.g. additional SWO identified	N/A
Is there a need to request/advise the EPA of any modifications to the existing WWDL? Refer to Condition 1.7 (changes to works/discharges) & Condition 4 (changes to monitoring location, frequency etc.)	No
List reason e.g. failure to complete specified works within dates specified in the licence, changes to monitoring requirements	N/A
Have these processes commenced? (i.e. Request for Technical Amendment / Licence Review / Change Request)	N/A
Are all outstanding reports and assessments from previous AERs included as an appendix to this AER?	N/A
List outstanding reports	Sewer Network Integrity Assessment

Declaration by Irish Water

The AER contains the following:

- Introduction and background to 2015 AER.
- Monitoring Reports Summary.
- Operational Reports Summary.
- Infrastructural Assessment and Programme of Improvements.
- Licence specific reports
- Certification and Sign Off
- Appendices

I certify that the information given in this Annual Environmental Report is truthful, accurate and complete:

Signed:  Date: 10/03/2016

Gerry Galvin
Chief Technical Advisor

Section 7. Appendix

In the appendix include all the detailed or site specific reports that are relevant to the AER. Reports omitted from previous AERs should also be appended here.

Appendix 7.1 - Annual Statement of Measures

Appendix 7.2 - Ambient monitoring summary

Appendix 7.3 – Specified Improvement Programme

- a) Specified Improvement Programme
- b) Programme of Improvements

Appendix 7.1 Annual Statement of Measures

Risk/Description Issue	Risk Score	Mitigation Measure to Be taken	Outcome	Action	Date for completion
High inflows into the Rockcorry WWTP during storm conditions/periods of heavy rainfall	Medium	CCTV survey of network & remedial measures identified carried out. Conduct SIRAT on network	Improved Operational Control	CCTV	The improvement programme will be reviewed by Irish Water to assess the works required to comply with the licence condition on a prioritised basis.

Appendix 7.2 Ambient Monitoring Results

Upstream Monitoring Results								
Sampling Location	Sample Date	Sample Type	Dissolved Oxygen mg/l	Temp	Ammonia N mg/l	BOD, 5 days with Inhibition (Carbonaceous) mg/l	Ortho Phosphate mg/l	pH units
Rockcorry WWTP Upstream	04/02/2015	Grab	12.63	9.3	0.008	2	0.033	7.7
Rockcorry WWTP Upstream	15/04/2015	Grab	10.66	15.8	0.14	2	0.056	7.8
Rockcorry WWTP Upstream	12/05/2015	Grab	9.86	13.0	0.047	2.5	<0.009	7.8
Rockcorry WWTP Upstream	12/08/2015	Grab	8.78	17.0	0.051	1	0.113	7.9
Rockcorry WWTP Upstream	07/10/2015	Grab	9.52	13.3	0.034	2	0.067	7.9
Rockcorry WWTP Upstream	10/11/2015	Grab	8.05	13.6	0.052	2	0.073	7.7
Average			9.92	13.67	0.055	1.92	0.059	7.8

Downstream Monitoring Results								
Sample Location	Sample Date	Sample Method	Dissolved Oxygen mg/l	Temp oC	Ammonia N mg/l	BOD, 5 days with Inhibition (Carbonaceous) mg/l	Ortho-Phosphate P mg/l	pH units
Rockcorry WWTP Downstream	04/02/2015	Grab	12.46	10	0.01	3	0.034	7.8
Rockcorry WWTP Downstream	15/04/2015	Grab	10.63	14.7	0.17	2	0.046	7.7
Rockcorry WWTP Downstream	12/05/2015	Grab	9.95	12.2	0.087	4	<0.009	7.8
Rockcorry WWTP Downstream	12/08/2015	Grab	8.81	16.6	0.1	1	0.125	8
Rockcorry WWTP Downstream	07/10/2015	Grab	9.42	13.7	0.039	1	0.078	7.9
Rockcorry WWTP Downstream	10/11/2015	Grab	8.39	14.6	0.11	5	0.076	7.8
Average			9.94	13.63	0.086	2.67	0.061	7.83

Appendix 7.3 – Specified Improvement Programme

a) Specified Improvement Programme

Report on progress made and proposals being developed to meet the improvement programme requirements

As per condition 5.1 of the licence, a programme of infrastructural improvements to maximise the efficiency and effectiveness of the waste water works shall be prepared and submitted:

In the licence, under schedule C, there is a specified improvement listed, this is to upgrade the WWTP to ensure that ELV's are complied with the completion date for this improvement is the 31/12/2019.

In 2015 the WWTP plant was in compliance with the ELV's in the discharge licence.

The capacity of the WWTP is detailed in section 3.2 (Treatment Capacity Report), there is remaining capacity at the WWTP.

Under condition 5.2 (i) of the licence, the programme of infrastructural improvements shall include an assessment of the waste water treatment plant having regard to the effectiveness of the treatment provided by reference to the following:

(i) The existing level of treatment, capacity of treatment plant and associated equipment:

There is adequate capacity at the treatment plant.

(ii) The emission limit values specified in Schedule A: Discharges, of this licence:

There were allowable exceedances of the ELV for Ammonia in 2015, it is planned to carry out additional Ammonia monitoring at the WWTP in 2016.

(iii) The designations of the receiving water body:

The receiving is not a designated Salmonid Water (under the European Communities (Quality of Salmonid Waters) Regulations, 1988). It is not designated as a sensitive water under the Urban Waste Water Treatment Regulations 2001. The river is not designated as an SPA, SAC or NHA.

The Drumlona Stream is a tributary of Drumlona Lough, its overall status is classified as 'Poor' with an overall objective to restore its status by 2021 in the North Western International River Basin Plan. The 'point risk source' and potential for impact from the WWTP discharge on the river is categorised as 'at risk',

(iv) Water quality objective for the receiving water body:

The WWTP discharges to waterbody NW_36_237 it is in the North Western river basin district with a status of 'Poor' and has an overall objective to restore its status by 2021. Some contamination issues with receiving stream seem to arise upstream and in general water quality is not satisfactory in the lake tributary. Due to the distance to the downstream site, further investigation is required to determine if the plant is impacting on the river or if there are other pollution sources in between.

(v) The standards and volumetric limitations applied to any industrial waste water that is licensed to discharge to the waste water works:

There are no industries licensed to discharge to the waste water works.

Under condition 5.2 (b) of the licence, the programme of infrastructural improvements shall include an assessment of the integrity of the waste water works having regard to:

(i) Capacity of the waste water works:

There is adequate capacity at the treatment plant (section 3.2 Treatment Capacity Report).

(ii) Leaks from the waste water works:

There are no known leaks at the WWTP site.

(iii) Misconnections between foul sewers and surface water drainage network:

Monaghan County Councils Environment Section monitor surface water quality and investigate misconnections. Any misconnections identified will be rectified.

(iv) Infiltration by surface water/ground water:

CCTV work is in the programme of improvements for Rockcorry WWTP.

b) Programme of Improvements

Under condition 5.2 (c) of the licence, the programme of infrastructural improvements shall include an assessment of all storm water overflows associated with the waste water works to determine the effectiveness of their operation and in particular identify improvements necessary to comply with the requirements of this licence:

There are no specified improvement works in the discharge licence and no planned improvement works for the WWTP.

There is no SWO at Rockcorry WWTP. There is a secondary discharge point at the wastewater treatment plant which activates when river levels are high. When river levels are high treated effluent is pumped to the river via this secondary discharge point.

Condition 5.3 (a) and (b) of the licence, the programme of infrastructural improvements shall include a plan for implantation for each individual improvement identified:

Improvement Summary Table

Improvement Identifier / Name	Improvement Description	Improvement Source	Progress (% complete)	Expected Completion Date	Comments
	Chemical Dosing	Improved Operational Control	0%	Agreed but not started	Flow (and load) proportional dosing should be investigated. Priority 2
	Flow related	Improved Operational Control	0%	Agreed but not started	Inlet level adjustment would decrease storm tank fill frequency. Priority 2
	Operational Shortfall	Improved Operational Control	0%	Agreed but not started	Inlet flow trends need to be reviewed so that 3 x DWF is allowed through to treatment. Priority 2

	Other	Improved Operational Control	0%	Agreed but not started	Crude sampling should be undertaken to determine process loadings. Priority 2
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