

Annual Environmental Report 2014

Agglomeration Name:	Rockcorry
Licence Register No.	D0454-01



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Section 1. Executive Summary and Introduction to the 2014 AER

1.1 Summary report on 2014

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. Specified assessments are included as an appendix to the AER as follows:

- Priority substances assessment

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

- preliminary treatment
- primary treatment
- secondary treatment
- chemical dosing for phosphorus removal

The final effluent from the Primary Discharge Point was non-compliant with the Emission Limit Values for cBOD and Ammonia in 2014.

The following parameters exceeded the emission limit values in 2014:-

- Suspended Solids
- cBOD
- Ammonia

729,000 kgs sludge (total weight) were removed from the wastewater treatment plant in 2014 as liquid sludge. Sludge was transferred to Monaghan WWTP.

There were no major capital or operational changes undertaken in 2014.

An Annual Statement of Measures is included in **Appendix 7.1**.

Section 2. Monitoring Reports Summary

2.1 Summary report on monthly influent monitoring

Table 2.1 - Influent Monitoring Summary

	BOD (mg/l)	COD (mg/l)	SS (mg/l)	TN (mg/l)	TP (mg/l)	Hydraulic Loading (m3/d)	Organic Loading (PE/day)
Number of Samples	6	6	6	6	6		
Annual Max.	469	839	325	64	7.5	504	480
Annual Mean	321.5	684.17	132	45	4.35	82	316

Significance of results

The annual mean hydraulic 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 Summary

	pH	cBOD (mg/l)	COD (mg/l)	SS (mg/l)	Total P (mg/l)	Ortho P (mg/l)	Ammonia (mg/l)	Total N (mg/l)	Comment
WWDL ELV (Schedule A)	6 - 9	10	100	35	N/A	1.5	6	N/A	
ELV with Condition 2 Interpretation included	No allowable failures – No deviation allowed	1 allowable failure provided under 100% of ELV (20 mg/l)	1 allowable failure provided under 100% of ELV (200 mg/l)	1 allowable failure provided under 150% of ELV (87.5 mg/l)	N/A	8 out of 10 consec. samples shall not exceed ELV. No individual result shall exceed ELV by more than 20% = (1.8 mg/l)	8 out of 10 consec. samples shall not exceed ELV. No individual result shall exceed ELV by more than 100% = (12 mg/l)	N/A	
Number of sample results	6	6	6	6	N/A	6	6	N/A	
Number of sample results above WWDL ELV	0	2	0	1	N/A	0	1	N/A	
Number of sample results above ELV with Condition 2 Interpretation included	0	1	0	0	N/A	0	1	N/A	
Annual Mean (for parameters where a mean ELV applies)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

Overall Compliance (Pass/Fail)	PASS	FAIL	PASS	PASS	N/A	PASS	FAIL	N/A	
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Significance of results

The WWTP was non-compliant with the ELVs for cBOD and Ammonia set in the wastewater discharge licence. There were 2 samples non-compliant with the ELVs in relation to cBOD and 1 sample non-compliant in relation to SS and Ammonia. The non-compliance is due unidentifiable reasons for the Ammonia or BOD exceedance. The impact on receiving waters is assessed further in Section 2.3.

2.3 Ambient monitoring summary

Table 2.3 - Ambient Monitoring Report Summary

Ambient Monitoring Point from WWDL (or as agreed with EPA)	Irish Grid Reference	EPA Feature Coding Tool code	Current EQS Status	Does assessment of the ambient monitoring results indicate that the discharge is impacting on water quality?
Upstream monitoring point	E264471 N318863	RS36D090080	Moderate /Poor	n/a
Downstream monitoring point	E264363 N318431	RS36D090100	Moderate /Poor	No

The results for the upstream and downstream monitoring are included as in Appendix 7.2.

Significance of results

The WWTP was non-compliant with the ELVs for cBOD and Ammonia set in the wastewater discharge licence as detailed in Section 2.2.

The discharge from the wastewater treatment plant doesn't have an observable impact on the water quality status.

2.4 Data collection and reporting requirements under the Urban Waste Water Treatment Directive

The electronic submission of data was completed on a monthly basis to EPA through MDS (EDEN) in XML format.

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

A PRTR is not required as the agglomerations is less than 2000 p.e.

Section 3 Operational Reports Summary

3.1 Treatment Efficiency Report

A summary presentation of the efficiency of the treatment process including information for all the parameters specified in the licence is included below:-

Table 3.1 - Treatment Efficiency Report Summary

	cBOD (kg/yr)	COD (kg/yr)	SS (kg/yr)	Total P (kg/yr)	Total N (kg/yr)	Comment
Influent mass loading (kg/year)	6929	13922	3597	119	1240	
Effluent mass emission (kg/year)	202	1293	409	21	728	
% Efficiency (% reduction of influent load)	97	91	89	83	41	

3.2 Treatment Capacity Report

Table 3.2 - Treatment Capacity Report Summary

Hydraulic Capacity – Design / As Constructed (dry weather flow) (m3/year)	9855
Hydraulic Capacity – Design / As Constructed (peak flow) (m3/year)	73000
Hydraulic Capacity – Current loading (m3/year)	30000
Hydraulic Capacity – Remaining (m3/year)	43000
Organic Capacity - Design / As Constructed (PE)	1000
Organic Capacity - Current loading (PE)	316
Organic Capacity – Remaining (PE)	684
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 treated 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 p.e. load generated in the agglomeration
Load generated in the agglomeration that is collected in the sewer network	100%
Load collected in the agglomeration that enters treatment plant	100%
Load collected in the sewer network but discharged without treatment	0%

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 above is based on influent monitoring as detailed in Section 2.1 above.

3.4 Complaints Summary

There were no complaints of an environmental nature related to the discharge to waters from the Rockcorry WWTP in 2014.

3.5 Reported Incidents Summary

A summary of reported incidents is included below.

Table 3.5.1 - Summary of Incidents

Incident Type (e.g. Non-compliance, Emission, spillage, Emergency Overflow Activation)	Incident Description	Cause	No. of incidents	Corrective Action	Authorities Contacted <small>Note 1</small>	Reported to EPA (Yes/No)	Closed (Y/N)
ELV exceedance	BOD (2 nd exceedance therefore reportable)	Unknown reason	1	none	No	No	N/A
ELV exceedance	Ammonia (13.46 mg/l)	Unknown reason	1	none	No	No	N/A

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 2014	No. of 2
Number of Incidents reported to the EPA via EDEN in 2014	No. of 0
Explanation of any discrepancies between the two numbers above	The laboratory services alert system for any ELV exceedances was using the old UWWT Reg exceedance limits (25, 35,125) rather than the new licence limits. Due to this miscommunication between the laboratory and MCC no exceedances were reported. The laboratory has since been informed of the new limits and any exceedances will be notified to MCC in the future and subsequently uploaded to EDEN portal.

Irish Water are in continuous communication with Local Authorities reiterating the requirement to report incidents to the EPA as per Waste Water Discharge Licence Requirements. Discussions in relation to this matter are also progressing at senior management level between Irish Water and the Local Authorities. In addition to this Incident Management training will also be provided to Local Authorities in 2015 to address concerns associated with incident classification, reporting requirements and incident notification.

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	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	0	N	N
Industrial / Commercial Sludge	0	0	0	N	N
Landfill Leachate (delivered by tanker)	0	0	0	N	N
Landfill Leachate (delivered by sewer network)	0	0	0	N	N
Other (specify)	0	0	0	N	N

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. Infrastructural Assessments and Programme of Improvements

4.1 Storm water overflow identification and inspection report

As per condition 4.11 of the licence this is required for the 2nd AER. As this is the first AER for Rockcorry, this report is not required until next year.

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

As per condition 5.1 of the licence this is required for the 2nd AER. As this is the first AER for Rockcorry, this report is not required until next year.

Table 4.2.1 - Specified Improvement Programme Summary

Specified Improvement Programmes (under Schedule A and C of WWDL)	Licence Schedule (A or C)	Licence Completion Date	Date Expired? (N/NA/Y)	Status of Works ((i) Not Started; (ii) At planning stage; (iii) Work ongoing on-site; (iv) Commissioning Phase; (v) Completed; (vi) Delayed;)	% Construction Work Completed	Timeframe for Completing the Work	Comments
Waste water works	C	31/12/2019	N	Not Started	0%	Unknown	The improvement programme will be reviewed by Irish Water to assess the works required to comply with the licence condition on a prioritised basis.

A summary of the status of any improvements identified by under Condition 5.2 will be provided in the 2nd AER.

Table 4.2.2 - Improvement Programme Summary

Improvement Identifier	Improvement Description	Improvement Source	Progress (% completed)	Expected Completion Date	Comments
N/A	N/A	WWTP assessment (Condition 5.2).	N/A	N/A	
N/A	N/A	Sewer Integrity Tool	N/A	N/A	

		<i>(Condition 5.2).</i>			
N/A	N/A	<i>Secondary discharges assessment (Condition 5.2).</i>	N/A	N/A	
N/A	N/A	<i>SWO assessment (Condition 4 & 5.2).</i>	N/A	N/A	
N/A	N/A	<i>Drinking Water Abstraction Risk Assessment (Condition 4)</i>	N/A	N/A	
N/A	N/A	<i>Shellfish Impact Risk Assessment (Condition 5)</i>	N/A	N/A	
N/A	N/A	<i>Pearl Mussel Impact Assessment (Condition 4)</i>	N/A	N/A	
N/A	N/A	<i>Improved Operational Control</i>	N/A	N/A	
N/A	N/A	<i>Incident Reduction</i>	N/A	N/A	
N/A	N/A	<i>Elimination/Reduction of Priority Substances</i>	N/A	N/A	

Improvements identified above also include measures taken to prevent environmental damage anticipated following events or accidents/incidents associated with discharges or overflows from the waste water works and as such are considered to fulfil any Statement of Measures requirements. Refer also to Appendix 7.1 which summarises the Annual Statement of Measures.

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	<i>medium</i>	<i>Unknown</i>	<i>SIRAT not used to date</i>
Environmental Risk Assessment Score	<i>medium</i>	<i>Unknown</i>	<i>SIRAT not used to date</i>
Structural Risk Assessment Score	<i>medium</i>	<i>Unknown</i>	<i>SIRAT not used to date</i>
Operation & Maintenance Risk Assessment Score	<i>medium</i>	<i>Unknown</i>	<i>SIRAT not used to date</i>
Overall Risk Score for the agglomeration	<i>medium</i>	<i>Unknown</i>	<i>SIRAT not used to date</i>

Section 5. Licence Specific Reports

Licence Specific Reports Summary Table

Licence Specific Report	Required in 2014 AER or outstanding from previous AER	Included in 2014 AER	Reference to relevant section of AER (e.g. Appendix 2 Section 4).
Priority Substances Assessment	Yes	Yes	Appendix 7.4
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	Appendix 7.4
Drinking Water Abstraction Point Risk Assessment	N/A	N/A
Habitats Impact Assessment	N/A	N/A
Shellfish Impact Assessment	N/A	N/A
Pearl Mussel Report	N/A	N/A
Toxicity/Leachate Management	N/A	N/A
Toxicity of Final Effluent Report	N/A	N/A

5.1 Priority Substances Assessment

The Priority Substances Assessment report is included in Appendix 7.4. 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
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?	Yes
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?	Yes

5.2 Drinking Water Abstraction Point Risk Assessment.

The Drinking Water Abstraction Point Risk Assessment report is not required for Rockcorry.

5.3 Shellfish Impact Assessment Report.

The Shellfish Impact Assessment report is not required for Rockcorry.

5.4 Toxicity / Leachate Management

The Toxicity / Leachate Management Assessment report is not required for Rockcorry.

5.5 Toxicity of the Final Effluent Report

The Toxicity of the Final Effluent Assessment report is not required for Rockcorry.

5.6 Pearl Mussel Measures Report

A sub-basin management plan in relation to Pearl Mussels is not required for Rockcorry.

5.7 Habitats Impact Assessment Report

The Habitats Impact Assessment Report is not required for Rockcorry.

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 <i>(insert lines as required)</i>	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 <i>(insert lines as required)</i>	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 <i>(insert lines as required)</i>	Sewer Integrity Risk Assessment

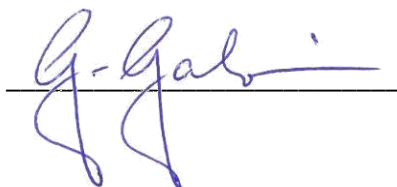
Declaration by Irish Water

The AER contains the following;

- Introduction and background to 2014 AER
- Monitoring reports summary.
- Operational reports summary.
- Infrastructural Assessment and Programme of Improvements.
- Licence specific reports.
- Certification and Sign Off
- Appendices

I certify that to the best of my knowledge the information given in this Annual Environmental Report is truthful, accurate and complete:

Signed:



Date: 15/04/2015

Gerry Galvin
Chief Technical Advisor

Section 7. Appendix

Appendix 7.1 - Annual Statement of Measures

Appendix 7.2 - Ambient monitoring summary

Appendix 7.4 - Priority substances assessment

Appendix 7.1 - Annual Statement of Measures

Risk /Description of issue	Risk Score	Mitigation Measure to be taken	Outcome	Action	Date for Completion	Owner/ Contact Person
High inflows into the Rockcorry WWTP during storm conditions/periods of heavy rainfall		CCTV survey of network & remedial measures identified carried out. Conduct SIRAT on network	SIRAT used to evaluate risk score	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.	C McCrossan

Appendix 7.2 - Ambient monitoring summary

Upstream monitoring results														
Location	Flow M3/day	Location	Date of Sampling	Sample Type (C or G)	Temp	pH	eBOD mg/l	COD mg/l	Suspended Solids mg/l	Ortho Phosphorus (as P) mg/l	Ammonia (as N)	Total Nitrogen mg/l (as N)	Total Phosphorus mg/l (as P)	Dissolved Oxygen (DO)
Rockorry		Up Stream Of Works		G	9.3	7	1			0.036	0.012			10.22
Rockorry		Up Stream Of Works		G	14	7.9	1			0.039	0.056			9.78
Rockorry		Up Stream Of Works		G	16.7	7.8	1			0.092	0.059			8.95
Rockorry		Up Stream Of Works		G	17.2	7.5	2			0.075	0.067			8.15
Rockorry		Up Stream Of Works		G	10.7	7.8	3			0.017	0.026			10.83
Rockorry		Up Stream Of Works		G	7	8	2			0.077	0.036			11.67
Average					12.48	7.67	1.67			0.056	0.043			9.933

Downstream monitoring results														
Location	Flow M3/day	Location	Date of Sampling	Sample Type (C or G)	Temp	pH	cBOD mg/l	COD mg/l	Suspended Solids mg/l	Ortho Phosphorus (as P) mg/l	Ammonia (as N)	Total Nitrogen mg/l (as N)	Total Phosphorus mg/l (as P)	Dissolved Oxygen (DO)
Rockorry		Down Stream of Works	19/02/2014	G	9.6	7	1			0.037	0.012			9.88
Rockorry		Down Stream of Works	22/04/2014	G	14.7	7.9	1			0.041	0.054			9.98
Rockorry		Down Stream of Works	10/06/2014	G	15.7	7.9	1			0.098	0.052			9
Rockorry		Down Stream of Works	12/08/2014	G	17.2	7.6	2			0.071	0.063			8.47
Rockorry		Down Stream of Works	14/10/2014	G	12.7	7.9	1			0.028	0.031			10.7
Rockorry		Down Stream of Works	02/12/2014	G	6.4	8	1			0.072	0.04			12.12
Average					12.72	7.72	1.17			0.058	0.042			10.025

Appendix 7.4 - Priority substances assessment

Priority Substance Assessment

A priority substance assessment is required under condition 4.18 of the licence, by undertaking a *'risk based assessment of the discharge in accordance with the Guidance on the screening for Priority Substances for Waste Water Discharge Licences'*, to identify any priority substances or pollutants in the discharge.

A desktop study is undertaken as follows:

The Rockcorry WWTP catchment area serves a small rural village comprising primarily of domestic dwellings, along with a school, church and local shops. There are no industrial inputs to the waste water works or section 16 licenced companies discharging to the WWTP, or disposal of same at the waste water works. It can therefore be concluded from this desktop overview that there is no further screening necessary or required for organic compounds or heavy metals. Furthermore, in 2009 when the initial discharge licence application for Rockcorry was compiled, monitoring of the effluent discharges and upstream and downstream locations in the receiving Newbliss River was undertaken and analysed for dangerous substances and submitted with the application. There were no elevated levels of these compounds in the discharge as reported. It is therefore concluded that no further screening is required for Rockcorry WWTP with regard to priority substances.