# Annual Environmental Report 2015

<b>Agglomeration Name:</b>	Knockaconny
Licence Register No.	D0463-01





# **Contents**

Section 1. Executive Summary and Introduction to the 2015 AER	3
1.1 Summary Report on 2015	3
Section 2. Monitoring Reports Summary	4
2.1 Summary report on monthly influent monitoring	4
2.2 Discharges from the agglomeration	5
2.3. Ambient Monitoring Summary	6
2.4 Data collection and reporting requirements under the UWWTD	6
2.5 Pollutant Release and Transfer Register (PRTR) - report for previous year	6
Section 3. Operational Reports Summary	7
3.1 Treatment Efficiency Report	7
3.2 Treatment Capacity Report	7
3.3 Extent of Agglomeration Summary Report	7
3.4 Complaints Summary	8
3.5 Reported Incidents Summary	9
3.6 Sludge / Other inputs to the WWTP	10
Section 4. Infrastructure Assessments and Programme of Improvements	11
4.1 Storm water overflow identification and inspection report	11
4.2 Report on progress made and proposals being developed to meet the improvement	ent programme
requirements.	12
Section 5. Licence Specific Reports	15
5.1 Priority Substances Assessment	16
5.2 Drinking Water Abstraction Point Risk Assessment.	16
Section 6. Certification and Sign Off	17
Section 7. Appendix	18
Appendix 7.1 Annual Statement of Measures	19
Appendix 7.2 Ambient Monitoring Results	20
Appendix 7.3 Specified Improvement Programme	21



# Section 1. Executive Summary and Introduction to the 2015 AER

#### 1.1 Summary Report on 2015

This Annual Environmental Report has been prepared for **D0463-01**, **Knockaconny**, in County **Monaghan**, in accordance with the requirements of the wastewater discharge licence for the agglomeration. No specified report is included as an appendix to this AER.

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

- Preliminary Treatment (Screens)
- Secondary Treatment (RAS)
- Chemical dosing for phosphorus removal

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

The following parameters exceeded the emission limit values in 2015:

• Ortho P (mg/l)

No sludge was removed from the wastewater treatment plant in 2015.

The following improvement works were undertaken during 2015: Ferric Dosing was installed at the plant in 2015.

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

2.1.1 Monthly Influent Monitoring	BOD (mg / I)	COD (mg / I)	SS (mg/l)	TP (mg / I)	TN (mg / I)	Hydraulic Loading (m3/d)	Organic Loading (PE/Day)
Number of Samples	7	7	7	1	1		
Annual Max.	558	2160	768	1.3	5.6	264	632
Annual Mean	165.12	402.22	190.81	1.3	5.6	81	231

Note: A rogue value of 1,901 m<sup>3</sup>/d was reported in 2015. This value has not been considered here, as it is supposed it resulted from the river backing up and interfering with the flow meter.

#### 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 greater 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)	Ammonia (as	Ortho P	рН
				N)	(mg/l)	
WWDL ELV (Schedule A) where applicable	20	125	35	5	3	6 to 9
ELV with Condition 2 Interpretation	40	250	87.5	6	3.6	No allowable
included						exceedances
Number of sample results	7	7	7	7	7	7
Number of sample results above WWDL ELV	0	0	0	0	2	
Number of sample results above ELV with	0	0	0	0	2	
Condition 2 Interpretation						
Annual Mean (for parameters where a	N/A	N/A	N/A	N/A	N/A	N/A
mean ELV applies)						
Overall Compliance (Pass/Fail)	Pass	Pass	Pass	Pass	Fail	Pass

# Significance of results

The WWTP was non-compliant with the ELV's set in the wastewater discharge licence. There were 2 sample non-compliant with the ELV's in relation to orthophosphate. The non-compliance was due to the absence of chemical dosing for phosphorus removal at the time. 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			Receiving	Waters D	esignation	(Y/N	WFD Status	Does assessment of the ambient
Monitoring Point from WWDL (or as agreed with EPA)	Irish Grid Reference	EPA Feature Coding Tool code	Bathing Water	Drinking Water	FWPM	Shellfish		monitoring results indicate that the discharge is impacting on water quality?
Upstream monitoring point	268906E 335795N	RS03B010640	N	N	N	N	Poor	
Downstream monitoring point	269003E 335758N	RS03B010641	N	N	N	N	Poor	No

The results for the upstream and downstream monitoring are included in Appendix 7. 2 Ambient Monitoring Results.

#### Significance of results

- The WWTP was non-compliant with the ELV's set in the wastewater discharge licence as detailed in Section 2.2.
- The discharge from the wastewater treatment plant doesn't 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	COD	SS (kg/yr)	Ammonia	Ortho P
	(kg/yr)	(kg/yr)		(kg/yr)	(kg/yr)
Influent mass loading (kg/year)	5,063	12,332	5,850	1722	518.3
Effluent mass emission (kg/year)	68	670	200	10.95	76.5
% Efficiency (% reduction of	99%	95%	97%	99%	85%
influent load)					

#### 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)	29,397
Hydraulic Capacity – Remaining (m3/year)	219,168
Organic Capacity - Design / As Constructed (PE)	1,000
Organic Capacity - Current loading (PE)	231
Organic Capacity – Remaining (PE)	769
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**

There were no complaints of an environmental nature related to Knockaconny WWTP in 2015.

**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)
Emission	Breach of ELV (ortho-phosphate)	Nutrient Removal Required	1	Ferric dosing requirement identified	No	Yes	Yes
Emission	Breach of ELV (ortho-phosphate)	Nutrient Removal Required	1	Contractor engaged to install Ferric dosing	No	Yes	Yes
Emission	Breach of ELV (ortho-phosphate)	Nutrient Removal Required	1	Installation ongoing	No	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	2
Number of Incidents reported to the EPA via EDEN in 2015	3
Explanation of any discrepancies between the two numbers above	Incident on the
	10/02/15 reported
	twice



# 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?	Is there a dedicated leachate/sludge acceptance facility for the WWTP?
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. <u>Sludge that is added to a dedicated sludge reception facility at a waste water treatment plant not include d in Table 3.6.</u> 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

The Storm Water Overflow Identification & Inspection report is included in the 2014 AER. A summary of the significance and operation of SWO is included below.

Table 4.1.1 - SWO Identification and Inspection Summary Report

WWDL Name / Code for Storm Water Overflow	Irish Grid Ref.	Included in Schedule A4 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
SWO02	268917E 335781N	Yes	Low	Complaint	Unknown	Unknown	Unknown	E

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)?	Unknown
How much sewage was discharged via SWOs in the agglomeration in the year (p.e.)?	Unknown
What % of the total volume of sewage generated in the agglomeration was discharged via SWOs in the agglomeration in 2013?	Unknown
Is each SWO identified as non-compliant with DoEHLG Guidance included in the Programme of Improvements?	No
The SWO assessment includes the requirements of relevant WWDL Schedules (Yes/No)	2014 AER Appendix 7.3
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	Licence	Licence	Date	Status of	%	Licensee	Comments
Improvement	Schedule	Completion	Expired	Works	Construction	Timeframe	
Programmes		Date			Work	for	
					Completed	Completing	
						the Work	
None	N/A	N/A	N/A	N/A	N/A	N/A	

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	Improvement	Improvement	Progress	Expected	Comments
Identifier /	Description	Source	(%	Completion	
Name			complete)	Date	
Implement a	Installation of ferric	WWTP assessment	100%		Completed in 2015
phosphorus	dosing system to	(Condition 5.2).			
Removal	lower ortho p levels				
System	discharging from				
	the WWTP				
Mechanical	To remove	WWTP assessment	0%	Unknown	The improvement programme will be reviewed by Irish
screener at	screenings at inlet	(Condition 5.2).			Water to assess the works required to comply with the
inlet works	works to prevent				licence condition on a prioritised basis.
	them going forward				
	into treatment				
	process.				
No record or	Install magmeter	WWTP assessment	0%	Unknown	The improvement programme will be reviewed by Irish
measurement	flow measurement	(Condition 5.2).			Water to assess the works required to comply with the
of outflows or	recorder device to				licence condition on a prioritised basis.
flows into river	measure flows				
		Sewer Integrity			The SNIT has not been completed but will be submitted



		Tool (Condition		following submission of the 2015 AER
		5.2).		
		Secondary		
		discharges		
		assessment		
		(Condition 5.2).		
		SWO assessment		
		(Condition 4 & 5.2).		
		Pearl Mussel		
		Impact Assessment		
		(Condition 4)		
10007268	Flow Monitoring	Improved	01/06/2016	Critical Asset Programme
	and Sampling MN	Operational Control		



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	The SNIT has not been completed but will be submitted following submission of the 2015 AER
Environmental Risk Assessment Score	Unknown	Unknown	The SNIT has not been completed but will be submitted following submission of the 2015 AER
Structural Risk Assessment Score	Unknown	Unknown	The SNIT has not been completed but will be submitted following submission of the 2015 AER
Operation & Maintenance Risk Assessment Score	Unknown	Unknown	The SNIT has not been completed but will be submitted following submission of the 2015 AER
Overall Risk Score for the agglomeration	Unknown	Unknown	The SNIT has not been completed but will be submitted following submission of the 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	N/A	2014 AER
Drinking Water Abstraction Point	Yes	No	N/A
Risk Assessment			
Habitats Impact Assessment	No	N/A	N/A
Shellfish Impact Assessment	No	N/A	N/A
Pearl Mussel Report	No	N/A	N/A
Toxicity/Leachate Management	No	N/A	N/A
Toxicity of Final Effluent Report	No	N/A	N/A

Licence Specific Reports Summary of Findings

Licence Specific Report	Recommend ations in Report	Summary of Recommendations in Report	Status of Recommendations
Priority Substances Assessment	Yes	No further screening for priority substances is required	N/A
Drinking Water Abstraction Point Risk Assessment	N/A	N/A	N/A



## **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** 

	Licensee self- assessment checks to determine whether all relevant information is included in the Assessment.
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 and 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

# **5.2 Drinking Water Abstraction Point Risk Assessment.**

The Drinking Water Abstraction Point Risk Assessment report has not been completed but will be submitted at a later date after submission of the 2015 AER.



# **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	Yes
Waste Water Works (i.e. have the results of assessments been	
interpreted against WWDL requirements and or Environmental	
Quality Standards)?	
Is there a need to advise the EPA for consideration of a	No
technical amendment / review of the licence?	NO
List reason e.g. additional SWO identified	N/A
	IN/A
Is there a need to request/advise the EPA of any modifications	No
to the existing WWDL? Refer to Condition 1.7 (changes to	
works/discharges) & Condition 4 (changes to monitoring	
location, frequency etc.)	
List reason e.g. failure to complete specified works within dates	N/A
specified in the licence, changes to monitoring requirements	
Have these processes commenced? (i.e. Request for Technical	N/A
Amendment / Licence Review / Change Request)	
Are all outstanding reports and assessments from previous	N/A
AERs included as an appendix to this AER?	
List outstanding reports	Sewer Network Integrity Risk Assessment
	Drinking water abstraction point risk
	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: <u>04/03/2016</u>

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 of issue	Risk Score	Mitigation Measure to be taken	Outcome	Action	Date for Completion
Ortho-P ELV exceedances in 2014 and beyond	4x4	Implement a phosphorus removal system to lower ortho-P levels discharging form the WWTP	Reduce ortho P levels in Final Effluent	Install a ferric dosing system	Completed December 2015
Screenings bypassing hand raked screen-	3x3	Fit Mechanical screener at inlet works to remove screenings at inlet works to prevent them going forward into treatment process		Install mechanical screener	The improvement programme will be reviewed by Irish Water to assess the works required to comply with the licence condition on a prioritised basis.
No record or measurement of outflows or flows into river.		Install magmeter flow measurement/recorder device to measure flows			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 (Carbonaceou s) mg/l	Ortho Phosphat e mg/l	pH units		
Knockaconny WWTP Upstream	10/02/2015	Grab			0.053	3	0.028	8		
Knockaconny WWTP Upstream	14/04/2015	Grab	10.95	11.1	0.084	<1	0.021	8		
Knockaconny WWTP Upstream	30/06/2015	Grab	9.26	18	0.083	1	0.13	8.1		
Knockaconny WWTP Upstream	15/07/2015	Grab	8.4	14.2	0.055	1	0.07	7.9		
Knockaconny WWTP Upstream	02/09/2015	Grab	9.55	13.5	0.061	1	0.064	8.3		
Knockaconny WWTP Upstream	02/12/2015	Grab	13.8	8.6	0.094	<1	0.072	7.7		
Average			10.39	13.08	0.072	1.33	0.064	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 (Carbonaceou s) mg/l	Ortho- Phosphate P mg/l	pH units		
Knockaconny WWTP										
Downstream	10/02/2015	Grab			0.069	3	0.049	8		
Knockaconny WWTP Downstream	14/04/2015	Grab	11.19	10.8	0.11	< 1	0.025	8.1		
Knockaconny WWTP Downstream	30/06/2015	Grab	11.4	18.1	0.088	1	0.132	8.2		
Knockaconny WWTP Downstream	15/07/2015	Grab	8.8	14.8	0.052	1	0.079	8		
Knockaconny WWTP Downstream	02/09/2015	Grab	9.24	14.3	0.068	1	0.068	8.2		
Knockaconny WWTP Downstream	02/12/15	Grab	16.62	8.6	0.098	<1	0.067	7.7		
Average			11.45	13.32	0.081	1.33	0.07	8.03		



# **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 are no specified improvements. There are no planned improvement works for the WWTP.

The WWTP is considered to be operating efficiently as effluent results are compliant with specified ELVs in the discharge licence with the exception of Ortho P and the WWTP is achieving adequate removal efficiencies. There were 2 exceedances of the ELV for Ortho P in 2015. Phosphorus removal has now been installed at the plant.

The treatment capacity is addressed in section 3, with adequate remaining capacity at the WWTP.

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

- (i) <u>The existing level of treatment, capacity of treatment plant and associated equipment:</u>
  As discussed in this report, the existing level of treatment at the plant is considered adequate based on ELV compliance and removal efficiencies. There is adequate capacity at the treatment plant.
- (ii) The emission limit values specified in Schedule A: Discharges, of this licence:

  The treatment plant is considered to be operating effectively but there were reportable exceedances in Ortho
  P for 2015 as the results exceeded the 20% allowable exceedance amount. A ferric dosing system was installed
  and commissioned in 2015 to address these exceedances.
- (iii) The designations of the receiving water body:

Under the Blackwater water management unit (WMU) action plan, Knockaconny WWTP is not suggested to be having an impact on the receiving water as there is adequate dilution in the river at that location. The WMU suggests implementing a Performance Management system, which this report and other performance measures taken are deemed to satisfy.

The receiving Blackwater River is not a designated Salmonid Water (under the European Communities (Quality of Salmonid Waters) Regulations, 1988), but it is identified in part, as sensitive water, at this location, from the confluence of the River Shambles to Newmills Bridge, in terms of the Urban Waste Water Treatment Regulations 2001. The river is not designated as an SPA, SAC or NHA. The Blackwater Water River is in the Neagh Bann river basin district with overall status classified as 'Good' but deemed '1a- at risk' with overall objective to protect its status. The 'point risk source' and potential for impact from the WWTP discharge on the river is categorised as 'not at risk', and the Blackwater Water Management Unit Action Plan (WMU) does not list the WWTP as impacting on the Blackwater River (Ref. WFD website & reports). Ambient monitoring results were assessed in this report and it is concluded that there is no significant impact from the discharge of the agglomeration on the receiving water quality. Results indicate some water quality issues at this location may be due to upstream sources.



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

Knockaconny WWTP discharges to waterbody XB\_03\_5 which has been classified as poor and has an objective of restore 2021 in the Neagh Bann International River Basin Management Plan.

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

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

<u>Under condition 5.2 (b) of the licence, the programme of infrastructural improvements shall include an</u> 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) <u>Misconnections between foul sewers and surface water drainage network:</u> There are no known misconnections on the Knockaconny network.
  - (iv) <u>Infiltration by surface water/ground water:</u>

The network is a separate system, therefore during storm conditions/periods of extensive rainfall, inflows into the WWTP don't increase greatly.

b) Programme of Improvements

<u>Under condition 5.2 (c) of the licence, the programme of infrastructural improvements shall include an</u>
<u>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:</u>

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

An assessment of the SWO from a storm tank at the WWTP in relation to the 'Procedures and criteria in relation to Storm Water Overflows', 1995 document, was addressed in section 4.1 of this report, it is concluded that the SWO complies with the document as assessed under section 4.1.

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:

There is no specified improvement works under schedule C1 or C2 of the discharge licence. One individual improvement identified for the WWTP is the addition of a ferric dosing system to reduce OrthoP in 2015.



# **Improvement Summary Table**

Improvement Identifier	Improvement Description	Improvement Source	Progress (%)completed	Expected Completion Date
Implement a phosphorus removal system	Lower ortho-P levels discharging form the WWTP	Installation of ferric dosing system	100%	2015
Mechanical screener at inlet works	To remove screenings at inlet works to prevent them going forward into treatment process		0%	The improvement programme will be reviewed by Irish Water to assess the works required to comply with the licence condition on a prioritised basis.
No record or measurement of outflows or flows into river.	Install magmeter flow measurement/recorder device to measure flows		0%	The improvement programme will be reviewed by Irish Water to assess the works required to comply with the licence condition on a prioritised basis.