

# Annual Environmental Report

## 2024



Manorcunningham

D0519-01

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# 1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2024 AER

This Annual Environmental Report has been prepared for D0519-01, Manorcunningham, in Donegal in accordance with the requirements of the wastewater discharge licence for the agglomeration. Specified reports where relevant are included as an appendix to the AER.

## 1.1 ANNUAL STATEMENT OF MEASURES

A summary of any improvements undertaken is provided where applicable.

## 1.2 TREATMENT SUMMARY

The agglomeration is served by a wastewater treatment plant(s)

- Manorcunningham WWTP with a Plant Capacity PE of 1000, the treatment type is 2 - Secondary treatment .

## 1.3 ELV OVERVIEW

The overall compliance of the final effluent with the Emission Limit Values (ELVs) is shown below. More detailed information on the below ELV's can be found in Section 2.

Discharge Point Reference	Treatment Plant	Discharge Type	Compliance Status	Parameters failing if relevant
TPEFF0600D0519SW001	Manorcunningham WWTP	Treated	Non-Compliant	Ammonia-Total (as N) mg/l BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l Total Oxidised Nitrogen (as N) mg/l

## 1.4 LICENCE SPECIFIC REPORTING

Assessment / Report
There are no Licence Specific Reports included in this AER.

## 2 TREATMENT PLANT PERFORMANCE AND IMPACT SUMMARY

### 2.1 MANORCUNNINGHAM WWTP - TREATED DISCHARGE

#### 2.1.1 INFLUENT MONITORING SUMMARY - MANORCUNNINGHAM WWTP

A summary of influent monitoring for the treatment plant is presented below. This monitoring is primarily undertaken in order to determine the overall efficiency of the plant in removing pollutants from the raw wastewater.

Parameters	Number of Samples	Annual Max	Annual Mean
Ammonia-Total (as N) mg/l	6	62	45
COD-Cr mg/l	6	1380	649
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	6	888	310
ortho-Phosphate (as P) - unspecified mg/l	6	6.30	4.58
Suspended Solids mg/l	6	620	238
pH pH units	6	8.10	7.72
Hydraulic Capacity	N/A	612	306

If other inputs in the form of sludge / leachate are added to the WWTP then these are included in Section 2.1.5 if applicable.

#### Significance of Results:

The annual mean hydraulic loading is less than the peak Treatment Plant Capacity. The annual maximum hydraulic loading is less than the peak Treatment Plant Capacity. Further details on the plant capacity and efficiency can be found under the sectional 'Operational Performance Summary'. The design of the wastewater treatment plant allows for peak values and therefore the peak loads have not impacted on compliance with Emission Limit Values.

## 2.1.2 EFFLUENT MONITORING SUMMARY - TPEFF0600D0519SW001

Parameter	WWDL ELV (Schedule A)	ELV with Condition 2 Interpretation included Note 1	Interim % reduction from influent concentration	Number of sample results	Number of exceedances	Number of exceedances with Condition 2 Interpretation included	Annual Mean	Overall Compliance (Pass/Fail)
COD-Cr mg/l	125	250	N/A	6	1	N/A	106	Pass
Suspended Solids mg/l	35	87.5	N/A	6	1	N/A	24	Pass
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	25	50	N/A	6	2	N/A	20	Fail
Total Oxidised Nitrogen (as N) mg/l	15	18	N/A	6	2	1	13	Fail
Ammonia-Total (as N) mg/l	10	12	N/A	6	4	2	10	Fail
pH pH units	9	9	N/A	6	N/A	N/A	7.28	Pass
ortho-Phosphate (as P) - unspecified mg/l	8	9.6	N/A	6	N/A	N/A	3.51	Pass
Conductivity @20°C µS/cm	N/A	N/A	N/A	6	N/A	N/A	658	
Nitrate (as NO3) mg/l	N/A	N/A	N/A	1	N/A	N/A	73	

Parameter	WWDL ELV (Schedule A)	ELV with Condition 2 Interpretation included Note 1	Interim % reduction from influent concentration	Number of sample results	Number of exceedances	Number of exceedances with Condition 2 Interpretation included	Annual Mean	Overall Compliance (Pass/Fail)
<b>E. Coli MPN/100ml</b>	N/A	N/A	N/A	7	N/A	N/A	701013	
<b>Nitrite (as N) mg/l</b>	N/A	N/A	N/A	6	N/A	N/A	3.18	
<b>Nitrate (as N) mg/l</b>	N/A	N/A	N/A	6	N/A	N/A	11	
<b>Enterococci (Intestinal) cfu/100ml</b>	N/A	N/A	N/A	7	N/A	N/A	312099	
<b>Faecal coliforms cfu/100ml</b>	N/A	N/A	N/A	7	N/A	N/A	370157	
<b>Nitrite (as NO2) mg/l</b>	N/A	N/A	N/A	1	N/A	N/A	8.23	

Notes:

1 – This represents the Emission Limit Values after the Interpretation provided for under Condition 2 of the licence is applied

2 – For pH the WWDA specifies a range of pH 6 - 9

### Cause of Exceedance(s):

Refer to Incident section of the report

### Significance of Results:

The WWTP is non compliant with the ELVs set in the wastewater discharge license. The impact on receiving waters is assessed further in section 2.

## 2.1.3 AMBIENT MONITORING SUMMARY FOR THE TREATMENT PLANT DISCHARGE

### TPEFF0600D0519SW001

A summary of monitoring from ambient monitoring points associated with the wastewater discharge is provided in the sections below. For discharges to rivers upstream (U/S) and downstream (D/S) location data is provided. For other ambient points in lakes, coastal or transitional waters, monitoring data from the most appropriate monitoring station is selected.

The table below provides details of ambient monitoring locations and details of any designations as sensitive areas.

Ambient Monitoring Point from WWDL (or as agreed with EPA)	Irish Grid Reference	River Station Code	Bathing Water	Drinking Water	FWPM	Shellfish	WFD Ecological Status
<b>Upstream</b>	223515, 410246	RS39L050660	No	No	No	Yes	Moderate
<b>Downstream</b>	223304, 411899	RS39L050840	No	No	No	Yes	Moderate

The table below provides a summary of monitoring results for designated ambient monitoring points. The upstream and downstream annual mean values are shown (mg/l), and the difference between both monitoring stations is given as a percentage of the Environmental Quality Standard (EQS) where relevant.

Parameter Name	Upstream Monitoring Point Location	Upstream Monitoring Point Annual Mean	Downstream Monitoring Point Location	Downstream Monitoring Point Annual Mean	EQS	% of EQS
<b>BOD - 5 days (Total) mg/l</b>	RS39L050660	1.00	RS39L050840	4.50	1.50	233.3
<b>Ammonia-Total (as N) mg/l</b>	RS39L050660	0.045	RS39L050840	0.125	0.065	123.7
<b>ortho-Phosphate (as P) - unspecified mg/l</b>	RS39L050660	0.035	RS39L050840	0.030	0.035	-15.3
<b>Nitrate (as N) mg/l</b>	RS39L050660	0.655	RS39L050840	N/A	N/A	



Parameter Name	Upstream Monitoring Point Location	Upstream Monitoring Point Annual Mean	Downstream Monitoring Point Location	Downstream Monitoring Point Annual Mean	EQS	% of EQS
Nitrite (as N) mg/l	RS39L050660	0.011	RS39L050840	N/A	N/A	
Enterococci (Intestinal) cfu/100ml	RS39L050660	773	RS39L050840	101	N/A	
Salinity PSU	RS39L050660	0.221	RS39L050840	8.90	N/A	
pH pH units	RS39L050660	7.86	RS39L050840	7.70	N/A	
Dissolved Oxygen % Saturation	RS39L050660	104	RS39L050840	99	N/A	
E. Coli MPN/100ml	RS39L050660	1214	RS39L050840	101	N/A	
COD-Cr mg/l	RS39L050660	21	RS39L050840	30	N/A	
Temperature °C	RS39L050660	12	RS39L050840	N/A	N/A	
Conductivity @20°C µS/cm	RS39L050660	345	RS39L050840	N/A	N/A	
Sodium - unfiltered mg/l	RS39L050660	11	RS39L050840	N/A	N/A	
Faecal coliforms cfu/100ml	RS39L050660	961	RS39L050840	N/A	N/A	
Dissolved Inorganic Nitrogen (as N) mg/l	RS39L050660	0.694	RS39L050840	0.415	N/A	
Suspended Solids mg/l	RS39L050660	4.24	RS39L050840	18	N/A	

## Significance of Results:

The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence.

The ambient monitoring results do not meet the required EQS at the upstream and the downstream monitoring locations. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009.

The discharge from the wastewater treatment plant does not have an observable impact on the water quality.

A deterioration in water quality has been identified, however it is not known if it or is not caused by the WWTP.

Other causes of deterioration in water quality in the area are unknown.

The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status.

The discharge from the wastewater treatment plant does not have an observable impact on the designated shellfish water quality.

## 2.1.4 OPERATIONAL PERFORMANCE SUMMARY - MANORCUNNINGHAM WWTP

### 2.1.4.1 Treatment Efficiency Report - Manorcunningham WWTP

Treatment efficiency is based on the removal of key pollutants from the influent wastewater by the treatment plant. In essence the calculation is based on the balance of load coming into the plant versus the load leaving the plant. The efficiency is presented as a percentage removal rate.

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

Parameter	Influent mass loading (kg/year)	Effluent mass emission (kg/year)	Efficiency (% reduction of influent load)
SS	26562	2716	90
TP	N/A	N/A	N/A
COD	72432	11830	84
cBOD	34616	2232	94
TN	N/A	N/A	N/A

Note: The above data is based on sample results for the number of dates reported

#### **2.1.4.2 Treatment Capacity Report Summary - Manorcunningham WWTP**

Treatment capacity is an assessment of the hydraulic (flow) and organic (the amount of pollutants) load a treatment plant is designed to treat versus the current loading of that plant.

Manorcunningham WWTP	
Peak Hydraulic Capacity (m <sup>3</sup> /day) - As Constructed	750
DWF to the Treatment Plant (m <sup>3</sup> /day)	250
Current Hydraulic Loading - annual max (m <sup>3</sup> /day)	611.55
Average Hydraulic loading to the Treatment Plant (m <sup>3</sup> /day)	305.77
Organic Capacity (PE) - As Constructed	1000
Organic Capacity (PE) - Collected Load (peak week) <sup>Note1</sup>	906
Organic Capacity (PE) - Remaining	94
Will the capacity be exceeded in the next three years? (Yes/No)	Yes

Nominal design capacities can be based on conservative design principles. In some cases assessment of existing plants has shown organic capacities significantly higher than the nominal design capacity. Accordingly plants that appear to be overloaded when comparing a collected peak load with the nominal design capacity can be fully compliant due to the safety factors in the original design.

#### **2.1.5 SLUDGE / OTHER INPUTS - MANORCUNNINGHAM WWTP**

'Other inputs' to the waste water treatment plant are summarised in table below

Input type	Quantity	Unit	P.E.	% 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? (Y/N)
There is no Sludge and Other Input data for the Treatment Plant included in the AER.							

### 3 COMPLAINTS AND INCIDENTS

#### 3.1 COMPLAINTS SUMMARY

A summary of complaints of an environmental nature related to the discharge(s) to water from the WWTP and network is included below.

Number of Complaints	Nature of Complaint	Number Open Complaints	Number Closed Complaints
There were no relevant environmental complaints in 2024.			

#### 3.2 REPORTED INCIDENTS SUMMARY

Environmental incidents that arise in an agglomeration are reported on an on-going basis in accordance with our waste water discharge licences. Where an incident occurs and it is reportable under the licence, it is reported to the Environmental Protection Agency through their Environmental Data Exchange Network, or in some instances by telephone. Some incidents which arise in the agglomeration are recorded by Uisce Éireann but may not be reportable under our licence for example where the incident does not have an impact on environmental performance.

A summary of reported incidents is included below.

##### 3.2.1 SUMMARY OF INCIDENTS

Incident Type	Cause	Recurring (Y/N)	Closed (Y/N)
Breach of ELV	Inadequate Operational Procedures/Training	Yes	No

### 3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2024	1
Number of Incidents reported to the EPA via EDEN in 2024	1
Explanation of any discrepancies between the two numbers above	N/A

## 4 INFRASTRUCTURAL ASSESSMENTS AND PROGRAMME OF IMPROVEMENTS

### 4.1 STORM WATER OVERFLOW IDENTIFICATION AND INSPECTION REPORT

A summary of the operation of the storm water overflows and their significance where known is included below:

#### 4.1.1 SWO IDENTIFICATION

WWDL Name / Code for Storm Water Overflow (chamber) where applicable	Irish Grid Ref. (outfall)	Included in Schedule of the WWDL	Significance of the overflow(High / Medium / Low)	Assessed against DoEHLG Criteria	No. of times activated in 2024 (No. of events)	Total volume discharged in 2024 (m3)	Monitoring Status
There are no Storm Water Overflows in this Agglomeration.							

The contents presented in this table include the most up to date information available at the time of writing. Any TBC SWO(s) were identified as part of the on-going National SWO programme and will be updated in subsequent AER(s) once the information is confirmed.

SWO Summary	
How much wastewater discharge by metered SWOs during the year (m3)?	Unknown
Is each SWO identified as not meeting DoEHLG Guidance included in the Programme of Improvements?	
The SWO Assessment included the requirements of relevant of WWDL schedules?	Unknown
Have the EPA been advised of any additional SWOs / changes to Schedule C3 and A4 under Condition 1.7?	Unknown

## 4.2 REPORT ON PROGRESS MADE AND PROPOSALS BEING DEVELOPED TO MEET THE IMPROVEMENT PROGRAMME REQUIREMENTS.

### 4.2.1 SPECIFIED IMPROVEMENT PROGRAMME SUMMARY

A wastewater discharge licence may require a number of reports on specific subject areas to be prepared for the agglomeration in question. These reports are submitted to the EPA as part of the Annual Environmental Report. This section provides a list of the various reports required for this agglomeration and a brief summary of their recommendations.

Specified Improvement Programmes (under Schedule A and C of WWDL)	Description	Licence Schedule	Licence Completion Date	Date Expired? (N/NA/Y)	Status of Works	Timeframe for Completing the Work	Comments
There are no Specified Improvement Programmes for this Agglomeration.							

A summary of the status of any other improvements identified by under Condition 5 assessments- is included below.

### 4.2.2 IMPROVEMENT PROGRAMME SUMMARY

Improvement Identifier	Improvement Description / or any Operational Improvements	Improvement Source	Expected Completion Date	Comments
No additional improvements planned at this time.				

### 4.2.3 SEWER INTEGRITY RISK ASSESSMENT

N/A



## 5 LICENCE SPECIFIC REPORTS

A wastewater discharge licence may require a number of reports on specific subject areas to be prepared for the agglomeration in question. These reports are submitted to the EPA as part of the Annual Environmental Report. This section provides a list of the various reports required for this agglomeration and a brief summary of their recommendations.

Licence Specific Report	Required by licence	Included in this AER
D0519-01-Priority Substances Assessment	Yes	No
D0519-01-Shellfish Impact Assessment	Yes	No

## 6 CERTIFICATION AND SIGN OFF

### 6.1 SUMMARY OF AER CONTENTS

Parameter	Answer
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?	N/A
List reason e.g. additional SWO identified	N/A
Is there a need to request/advise the EPA of any modification to the existing WWDL with respect to condition 4 changes to monitoring location, frequency etc	N/A
List reason e.g. changes to monitoring requirements	N/A
Have these processes commenced?	N/A
Are all outstanding reports and assessments from previous AERs included as an appendix to this AER	N/A

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

Signed:    Date: 21/05/2025

This AER has been produced by Uisce Éireann's Environmental Information System (EIMS) and has been electronically signed off in that system for and on behalf of ,

Eleanor Roche

Head of Environmental Regulation.

# 7 APPENDIX

Appendix
Appendix 7.1 - Ambient monitoring summary

Manorcunningham WWTP

Ambient Monitoring Points from WWDL (or as agreed by EPA)	Irish Grid Reference	EPA Feature Coding Tool code	Receiving Waters Designation (Y/N)				WFD Status
			Bathing Water	Drinking Water	FWPM	Shellfish	
Upstream Monitoring Station	223515, 410246	RS39L050660	No	No	No	Yes	Moderate
Downstream Monitoring Station	223304, 411899	RS39L050840	No	No	No	Yes	Moderate

Parameter Name	Upstream Monitoring Point Location	Upstream Monitoring Point Annual Mean	Downstream Monitoring Point Location	Downstream Monitoring Point Annual Mean	EQS (mean)	% EQS
cBOD mg/l	223515, 410246	1.3	223304, 411899	4	1.5	180
Ortho-Phosphate (as P) mg/l	223515, 410246	0.046	223304, 411899	0.033	0.035	-37.14
Ammonia (as N) mg/l	223515, 410246	0.088	223304, 411899	0.143	0.065	84.6

County	Licence Ref.	Agglomeration	Receiving Water Body	Monitoring Location	Monitoring Result Source	Date																																					
							pH	Temperature (°C)	BOD mg/l	COD mg/l	SS mg/l	Total Nitrogen (as N) mg/l	Total Phosphorus (as P) mg/l	Ammonia (as N) mg/l	Orthophosphate (as P) mg/l	Dissolved Oxygen mg/l	Dissolved Oxygen %Sat	Total Oxidised Nitrogen (as N) mg/l	Dissolved Inorganic Nitrogen (as N) mg/l	Faecal Coliforms (cfu/100ml)	Escherichia coli (cfu/100ml)	Intestinal Enterococci (cfu/100ml)	Visual Inspection	SSRS	Water level	Conductivity	Chloride	Fluoride	Ammonium (NH4)	Major anions	Major Cations	Priority Subs	Metals & Organic Compounds	Salinity	Nitrate	Nitrite	Chlorophyll (ug/l)	Chlorophyll (mg/m3)					
Dongall Issued on 22/09/2015	00119-01	Invercunningham	Leslie Hill Stream/Corkie	Number of samples Required			4	0	4	4	4	0	0	4	4	4		0	4	4	4	4	4	52	0	0										0	0	0	0				
				Upstream- SW1u (l)																																							
				Downstream-SW1d (l)																																							
				Manor - Upstream	Email	23/01/2024	8	6.1	1	24	NT	NT	NT	0.032	0.05				99.4	NT	0.9	1095	1119	441	NT				278									1	0.872	0.015	NT		
				Manor - Upstream	Email	21/03/2024	7.8	8.1	1	20	6	NT	NT	0.159	0.05				94.2	NT	0.28	364	389	135	NT				326									0.1	0.23	0.015	NT		
				Manor - Downstream	Email	27/03/2024	7.5	NT	5	33	10	NT	NT	0.03	0.05				100.9	NT	0.04	100	100	100	NT				NT									17	NT	NT	NT		
				Manor - Upstream	Email	14/05/2024	7.7	14	25	6	NT	NT	0.015	0.05				115.1	NT	0.99	687	1046	326	NT				NT										0.1	0.97	0.015	NT		
				Manor - Downstream	Email	28/05/2024	7.9	NT	4	26	26	NT	NT	0.22	0.01				96.2	NT	0.79	100	100	100	NT				NT									0.81	NT	NT	NT		
				Manor - Upstream	Email	17/07/2024	7.9	16.7	1	20	6	NT	NT	0.015	0.05				107.7	NT	0.4	1246	1725	865	NT				410										0.1	0.387	0.015	NT	
				Manor - Upstream	Email	14/08/2024	7.9	15.7	1	29	6	NT	NT	0.015	0.05				105.3	NT	0.9	1414	1789	2098	NT				320										0.1	0.885	0.015	NT	
Manor - Upstream	Email	11-Sep-24	7.9	NT	3	23	10	NT	NT	0.38	0.03				90.3	NT	1.22	100	100	100	NT				NT										0.3	NT	NT	NT					
Manor - Downstream	Email	19-Nov-24	7	NT	3	24	32	NT	NT	0.18	0.04				99.5	NT	0.74	9	9	27	NT				NT										3	NT	NT	NT					