



**Guidance on the preparation and submission of Annual  
Environmental Reports for waste water discharge  
licences**

**Environmental Protection Agency**

An Ghníomhaireacht um Chaomhnú Comhshaoil

P.O. Box 3000, Johnstown Castle Estate, County Wexford, Ireland Y35 W821

Telephone: +353 53 9160600

Fax: +353 53 9160699

E-mail: [info@epa.ie](mailto:info@epa.ie)

Website: [www.epa.ie](http://www.epa.ie)

LoCall: 1890 335599

# Table of Contents

<b>A. Introduction .....</b>	<b>3</b>
<b>B. Preparation of the AER.....</b>	<b>4</b>
<b>Section 1. Executive summary and introduction to the AER.....</b>	<b>5</b>
1.1 Summary report.....	5
<b>Section 2. Monitoring reports summary.....</b>	<b>5</b>
2.1 Summary report on monthly influent monitoring .....	5
2.2 Discharges from the agglomeration .....	6
2.3 Ambient monitoring summary.....	7
2.4 Data collection and reporting requirements under the Urban Waste Water Treatment Directive .....	9
2.5 Pollutant Release and Transfer Register (PRTR) - report for previous year .....	9
<b>Section 3 Operational Reports Summary.....</b>	<b>10</b>
3.1 Treatment Efficiency Report.....	10
3.2 Treatment Capacity Report .....	10
3.3 Extent of Agglomeration Summary Report.....	11
3.4 Complaints Summary .....	12
3.5 Reported Incidents Summary.....	13
3.6 Sludge / Other inputs to the WWTP .....	14
<b>Section 4. Infrastructural Assessments and Programme of Improvements .....</b>	<b>15</b>
4.1 Storm water overflow identification and inspection report.....	15
4.2 Report on progress made and proposals being developed to meet the improvement programme requirements.....	16
<b>Section 5. Licence Specific Reports.....</b>	<b>18</b>
5.1 Priority Substances Assessment.....	19
5.2 Drinking Water Abstraction Point Risk Assessment.....	19
5.3 Shellfish Impact Assessment Report. ....	20
5.4 Toxicity / Leachate Management .....	21
5.5 Toxicity of the Final Effluent Report .....	22
5.6 Pearl Mussel Measures Report .....	22
5.7 Habitats Impact Assessment Report .....	23
<b>Section 6. Certification and Sign Off .....</b>	<b>25</b>
<b>Section 7. Appendix .....</b>	<b>26</b>

## A. Introduction

Condition 6 of EPA waste water discharge licences (WWDLs) require Irish Water to prepare and submit an Annual Environmental Report (AER) for the previous reporting year, that is to the satisfaction of the EPA. The AER must be submitted to the EPA by the 28<sup>th</sup> February. This requirement applies to all WWDLs issued on or before 31st December of the previous year. This guidance document is provided to assist Irish Water with the preparation of their AERs.

*“The licensee shall submit to the Agency, by the 28<sup>th</sup> of February of each year, an AER covering the previous calendar year. This report, which shall be to the satisfaction of the Agency, shall include as a minimum the information specified in Schedule D: Annual Environmental Report of this licence and shall be prepared in accordance with any relevant guidelines issued by the Agency.”*

The annual reporting of environmental information is a legal requirement for the operators of all EPA Waste Water Discharge Licences. The annual reporting obligation comprises three separate tasks. These are:

- 1      **Full PDF AER.** Submission of an electronic PDF copy of the full AER.
- 2      **Urban Waste Water Treatment Data:** Reporting of Urban Waste Water Treatment data via EDEN-MDS, and the summary excel spreadsheet for plant, agglomeration and receiving water
- 3      **PRTR Emissions Data:** Reporting of emissions and waste transfer information via the EPA’s AER / PRTR Emissions Data Reporting Workbook. Please note that a PRTR is only required for licensed agglomerations above 100,000 p.e.

**Tasks 1 and 3** are carried out online via the EPA’s AER / PRTR annual environmental reporting website at the link: <http://aer.epa.ie/reporting/pgLogon.aspx>,

**Task 2** is achieved by submission of the monitoring results via EDEN at the following link; <https://www.edenireland.ie/> and the excel reporting template issued annually to Irish Water.

In addition to the three tasks above, the EPA may request submission of collated information on all AERs directly from Irish Water. This step of the AER reporting process will be covered in separate correspondence with Irish Water.

The reporting obligation will not be satisfied until all relevant steps are completed and the EPA has confirmed that it has accepted the information.

Guidance documentation for WWDLs is provided on the EPA website at the following link: <http://www.epa.ie/pubs/advice/wastewater/>.

## **B. Preparation of the AER**

Condition 6 and Schedule D of the WWDL sets out the contents required in the AER. This may differ between licences so it is important to check the AER requirements of each licence (conditions and schedules). The AER requirements and format may be considered under the following seven categories:

1. Executive summary and introduction
2. Monitoring reports summary
3. Operational reports summary
4. Infrastructural assessment and programme of improvements
5. Licence specific reports
6. Certification and sign off
7. Appendix

The AER should be prepared under the 7 different sections listed above. The remainder of this guidance document summarises what is expected under each of these headings. Irish Water should ensure that the AER contains all the information that is required under the licence, and is presented as outlined in this guidance document.

Note: From 2012, Environmental Liabilities Risk Assessment and Financial Provisions are no longer required for all waste water discharge authorisations. Irish Water is required to prepare and submit an Annual Statement of Measures as part of the AER. This must contain the measures taken or adopted by Irish Water to prevent environmental damage anticipated following events or accidents / incidents associated with discharges or overflows from the waste water works. This should include cessation / decommissioning of any discharge associated with the works, if expected within 3 years. It should also address the list of impacts / improvements identified in the Condition 5 assessment of the existing works, the storm water overflow identification and assessment, and licence specific reports (e.g. drinking water abstraction risk assessment, shellfish impact risk assessment).

Where outstanding assessments and / or reports that were due in earlier AERs are being provided, their findings should be included in the relevant summary report section of the AER. Where relevant the main reports on which the summary is based can be attached as an appendix to the AER.

It is a WWDL requirement that each AER report is certified as accurate and representative by a nominated suitably qualified and experienced person.

Where the AER relies on colour coding to illustrate findings, the pdf copy must be in colour. If you have further queries in relation to this guidance document or regarding the content of the AER, please contact the EPA's waste water enforcement team.

## Section 1. Executive summary and introduction to the AER

### 1.1 Summary report

In this section, which should be two pages maximum, provide an introduction to what is included in the AER and the key findings for the year. This should include a brief description of the works, details of any compliance issues such as ELV exceedances and incidents, water quality and any significant improvement works or projects carried out during the year (or plans for such with timeframes). This can be presented in tabular format but must include an interpretation of the significance of the findings and improvements in relation to licence requirements.

Where relevant, this section should identify if the agglomeration is on the European Commission infringement list and / or meets any of the EPA's waste water priorities. These priorities are summarised on page 19 of the [Urban Waste Water Treatment in 2016](#) report. This section should also include a brief discussion on which of the priorities it meets and a summary and timeframe of actions planned or underway to resolve the priority issue(s).

## Section 2. Monitoring reports summary

### 2.1 Summary report on monthly influent monitoring

Include a summary of influent monitoring results for BOD, COD, suspended solids, Total Nitrogen and Total Phosphorus (where required by the licence). This can be presented in tabular format and must include an interpretation of the significance of the results in relation to licence requirements. These results are used to determine the mass loading and removal efficiencies of the works required by Condition 4.

Please note that the Influent Monitoring Summary Table is available as a dashboard on EDEN via Code Management / Returns and Scheme Management. This provides a report based on the data uploaded at the time. Please ensure that all sample data is uploaded to EDEN-MDS to ensure it is included in the dashboard.

Preferred format for the Influent Monitoring Summary Table:

	<b>BOD (mg/l)</b>	<b>COD (mg/l)</b>	<b>SS (mg/l)</b>	<b>TP (mg/l)</b>	<b>TN (mg/l)</b>	<b>Hydraulic loading (m3/d)</b>
Number of samples						
Annual max.						
Annual mean						

## 2.2 Discharges from the agglomeration

A summary presentation of monitoring results for primary and secondary discharge points, as set out in Schedule B of the licence. The emission limit values or ELVs (where applicable) should be included. This can be presented as a summary table, with ELV exceedances clearly highlighted.

This section must include an interpretation of the significance of the results (i.e. a discussion on compliance with the ELVs and monitoring frequency specified in the licence).

Where exceedances are reported, they can be grouped by cause. Significance must be assessed in terms of the impact on receiving water quality / designation and frequency and duration of the exceedance. This should also summarise the cause of the ELV exceedance as well as the measures taken, or to be taken, to eliminate/minimise recurrence of the exceedance. Note: if grab samples are taken, compliance is determined using different criteria in Condition 2 to those for a sample from a composite sampler.

Preferred format for the Effluent Monitoring Summary Table

	BOD (mg/l)	COD (mg/l)	TSS (mg/l)	Total P (mg/l)	Total N (mg/l)	Other parameters specified in the WWDL	Comment
WWDL ELV (Schedule A)							
ELV with Condition 2 interpretation included							
<i>Interim</i> % reduction from influent concentration <sup>1</sup>							
Number of sample results							
Number of sample results above WWDL ELV						Insert an additional column for each extra parameter	Include any relevant explanatory notes
Number of sample results above ELV with Condition 2 interpretation included							e.g. grab / composite taken
Annual mean (for parameters where a mean ELV applies)							
Overall compliance (pass/fail)							

Notes:

1. % reductions apply in certain licences only and are based on the minimum % reduction relative to the influent load for each sample. Lines can be deleted for clarity if not used.

## 2.3 Ambient monitoring summary

A summary presentation of ambient monitoring results as set out in Schedule B of the licence. This must include an interpretation of the impact of the discharge(s) from the agglomeration on the receiving water, i.e. comparison of results against any designation of the receiving water (e.g. Environmental Quality Standards (EQS), Pearl Mussel, Shellfish, Bathing Water Regulations).

If Irish Water is not satisfied with the location of the licensed ambient monitoring points, it should apply to the EPA for a change to the location using Condition 4. Similarly, if the ambient monitoring locations are not specified in the licence and are to be agreed by the EPA, the licensee should apply to the EPA for approval of these locations. A [form for agreeing ambient monitoring locations](#) is available on the [WWDL guidance](#) section of the EPA website.

Irish Water is advised to consider using any relevant and reliable ambient monitoring conducted by other organisations when completing their ambient monitoring programme or deciding on a relevant monitoring location. Irish Water is required to submit all ambient monitoring from licenced and approved monitoring locations electronically via EDEN-MDS at <https://www.edenireland.ie/>. The codes for ambient monitoring locations can be created using the EPA's Feature Coding Tool on EDEN.

Preferred format for the Ambient Monitoring Report Summary Table:

Ambient monitoring point from WWDL (or as agreed with EPA)	Irish Grid Reference	Ambient point code	Bathing water	Drinking water	Pearl mussel	Shellfish	Does the assessment of the ambient monitoring results indicate that the discharge is impacting on water quality?
Upstream ambient sample points							Yes / No <sup>Note1</sup>
Downstream ambient sample points							
Insert a line for each ambient monitoring location							

Note 1: List the parameter(s) causing impact(s) for each Yes answer

The AER should provide a commentary on the interpretation of the impact of the discharge(s) on receiving waters. It should also identify:

- If there is a deterioration in the Water Framework Directive status of the receiving water.
- If any parameters are failing which may impact on the water quality of the receiving water, e.g. failing to meet any EQS.

- If there are known impacts on the water quality of the receiving water (e.g. based on complaints, feedback from IFI, or other known issues).

To improve assessment of the ambient impact and to direct investigation, the following assessment process should be carried out where the effluent is non-compliant with emission limit values. The purpose of this is to comment on the contribution to the receiving water from the waste water discharge(s) by comparison with the relevant EQS as follows:

- $d/s \text{ sample} - u/s \text{ sample} = \text{waste water works contribution for each compound with an EQS.}$
  - $\text{Contribution from the works} / \text{EQS} = \text{Ratio of input to EQS.}$
1. Where the ratio of input to EQS is  $>1$  this indicates that the discharge from the works is giving rise to a breach of EQS in the receiving water regardless of status.
  2. Where the ratio of input to EQS is  $>0.75$  this indicates that the discharge from the works is a significant pressure on the receiving water.
  3. Where the ratio of input to EQS is  $>0.5$  this indicates that the discharge from the works is a pressure on the receiving water.

For each parameter where Irish Water identifies its discharge is having an impact it should prepare an improvement programme to ensure that the discharge does not cause pollution.

Preferred format for the ambient impact assessment table where the effluent is non-compliant with ELVs:

Parameter	u/s sample	d/s sample	Contribution (d/s – u/s)	EQS	Contribution from works relative to EQS
	A	B	$C = B - A$	EQS	$C / \text{EQS}$
BOD					
o-Phosphate					
Ammonia					
Nitrogen					
Include additional lines for each compound with an EQS where comparison is required/made					

The results for the upstream and downstream monitoring should be included as an appendix to the AER.

*Note: There is a deterioration of the status of a body of surface water as soon as the status of at least one of the quality elements, within the meaning of Annex V to Water Framework Directive, falls by one class, even if that fall does not result in a fall in classification of the body of surface water as a whole. If the quality element concerned is already in the lowest class, any deterioration of that element constitutes a deterioration of status.*



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

The monitoring data is to be submitted electronically via EDEN at <https://www.edenireland.ie/>. The plant, agglomeration and receiving water data is to be submitted using the excel template circulated annually to Irish Water. The EPA writes separately to Irish Water requiring submission of the annual urban waste water information for agglomerations and treatment plants for the previous year. This request includes the excel reporting template and sets out the reporting deadlines, which include submission of all monitoring results to EDEN by the end of February. Monitoring data can be uploaded to EDEN once it is available and there is no need to wait to commence uploading until the EPA issues the formal request for data. If you have any queries on the preparation or submission of this data, please contact [wastewaterreturns@epa.ie](mailto:wastewaterreturns@epa.ie).

From 2017, the AERs are no longer required to include confirmation of the date that electronic submission of the waste water returns was complete.

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

The requirement to submit a PRTR only applies for agglomerations greater than 100,000 p.e.

Agglomerations greater than 100,000 p.e. must report their annual mass emissions to air and water, and their waste transfers, using the AER/PRTR Emissions Reporting Workbook. Agglomerations less than 100,000 p.e. have no PRTR reporting requirement. Sector Specific Guidance is provided on how to complete the AER / PRTR Emissions Reporting Workbook at the following link: [AER PRTR UWWTP Guidance V6.0 January 2013](#)

The AER/PRTR Emissions Reporting Workbook can be downloaded from the AER reporting website using the site-specific login details. When completed it should be submitted electronically via the AER reporting website at the following link: <http://aer.epa.ie/reporting/pgLogon.aspx>.

Reporting guidance on the: [UWW PRTR Electronic Toolset V5.0](#) is also available on the EPA website at the following link: [Reporting Guidance for the UWW PRTR Electronic Toolset V5.0 Nov 2012](#).

The AER/PRTR Emissions Reporting Workbook is designed to allow the information to be printed out and inserted directly into the AER without any additional formatting. When creating the pdf AER, the PRTR Emissions Reporting Workbook can be converted to pdf and merged with the pdf copy of the AER using Adobe Acrobat, or it can be scanned and added to the AER.

If you have any queries which are not addressed in the [AER PRTR UWWTP Guidance V6.0 January 2013](#)) or the other documents please contact the AER/PRTR Helpdesk at the following e-mail address [aerreturns@epa.ie](mailto:aerreturns@epa.ie).

## 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 (typically Condition 4.19, check individual licence).

Preferred format for the Treatment Efficiency Report Summary Table

	<b>cBOD (kg/yr)</b>	<b>COD (kg/yr)</b>	<b>SS (kg/yr)</b>	<b>Total P (kg/yr)</b>	<b>Total N (kg/yr)</b>	<b>Comment</b>
Influent mass loading (kg/year)						
Effluent mass emission (kg/year)						
Percentage efficiency (% reduction of influent load)						

### 3.2 Treatment Capacity Report

Condition 1 of the licence requires Irish Water to complete an annual assessment of the remaining organic and hydraulic treatment capacities within the waste water works (design capacity of plant, less flow-load calculation for representative period).

This must include a summary of the annual assessment of the remaining treatment capacity of the works expressed in terms of:

1. Hydraulic treatment capacity i.e. are the works sufficient to manage the volumetric flows in the agglomeration to licence requirements.
2. Organic treatment capacity i.e. are the works sufficient to treat the organic loading in the agglomeration to licence requirements.

Preferred format for the Treatment Capacity Report Summary Table:

Hydraulic Capacity – Design / As Constructed (m3/year) Peak	
Hydraulic Capacity – Design / As Constructed (m3/year) DWF	
Hydraulic Capacity – Current loading (m3/year)	
Hydraulic Capacity – Remaining (m3/year)	
Is the plant overloaded – hydraulic loading?	Yes /no
Organic Capacity - Design / As Constructed (p.e.)	
Collected Load (p.e.)	
Organic Capacity – Remaining (p.e.)	
Is the plant overloaded – organic loading?	Yes / no
Will the capacity be exceeded in the next three years? (Yes / No) <i>If answer is Yes note the Condition 1.7 notification to EPA requirement re: licence review / technical amendment.</i>	

A copy of the detailed assessment can be included as an appendix to the AER. Where relevant, findings from this assessment should be considered under the Programme of Improvements required under Condition 5.

### **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).

Preferred format for Extent of Agglomeration Summary Report

	<b>Load generated in the agglomeration (p.e.)</b>	<b>Load generated in the agglomeration (m3)</b>
Load generated in the agglomeration and collected in the sewer network		
Load collected in the agglomeration that entered treatment plant		
Load collected in the sewer network but discharged without treatment (includes SWO, EO and any discharges that are not treated)		

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

Load collected in the agglomeration 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.

**Agglomeration** is defined in the Glossary and Condition 1 of each licence. It is an area where the population or economic activities or both are sufficiently concentrated for a waste water works to have been put in place.

**Agglomeration Load** is as per in Article 4.4 of Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment which states that: The load expressed in p.e. shall be calculated on the basis of the maximum average weekly load entering the treatment plant during the year, excluding unusual situations such as those due to heavy rain.

Irish Water should comment on the source and quality of this data, i.e. is it based on actual measurements, estimates and /or a combination of both.

### 3.4 Complaints Summary

Condition 6 of the WWDL requires that:

*“The licensee shall record all complaints of an environmental nature related to the discharge(s) to waters from the waste water works in accordance with the national environmental complaints procedure. Each record shall give details of the date and time of the complaint, the name of the complainant (if provided), and the nature of the complaint. A record shall also be kept of the response made in the case of each complaint.”*

Note this refers to complaints about discharges from the works, and not odour and noise complaints which are dealt with under separate reporting requirements. Please find below a suggested format for reporting this information. Irish Water is advised to consider its obligations under the Data Protection Act (as amended) when submitting data in the complaints summary.

Preferred format for the Complaints Summary Table:

Number	Date and time	Nature of complaint	Cause of complaint	Actions taken to resolve issue	Closed (Y/N)

### 3.5 Reported Incidents Summary

Condition 6 of the WWDL requires that:

*“The licensee shall make a record of any incident. This record shall include details of the nature, extent and impact of, and circumstances giving rise to, the incident. The record shall include all corrective actions taken to manage the incident, to minimise the effects on the environment, and to avoid recurrence. The licensee shall, as soon as practicable following incident notification, submit to the Agency the incident record including clean up and recurrence prevention measures.”*

The Glossary of Terms in the introduction of each licence defines an incident as follows:

*“The following shall constitute an incident (as defined in the licence) for the purpose of this licence*

- *any discharge that does not comply with the requirements of this licence;*
- *any incident with the potential for environmental contamination of surface water, or groundwater, or posing an environmental threat to land, or requiring an emergency response by the relevant Water Services Authority.”*

Preferred format for the Summary of Incidents table:

<b>Incident Type (e.g. non-compliance; emission; spillage; emergency overflow activation)</b>	<b>Incident description</b>	<b>Cause</b>	<b>Recurring incident Y/N</b>	<b>No. of incident occurrences</b>	<b>Corrective action</b>	<b>Authorities contacted Note 1</b>	<b>Reported to EPA (Yes/No)</b>	<b>Closed (Y/N)</b>

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

In addition, the following details must be provided:

Number of Incidents	
Number of Incidents reported to the EPA via EDEN	
Explanation of any discrepancy between the two numbers above	

### **3.6 Sludge / Other inputs to the WWTP**

All agglomerations are required to provide a report detailing all 'other inputs' to the waste water treatment plant.

Other inputs include: septic tank sludge, industrial /commercial sludge, landfill leachate and any other sludge that is collected and added to the treatment plant.

Do not include any sludge that is added to a dedicated sludge reception facility at a waste water treatment plant. Only include sludge which is added to the waste water treatment process stream. Enter zero where there are no inputs.

Preferred format for Other Inputs table.

<b>Input type</b>	<b>m3/year</b>	<b>p.e./year</b>	<b>% of load to WWTP</b>	<b>Is there a leachate/sludge acceptance procedure for the WWTP? (Y/N)</b>	<b>Is there a dedicated leachate/sludge acceptance facility for the WWTP? (Y/N)</b>
Domestic /Septic Tank Sludge					
Industrial / Commercial Sludge					
Landfill Leachate (delivered by tanker)					
Landfill Leachate (delivered by sewer network)					
Other (specify)					

## Section 4. Infrastructural Assessments and Programme of Improvements

### 4.1 Storm water overflow identification and inspection report

Condition 4 of the licence details the specific information required in this report. The Storm Water Overflow Identification and Inspection report findings should be summarised in the second AER and reviewed every three years thereafter. The AER should contain an update for the years between full reviews (e.g. years 3, 4, 6, 7, 9, 10, 12). The report should detail progress at achieving compliance with criteria. A copy of the detailed assessment can be included as an appendix to the AER.

Additional SWOs and/or changes to Schedule A3: Discharges to be discontinued or, Schedule C: Specified Improvement Programme, requirements (including compliance dates) must be notified to the EPA under Condition 1.7, as a Technical Amendment or Licence Review may be required to accommodate the change. A report in the AER does not satisfy this requirement.

Irish Water is requested to provide the following information for all storm water overflows in each agglomeration, regardless of whether the SWO Identification and Inspection Report is required. Preferred format for the SWO Identification and Inspection Summary Report Table A:

WWDL Name / Code for Storm Water Overflow	Irish Grid Ref.	Included in Schedule A4 of the WWDL	Significance of the overflow (High / Medium / Low)	Compliance with DoEHLG Criteria	No. of times activated in the year (No. of events)	Total volume discharged in the year (m3)	Total discharged in the year (p.e.)	Estimated /Measured data
Insert rows as required		Yes / No		Compliant / Not compliant / Not yet assessed	No.			M / E

Preferred format for the SWO Identification and Inspection Summary Report Table B:

How much sewage was discharged via SWOs in the agglomeration in the year (m3/yr)?	
How much sewage was discharged via SWOs in the agglomeration in the year (p.e.)?	
What percentage of the total volume of sewage collected in the agglomeration was discharged via SWOs in the year?	List the % of collected load that does not enter the WWTP
Is each SWO identified as non-compliant with <a href="#">DoEHLG Guidance</a> included in the Programme of Improvements?	Yes/No List the relevant Section of the Programme of Improvements
The SWO assessment includes the requirements of Schedule A3 & C3	List the relevant section of the SWO Report
Has the EPA been advised of any additional SWOs / changes to Schedule C3 and A4 under Condition 1.7?	Yes/No Provide details where relevant

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

Condition 5 of the licence requires the licensee to prepare and implement an Improvement Programme to maximise the effectiveness and efficiency of the works as specified in Condition 5.1.

The Improvement Programme must be prepared for inclusion in the second AER and reviewed every three years thereafter. A summary of the Improvement Programme report must be included in the second AER and reviewed every three years. An update on the Improvement Programme is required for the years between reviews. A copy of the detailed report should be included as an appendix to the AER.

The Improvement Programme report must address the Specified Improvement Programmes as detailed in Schedules A3 and C of the WWDL. It should also catalogue other improvements identified through assessments required under the licence. Each improvement required under the license should be reported on in the AER.

When preparing the Improvement Programme Irish Water must also consider the requirements of:

- Condition 5.2.1 for the Waste Water Treatment Plant
- Condition 5.2.2 for the Works,
- Condition 5.2.3 for Secondary Discharges (including Emergency Overflows)
- Condition 5.2.4 for Storm Water Overflows,
- The findings of other investigations and assessments required under the WWDL e.g. Drinking Water Abstraction Risk Assessment, Shellfish Impact Assessment, etc.
- Operation (e.g. improved process control) and maintenance improvements (e.g. development of the maintenance programme for the works).

Preferred format for Specified Improvement Programme (Schedule A and C) summary report, to be submitted annually:

Specified Improvement Programmes (under Schedule A and C of WWDL)	Licence schedule (A or C)	Date for completion in the licence	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;)	Percentage of construction work completed	Irish Water's expected timeframe for completing the work	Comments



A summary of the status of any improvements identified by Irish Water under Condition 5.2 must also be included. The suggested format for reporting this information is outlined below.

<b>Improvement identifier</b>	<b>Improvement description</b>	<b>Improvement source</b>	<b>Progress (% completed)</b>	<b>Expected completion date</b>	<b>Comments</b>
		<i>WWTP assessment (Condition 5.2).</i>			
		<i>Sewer Integrity Tool (Condition 5.2).</i>			
	<i>Insert rows as required</i>	<i>Secondary discharges assessment (Condition 5.2).</i>			
		<i>SWO assessment (Condition 4 &amp; 5.2).</i>			
		<i>Drinking Water Abstraction Risk Assessment (Condition 4)</i>			
		<i>Shellfish Impact Risk Assessment (Condition 5)</i>			
		<i>Pearl Mussel Impact Assessment (Condition 4)</i>			
		<i>Improved Operational Control</i>			
		<i>Incident Reduction</i>			
		<i>Elimination/Reduction of Priority Substances</i>			
		<i>Process Optimisation</i>			

The EPA has developed the [Sewer Integrity Risk Assessment Tool](#) and associated [guidance document](#) to facilitate completion of the Condition 5.2.2 assessment of the existing works. This can be used when completing the assessment of the existing works. Any outstanding assessments from previous years should also be completed and reported. Where the sewer integrity tool is used, the relevant summary table must be completed and included in the AER. Copies of the completed risk assessment tool should be included as an appendix to the AER.

If Irish Water does not believe that the score achieved is a true reflection of their experience with the network in question, it should explain this in the AER. This may be attributable, for example, to a large number of unknowns which will tend to generate a higher risk score. Space is provided in the summary sheet for Irish Water to input a brief commentary, if they believe that the risk score achieved is not a true reflection of the reality. This should set out the reasons for the perceived discrepancy between the risk score and experience and should, if possible, reference any reports, records or other documents that would support this view.

Sewer Integrity Risk Assessment Tool Improvement Programme (Works) summary table:

<b>The Improvement Programme should include an assessment of the integrity of the existing wastewater works for the following:</b>	<b>Risk Assessment Rating (High, Medium, Low)</b>	<b>Risk Assessment Score</b>	<b>Reference to relevant section of AER (e.g. Appendix 2 Section4).</b>
Hydraulic Risk Assessment Score			
Environmental Risk Assessment Score			
Structural Risk Assessment Score			
Operation & Maintenance Risk Assessment Score			
Overall Risk Score for the agglomeration			

## Section 5. Licence Specific Reports

Some, or all, the following reports may be required, check each licence for specific requirements. These assessments should be completed in accordance with EPA guidance (where published). Irish Water should review each WWDL to ensure that these reports are submitted, where specified in the licence. Irish Water should complete the table below in the AER indicating whether any of these reporting requirements apply, and listing where they are contained in the report.

- Where a licence specific report is overdue from a previous AER or has been submitted separately to the EPA a copy of this report should be included as an appendix to the AER.
- Where actions arising from a report previously submitted have not been completed, the table should include a summary of the current status of the actions and necessary improvement works.

Preferred format for the Licence Specific Reports Summary Table:

<b>Licence specific report</b>	<b>Required in current AER or outstanding from previous AER</b>	<b>Included in current AER</b>	<b>Reference to relevant section of AER (e.g. Appendix 2 Section4).</b>
Priority Substances Assessment	Yes / No	Yes / No	Summary of finding on page XX. Full report in Appendix XX
Drinking Water Abstraction Point Risk Assessment			
Habitats Impact Assessment			
Shellfish Impact Assessment			
Fresh Water Pearl Mussel Report			
Toxicity/Leachate Management			
Toxicity of Final Effluent Report			

## 5.1 Priority Substances Assessment

Condition 4 of the licence details the specific information required in this report. This assessment must include an assessment of the significance of the discharge on the receiving water (e.g. assessment against the EQS Regulations). The EPA has published guidance on how to complete this assessment on their website at: [Priority Substance Assessment Guidance](#).

Preferred format for Priority Substance Assessment summary table:

	<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/or</i> Screening Analysis
Does the assessment include a review of Trade inputs to the works?	Yes / No
Does the assessment include a review of other inputs to the works?	Yes / 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 / No
Does the assessment identify that priority substances may be impacting the receiving water?	Yes / 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 / No

A copy of the detailed assessment should be included as an appendix to the AER. Where relevant, findings from this assessment should be considered under the Programme of Improvements required under Condition 5.

## 5.2 Drinking Water Abstraction Point Risk Assessment.

Condition 4 of the licence details the specific information required in this report. This assessment must be carried out where discharges from the agglomeration have the potential to impact on a drinking water abstraction. This assessment must include all discharges as well as periods of normal and abnormal operation. The EPA guidance on [Drinking Water Safety Plans](#) and the [Disinfection Manual](#) provide background information that Irish Water must consider when carrying out this assessment.

Preferred format for Drinking Water Abstraction Point Risk Assessment summary table:

	<i>Licensee self- assessment checks to determine whether all relevant information is included in the Assessment.</i>
Is a Drinking Water Abstraction Risk Assessment required in the current AER (or outstanding from a previous AER)?	Yes / No
Does the Drinking Water Abstraction Risk Assessment identify whether any of the discharges in Schedule A of the licence pose a risk to a drinking water abstraction?	Yes / No
Does the assessment identify if any other discharge(s) from the works pose a risk to a drinking water abstraction (includes emergency overflows)?	Yes / No
What is the overall risk ranking applied by Irish Water?	H / M / L
Does the risk assessment consider the impacts of normal operation?	Yes / No
Does the risk assessment consider the impacts of abnormal operation (e.g. incidents /overflows)?	Yes / No
Does the risk assessment include control measures for each risk identified?	Yes / No
Does the risk assessment consider operational control measures e.g. waste water incident notification to drinking water abstraction operator?	Yes / No
Does the risk assessment include infrastructural control measures?	Yes / No
Does the Improvement Programme for the agglomeration include control measures / corrective actions to eliminate / reduce priority substances identified as having an impact on receiving water quality?	Yes / No

A copy of the detailed assessment should be included as an appendix to the AER. Where relevant, findings from this assessment should be considered under the Programme of Improvements required under Condition 5.

### **5.3 Shellfish Impact Assessment Report.**

Condition 5 of the licence details the specific information required in this report. This assessment must include an assessment of the significance of discharges from the waste water works on shellfish in the adjacent designated shellfish water, and where relevant identify a plan for the installation of an appropriate disinfection system on the discharge. The EPA has published guidance on how to complete this assessment on its website at: [Shellfish Assessment Guidance Document](#).

Preferred format for Shellfish Impact Assessment summary table:

Is a Shellfish Impact assessment required in the current AER (or outstanding from a previous AER)?	Yes / No
List prescribed organisations consulted when preparing the assessment (BIM, SFPA, MI)	
Does the assessment consider the impact of all discharges from the works?	Yes / No
Does the assessment identify that any of the discharges from the works are impacting on the microbiological quality of the shellfish?	Yes / No
Does the assessment recommend that there is a requirement to install UV/other disinfection equipment on any of the discharges?	Yes / No
Provide details on disinfection system to be employed	
Has this been completed?	Yes / No

If not yet complete what is the expected date for completion?	
Where disinfection is required, is there a programme in place to demonstrate the efficiency of any disinfection system in place?	Yes / No
What is the demonstrated efficiency of the disinfection system?	
Is there a shellfish monitoring programme in place?	Yes / No
Does the shellfish or shellfish water monitoring programme include results generated by other organisations?	Yes / No
List organisations contributing data to the assessment	
Does the Improvement Programme for the agglomeration include the findings and recommendations of the shellfish impact risk assessment?	Yes / No

A copy of the detailed assessment should be included as an appendix to the AER. Where relevant, findings from this assessment should be considered under the Programme of Improvements required under Condition 5.

### **5.4 Toxicity / Leachate Management**

Condition 4 of the licence details the specific information required in this report. This requirement is typically applied where there is a potential for the discharge to contain priority/dangerous substances and/or accepts landfill leachate for treatment at the WWTP.

Preferred format for Toxicity / Leachate Management Report summary table:

Is a Toxicity / Leachate Management Report required in the current AER (or outstanding from previous AER)?	Yes / No
What percentage of the total influent for the year is leachate?	% of annual load (volume)
Does leachate exceed 4% (volume) of the influent load at any time?	Yes / No
Maximum leachate loading rate?	% of daily load (volume)
Does the leachate study identify any constituents of the material that present an environmental risk?	Yes / No
List leachate constituent identified and impact ( <i>insert a row for each constituent</i> )	
Has the suitability of the WWTP to treat the leachate been assessed?	Yes / No
What are the results of the assessment? (Suitable / Not Suitable / Suitable subject to completion of improvement programme works)	
Has the study identified the maximum and operational loadings (mass, volume and rate of addition) for leachate to the WWTP?	Yes / No
Is there a monitoring programme for the priority substances identified above?	Yes / No
Have trigger and action levels for the concentration of identified leachate constituents been established to prevent impact on the receiving water?	Yes / No

Does the Improvement Programme for the agglomeration include any procedural and/or infrastructural works to reduce the impacts of leachate acceptance on the operation of the WWTP?	Yes / No
---	----------

A copy of the detailed assessment should be included as an appendix to the AER. Where relevant, findings from this assessment should be considered under the Programme of Improvements required under Condition 5.

### **5.5 Toxicity of the Final Effluent Report**

A small number of waste water discharge licences have a requirement to determine the toxicity of the final effluent. This typically requires assessment of toxicity on four species in three trophic levels.

Preferred format for Toxicity of the final effluent assessment summary table:

Is a Toxicity report required? (Condition 4)?	Yes / No
Has the study been carried out against four species in three trophic levels?	Yes / No
Does the report identify that the discharge is toxic to any of the species in the study?	Yes / No
List species impacted	
Does the Improvement Programme for the agglomeration include any procedural and/or infrastructural works to reduce the toxicity of the final discharge?	Yes / No

A copy of the detailed assessment can be included as an appendix to the AER. Where relevant, findings from this assessment should be considered under the Programme of Improvements required under Condition 5.

### **5.6 Pearl Mussel Measures Report**

Condition 4 of some licences require Irish Water to either (check licence condition for specific details):

- Report on progress at achieving the measures relevant to the WWDL identified in the Pearl Mussel Protection Measures Report for the receiving water body; or.
- Report on an ecological assessment of the significance of discharges from the waste water works on the pearl mussel habitat, following consultation with National Parks and Wildlife Service. The report must consider if any of the discharges from the works are impacting on the pearl mussel habitat and, where relevant, prepare and report on implementation of plans to minimise any negative impacts on the pearl mussel population.

Preferred format for Pearl Mussel Measure Report summary table (check licence condition to see which format is appropriate):

Is a progress report on implementation of the findings of Pearl Mussel Protection Measures report required in the current AER (or outstanding from previous AER)?	Yes / No
Is there a Pearl Mussel Protection Measures Report for the receiving water body?	Yes / No
Include hyperlink to internet location of report	
Does this report identify measures relevant to discharges from the waste water works as having a potential impact on the Pearl Mussel habitat?	Yes / No
List measures relevant to discharges from the waste water works	
Does the Improvement Programme for the agglomeration include any procedural and/or infrastructural works to reduce the impacts of discharge on pearl mussel habitat / populations?	Yes / No
List Condition 5 Improvement Programme reference	

A copy of the detailed assessment should be included as an appendix to the AER. Where relevant, findings from this assessment should be considered under the Programme of Improvements required under Condition 5.

### **5.7 Habitats Impact Assessment Report**

Condition 4 of the licence details the specific information required in this report. This assessment must be carried out where discharges from the agglomeration have the potential to impact on a sensitive species or habitat. Where required, this assessment must be specified and carried out in accordance with any guidance provided by the National Parks and Wildlife Service (NPWS).

Preferred format for Habitats Impact Assessment summary table:

	<i>Licensee self- assessment checks to determine whether all relevant information is included in the Assessment.</i>
Is a Habitats Assessment required in the current AER (includes outstanding assessments from previous years)?	Yes / No
Was the scope of the study agreed in advance with NPWS?	Yes / No
Does the report include a Stage 1 screening assessment?	Yes / No
Does the screening identify that discharges are causing an impact on listed sites?	Yes / No
Does the report require a Stage 2 Appropriate assessment?	Yes / No
Does the report identify any European Sites (e.g. SPA, SAC, NHA) that discharges from the works could have an impact on?	Yes / No
List European sites identified (insert a line for each site identified)	
Does the report include mitigation measures for each identified impact?	Yes / No

Does each measure explain how the adverse impact will be avoided/reduced?	Yes / No
Does the Improvement Programme for the agglomeration include any procedural and/or infrastructural works to reduce the impacts of discharges on the listed site (NHA, SAC, SPA)?	Yes / No

A copy of the detailed assessment should be included as an appendix to the AER. Where relevant, findings from this assessment should be considered under the Programme of Improvements required under Condition 5.



## Section 6. Certification and Sign Off

As part of the requirements of the WWDL, Irish Water must ensure that the AER report is certified as accurate and is representative by a nominated and suitably qualified person. The AER must contain the following:

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

The reporting obligation will not be satisfied until all relevant steps are completed, as listed on page 3 of this guidance.

Does the AER include an executive summary?	Yes / No
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 / No
Is there a need to advise the EPA for consideration of a technical amendment / review of the licence?	Yes /No
List reason e.g. additional SWO identified ( <i>insert lines as required</i> )	
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.)	Yes / 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> )	
Have these processes commenced? (i.e. Request for Technical Amendment / Licence Review / Change Request)	Yes / No / N/A
Are all outstanding reports and assessments from previous AERs included as an appendix to this AER?	Yes / No / N/A
List outstanding reports ( <i>insert lines as required</i> )	Appendix XX of AER

Reference to all the above must be included in the certification and sign off page submitted by Irish Water. The final page of each AER should be signed by the nominated official.

## **Section 7. Appendix**

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