

# Site Visit Report

The site visit process is a sample on a particular day of an installation's compliance with some of its licence conditions. Where non-compliance against a particular condition has not been reported, this should not be construed to mean that there is full compliance with that condition of the licence.

Instructions and actions arising from the visit shall be addressed, or where applicable noted, by the licensee in order to ensure compliance, to improve the environmental performance of the installation and to provide clarification on certain issues.

The licensee shall take the actions specified to close out the non-compliances and observations raised in this Site Visit Report.

Licensee	
<b>Name of Installation</b>	Ringsend
<b>Licensee</b>	Irish Water
<b>Licence Register No.</b>	D0034-01
<b>CRO Number</b>	
<b>Site Address</b>	Dublin
<b>Site Visit Reference No.</b>	SV17524

Report Detail	
<b>Issue Date</b>	20/02/2019
<b>Prepared By</b>	Michael Martin

Site Visit Detail					
<b>Date Of Inspection</b>	07/02/2019	<b>Announced</b>	Yes		
<b>Time In</b>	10:30	<b>Time Out</b>	12:50		
<b>Agency Personnel On Site</b>	Michael Martin Brian Coffey Tom Ryan				
<b>Licensee Personnel and Role</b>	Ciaran McCausland - CAW - Contracts manager Frank O'Connor - Operations engineer				
<b>Photo Taken</b>	Yes	<b>Samples Taken</b>	No	<b>Video Taken</b>	No
<b>Odour Assessment</b>	No				

## > Scope

To check compliance with the wastewater discharge licence.

## > Media

Water, wastewater.

## > Site Areas Inspected

Ringsend wastewater treatment plant (WWTP)

## > Documents Inspected

Sludge handling records, sampling results, MLSS records.



## 1. General

	Answer	Condition Number	Non Compliance	Observation
1.1	Have you recorded emission limit value breaches to date in the current year?	Yes		
<b>Comment / Corrective Action</b>				
Breaches of emission limit values (ELV's) for Suspended Solids (SS), BOD and COD have been recorded in 2019 to date.				
	Answer	Condition Number	Non Compliance	Observation
1.2	Has an Irish Water process optimisation visit been completed at this plant?	No		
<b>Comment / Corrective Action</b>				
The Design, Build, Operate (DBO) contractor undertakes on-going process optimisation. Regular meetings are held between Irish Water and the DBO contractor to discuss the on-going upgrade works.				
	Answer	Condition Number	Non Compliance	Observation
1.3	Is landfill leachate accepted at the plant?	Yes		
	Answer	Condition Number	Non Compliance	Observation
1.4	Is there a significant discharge from industry into the plant?	Yes		
<b>Comment / Corrective Action</b>				
On the day of the site visit the plant operator advised the EPA inspectors that there are frequent increases in the concentration of solids entering the plant which does impact on operations. Hydrocarbons have also been detected in the inflow occasionally.				
<b>Action:</b> Irish Water shall ensure adequate source control is in place to help mitigate against any adverse impact caused by the frequent increased loading of solids to the plant and to help identify the sources of any significant hydrocarbon contributions to the inflow.				
	Answer	Condition Number	Non Compliance	Observation
1.5	Is the plant overloaded?	Yes		
<b>Comment / Corrective Action</b>				
Design capacity of the plant is 1.64 million population equivalent (p.e.). Irish Water report that the current loading is c. 2.1 - 2.2 million p.e.				
Upgrade works are on-going to increase the treatment capacity of the plant to 2.4 million p.e.				
	Answer	Condition Number	Non Compliance	Observation
1.6	Are critical spare parts and equipment readily available?	Yes		

**Comment / Corrective Action**

All critical pumps and equipment are installed in a duty and standby arrangement. Spare critical equipment can be obtained in a timely manner and the DBO undertakes preventative maintenance on an on-going basis.

	<b>Answer</b>	<b>Condition Number</b>	<b>Non Compliance</b>	<b>Observation</b>
<b>1.7</b>	In the event of a power-cut, is there a contingency plan in place at the plant?	Yes		

**Comment / Corrective Action**

There are 2 main power lines coming in to the plant and there are also onsite gas engines which are capable of generating 4 MW of power from the gas produced during the treatment of the sewage sludge.

	<b>Answer</b>	<b>Condition Number</b>	<b>Non Compliance</b>	<b>Observation</b>
<b>1.8</b>	Is the composite sampler operational at all times the discharge is taking place?	Yes		

	<b>Answer</b>	<b>Condition Number</b>	<b>Non Compliance</b>	<b>Observation</b>
<b>1.9</b>	Is there a composite sample available?	Yes		



## 2. Inlet Works

	Answer	Condition Number	Non Compliance	Observation
2.1	Is there screening in place at the inlet works?	Yes		
	Answer	Condition Number	Non Compliance	Observation
2.2	Is the screening system at the plant inlet working adequately?	Yes		
<b>Comment / Corrective Action</b>				
Replacement screens are on order and all will be replaced on a phased basis beginning in 2019. It is expected to be completed by the end of 2020.				
	Answer	Condition Number	Non Compliance	Observation
2.3	Is the screening system at the plant inlet being inspected and maintained?	Yes		
<b>Comment / Corrective Action</b>				
	Answer	Condition Number	Non Compliance	Observation
2.4	Is there grit removal at the inlet works?	Yes		
	Answer	Condition Number	Non Compliance	Observation
2.5	Is there visual evidence of surcharging at the inlet?	No		



### 3. Primary Settling Tank

3.1

	Answer	Condition Number	Non Compliance	Observation
Is the tank a Horizontal Flow Primary Settlement tank?	Checked			
<b>Comment / Corrective Action</b>				
The operator advises that they are of a lamella plate arrangement and work well. 50-60% solids removal is being achieved.				



## 4. Sequencing Batch Reactor (SBR)

	Answer	Condition Number	Non Compliance	Observation
4.1	Is there a sequencing batch reactor in operation at the plant?	Yes		
	Answer	Condition Number	Non Compliance	Observation
4.2	Is the operator aware of the timing for the cycles in the sequencing batch reactor?	Yes		
	Answer	Condition Number	Non Compliance	Observation
4.3	In the aeration cycle, is there evidence of good mixing?	Yes		
	Answer	Condition Number	Non Compliance	Observation
4.4	Is the dissolved oxygen probe cleaned and maintained?	Yes		
	Answer	Condition Number	Non Compliance	Observation
4.5	Does the operator monitor the mixed liquor suspended solids/cone level at the plant?	Yes		
	Answer	Condition Number	Non Compliance	Observation
4.6	What is the target mixed liquor suspended solids/cone at the plant?	Checked		
<b>Comment / Corrective Action</b>				
2,500 in the winter and 1,500 in the summer. On the day of the site visit the operator advised it was approximately 2,400.				
	Answer	Condition Number	Non Compliance	Observation
4.7	Is there any evidence of operational problems?	Yes		
<b>Comment / Corrective Action</b>				
There was a broken diffuser in the corner of one of the upper tanks. The operator confirmed it was not affecting the quality of the final effluent and was scheduled to be repaired.				



## 5. Phosphate Treatment

	Answer	Condition Number	Non Compliance	Observation
5.1	Is there dosing for phosphate removal at the plant?	Yes		
<b>Comment / Corrective Action</b>				
Dosing is carried out in the Nereda and hybrid Nereda basins only.				
	Answer	Condition Number	Non Compliance	Observation
5.2	Is the dosing rate for phosphate removal at the plant known?	Checked		
<b>Comment / Corrective Action</b>				
The dosing rate is controlled automatically depending on the level of phosphate concentration near the end of the aeration cycle.				
	Answer	Condition Number	Non Compliance	Observation
5.3	Is there duty/standby pump(s) in operation?	Yes		
<b>Comment / Corrective Action</b>				
There are two duty pumps (one per tank) and one common standby pump.				
	Answer	Condition Number	Non Compliance	Observation
5.4	Is pump maintenance completed on a regular basis?	Yes		
	Answer	Condition Number	Non Compliance	Observation
5.5	Is there automatic switchover between duty and standby pumps?	Yes		





## 6. Disinfection

	Answer	Condition Number	Non Compliance	Observation
6.1	Is there disinfection in place?	Yes		
<b>Comment / Corrective Action</b>				
Ultra Violet (UV) disinfection is utilised during the bathing season (as required in the Waste Water Discharge Licence).				

	Answer	Condition Number	Non Compliance	Observation
6.2	If ultra violet disinfection is in place, is the transmission level at optimum levels?	Yes		
<b>Comment / Corrective Action</b>				
The operator advises that during the bathing season the UV runs continually on a 100% power setting and performs at optimum levels. There are a total of 990 UV bulbs in the system and c. 200 of them are changed annually.				



## 7. Site Specific Issues

	Answer	Condition Number	Non Compliance	Observation
7.1	Progress of works on the 400,000 p.e. extension	Checked		
<b>Comment / Corrective Action</b>				
Irish Water have advised the EPA that the 400,000 p.e. extension is due to be operational in Q2 2020.				

	Answer	Condition Number	Non Compliance	Observation
7.2	Progress of works to upgrade SBR's to Nereda process	Checked		
<b>Comment / Corrective Action</b>				
Irish Water have advised the EPA that the upgrade works to increase treatment capacity in the existing SBR's to 2 million p.e. and achieve Licence Compliance is due for completion in 2022.				
The 12 upper deck SBR's will be converted to the Nereda process (one tank has been converted and it is currently achieving Licence compliance).				
Lower deck SBR's will be converted to operate on a Nerdea / normal activated sludge hybrid basis. (one tank has been successfully converted and proven).				

Breaches of ELV's for SS, BOD and COD have been recorded in 2019 to date. The WWTP is overloaded and repeatedly fails to comply with the ELV's specified in the wastewater discharge licence.

The on-going upgrade works at Ringsend WWTP will increase the treatment capacity from 1.64 million p.e. to 2.4 million p.e.

The upgrade is progressing in two main tranche of works and Irish Water have advised the EPA that:

- Tranche 1 - The 400,000 p.e. capacity upgrade extension (which is currently under construction) is due to be operational in Q2 2020.
- Tranche 2 - The upgrade works to increase the treatment capacity in the existing SBR's to 2 million p.e. and achieve Licence Compliance is due for completion in 2022. The 12 upper deck SBR's will be converted to the Nereda process (one tank has been converted and it is currently achieving Licence compliance). Lower deck SBR's will be converted to operate on a Nereda / normal activated sludge hybrid basis. (one tank has been successfully converted and proven).

Irish Water shall fulfil the requirements of the Action contained in this report and in Compliance Investigation No. CI000025.

## **FOLLOW-UP ACTIONS**

You are required to complete the instructions and actions, as outlined in this report, within the specified timeframe. Where required, you shall respond to actions specified in Compliance Investigations within the required timeframe. The licensee shall maintain documentary evidence, for review by the EPA, that the prescribed corrective actions were completed within the required timeframe.

### **(i) Compliance Investigations**

You are not required to respond directly to items contained in this EPA site visit report; where an issue requires a direct response, the EPA will generate a Compliance Investigation through the EDEN system. You will receive notification when a Compliance Investigation instruction or action is generated.

### **(ii) Publication of reports and licensee response.**

Please note that this Site Visit Report will be made available for public viewing via the EPA's Licence Enforcement Access Portal within one day of the issue date and will be published on the Licence Details Page of the EPA's website, [www.epa.ie](http://www.epa.ie), that relates to your licence 60 calendar days after the issue date.

You may if you choose submit, within 45 calendar days of the issue date of this Site Visit Report, a Licensee Public Response that will be published alongside the Site Visit Report. This Response, should you wish to avail of it, provides you with an opportunity to inform the public about how you are implementing the actions set out in the report, activities underway, timescales and target completion dates. Please be aware that the content of your Licensee Public Response must be factual and should not breach the EPAs stated online publication standards.

If you wish to submit a Licensee Public Response to an EPA Site Visit Report, you should do this by clicking on the 'Make a Response' link on the Site Visits page in EDEN. A .pdf document containing your response can be attached and submitted from here.

### **(iii) Response to Site visit report**

Where you do wish to respond directly to a site visit report, you should do this by generating a 'Licensee Return' of the type 'Site Updates/Notifications' and the sub-type 'Response to EPA Report' in EDEN.

Please note that you are required to comply with the conditions of your licence at all times, and where noncompliance occurs you must restore compliance within the shortest possible time. These actions will be verified during subsequent EPA visits.

Please quote the above Inspection Reference Number in any future correspondence in relation to this Report.