

This Report has been cleared for submission to the Director, David Flynn by Programme

Manager Darragh Page



Signed: Philomena Kelly, Programme Officer Date: 2 February 2024



OFFICE OF ENVIRONMENTAL SUSTAINABILITY

INSPECTOR'S REPORT ON A WASTE WATER DISCHARGE LICENCE REVIEW APPLICATION

To: David Flynn, Director

From: Christine Murphy and Mark Dwyer, Inspectors,
Environmental Licensing Programme.

Date: 2 February 2024

RE: Application for a review of a Waste Water Discharge Licence from **Uisce Éireann**, for the agglomeration named **Whitegate-Aghada**, Reg. No. D0423-02.

Summary Details of an Application for the review of a licence under the European Union (Waste Water Discharge) Regulations 2007 to 2020

Agglomeration Name:	Whitegate-Aghada
Location:	Townlands of Ballytigueen, Knockanemorney, Ballynafarsid, Aghada, Ballinacarroonig, Ardnabourkey, Curragh and Mosestown, Co. Cork
Number and type of waste water discharges from the waste water works:	1 No. primary discharge, 4 No. discharges from dual functioning storm water overflows and emergency overflows
Location of waste water treatment plant:	Ballytigen TD, Whitegate, Co. Cork
Population equivalent to which the application relates:	2,479 (design)
Actual Population Equivalent:	2,367 (2022)
Schedule of discharge licensed:	Discharges from agglomerations with a population equivalent of 2,001 to 10,000
Licence application received:	6/12/2021
Additional information received:	Yes (22/04/2022 & 07/07/2022)
Regulation 12 notice response received:	02/02/2022

Regulation 18(2) Compliance	18/09/2023
Acknowledgement:	
Site notice check:	13/12/2021
Submission Received:	Health Service Executive (28/02/2022)
Environmental Impact Assessment (EIA) required:	No
Stage 2 Appropriate Assessment required:	Yes. Natura Impact Statement (NIS) received with application on 06/12/2021

1. Introduction to application

The Agency granted a Waste Water Discharge Licence (WWDL) on 8/10/2015 for the Whitegate-Aghada agglomeration, Reg. No. D0423-01. The licence was technically amended on 13/12/2016 and 3/12/2021. An application for a review of the Whitegate-Aghada licence was received in December 2021. The review application was made for the following reasons:

- the relocation of the primary discharge point;
- increase in population equivalent (p.e.) to over 2,000;
- revised Emission Limit Values (ELVs);
- the provision of a new primary Wastewater Treatment Plant (WWTP); and
- the decommissioning of a secondary discharge point.

It should be noted that the current licence required secondary treatment. This was primarily due to the location of the primary discharge and in the interest of ensuring Cork Harbour reached 'Good' status. This proposal is for primary treatment with a new discharge point discharging into Outer Cork Harbour. The latest p.e. of the Whitegate-Aghada agglomeration, as reported by Uisce Éireann to the Agency, is 2,367 (2022) and the new WWTP has a design capacity to serve 2,479 p.e.

Untreated wastewater is currently being discharged directly into Cork Harbour coastal waterbody from the Whitegate-Aghada agglomeration. The agglomeration does not meet the requirements of the Council Directive 91/271/EEC on Urban Wastewater Treatment and is on the current EPA list of priority areas where treatment must improve to resolve national environmental priorities. This is one of the 26 urban areas still discharging raw sewage which have been identified as an EPA priority in the recent report on *Urban Waste Water Treatment in 2022*.

The current situation is one primary discharge point, three secondary discharge points and one stormwater overflow. The current licence (D0423-01) specified the provision of a new WWTP providing secondary treatment for the agglomeration and the discontinuation of a secondary discharge into groundwater to be completed by 31 December 2019.

The proposal by Uisce Éireann for this application consists of preliminary treatment (screening and grit removal), primary treatment (settling tanks), the construction of a new 295m long primary discharge (~4km by sea from existing primary discharge point), a storm water holding tank (216m³), three new pumping stations, a new network section and network upgrades. It is proposed that the existing primary discharge point will be decommissioned while two existing secondary discharge points and an existing stormwater overflow will be retained for use as dual functioning stormwater overflows/emergency overflows (SWO/EOs). A new SWO/EO is also proposed which will share a discharge point with the new primary discharge point.

The River Basin Management Plan (RBMP) 2018-2021 prescribed a date of 2021 for the Whitegate-Aghada WWTP to be completed. The works are being carried out under Uisce Éireann's 2022-2024 Investment Plan. Although construction upgrade works began in summer of 2022 and are scheduled for completion in Q2 2024, the Agency is obliged to authorise in accordance with the RBMP.

2. Planning & Foreshore

Planning permission for the Whitegate-Aghada WWTP was granted on 30/08/2021 by Cork County Council and an Environmental Impact Assessment (EIA) was not required for the development. A copy of the planning permission was submitted with the application.

A foreshore licence (Ref.: FS007027) was granted by the Department of Housing, Local Government and Heritage (DHLGH) on 13/06/2023 in respect of the waste water works

and the DHLGH determined that an Environmental Impact Assessment Report (EIAR) was not required with the foreshore licence application.

3. EIA Screening

The Agency made an EIA Screening Determination on 10 February 2022 and determined that an EIA is not required as there is no real likelihood of significant effects on the environment arising from the proposed development. The EIA screening determination is based on the following main reasons and considerations:

1. The limited scale of the waste water discharges from the wastewater treatment plant. The wastewater treatment plant serves an agglomeration with a population equivalent (p.e) of 2,479 which is significantly below the 10,000 p.e mandatory threshold for EIA.
2. The waste water discharge from the waste water treatment plant is domestic in nature and readily biodegradable. There is no industrial or commercial inputs into the waste water.
3. Wastewater is treated in primary settlement tanks prior to discharge to Cork Harbour via a long marine outfall of 295m.
4. The potential effects of the waste water discharges, alone and cumulatively with other discharges, on WFD status and environmental objectives will be assessed and should a waste water discharge licence be granted for the agglomeration, emission limit values will be set in the licence to contribute to meeting the objectives for the receiving waterbody.
5. There are no bathing waters in the vicinity likely to be affected by the discharge.
6. There are no shellfish waters in the vicinity likely to be affected by the discharge.
7. The proposed primary discharge is directly into the Cork Harbour SPA. With regard to this European site, the potential effects the waste water discharges may have on European Sites and their qualifying interests will be assessed under the Habitats Directive (Appropriate Assessment).

While it is noted that there are commercial inputs into the waste water network, this does not affect the EIA screening determination.

The following features of the development and measures provided by the licensee which are envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment are as follows:

- The provision of primary settlement tanks and a stormwater holding tank to prevent the discharge of untreated wastewater into Cork Harbour.
- The provision of a long marine outfall (295m) to discharge treated effluent from the proposed wastewater treatment plant.

4. Discharges to Waters

The following table outlines the waste water discharges to waters from the waste water works serving this agglomeration.

Table 1: Waste Water Discharges

Primary discharge point (SW006)	
Type of treatment:	Preliminary and primary
Proposed WWTP description:	Inlet screens, 3 primary settlement tanks, a new long sea outfall, stormwater storage and associated infrastructure.
Receiving water name	Outer Cork Harbour (Water Framework Directive (WFD) Code: IE_SW_050_0000) coastal waterbody.

Design Dry weather flow (DWF)	A DWF of 558m ³ /day is based on the design capacity of the WWTP of 2,479 p.e. and on 225 litres per head per day.
Maximum flow	1,674m ³ /day. The WWTP is designed to treat a maximum of 3DWF.
Overflows	
Dual functioning storm water overflows and emergency overflows	<p>Yes (4):</p> <p>SW002 and SW003 (existing secondary discharges to be reused as dual functioning SWO/EOs)</p> <p>SW005 (existing SWO to be reused as a SWO/EO)</p> <p>SW007 (new SWO from the main stormwater storage tank which discharges at the same location as the primary discharge point)</p> <p>A total of 379.9m³ (minimum) storm water storage to be provided in the agglomeration including stormwater holding tank at the WWTP of 216m³ with the remaining 163.9m³ storm water storage provided at the 3 pumping stations.</p>
Receiving water name	Outer Cork Harbour (IE_SW_050_0000) and Cork Harbour (IE_SW_060_0000)

The Urban Wastewater Treatment Directive (UWWTD) requires discharges to coastal waters from agglomerations with a p.e. of <10,000 to be subject to 'appropriate treatment'. Appropriate treatment is defined by the Directive as treatment of urban wastewater by any process and/or disposal system which after discharge allows the receiving waters to meet the relevant quality objectives and the relevant provisions of EU Directives.

Based on water quality modelling, Uisce Éireann stated that primary treatment is sufficient to protect the water environment, designated shellfish waters and other receptors, and is compatible with achieving the WFD objectives for the receiving water. The provision of secondary treatment was considered appropriate treatment under the existing licence (D0423-01) having regard to the location of the primary discharge (Cork Harbour). The requirement for 'appropriate treatment' with respect to the new primary discharge point location (Outer Cork Harbour and ~4 km by sea south of the existing discharge) is considered in more detail in Section 5 of this Inspector's Report.

The licensee has requested ELVs as set out in Table 2 for the primary discharge from the Whitegate-Aghada agglomeration in line with the UWWTD. The current ELVs set in the existing WWDL (D0423-01) were based on what was considered appropriate treatment at that time.

Table 2: Current and Requested ELVs

Parameter	Current ELV	Requested ELV
pH	6-9	-
BOD	25 mg/l	At least 20% reduction in relation to the load of the influent
Suspended Solids	35 mg/l	At least 50% reduction in relation to the load of the influent

Parameter	Current ELV	Requested ELV
Total Oxidised Nitrogen (as N)	20 mg/l	-
Total Ammonia (as N)	5 mg/l	-

Untreated wastewater is currently being discharged to Cork Harbour coastal waterbody and there are widespread and ongoing non-compliances of ELVs. The proposal will improve the water quality of the receiving waterbody by removing untreated wastewater from the coastal waterbody. The source of wastewater is municipal in nature and there are no emissions from industrial sources.

5. Impact of Waste Water Discharges

The following table summarises the main considerations in relation to the Outer Cork Harbour coastal waterbody in the vicinity of the primary discharge and SWO/EO SW007 (see Appendix 1).

Table 3: Receiving Waterbody

Primary Discharge (SW006) and Stormwater Overflow SW007		
Characteristic	Classification	Comment
Receiving water name for primary discharge and SWO SW007	Outer Cork Harbour (WFD Code: IE_SW_050_0000)	Outer Cork Harbour is a coastal waterbody
WFD status	Moderate (2016-2021) Good (2013-2018)	"At Risk" as of WFD 3 rd cycle (2022-2027) Diffuse urban run-off from the Whitegate-Aghada agglomeration is listed as a significant pressure under the WFD 3 rd cycle RBMP on Cork Harbour waterbody.
WFD Environmental Objective	Good	To be achieved. The proposed WWTP is a measure specified in the RBMP 2018-2021 in order to support the prevention of deterioration and promote the improvement of water quality. The date prescribed for completion was 2021.
WFD Protected Areas	Rostellan North Shellfish Area (Shellfish Site Code: IEPA2_0048) Rostellan South Shellfish Area (Shellfish Site Code: IEPA2_0047) Rostellan West Shellfish Area (Shellfish Site Code: IEPA2_0064)	Proposed primary discharge is approximately 9.5km south of the shellfish area. Nearest SWO is approximately 1.1km distance. Proposed primary discharge is approximately 9km south of the shellfish area. Nearest SWO is approximately 470m distance. Proposed primary discharge is approximately 7.7km south of the shellfish area. Nearest SWO is approximately 450m distance.

	<p>Fountainstown Bathing Water Area</p> <p>European Site: Cork Harbour SPA (Site Code: 004030)</p>	<p>The three protected shellfish areas have met their water dependent objective under the 2nd cycle RBMP (as of 4th July 2019).</p> <p>Bathing Water ID: IESWBWC050_0000_0100 (primary discharge is approximately 5km northeast of the bathing area)</p> <p>The achievement of Good WFD status is an important factor in the achievement of conservation status of the SPA.</p>
Designations	European Sites	Appendix 2 of this Inspector's Report contains an assessment of the effects of discharges on European Sites and proposed mitigation measures
Receiving water monitoring stations	<p>LE630 - Adjacent to Carlisle Fort (Code: CW05003149LE9001)</p> <p>LE810 - Roches Point (Code: CW05003149LE9002)</p> <p>Outer Cork Harbour - WFD Reporting Station (Code: CW05003149LE9007)</p>	<p>Distance of 1.1km northwest of primary discharge point</p> <p>Distance of 2km south of primary discharge point</p> <p>Distance of 3.2km south of primary discharge point</p>
Trophic Status	Unpolluted (2018-2020)	Outer Cork Harbour waterbody is not designated as nutrient sensitive area.

Primary Discharge Impact Assessment

The licensee carried out modelling to determine the impact of discharges from the Whitegate-Aghada WWTP on Dissolved Inorganic Nitrogen (DIN), *Escherichia coli* (*E. coli*), Intestinal Enterococci (IE), Molybdate Reactive Phosphorus (MRP), Total Ammonia, Unionised Ammonia, Dissolved Oxygen and Biochemical Oxygen Demand (BOD) concentrations, as explained in Table 4. The cumulative effects of all relevant WWTP outfalls in Cork Harbour and the primary rivers flowing into Cork Harbour were included in the modelling assessment. A detailed, high-resolution, 2D MIKE21 numerical model comprising hydrodynamic modelling and water quality modelling was applied. An average discharge flow of 734.3m³/day, was modelled. Although the licensee typically uses the DWF value when preparing impact assessments, in their application for this review licence, the average effluent flow value of 734.3m³/day for 2,266p.e. was used. A DIN concentration (summer and winter) of 54mg/l from the primary discharge point was modelled.

The licensee calculated the number of dilutions which will be achieved at the surface water. This results in a 95%ile scenario with a dilution value of 119. Uisce Éireann

Technical Standards for Marine Modelling requires a minimum of 100 initial dilutions for primary treated effluent discharges. Table 4 summarises the model results.

Table 4: Parameters Modelled and Modelling Results

Parameter Modelled	Modelling Results
DIN	The results of the modelling showed that DIN did not have an impact. The 50%ile scenario show that DIN concentration is an order of magnitude less than the EQS for DIN of 0.25mg/l in summer and winter within and outside the immediate vicinity of the outfall.
<i>E. coli</i>	The model results show that <i>E. Coli</i> 95%ile concentration is 36 Colony Forming Units (CFU)/100ml at "Cork Estuary 2" monitoring point, which is the nearest monitoring point to the proposed outfall location. Although there is no water quality standard for <i>E. Coli</i> in shellfish waters, the modelling results indicate a significant (over 99%) reduction in <i>E. Coli</i> concentrations at the existing outfall.
IE	The model results show that IE 95%ile concentration is 1 cfu/100ml at "Cork Estuary 2" monitoring point, which is the nearest monitoring point to the proposed outfall location. Although there is no water quality standard for Intestinal Enterococci in shellfish waters, the modelling results indicate a significant (over 99%) reduction in the Intestinal Enterococci concentrations at the existing outfall.
MRP	The model results show that MRP concentration is 0.006mg/l at "Cork Estuary 2" monitoring point which is significantly less than the EQS for MRP of 0.04mg/l for transitional waters.
Total Ammonia	The model results show that Total Ammonia concentration is 0.01mg/l at "Cork Estuary 2" monitoring point which is significantly less than the EQS of 1mg/l, as per the Salmonid Water Regulations.
Unionised Ammonia	The model results show that Unionised Ammonia concentration is 0.0002mg/l at "Cork Estuary 2" monitoring point which is significantly less than the EQS of 0.02mg/l, as per the Salmonid Water Regulations.
Dissolved Oxygen	The model results show a concentration of 104.1% Saturation of DO which is within the EQS target level of 80-120% Saturation for the 95%ile scenario.
BOD	The model results show a concentration of 2.8mg/l BOD which is below the EQS target level of 4mg/l for the 95%ile scenario.

Ecological status and objective

The relevant parameters for the ecological status of Outer Cork Harbour coastal waterbody is DIN and dissolved oxygen. DIN is the sum of nitrate (NO₃), nitrite (NO₂) and ammonia (NH₃). Modelling results demonstrated that DIN levels across the harbour remained unchanged with imperceptible levels within and outside the immediate vicinity of the outfall. Predicted DIN and dissolved oxygen levels were below EQSs specified in the European Communities Environmental Objectives (Surface Waters) Regulations 2009 as amended). The proposed primary treatment plant will not compromise the achievement of the environmental objectives or environmental quality standards for the receiving water.

Designated Shellfish Waters Impact Assessment

The Rostellan Shellfish Areas include three (3 No.) separate shellfish production areas adjacent to each other, located north of Aghada. The three oyster production areas (Table 3) in Rostellan are classified as Class B¹ with no seasonal classification for the purposes of EC Regulations 854/2004.

The 2012 revised/updated Rostellan North, Rostellan South and Rostellan West Pollution Reduction Programmes (PRPs) were considered when assessing the D0423-01 WWDL application. The PRPs lists the Whitegate/Aghada urban wastewater systems as key pressures on the protected shellfish area. The PRP states that compliance with any EPA Wastewater Discharge Authorisation will require the licensee to carry out detailed actions, including infrastructural works, and will be enforced by the EPA. Condition 5.6 of the existing licence, D0423-01, required the licensee to carry out an assessment of the impact of discharges on shellfish within 9 months of grant of the licence. Condition 5.7 of the licence required disinfection where shellfish are determined to be impacted by discharges.

This review application does not propose disinfection. The protected shellfish area has met its water dependent objective under the 2nd cycle WFD. According to the Marine Institute, the WFD water dependent objective is generally considered to have been met when the shellfish samples have passed at least 75% of the microbial compliance limit (*E. coli* 230 cfu/100g in shellfish flesh).

The new primary discharge is over 7km (by sea) from the nearest designated shellfish area.

Modelling was carried out as part of this review application to assess impacts of discharges on shellfish waters. The modelling results indicate a significant (over 99%) reduction in the *E. coli* and Intestinal Enterococci concentrations at the existing outfall as a result of the new WWTP and the relocation of the primary discharge point. At the nearest designated shellfish water area (Rostellan West) the *E. coli* concentration is predicted to be 4cfu/100ml and the Intestinal Enterococci concentration is predicted to be 0cfu/100ml with the proposed WWTP and discharges in place. At these levels, it is considered the proposed primary discharge is unlikely to have an impact on designated shellfish water.

There is no water quality standard for *E. coli* or Intestinal Enterococci in shellfish waters. However, the shellfish areas are reported to have met their water dependent objectives. The proposed removal of untreated wastewater discharges and a new primary discharge point (remote from the shellfish designated waters) will have a positive effect on reducing *E. coli* and Intestinal Enterococci concentrations in the vicinity of the protected shellfish area.

Bathing Water Impact Assessment

Fountainstown Beach (code: IESWBWC050_0000_0100) is a designated Bathing Water Area located 5km south west of the primary discharge. Fountainstown Beach had 'excellent' annual water quality from 2019 to 2022. While there were 5 bathing water notices issued since 2014, these were related to diffuse agriculture pollution. The Bathing Water Area currently meets its water dependent objective and standards and discharges are considered low risk to the designated Bathing Water Area.

White Bay beach is not a designated bathing area but is known to be used by bathers and is located approximately 240m from the proposed primary discharge point.

The model results indicate that *E. coli* and Intestinal Enterococci concentrations will increase in the immediate vicinity of the outfall and will drop:

¹ <https://www.sfpa.ie/What-We-Do/Molluscan-Shellfish/Classified-Areas>

- below the 250 cfu/100ml *E. coli* threshold within approximately 50m from the outfall, and
- below the 100cfu/100ml IE threshold as it is predicted that there will be approximately 50 cfu/100ml IE at the outfall and <25 cfu/100ml IE within 20m of the outfall.

Therefore, the achievement of excellent bathing water quality standards at White Bay and Fountainstown Beach for *E.coli* and Intestinal Enterococci will not be compromised as per the Bathing Water Quality Directive.

Recommended Licence Requirements

Having regard to the conclusions of the impact assessment, I am satisfied that the proposal for primary treatment meets the requirements of appropriate treatment under the UWWTD and the WFD.

In accordance with the combined approach, *Schedule A: Discharges & Discharge Monitoring* has set ELVs of:

- 20% reduction for cBOD and 50% reduction for suspended solids at the primary discharge point in accordance with Article 2 of the UWWTD; and
- DIN concentration limit of 54mg/l to ensure that discharge will not compromise the achievement of the objective to achieve good status of the receiving waterbody and to ensure compliance with the EQS for DIN.

Given that the volume and nature of the discharges are not significant in the context of the receiving water ecological status, the RL does not specify a mass flow limit for DIN. Condition 2 of the RL on the interpretation of ELVs has been updated in accordance with the UWWTD.

In line with the EIA screening, the RL requires the primary discharge point to be located at least 295m from the high-water mark at Whitebay Beach at approximately -5.3mOD, terminating at an 80mm diameter diffuser port. The RL also specifies the level of treatment to be provided.

The RL requires the discontinuation of the existing primary discharge point and a secondary discharge point to come into effect in accordance with the RBMP 2018-2021.

Monitoring of the primary discharge will take place as per Schedule A.1 of the RL. The requirement for monitoring of the primary discharge point for *E. coli*, Enterococci and faecal coliforms has not been carried forward from the existing licence. Only the requirement for monitoring BOD, suspended solids, pH, flow rate and visual inspection are being carried forward, with the addition of DIN monitoring. Ambient EPA monitoring and Cork County Council bathing water monitoring will continue in Cork Harbour and Outer Cork Harbour.

The waste water discharges from the proposed WWTP are residential and domestic in nature. There are no heavy industries within the agglomeration and leachate is not accepted by the WWTP. Therefore, priority substance and toxicity monitoring are not required.

Impact of the Storm Water Overflows/Emergency Overflows

There are four (4.no) proposed SWO/EOs. Three (3.no) of the four SWOs/EOs discharge into the Cork Harbour coastal waterbody (WFD Code: IE_SW_060_0000) which has a WFD objective of achieving Good status. One SWO/EO (SW007), discharges into the Outer Cork Harbour coastal waterbody (WFD Code: IE_SW_050_0000) at the same location as the new primary discharge point.

While there is no significant deteriorating trend in the waterbody, the Cork Harbour waterbody is "At Risk" of not meeting its environmental objective as of WFD 3rd cycle

(2022-2027) and diffuse urban run-off from the agglomeration is listed as a significant pressure. This proposed scheme is a measure that will remove un-treated discharges/address misconnections in the system and consolidate discharges in the agglomeration.

It is required that all four (4 no.) proposed SWO/EOs will be in compliance with criteria as set out in the DoECLG 'Procedures and Criteria in Relation to Storm Water Overflows', 1995 and that ultrasonic flowmeters will be included at each of the pumping station overflows to measure overflow spills. SWO/EO SW007 will have a flow monitor to monitor discharges from the stormwater storage tank to Outer Cork Harbour. Schedule A.3 of the RL requires flow monitoring of the discharges from all SWOs.

Section 6 and Appendix 2 of this Inspector's Report contains an assessment of the effects of discharges on Cork Harbour SPA and details proposed mitigation measures. Two of the four SWOs/EOs are discharging directly to Cork Harbour SPA.

Population equivalent

The mass load of waste water entering a waste water works can be expressed in p.e. The licensee stated that the p.e. to which this application relates is 2,479. The assessment of the impact of waste water discharges from the waste water works corresponds to this p.e. The RL limits the p.e. to that which was assessed in order to ensure that any negative impacts arising from an expansion/increase in loadings are controlled. Condition 4.18 of the RL requires the licensee to determine the p.e. annually.

Unintended or accidental discharges

Discharges from emergency overflows are potential sources of environmental damage. Emergency overflows activate in the case of a pump or power failure. To deal with potential accidents and emergency situations arising at the WWTP there are four (4 no.) dual-function SWO/EOs present in the agglomeration.

The licensee has detailed the following measures to prevent unintended discharges discharging into the water environment and the surveillance of such measures:

- A total of 379.9m³ (minimum) storm water storage to be provided in the agglomeration including stormwater holding tank at the WWTP of 216m³ with the remaining 163.9m³ storm water storage provided at the 3 pumping stations.
- The pumping stations at Lower Aghada, Rostellan and Whitegate will be controlled via radio links and programme logic controllers (PLCs) to maximise the storm storage volumes within the agglomeration and pumping station storm tanks.
- Chambers, V-notch weirs and ultrasonic flowmeters will be included in each of the pumping station overflows to measure any spills.
- All 3 pumping stations and the WWTP will have capability for mobile generator connections in the event of a power failure.
- At the WWTP, a stormwater tank is being provided to capture all flows in excess of full flow to treatment. The tank incorporates return duty / standby pumps.
- Monitoring instrumentation is provided at the WWTP to log any storm overflows.
- An emergency procedures plan will be developed as part of the process of the design and construction of the new WWTP to ensure unintended waste water discharges and potential impacts on the environment are kept to a minimum.
- A petrol interceptor will be in place at the WWTP site.

In order to minimise accidents associated with the WWTP and their consequences, the RL as drafted requires the licensee to:

- Maintain corrective action procedures and take corrective action as soon as practicable in the event of an incident (Condition 4.8).
- Maintain an operation and maintenance programme for all plant and equipment to ensure that no unauthorised waste water discharges take place (Condition 4.9).
- Provide an annual statement containing measures to minimise environmental damage associated with discharges or overflows following anticipated events or accidents/incidents (Condition 4.17).
- Provide details on corrective action and preventative measures taken following the occurrence of any incidents associated with the waste water works (Condition 6.1).
- Maintain an Emergency Response Procedure to minimise the effects of any emergency on the environment (Condition 6.5).

6. Appropriate Assessment

Appendix 2 lists the European Sites assessed, their associated qualifying interests and conservation objectives along with the assessment of the effects of the waste water discharges on the European Sites.

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the waste water discharges, individually or in combination with other plans or projects are likely to have a significant effect on any European Site. In this context, particular attention was paid to the European Sites at:

1. Cork Harbour Special Protected Area (SPA) (Site Code: 004030)
2. Ballycotton Bay SPA (Site Code 004022)
3. Great Island Channel SAC (Site Code 001058)

The waste water discharges are not directly connected with or necessary to the management of any European Site. The Agency considered, for the reasons set out below, that it cannot be excluded, on the basis of objective information, that the waste water discharges, individually or in combination with other plans or projects, will have a significant effect on any European Site and accordingly determined that an Appropriate Assessment of the waste water discharges was required, and for this reason determined to require the applicant to submit a Natura Impact Statement. A Natura Impact Statement was received by the Agency on 06/12/2021. This AA screening determination is based on the potential for impacts from the activity on the water dependent qualifying habitat and species of the Cork Harbour SPA. The proposed discharges are hydrologically connected with the qualifying interests of the site. There were no submissions on this application concerning Appropriate Assessment.

An Inspector's Appropriate Assessment has been completed and has determined, based on best scientific knowledge in the field and in accordance with the European Communities (Birds and Natural Habitats) Regulations 2011 as amended, pursuant to Article 6(3) of the Habitats Directive, that the waste water discharges, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site, in particular Cork Harbour SPA, having regard to the conservation objectives and will not affect the preservation of the site at favourable conservation status if carried out in accordance with this RL and the conditions attached hereto for the following reasons:

- The ELVs for the primary discharge have been established in accordance with the combined approach and will contribute to the achievement of the objective of Good status for the Outer Cork Harbour including the EQSs established under European Communities Environmental Objectives (Surface Water) Regulations 2009 as amended.

- The removal of untreated wastewater from the receiving waterbody, the relocation of the primary discharge to Outer Cork Harbour waterbody and the controls in the licence will contribute to the improvement of water quality and the protection of the water-dependent qualifying interests of Cork Harbour SPA.
- Condition 3.3 requires the licensee to take such measures as necessary to ensure that no deterioration in the quality of the receiving water shall occur as a result of the discharge.
- Condition 3.5.2 requires that all storm water overflows comply with the criteria for storm water overflows, as set out in the DoECLG 'Procedures and Criteria in Relation to Storm Water Overflows', 1995 and any other guidance as may be specified by the Agency.
- Conditions attached to the licence require measures to prevent and limit the consequences of unintended discharges.

In light of the foregoing reasons no reasonable scientific doubt remains as to the absence of adverse effects on the integrity of Cork Harbour SPA.

7. Ambient Monitoring

Ambient monitoring requirements are not considered necessary. The proposed removal of untreated wastewater discharges will have a positive effect on the receiving coastal waterbody. However, *Schedule B: Ambient Monitoring* of the RL includes a requirement to allow the Agency to require ambient monitoring in the future.

8. Programme of Improvements

Schedule C.1 of the RL as drafted requires specified improvements for the WWTP in Whitegate-Aghada to be constructed for the Whitegate-Aghada agglomeration on issuing of the licence, in line with the RBMP 2018-2021 prescribed date of 2021 for completion of the WWTP.

9. EU Directives, National Regulations and Act

In considering the application and the drafting of the recommended licence, regard was had to the section 15 of Climate Action and Low Carbon Development Act 2015 and the requirements of Regulation 6(2) (a) to (g) of the European Union (Waste Water Discharge) Regulations 2007 to 2020 as set out in Table 5.

Table 5: EU Directives/Regulations/Act

Directives/Regulations/Act
Urban Waste Water Treatment Directive [91/271/EEC]
Articles 4 and 7 of, and the Second and Fifth Schedules to, the Urban Waste Water Regulations 2001 as amended
Water Framework Directive [2000/60/EC]
EC Environmental Objectives (Surface Water) Regulations 2009 (S.I. No. 272 of 2009), as amended
Bathing Water Directive [2006/7/EC]
Bathing Water Quality Regulations 2008, as amended.
Environmental Impact Assessment Directive (2011/92/EU as amended by 2014/52/EU)
Birds Directive [79/409/EC] as amended and Habitats Directive [92/43/EEC] as amended
Climate Action and Low Carbon Development Act 2015 as amended and the Department of Housing, Planning and Local Government <i>Water Quality and Water Services Infrastructure – Climate Change Sectoral Adaptation Plan</i>

10. Submission

One submission was received in relation to this licence application. While the main points raised in the submission are briefly summarised below, the original submission should be referred to at all times for greater detail and expansion of particular points.

Submission: The submission received from the HSE South Emergency Management states that they do not have any specific observations to make with respect to this application but make a number of recommendations as follows:

- should an incident occur at the site and emergency services assistance is required, the incident information should be provided in the `ETHANE` format (Exact location, Type of incident, Hazards, Access and egress, Number of casualties, Emergency services present and required);
- emergency services access to the site should be clearly identified;
- that a mechanism should be in place to account for personnel during an evacuation;
- that vulnerable facilities in the area should be identified and that the site operator should determine the impact on the local community where a vulnerable population is affected by an incident; and
- that the site operator should plan for severe weather.

Response: It is important to note that the scope of a waste water discharge licence with respect to incidents is primarily concerned with measures to prevent and limit consequences of unintended discharges. The RL as drafted contains a number of measures in this regard including:

- Condition 4.9 of the RL requires that the licensee shall maintain a programme for maintenance and operation of all plant and equipment to ensure that unintended waste water discharges and potential impacts on the environment are kept to a minimum;
- Condition 6.1 of the RL requires the notification of any incidents to the Agency; and
- Condition 6.5 of the RL requires an Emergency Response Procedure to be maintained to minimise the effects of any emergency on the environment.

The licensee states that storm water storage, communication between pumping stations to increase storm storage volumes, return duty / standby pumps at WWTP stormwater tank, a backup generator, an emergency procedures plan and flow monitoring will be provided to prevent unintended discharges.

11. Cross Office Liaison

We consulted with OEE Inspector Michael Mc Donagh in relation to this agglomeration. There is an open Compliance Investigation (CI) for the discharge of untreated raw sewerage into Cork Harbour. The agglomeration is continually breaching its ELV limits for Ammonia. The Whitegate-Aghada agglomeration is on the list of priority areas where treatment must improve to resolve national environmental priorities, as published in 2023. We also consulted with OEA Scientific Officers Robert Wilkes in relation to coastal modelling results.

12. Charges

The RL requires that the licensee shall pay to the Agency, such sum as the Agency from time to time determines is reflective of the monitoring and enforcement regime being proposed for the agglomeration.

13. Recommendation

In considering an application for the review of a licence, the Agency shall have regard to the requirements of Regulation 6(2) of the European Union (Waste Water Discharge) Regulations 2007 to 2020.

In deciding on an application, the Agency shall:

- set ELVs and a timeframe in which these are to be achieved with the aim of achieving environmental objectives for the surface waterbody into which the discharges are or will be made including any objectives and standards established for associated protected areas;
- have regard to the conclusions of the Appropriate Assessment and findings of the EIA Screening; and
- has regard to submission received in accordance with these Regulations.

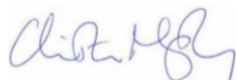
The Agency shall not grant a revised licence which in the opinion of the Agency will cause a deterioration in the status of the receiving surface water body or compromise the achievement of objectives or environmental quality standards.

In setting ELVs for the discharge, the Agency shall ensure that the discharge is controlled according to the combined approach where the limits are established on the basis of the stricter of either or both, the limits and controls required under the Urban Waste Water Regulations, and the limits determined under statute or Directive for the purpose of achieving the environmental objectives established for surface waters, groundwater or protected areas for the water body into which the discharge is made.

We are satisfied, on the basis of the information available, that the conditions of the RL give effect to the requirements set out above. Subject to compliance with the conditions of this RL, any discharges from the agglomeration served by the waste water works will comply with and will not contravene any of these requirements.

I recommend that a Final Licence be granted subject to the conditions and for the reasons as set out in the attached Recommended Licence.

Signed



Christine Murphy

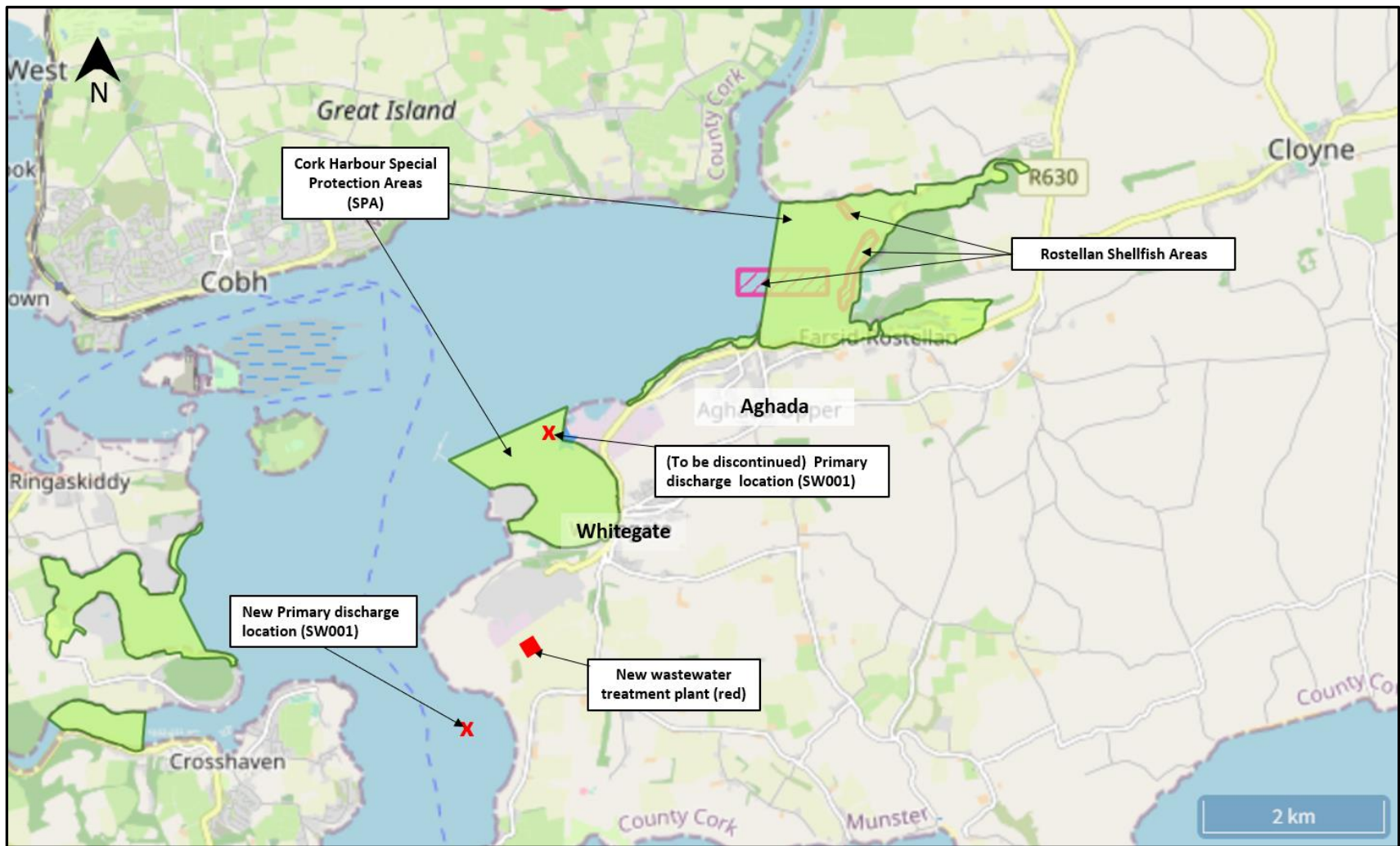
Environmental Licensing Programme

Signed



Mark Dwyer

Appendix 1: Map showing location of Whitegate-Aghada WwTP and associated primary discharge point.



Appendix 2 Appropriate Assessment

Table 1: List of European Sites assessed, their associated qualifying interests and conservation objectives.

European Site (Site Code)	Distance/ Direction from discharges	Qualifying Interests (* denotes priority habitat)	Conservation Objectives	Assessment
Cork Harbour SPA (004030)	3.4km north of the proposed primary discharge	<p>Species</p> <p>A004 Little Grebe (<i>Tachybaptus ruficollis</i>)</p> <p>A005 Great Crested Grebe (<i>Podiceps cristatus</i>)</p> <p>A017 Cormorant (<i>Phalacrocorax carbo</i>)</p> <p>A028 Grey Heron (<i>Ardea cinerea</i>)</p> <p>A048 Shelduck (<i>Tadorna tadorna</i>)</p> <p>A050 Wigeon (<i>Anas Penelope</i>)</p> <p>A052 Teal (<i>Anas crecca</i>)</p> <p>A054 Pintail (<i>Anas acuta</i>)</p> <p>A056 Shoveler (<i>Anas clypeata</i>)</p> <p>A069 Red-breasted Merganser (<i>Mergus serrator</i>)</p> <p>A130 Oystercatcher (<i>Haematopus ostralegus</i>)</p> <p>A140 Golden Plover (<i>Pluvialis apricaria</i>)</p> <p>A141 Grey Plover (<i>Pluvialis squatarola</i>)</p> <p>A142 Lapwing (<i>Vanellus vanellus</i>)</p> <p>A149 Dunlin (<i>Calidris alpina</i>)</p> <p>A156 Black-tailed Godwit (<i>Limosa limosa</i>)</p> <p>A157 Bar-tailed Godwit (<i>Limosa lapponica</i>)</p> <p>A160 Curlew (<i>Numenius arquata</i>)</p> <p>A162 Redshank (<i>Tringa totanus</i>)</p> <p>A179 Black-headed Gull (<i>Chroicocephalus ridibundus</i>)</p> <p>A182 Common Gull (<i>Larus canus</i>)</p>	As per NPWS (2014) Conservation Objectives: Cork Harbour SPA 004030. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht (dated 16/12/2014).	<p>Discharges to Water</p> <p>Discharge of effluent to water systems can lead to an altered nutrient balance (eutrophication), potential threat of toxicity, reduction in biological status and effects on water dependant habitats and species. The birds of the SPA are dependent on water based species (e.g. fish) as a food source. The RL specifies ELVs which were established to ensure that the quality of the receiving water will not compromise the achievement of the objective to achieve the good status for Outer Cork Harbour including the EQSs established under European Communities Environmental Objectives (Surface Water) Regulations 2009 (S.I. No. 272 of 2009) as amended. Water quality is an important factor for achieving the conservation objectives established for protected species and natural habitats of European Sites. The RL requires all storm water overflows comply with criteria set out in the DoECLG 'Procedures and Criteria in Relation to Storm Water Overflows', 1995. Condition 3.3 of the RL requires the licensee to take such measures as necessary to ensure that no deterioration in the quality of the receiving waters shall occur as a result of the discharge.</p>

		<p>A183 Lesser Black-backed Gull (<i>Larus fuscus</i>)</p> <p>A193 Common Tern (<i>Sterna hirundo</i>)</p> <p>Habitat</p> <p>A999 Wetland and Waterbirds</p>	<p>Potential for Accidents to Arise</p> <p>There is the potential for accidents and emergency situations arising at a waste water works resulting in partially treated or untreated waste waters discharging to the receiving waters. Such incidents or events could lead to the breach of ELVs and the discharge of elevated levels of polluting organic matter, which would have the potential to impact on the receiving water environment. The licensee is required to maintain an operation and maintenance programme for all plant and equipment to ensure that no unauthorised waste water discharges take place (Condition 4.9). The licensee is required to provide details on measures taken to prevent environmental damage following accidents associated with the waste water works. Condition 5.1.7 of the RL requires the licensee to identify measures to minimise any environmental damage associated with discharges or overflows from the waste water works following anticipated events or accidents/incidents. Condition 4.17 of the RL requires the licensee to provide an annual statement as to the measures taken or adopted to minimise environmental damage associated with discharges or overflows from the waste water works following anticipated events or accidents/incidents.</p>
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Appendix 3 Acknowledgement and Attribution:

This report uses maps submitted as part of the application and map imagery as set out in **Table 2** below.

Table 2: Acknowledgement and attribution of the imagery used from (for e.g.) Google and Geohive in **Appendix 1** of this report.

Map Source	Link to Source	Data Provider	Usage Licence	Attribution Statement	Location in Report
EPA Maps	https://gis.epa.ie/EPAMaps/	OpenStreetMap®	ShareAlike 2.0 Generic (CC BY-SA 2.0)	Data is available under the Open Database License	Appendix 1