



## OFFICE OF CLIMATE, LICENSING & RESOURCE USE

### INSPECTORS REPORT ON A WASTE WATER DISCHARGE LICENCE APPLICATION

|       |  |                                   |
|-------|--|-----------------------------------|
| To:   | Dara Lynott, Director  |                                   |
| From: | Éimer Godsil   | Environmental Licensing Programme |
| Date: | 1 <sup>st</sup> October 2015   |                                   |
| RE:   | Application for a Waste Water Discharge Licence from Irish Water, for the agglomeration named <b>Whitegate-Aghada</b> Reg. No. D0423-01. |                                   |

#### Application & Agglomeration Details

|  |  |
|--|--|
| Agglomeration Name:                                    | Whitegate-Aghada (Appendix 1)  |
| County:  | Cork   |
| Schedule of discharge licensed:                        | Discharges from agglomerations with a population equivalent of 1,000 to 2,000. |
| Licence application received:                          | 22/06/2009   |
| Notices under Regulation 18(3)(b) <sup>1</sup> issued: | 06/10/2014   |
| Information under Regulation 18(3)(b) received:        | 27/11/2014   |
| Unsolicited Additional information received:           | 16/07/2009, 05/06/2015   |
| Notices Reg 20(1) <sup>1</sup> issued:                 | 13/03/2015   |
| Information under Reg 20(1) received:                  | 30/03/2015   |
| Site notice check:                                     | 20/07/2009   |
| Site Visit:  | 16/12/2014   |
| Submission(s) Received:                                | None   |
| Design Population Equivalent:                          | None   |
| Actual Population Equivalent:                          | 1953   |
| Type of treatment:                                     | No Treatment.  |
| Plant description:                                     | There is no wastewater treatment plant for Whitegate/Aghada agglomeration.     |

<sup>1</sup> Wastewater Discharge (Authorisation) Regulations, 2007, as amended.

The agglomeration of Whitegate-Aghada comprises of the villages of Whitegate, Aghada, Farsid and Rostellan and contains industrial, commercial and domestic wastewater. The collection system is combined and discharges to Cork Harbour, untreated, at Long Point adjacent to the ESB Generating Station - Aghada.

A new plant is proposed for the agglomeration and is listed in *Irish Water's Capital Investment Plan 2014-2016* as 'review scope and commence construction of approved scope'. The preliminary report has yet to be approved by Irish Water.

Unsolicited information received from the applicant (05/06/2015) states that the secondary discharge to groundwater, via a percolation area, at Ardnabourkey, GW004, is to be decommissioned as part of the upgrade to Whitegate/Aghada agglomeration. There is one IPC licenced facility within the agglomeration, Electricity Supply Board P0561-05, which discharges directly to Cork Harbour.

## 1. Discharges to waters

The following Table 1 outlines the main considerations in relation to discharges to waters from this agglomeration.

Table 1: Discharges to waters

| <b>Primary discharge point</b>    |  |
|-----------------------------------|--|
| Receiving water name              | Cork Harbour                                   |
| Type of receiving water           | Coastal. SW001.                                |
| Normal flow                       | 302m <sup>3</sup> /day                         |
| Maximum flow                      | 453m <sup>3</sup> /day                         |
| <b>Secondary discharge points</b> |  |
| Receiving water name              | Cork Harbour at Farsid.                        |
| Type of receiving water(s)        | SW002. Coastal. (161 p.e.)                     |
| Normal flow                       | 40m <sup>3</sup> /day                          |
| Maximum flow                      | 120m <sup>3</sup> /day                         |
| Receiving water name              | Cork Harbour at Aghada.                        |
| Type of receiving water(s)        | SW003. Coastal. (80 p.e.)                      |
| Normal flow                       | 9m <sup>3</sup> /day                           |
| Maximum flow                      | 27m <sup>3</sup> /day                          |
| Receiving water name              | Percolation area in Ardnabourkey               |
| Type of receiving water(s)        | GW004. Groundwater percolation area. (28 p.e.) |
| Normal flow                       | 6.3m <sup>3</sup> /day                         |
| Maximum flow                      | 19m <sup>3</sup> /day                          |
| <b>Storm water overflow(s)</b>    |  |
| Storm water overflow(s)           | Yes (1)  |
| Receiving water name(s)           | Coastal, Cork Harbour at Whitegate Village.    |
| <b>Emergency overflow(s)</b>      |  |
| Emergency overflow(s)             | Yes (2)  |

*Schedule A: Discharges & Discharge Monitoring* of the recommended licence (RL) specifies the Emission Limit Values (ELVs) to which the discharges from the Whitegate/Aghada agglomeration must conform. Monitoring of the discharges will take place as per this schedule of the RL.

There is a large variation noted between the normal and maximum flows recorded from the primary discharge point. This variation can be attributed to the combined nature of the collection network.

## 2. Receiving waters and impact

The following table summarises the main considerations in relation to Cork Harbour in the vicinity of the primary discharge.

Table 2: Receiving waters

| Characteristic                      | Classification                                       | Comment                        |
|-------------------------------------|--|--------------------------------|
| Receiving water name                | Cork Harbour   | WFD Code: IE_SW_060_0000       |
| Designations                        | Cork Harbour SPA                                     | Site code: 004030              |
| Receiving water monitoring stations | LE610 – Adj to Aghada<br>EPA Code: CW05003150LE8002  | 700m north of SW001            |
|                                     | LE620 – E Spike Island<br>EPA Code: CW05003150LE8003 | 1.5km west of SW001            |
| Coastal water Quality               | Unpolluted   | 2014                           |
| WFD status                          | Moderate (2011)                                      | Restore to Good status by 2021 |

The *South Western RBD Transitional and Coastal Waters Action Plan* (TraC AP) lists Cork Harbour as a waterbody at risk from land based point source pressures (nutrient input) and identifies the primary discharge from the Whitegate/Aghada agglomeration as a point source potentially putting the waterbody at risk.

The document also identified Cork Harbour as having 'Moderate' ecological status at present. The overall 'Moderate' status of Cork Harbour is determined as the TraC AP assigned a 'Moderate' Dissolved Inorganic Nitrogen (DIN) status and a 'Fail' for chemical status to the waterbody.

The *Womanagh Water Management Unit Action Plan* details measures required for Whitegate/Aghada agglomeration as 'requiring further investigation prior to capital works' and 'to commence implementation of pollution reduction programmes for shellfish waters'.

As the plan for a WWTP for Whitegate/Aghada is at a preliminary stage, investigations of the requirements for a new plant are ongoing. The secondary discharges SW002 and SW003 discharge in the vicinity of Rostellan West, Rostellan South and Rostellan North Shellfish Areas. SW001 discharges 2.8km south west of the nearest shellfish area (Rostellan West Shellfish Area).

Due to issues with nitrogen in Cork Harbour, the RL, as drafted, has set emission limit values for Total Oxidised Nitrogen (TON) and ammonia. The standard for "Good/High" status of Dissolved Inorganic Nitrogen (DIN) in coastal receiving waters is  $\leq 0.25/0.17\text{mg/l}$  in accordance with European Communities Environmental

Objectives (Surface Water) Regulations, 2009, as amended. The Whitegate/Aghada agglomeration discharges untreated wastewater to Cork Harbour and this contributes to the DIN levels and to the nutrient status of the waterbody.

The primary discharge from the agglomeration is to a coastal waterbody and the agglomeration p.e. is below the 10,000 threshold at which the ELVs specified in Part 1 of the second schedule of the Urban Wastewater Treatment Regulations, 2001, as amended, apply. For agglomerations under this threshold, "appropriate treatment" is required.

Article 7 of Directive 91/271/EC<sup>2</sup> requires that urban waste water entering collection systems shall, before discharge, be subject to appropriate treatment, as defined in Article 2(9), for discharges to coastal waters from agglomerations of less than 10,000 p.e.. The term 'appropriate treatment' is defined in the Directive as '*treatment of urban waste water 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 the Directive and of other Community Directives*'.

In the interest of ensuring Cork Harbour reaches 'Good' status, secondary treatment is regarded as appropriate treatment for this agglomeration.

To ensure that the discharge does not impact on the receiving water quality, ELVs for cBOD (25mg/l), COD (125mg/l) and suspended solids (35mg/l) are set in the RL from the date of grant of licence. ELVs are also set for TON (20mg/l) and ammonia (5mg/l) with a commencement date of 01/01/2020, as specified in *Schedule A* of the RL.

If a deterioration in the status of the receiving waters is noted, and is attributed to the discharges from this waste water works, *Condition 3.4* requires that Irish Water take 'such measures as are necessary' to prevent such deterioration.

#### Rostellan West Shellfish Area

The Rostellan West shellfish area is located 2.8km south west of the primary discharge point, 800m from the secondary discharge point SW002 and 450m from the secondary discharge point SW003. The *Revised/Updated Rostellan West Pollution Reduction Programme* (PRP) lists the Whitegate Aghada urban waste water system as a key pressure on the protected shellfish area.

The results of monitoring (2009) undertaken in accordance with this PRP indicated that there were historical water quality issues with faecal coliform levels within/in the vicinity of the shellfish area. The results of monitoring (2012) undertaken in accordance with this revised/updated PRP indicates that there are no water quality issues with faecal coliform levels within/in the vicinity of the shellfish area.

The bivalve mollusc production areas in Rostellan West Shellfish Area are classified as 'Class B' for the purposes of EC Regulation 854/2004. The results of shellfish water monitoring for the other parameters do not indicate any other water quality issues within/in the vicinity of this shellfish area.

#### Rostellan South Shellfish Area

The Rostellan South shellfish area is located 3.8km south west of the primary discharge point, 460m from the secondary discharge point SW002 and 1.1km from the secondary discharge point SW003. The *Revised/Updated Rostellan South*

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<sup>2</sup> Council Directive of 21 May 1991 concerning urban waste water treatment.

*Pollution Reduction Programme* (PRP) lists the Whitegate Aghada urban waste water system as a key pressure on the protected shellfish area.

The results of monitoring (2009) undertaken in accordance with this PRP indicated that there were historical water quality issues with faecal coliform levels within/in the vicinity of the shellfish area. The results of monitoring (2012) undertaken in accordance with this revised/updated PRP indicates that there are no water quality issues with faecal coliform levels within/in the vicinity of the shellfish area.

The bivalve mollusc production areas in Rostellan South Shellfish Area are classified as 'Class B' for the purposes of EC Regulation 854/2004. The results of shellfish water monitoring for the other parameters do not indicate any other water quality issues within/in the vicinity of this shellfish area.

#### Rostellan North Shellfish Area

The Rostellan North shellfish area is located 4.8km south west of the primary discharge point, 1.5km from the secondary discharge point SW002 and 1.7km from the secondary discharge point SW003. The *Revised/Updated Rostellan North Pollution Reduction Programme* (PRP) lists the Whitegate Aghada urban waste water system as a key pressure on the protected shellfish area.

The results of monitoring (2009) undertaken in accordance with this PRP indicated that there were historical water quality issues with faecal coliform levels within/in the vicinity of the shellfish area. The results of monitoring (2012) undertaken in accordance with this revised/updated PRP indicates that there are no water quality issues with faecal coliform levels within/in the vicinity of the shellfish area.

The bivalve mollusc production areas in Rostellan North Shellfish Area are classified as 'Class B' for the purposes of EC Regulation 854/2004. The results of shellfish water monitoring for the other parameters do not indicate any other water quality issues within/in the vicinity of this shellfish area.

Condition 5.6 of the RL, as drafted, requires the licensee to carry out an assessment of the impact of the discharges from the waste water works on the microbiological quality (including viruses) of the shellfish in the Rostellan South, Rostellan West and Rostellan North shellfish areas. Conditions 5.7 & 5.8 require, where the assessment finds that the discharge is having a deleterious effect on the shellfish, to install and maintain appropriate disinfection systems within a specified timeframe.

### **3. Ambient Monitoring**

*Schedule B: Ambient Monitoring* of the RL specifies the parameters, analysis method and frequency for which ambient monitoring of the primary discharge shall be carried out. The requirements for ambient monitoring in *Schedule B: Ambient Monitoring* are sufficient to ensure that there will be no deterioration in the status of the receiving water as a result of the discharge.

### **4. Combined Approach**

The Wastewater Discharge (Authorisation) Regulations, 2007, as amended, specify that a 'combined approach' in relation to licensing of waste water works must be taken, whereby the emission limits for the discharge are established on the basis of the stricter of either or both, the limits and controls required under the Urban Waste Water Treatment Regulations, 2001, as amended, 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. The RL as drafted gives effect to the principle of the Combined Approach as defined in Wastewater Discharge (Authorisation) Regulations, 2007, as amended.

## 5. Programme of Improvements

There is a programme of improvements in place for the agglomeration. The works to be carried out include;

- the provision of secondary treatment for the agglomeration to meet ELVs as specified in the RL, and
- discontinuation of the groundwater secondary discharge, GW004, at Ardnabourkey.

The RL, as drafted, requires that these works be completed by 31/12/2019 in order to ensure compliance with the emission limit values as set out in *Schedule A: Discharges & Discharge Monitoring* of the RL.

Irish Water is required to apply to the Agency for a licence review prior to commissioning of a new WWTP, as specified in *Condition 5.9* of the RL, as drafted.

## 6. Compliance with EU Directives

In considering the application, regard was had to the requirements of Regulation 6(2) of the Wastewater Discharge (Authorisation) Regulations, 2007, as amended, notably:

Table 4: Compliance with EU Directives/Regulations

| Compliance with Directives/Regulations  | Description and Conditions in RL   |
|---|--|
| Urban Waste Water Treatment Directive [91/271/EEC]  | Not compliant in 2013 due to lack of appropriate treatment.  |
| Water Framework Directive [2000/60/EC]  | Good status to be achieved by 2021   |
| EC Environmental Objectives (Surface Water) Regulations 2009 (S.I. No. 272 of 2009), as amended | <i>Schedule A</i> of RL sets ELVs to contribute towards achieving the environmental quality standards.                             |
| Drinking Water Abstraction Regulations  | There are no drinking water abstractions downstream.   |
| Bathing Water Directive [2006/7/EC]   | Under the Water Framework Directive Outer Cork Harbour IE_SW_050_0000 is a recreational water and is approximately 3km from SW001. |
| Dangerous Substances Directive [2006/11/EC]   | Condition 4 requires screening for priority substances.  |
| Environmental Impact Assessment Directive [85/337/EEC]  | An EIS has not been required for Whitegate/Aghada WWTP to date.  |

Birds Directive [79/409/EEC] & Habitats Directive [92/43/EEC]

The Whitegate/Aghada agglomeration discharges directly into the Cork Harbour SPA<sup>3</sup>. The site is protected for priority species listed under Annex 1 of the Birds Directive. It is also selected for protection of species listed under Annex II of the same directive.

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the activity, individually or in combination with other plans or projects is likely to have a significant effect on a European Site(s).

In this context, particular attention was paid to the European site at Cork Harbour SPA (Code 004030) and the Agency considered, for the reasons set out below, that the activity is not directly connected with or necessary to the management of the site as a European Site and that it cannot be excluded, on the basis of objective scientific information following screening under this Regulation, that the activity, individually or in combination with other plans or projects, will have a significant effect on a European site and accordingly determined that an Appropriate Assessment of the activity is required, and for this reason determined to require the applicant to submit a Natura Impact Statement.

The reasons being:

- The discharge of untreated effluent from the agglomeration directly to Cork Harbour SPA.
- The Water Framework Directive status of the receiving water is 'moderate', and
- Monitoring of the receiving water indicates that the discharge is having an impact on Dissolved Inorganic Nitrogen levels in the receiving waters.

An 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 and 2013, pursuant to Article 6(3) of the Habitats Directive, that the activity, individually or in combination with other plans or projects, will not adversely affect the integrity of a European Site in particular Cork Harbour SPA, having regard to its conservation objectives and will not affect the preservation of the site at favourable conservation status if carried out in accordance with this licence and the conditions attached hereto for the following reasons:

- The emission limit values set out in *Schedule A: Discharges and Discharge Monitoring* of the licence have been set to ensure no deterioration of the receiving water as a result of the discharge.
- *Schedule C: Programme of Improvements* of the RL requires the licensee to provide secondary treatment for the agglomeration and discontinue the secondary discharge to ground (GW004), by 31/12/2019.

These mitigation measures will ensure that the discharge from the agglomeration will not have an adverse impact on the water dependant and other qualifying interests of the designated site. 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.

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<sup>3</sup> SPA: Special Protection Area designated under the *Birds Directive*, Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

## **7. Cross Office Liaison**

Advice and guidance issued by the Waste Water Technical Working Group (WWTWG) was followed in my assessment of this application. Advice and guidance issued by the WWTWG is prepared through a detailed cross-office co-operative process, with the concerns of all sides taken into account. The Board of the Agency has endorsed the advice and guidance issued by the WWTWG for use by licensing inspectors in the assessment of wastewater discharge licence applications.

Robert Wilkes, Office of Environmental Assessment, was consulted regarding DIN issues in Cork Harbour.

## **8. Submissions**

No submissions were received in relation to this application.

## **9. Charges**

The RL sets an annual charge for the agglomeration at €5,978.10 and is reflective of the monitoring and enforcement regime being proposed for the agglomeration.

## **10. Recommendation**

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

Signed

A handwritten signature in cursive script, reading "Éimer Godsil", is written over a horizontal line.

Éimer Godsil  
Environmental Licensing Programme



**Appendix 1: Map showing location of Whitegate/Aghada primary discharge point and secondary discharges.**

