



Headquarters
P.O. Box 3000
Johnstown Castle Estate
County Wexford
Ireland

Waste Water Discharge Licence

Recommended Decision

Licence Register Number:	D0044-01
Licensee:	Irish Water
Company Register Number:	530363
Agglomeration:	Carrigtwohill and Environs

INTRODUCTION

This introduction is not part of the licence and does not purport to be a legal interpretation of the licence.

The licence sets out in detail the conditions under which Irish Water will control and manage the waste water discharges from the agglomeration covered by this licence.

The WWTP in Carrigtwohill was designed to cater for a population equivalent (p.e.) of approximately 5,000. The current loading, comprising industrial, commercial and domestic waste water sources plus leachate from Rossmore and Youghal landfills, is estimated at 12,000 p.e. and is projected to increase significantly in the coming years. There are leachate storage tanks on site with a total capacity of approximately 220m³. Average daily intake of leachate is 150m³ (April 2007), which accounts for 6.7% of the total influent to the WWTP (for that time period). The sewerage system in Carrigtwohill is partially separate/partially combined. The WWTP provides secondary treatment. treatment at the plant consists of inlet screen and grit removal, surface aeration, oxidation ditch and secondary clarification and picket fence thickener for sludge drying. There are two emergency overflows associated with pumping stations in the agglomeration. There are no secondary discharges in the agglomeration, and two stormwater overflows.

The sewerage system in Carrigtwohill is a partially separate/partially combined system.

The licence requires appropriate remedial action, within specified timeframes, to be undertaken in order to address each of the discharge locations within the agglomeration. This remedial action will ensure that appropriate protection is afforded to the receiving water environment.

The legislation governing this licence relates specifically to, and is restricted to, the regulation and control of waste water discharges from the agglomeration. Therefore any odour or noise issue that may be associated with the waste water works including the treatment plant cannot be addressed by this licence.

By virtue of section 17(4) of the Water Services (No.2) Act 2013, the application for this licence is deemed to have been made by Irish Water and this licence is granted to Irish Water.

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GLOSSARY OF TERMS

All terms in this licence should be interpreted in accordance with the definitions in the Waste Water Discharge (Authorisation) Regulations 2007, as amended, unless otherwise defined in this section.

AER	Annual Environmental Report.
Agglomeration	An area where the population or economic activities or both are sufficiently concentrated for a waste water works to have been put in place.
Agreement	Agreement in writing.
Annually	At least one measurement in any one year.
Application	The application for this licence.
Attachment	Any reference to Attachments in this licence refers to attachments submitted as part of the licence application.
Bi-monthly	At approximately two - monthly intervals.
Biannually	At approximately six – monthly intervals.
Biennially	Once every two years.
BIM	Bord Iascaigh Mhara.
BOD	5 day Biochemical Oxygen Demand (without nitrification suppression).
cBOD	5 day Carbonaceous Biochemical Oxygen Demand (with nitrification suppression).
CEN	Comité Européen De Normalisation – European Committee for Standardisation.
COD	Chemical Oxygen Demand.
Combined approach	In relation to a waste water works, means the control of discharges and emissions to waters 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 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.
Competent Laboratory	A testing facility meeting the general management and technical requirements of EN ISO/IEC-17025 standard, or other equivalent standards accepted at international level and utilising methods of analysis, including laboratory, field, and on-line methods, which are validated and documented in accordance with the above standard(s) for the specific tests.
Daily	During all days when discharges are taking place; with at least one measurement/observation per day.

Day	Any 24 hour period.
Discharge limits	Those limits, specified for a particular parameter in <i>Schedule A: Discharges & Discharge Monitoring</i> , of this licence.
Discharge Point	The point from which a waste water discharge occurs.
DO	Dissolved oxygen.
Documentation	Any report, record, result, data, drawing, proposal, interpretation or other document, in written or electronic form, that is required by this licence.
DoECLG	Department of the Environment, Community and Local Government.
Domestic Waste Water	Waste water from residential settlements and services that originates predominantly from human metabolism and from household activities.
Drawing	Any reference to a drawing or drawing number means a drawing or drawing number contained in the application, unless otherwise specified in this licence.
ELV	Emission Limit Value.
EMP	Environmental Management Programme.
Environmental damage	As defined in Directive 2004/35/EC.
Environmental Pollution	<p>Means, in relation to waste water discharges, the direct or indirect introduction, as a result of human activity, of waste water discharges, substances (including any explosive, liquid or gas) or polluting matter (including any poisonous or noxious matter) into waters which may endanger human health or harm the aquatic environment, and in particular:</p> <ul style="list-style-type: none">(i) create a risk to waters, sediment, plants or animals.(ii) deleteriously interfere with the quality of aquatic ecosystems or terrestrial ecosystems directly depending on aquatic ecosystems including by:<ul style="list-style-type: none">• Rendering those or any other waters poisonous or injurious to fish, shellfish, spawning grounds or the food of any fish, or• Impairing the usefulness of the bed and soil of any waters as spawning grounds or impairing their capacity to produce the food of fish or shellfish,(iii) impair or interfere with amenities and other legitimate uses of the water, or(iv) result in water failing to meet any environmental quality standards prescribed in regulations for the purposes of giving effect to the requirements of any Directive relating to the quality or use of water for the time being in force.
EPA	Environmental Protection Agency.
Fortnightly	A minimum of 24 times per year, at approximately two week intervals.

FSAI	Food Safety Authority of Ireland.
GC/MS	Gas chromatography/mass spectroscopy.
ICP	Inductively coupled plasma spectroscopy.
Incident	The following shall constitute an incident for the purposes of this licence: (i) any discharge that does not comply with the requirements of this licence; (ii) 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 licensee and/or the relevant authorities.
Industrial waste water	Any waste water that is discharged from premises used for carrying on any trade or industry or other non-domestic use and excludes run-off rain water.
Interim ELV	Interim Emission Limit Value means an emission limit value that applies to a discharge for the period between the date of grant of licence and the date specified for the emission limit value to take effect.
Licensee	Irish Water, Colvill House, 24/26 Talbot Street, Dublin 1, Company Register Number 530363, as by virtue of section 17(4) of the Water Services (No. 2) Act 2013, the application for this licence is deemed to have been made by Irish Water and this licence is granted to Irish Water.
Licensing Regulations	Waste Water Discharge (Authorisation) Regulations 2007, as amended.
Local Authority	Cork County Council.
Maintain	Keep equipment, plant and infrastructure in a fit state, including such regular inspection, servicing, calibration and repair as may be necessary to perform its function.
Monthly	A minimum of 12 times per year, at intervals of approximately one month.
National Environmental Complaints Procedure	As established under the National Environmental Enforcement Network.
Population Equivalent	A measurement of organic biodegradable load and a population equivalent of 1 (1 p.e.) means the organic biodegradable load having a five-day biochemical oxygen demand (BOD5) of 60g of oxygen per day; the load being calculated on the basis of the maximum average weekly load entering the waste water works during the year, excluding unusual situations such as those due to heavy rain.
Priority Substances	Those substances or groups of substances, identified by the Commission in accordance with Article 16(2) of the Water Framework Directive and listed in Tables 11 and 12 of Schedule 6 of the European Communities Environmental Objectives (Surface Waters) Regulations, 2009, as amended, that have been prioritised for action by the setting of environmental quality standards at

	Community level.
Primary Discharge	The discharge with the largest volume being discharged from the waste water works.
Primary Treatment	Treatment of urban waste water by a physical and/or chemical process involving settlement of suspended solids, or other processes in which the BOD5 of the incoming waste water is reduced by at least 20% before discharge and the total suspended solids of the incoming waste water are reduced by at least 50%.
Protected Areas	Areas designated as requiring special protection under specific Community legislation for the protection of their surface water and groundwater or for the conservation of habitats and species of European sites directly dependant on water and listed in the register established by the Agency in accordance with Article 8 of the Water Policy Regulations.
PRTR	Pollutant Release and Transfer Register.
Quarterly	All or part of a period of three consecutive months beginning on the first day of January, April, July or October.
Unusual Weather Conditions	In relation to waste water discharges unusual weather conditions, means any one or combination of the following: (i) heavy rainfall >50 mm in 24 hrs, >40 mm in 12 hrs, >30 mm in 6 hrs (i.e. Met Eireann Orange Alert criteria or greater); (ii) low ambient temperatures as evidenced by effluent temperature of 5 degrees Celsius or less or by the freezing of mechanical equipment in the works; (iii) significant snow deposits; (iv) tidal or fluvial flooding; (v) weather conditions causing unforeseen loss of power supply to the waste water treatment plant which could not be ameliorated by the reasonable provision and operation of standby generation facilities.
Sample(s)	Unless the context of this licence indicates to the contrary, the term sample(s) shall include measurements taken by electronic instruments.
Secondary Discharge	A potential, occasional or continuous discharge from the waste water works other than a primary discharge or a storm water overflow.
SFPA	Sea Fisheries Protection Authority.
SSRS	Small Streams Risk Score.
Specified discharges	Those discharges listed in <i>Schedule A: Discharges & Discharge Monitoring</i> , of this licence.
Standard method	A relevant CEN, ISO, National, or other internationally recognized test procedure such as detailed in the current edition of "Standard Methods for the Examination of Water and Wastewater" (published jointly by A.P.H.A. / A.W.W.A. / W.E.F.), a documented and validated in-house procedure based on the above sources that will ensure the provision of data of an equivalent scientific quality, or an alternative method as may be agreed with the Agency.

Storm water overflow	A structure or device on a sewerage system designed and constructed for the purpose of relieving the system of excess flows that arise as a result of rain water or melting snow in the sewered catchment, the excess flow being discharged to receiving waters.
The Agency	Environmental Protection Agency.
Waste Water	Domestic waste water or the mixture of domestic waste water with industrial waste water.
Waste Water Works	Sewers and their accessories (or any part thereof) and all associated structural devices, including waste water treatment plants, which are owned by, vested in, controlled or used by the licensee for the collection, storage, treatment or discharge of waste water.
Water Services Authority	Cork County Council.
Weekly	During all weeks when discharges are taking place; with at least one measurement in any one week.
WSIP	Water Services Investment Programme.
WWTP	Waste water treatment plant.

DECISION & REASONS FOR THE DECISION

The Environmental Protection Agency is satisfied, on the basis of the information available, that subject to compliance with the conditions of this licence, any discharges from the agglomeration served by the waste water works will comply with and will not contravene any of the requirements of Regulation 6 of the Waste Water Discharge (Authorisation) Regulations 2007, as amended.

In reaching this decision the Environmental Protection Agency has had regard to the requirements and objectives of Regulation 6 of the Regulations and has considered the application and supporting documentation received from the applicant, *a submission received from a third party* and the report of its inspector.

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 European Sites. In this context, particular attention was paid to the European sites at Great Island Channel SAC 001058 and Cork Harbour SPA 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 those sites as European Sites and that it cannot be excluded, on the basis of objective information, 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 for the following reasons; the primary discharge is directly into Great Island Channel SAC and to Cork Harbour SPA, effluent quality for 2012 does not comply with the UWWT Regulations nor the Surface Water Regulations, the SWRBD TrAC lists the receiving water Lough Mahon as 'at risk from overflows from the discharge' from the Carrigtwohill agglomeration, the receiving waterbody is at 'moderate' ecological status, under the Water Framework Directive Lough Mahon has a risk score of 1a - at risk of not achieving good status and Trophic Status Assessment 2010-2012 states the waterbody breaches winter and summer DIN and oxygenation conditions.

The Agency has completed the Appropriate Assessment 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 will not adversely affect the integrity of European Sites, in particular Great Island Channel SAC and Cork Harbour SPA, having regard to their conservation objectives and will not affect the preservation of those sites at favourable conservation status if carried out in accordance with this Licence and the conditions attached hereto for the following reasons: improvements to the treatment works to be completed as per Schedule C of the RL by 31st December 2016 - increased capacity at the plant, the installation of phosphorous removal, sufficient stormwater holding at the stormwater overflows in the agglomeration, modelling of the impact of the discharge on Cork Harbour indicates that the proposed primary discharge point location results in increased assimilative capacity and increased effluent dispersion.

In light of the foregoing reasons, the Agency is satisfied that no reasonable scientific doubt remains as to the absence of adverse effects on the integrity of the Great Island Channel SAC and Cork Harbour SPA.

PART I: SCHEDULE OF DISCHARGES LICENSED

In pursuance of the powers conferred on it by the Waste Water Discharge (Authorisation) Regulations 2007, as amended, the Environmental Protection Agency (the Agency), under Regulation 28(1) of the said Regulations grants this Waste Water Discharge Licence to Irish Water, Colvill House, 24/26 Talbot Street, Dublin 1, Company Register Number 530363, as by virtue of section 17(4) of the Water Services (No. 2) Act 2013, the application for this licence is deemed to have been made by Irish Water and this licence is granted to Irish Water. The licence authorises the discharge of waste water from the waste water works servicing the **Carrigtwohill** agglomeration described below, subject to conditions listed in Part II, with the reasons therefor and the associated schedules attached thereto.

***Licensed Discharges, in accordance with the Second Schedule
of the Waste Water Discharge (Authorisation) Regulations 2007, as amended***

Discharges from agglomerations with a population equivalent of more than 10,000

PART II: CONDITIONS

Condition 1. Scope

- 1.1 Statutory Obligations
 - 1.1.1 This licence is for the purposes of Waste Water Discharge licensing under the Waste Water Discharge (Authorisation) Regulations 2007, as amended, only and nothing in this licence shall be construed as negating the licensee's statutory obligations or requirements under any other enactments or regulations.
- 1.2 The agglomeration is the area outlined in red on the Drawing entitled Agglomeration Boundary, received on the 20th August 2013, of the application. Any reference in this licence to agglomeration shall mean the area thus outlined in red.
- 1.3 The discharge(s) to waters from the waste water works shall be restricted to those listed and described in *Schedule A: Discharges and Discharge Monitoring*, of this licence and shall be as set out in the licence application or as modified under Condition 1.6 of this licence and subject to the conditions of this licence.
- 1.4 The discharge(s) to waters from the waste water works shall be controlled and managed and shall take place as set out in this licence. All programmes required to be carried out under the terms of this licence become part of this licence.
- 1.5 For the purposes of this licence, the location(s) of the waste water discharge(s) authorised by this licence is/are as presented on Drawing No. B3-01 CARRIG and Attachment B Map 02 of the application.
- 1.6 No alteration to the waste water works or any part thereof that would, or is likely to, result in a material change to or increase in discharges sufficient to represent a risk of causing a breach of emission standards specified in the licence shall be carried out or commenced without prior notice to, and without the agreement of, the Agency.
- 1.7 Treatment Capacities
 - 1.7.1 The licensee shall, on an annual basis, undertake an 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).
 - 1.7.2 The licensee shall maintain such available capacity within the waste water works as is necessary to ensure that there is no environmental risk posed to the receiving water environment as a result of the discharges.
 - 1.7.3 Where the licensee determines, as part of those assessments undertaken in Condition 1.7.1 above, that the remaining treatment capacity will be exceeded within the ensuing three year period, the licensee shall notify the Agency and seek a licence review, as appropriate.
- 1.8 Infrastructural Works
 - 1.8.1 Where the licensee has received approval in accordance with the Planning and Development Act 2000, as amended, for the infrastructural improvements in Condition 1.8.1 above, the licensee shall seek a determination from the Agency as to whether a review of the Waste Water Discharge licence is required.
 - 1.8.2 Where a treatment plant associated with the agglomeration waste water works requires infrastructural improvements to the wastewater works that are subject to the European Communities (Environmental Impact Assessment) Regulations 1989, as amended, the licensee shall notify the Agency.

Reason: To clarify the scope of this licence.

Condition 2. Interpretation

- 2.1 Emission limit values for discharges to waters in this licence shall be interpreted in the following way:
- 2.1.1 Composite Sampling
- 2.1.1.1 No pH value shall deviate from the specified range.
- 2.1.1.2 For cBOD and COD, no more than the relevant number of samples specified in *Schedule A.4: Interpretation of Discharge Monitoring Results* – Column 2 or Column 4, of this licence, shall exceed the concentration Emission Limit Value based on the number of samples taken as listed in *Schedule A.4: Interpretation of Discharge Monitoring Results* – Column 1 or Column 3, of this licence. No individual result similarly calculated shall exceed the emission limit value by more than 100%.
- 2.1.1.3 For Suspended Solids, no more than the relevant number of samples specified in *Schedule A.4: Interpretation of Discharge Monitoring Results* – Column 2 or Column 4, of this licence, shall exceed the concentration Emission Limit Value based on the number of samples taken as listed in *Schedule A.4: Interpretation of Discharge Monitoring Results* – Column 1 or Column 3, of this licence. No individual result similarly calculated shall exceed the emission limit value by more than 150%.
- 2.1.1.4 For parameters Total Phosphorus and Total Nitrogen the annual mean of the samples shall not exceed the emission limit value. No individual result similarly calculated shall exceed the emission limit value by more than 20%.
- 2.1.1.5 For parameters other than pH, cBOD, COD, Suspended Solids, Total Nitrogen and Total Phosphorus eight out of ten consecutive composite results shall not exceed the emission limit value. No individual result similarly calculated shall exceed the emission limit value by more than 20%.
- 2.1.2 Discrete Sampling
- No cBOD, COD grab sample value shall exceed the emission limit value by more than 100% or Suspended Solids grab sample value shall exceed the emission limit value by more than 150%. For all other parameters, except pH, no grab sample value shall exceed the emission limit value by more than 20%.
- 2.2 No sample of the discharge taken at a time when unusual weather conditions are adversely affecting the operation of the waste water treatment plant, shall be taken into account in determining compliance with Condition 2.1 of this licence. A replacement sample shall be taken within 72 hours of cessation of the unusual weather conditions. The licensee shall report the sample result including any justification of the basis for excluding the sample in the Annual Environmental Report.

- 2.3 On any occasion where unusual weather conditions affect the operation of the waste water works the licensee shall use its best endeavours to mitigate the effect of the unusual weather conditions.

Reason: To clarify the interpretation of limit values fixed under the licence.

Condition 3. Discharges

- 3.1 No discharge(s) from the waste water works is/are permitted save under and in accordance with this licence.
- 3.2 No specified discharge from the waste water works shall exceed the emission limit values set out in *Schedule A: Discharges and Discharge Monitoring*, of this licence, subject to the requirements of Condition 2 above.
- 3.3 The licensee shall take such measures as are necessary to ensure that no deterioration in the quality of the receiving waters shall occur as a result of the discharge.
- 3.4 There shall be no discharge from the discharge point(s) specified in *Schedule C.2: Discharges to be Discontinued*, of this licence, from the dates specified therein.
- 3.5 Storm water overflows shall be as specified in *Schedule A.3: Storm Water Overflows*, of this licence, and shall include any other storm water overflows identified in the identification and assessment of storm water overflows required under this licence. All storm water overflows identified shall be notified in writing to the Agency.
- 3.6 The licensee shall ensure that all or any of the following:
- Gross solids
 - Litter
- associated with discharges from the waste water works do not result in an impairment of, or an interference with, amenities or the environment.

Reason: To provide for the protection of the receiving environment by way of control and limitation of discharges to Lough Mahon (Harper's Island).

Condition 4. Control and Monitoring

- 4.1 The licensee shall carry out such sampling, analyses, measurements, examinations, maintenance and calibrations as set out below and in accordance with *Schedule A: Discharges and Discharge Monitoring*, of this licence.
- 4.1.1 Analyses shall be undertaken by competent staff in accordance with documented operating procedures. Analysis for compliance purposes, including any sub-contracted analysis, shall be done by a competent laboratory.
- 4.1.2 Such procedures shall be assessed for their suitability for the test matrix and performance characteristics shall be determined.
- 4.1.3 Such procedures shall be subject to a programme of Analytical Quality Control verified by a competent third party using control standards with evaluation of test responses.

- 4.2 The licensee shall ensure that:
- 4.2.1 Sampling and analysis for all parameters listed in the Schedules to this licence, and
- 4.2.2 Any reference measurement methods to calibrate automated measurement system shall be carried out by an appropriate Standard Method.
- 4.3 The licensee shall install on all emission points such sampling points or equipment, including any data-logging or other electronic communication equipment, as may be required by the Agency. All such equipment shall be consistent with the safe operation of all sampling and monitoring systems.
- 4.4 All automatic monitors and samplers shall be functioning at all times (except during maintenance and calibration) when the discharges are being made unless alternative sampling or monitoring has been agreed in writing by the Agency for a limited period. In the event of the malfunction of any continuous monitor, the licensee shall contact the Agency as soon as practicable and alternative sampling and monitoring facilities shall be put in place. Agreement for the use of alternative equipment, other than in emergency situations, shall be obtained from the Agency.
- 4.5 Monitoring and analysis equipment shall be operated and maintained as necessary so that monitoring accurately reflects the discharge (or ambient conditions where that is the monitoring objective).
- 4.6 In the case of composite sampling of discharge(s) from the waste water works, a separate composite sample or homogeneous sub-sample (of sufficient volume as advised by the Agency) shall be refrigerated immediately after collection and retained as required for Agency use.
- 4.7 The licensee shall clearly label and provide safe and permanent access to all on-site sampling and monitoring points and to off-site points as required by the Agency.
- 4.8 The licensee shall ensure that a person in charge or a nominated deputy shall be available to meet with authorised person(s) of the Agency at all reasonable times and shall allow access to the waste water works or other premises that the Agency reasonably considers may contain information pertaining to a discharge from those works or other premises.
- 4.9 The licensee shall **establish and maintain** corrective action procedures and shall take corrective action should the specified requirements of this licence not be fulfilled. The responsibility and authority for persons initiating further investigation and corrective action in the event of a reported non-conformity with this licence shall be defined by the licensee.
- 4.10 The licensee shall **establish and maintain** a programme for maintenance and operation of all plant and equipment to ensure that no unauthorised waste water discharges take place. This programme shall be based on the instructions issued by the manufacturer/supplier or installer of the equipment. Appropriate record keeping and diagnostic testing shall support this maintenance programme. The licensee shall clearly allocate responsibility for the planning management and execution of all aspects of this programme to appropriate personnel.
- 4.11 The location, frequency, methods and scope of monitoring, sampling and analyses, as set out in this licence, may be amended with the agreement of the Agency following evaluation of test results.
- 4.12 Toxicity
- Within **six months** of the date of grant of this licence, the licensee shall submit a proposal

for the management of leachate within the wastewater works, to the Agency for its agreement. The proposal shall as a minimum include:

- 4.12.1 Characterisation of all constituents of the leachate likely to present a risk of environmental pollution,
 - 4.12.2 Assessment of the quantity and composition of the leachate to be accepted,
 - 4.12.3 Determination of the technical suitability of the wastewater treatment plant to treat the leachate,
 - 4.12.4 Monitoring regime for the constituents of the leachate likely to present a risk of environmental pollution,
 - 4.12.5 Trigger and action levels for the constituents of the leachate likely to present a risk of environmental pollution,
 - 4.12.6 Action plan for when action levels for leachate constituents are breached.
- 4.13 The licensee shall, within **twelve months** of the date of grant of this licence, investigate the sources of priority substances detected during the monitoring of discharges and take such measures as are necessary to reduce or eliminate these substances in the primary discharge. A report on the investigation and measures identified, including timeframe for implementation, shall be included in the AER.
- 4.14 Storm Water Overflows
- 4.14.1 The licensee shall, prior to the date for submission of the second AER (required under Condition **6.8**), carry out an investigation for the identification and assessment of storm water overflows. A report on the storm water overflows shall be submitted to the Agency as part of the second AER. All storm water overflows shall be in compliance 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.
 - 4.14.2 The licensee shall carry out an assessment of storm water overflows at least once every three years thereafter and report to the Agency on each occasion as part of the AER. The assessment shall include a determination of compliance 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. The licensee shall maintain a written record of all assessments and remedial measures arising from the assessment.
- 4.15 The licensee shall prepare a PRTR report for the primary and secondary discharges. The substances to be included in the PRTR shall be as agreed by the Agency each year by reference to EC Regulation No. 166/2006 concerning the establishment of the European Pollutant Release and Transfer Register and amending Council Directives 91/689/EEC and 96/61/EC. The PRTR shall be prepared in accordance with any relevant guidelines issued by the Agency and shall be submitted electronically in specified format and as part of the AER.
- 4.16 The licensee shall, within **six months** of the date of grant of this licence, develop and establish a Data Management System for collation, archiving, assessing and graphically presenting the monitoring data generated as a result of this licence.
- 4.17 The licensee shall carry out **quarterly** monitoring of the influent stream to the waste water treatment plant for **CBOD, COD, Suspended Solids, Total Nitrogen and Total Phosphorus** in order to measure the mass loadings and removal efficiencies within the treatment plant.
- 4.18 Habitats

The licensee shall, within twelve months of the date of grant of this licence, undertake an

ecological assessment of the predicted impacts of the discharges from the agglomeration. The assessment shall be submitted as part of the AER.

- 4.19 Prior to submitting ambient monitoring data, the licensee must consult with the Agency with regard to the appropriate format for submittal.
- 4.20 Where such ambient monitoring results are available from any other statutory body, including the Agency, the licensee may submit those results in fulfilment of the requirements of *Schedule B: Ambient Monitoring* of this licence.
- 4.21 The licensee shall provide a composite sampler on all monitoring points listed in *Schedule A.1: Primary Waste Water Discharge and Monitoring* and *Schedule A.2: Secondary Waste Water Discharge(s) and Monitoring* of this licence within **three months** of date of grant of this licence. All samples thereafter shall be collected on a 24-hour flow proportional or time based composite sampling basis.
- 4.22 The licensee shall record the total effluent volume discharged over the 24-hour period in which any composite sample is collected.
- 4.23 Priority Substances

The licensee shall undertake a risk based assessment of the discharge(s) in order to identify the relevant priority substances or pollutants for monitoring. This assessment shall be undertaken in accordance with "Guidance on the Screening for Priority Substances for Waste Water Discharge Licences" issued by the Agency. Monitoring for the identified priority substances or pollutants shall be carried out at least annually, unless a case for less frequent monitoring is agreed by the Agency.

Reason: To provide for the protection of the receiving environment by way of control and monitoring of discharges.

Condition 5. Programmes of Improvements

- 5.1 The licensee shall, as a part of the second AER (required under Condition **6.8**), prepare and submit to the Agency a programme of infrastructural improvements to maximise the effectiveness and efficiency of the waste water works in order to:
- 5.1.1 achieve improvements in the quality of all discharges from the works;
 - 5.1.2 meet the emission limit values specified in *Schedule A: Discharges and Discharge Monitoring*, of this licence;
 - 5.1.3 give effect to Regulation 2 of the Waste Water Discharge (Authorisation) Regulations 2007, as amended;
 - 5.1.4 reduce Total Phosphorus loadings in the discharge to the maximum practicable extent;
 - 5.1.5 reduce Total Nitrogen loadings in the discharge to the maximum practicable extent;
 - 5.1.6 meet the obligations of Condition **1.7**.
- 5.2 The programme of infrastructural improvements referred to in Condition **5.1** shall include an assessment of:
- 5.2.1 the waste water treatment plant, having regard to the effectiveness of the treatment provided by reference to the following:

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- 5.2.1.1 the existing level of treatment, capacity of treatment plant and associated equipment;
 - 5.2.1.2 the emission limit values specified in *Schedule A: Discharges and Discharge Monitoring*, of this licence;
 - 5.2.1.3 designations of the receiving water body;
 - 5.2.1.4 water quality objective for the receiving water body;
 - 5.2.1.5 the standards and volumetric limitations applied to any industrial waste water that is licensed to discharge to the waste water works.
 - 5.2.2 the integrity of the waste water works having regard to:
 - 5.2.2.1 capacity of the waste water works;
 - 5.2.2.2 leaks from the waste water works;
 - 5.2.2.3 misconnections between foul sewers and surface water drainage network;
 - 5.2.2.4 infiltration by surface water;
 - 5.2.2.5 infiltration by groundwater;
 - 5.2.2.6 such other aspects of the works as may be specified by the Agency.
 - 5.2.3 all storm water overflows associated with the waste water works to determine the effectiveness of their operation and in particular to identify improvements necessary to comply with the requirements of this licence.
 - 5.3 The programme of infrastructural improvements shall include a plan for implementation for each individual improvement identified. The plan for implementation shall:
 - 5.3.1 in the case of the assessment carried out under Conditions 5.2.1 (waste water treatment plant) and 5.2.3 (storm water overflows):
 - 5.3.1.1 clearly identify and describe the improvement and the timeframe for implementation;
 - 5.3.1.2 specify the parametric emission(s) that will be affected by the implementation of the improvement;
 - 5.3.1.3 estimate the costs and sources of funding required to implement the improvement.
 - 5.3.1.4 identify the anticipated improvements in the quality of the receiving waters as a result of the implementation of the improvement.
 - 5.3.2 in the case of the assessment carried out under Condition 5.2.2 (waste water works):
 - 5.3.2.1 identify, evaluate and describe the infrastructural works necessary to implement those works listed under *Schedule C: Specified Improvement Programme*, of this licence;
 - 5.3.2.2 clearly identify and describe the improvement and the timeframe for its implementation;
 - 5.3.2.3 estimate the costs and sources of funding required to implement the improvement including, where appropriate, details of submissions made to the Department of the Environment, Community and Local Government and sanctions received.
 - 5.4 The licensee shall complete the improvements as set out in *Schedule C: Specified Improvement Programme*, of this licence, by 31/12/2016 in order to ensure compliance

with the emission limit values as set out in *Schedule A: Discharges and Discharge Monitoring*, of this licence.

- 5.5 The licensee shall put in place a programme of measures for the gathering, recording and retention of information in relation to the infrastructural components of the waste water works. This information shall be in the form of "As-Constructed" drawings and electronic mapping tools, or in any other format as required by the Agency.
- 5.6 The licensee shall carry out an assessment of the impact of the discharge(s) from the waste water works on the microbiological quality (including viruses) of the shellfish in the adjacent designated shellfish waters in consultation with the Sea Fisheries Protection Authority (SFPA), the Marine Institute and Bord Iascaigh Mhara (BIM). The assessment, including a timeframe for installation of UV or other appropriate disinfection as considered necessary, shall be submitted to the Agency within **twelve months** of the installation of the new plant where it is identified in the assessment that UV or other appropriate disinfection is required.
- 5.7 Where the assessment outlined in Condition **5.6** indicates that the discharge(s) are having a deleterious microbiological (including viruses) effect on the quality of shellfish in the adjacent designated shellfish waters, the licensee shall install UV or other appropriate disinfection system within the timeframe identified.
- 5.8 Where a UV or other appropriate disinfection system is installed the licensee shall ensure that it is operating to the designed disinfection efficiency at all times. The disinfection efficiency of the system shall be measured to demonstrate that the system is operated within its design range. The records from this verification process shall be recorded and maintained.

<p>Reason: To provide for the improvement of the waste water works on a planned basis having regard to the need for on-going assessment, recording and reporting of matters affecting the receiving water environment.</p>

Condition 6. Notifications, Records and Reports

- 6.1 The licensee shall notify the Agency's headquarters in Wexford, or to such other Agency office, as soon as practicable after the occurrence of any incident (as defined in this licence). This notification shall be in such format as specified in Guidance to Licensees/COA holders on the Notification, Management and Communication of Environmental Incidents issued by the Agency and as a minimum shall include the following: the date, time, location, details, nature, cause, extent and ranking of the incident, details on any vulnerable receptors, corrective action taken and plans to prevent a reoccurrence, and the steps taken to minimise any discharges and to carry out any necessary environmental cleanup. The following shall also be notified, as soon as practicable after the occurrence of any incident:
- 6.1.1 **Inland Fisheries Ireland** in the case of discharges to receiving waters.
- 6.1.2 Marine Institute (MI), Sea Fisheries Protection Authority (SFPA), Food Safety Authority of Ireland (FSAI) and an Bord Iascaigh Mhara (BIM) in the case of discharges to or likely to impact a designated shellfish water.
- 6.2 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 such 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.

- 6.3 The licensee shall record all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this licence.
- 6.4 The licensee shall as a minimum keep the following documents at the headquarters of the licensee or such office as may be agreed by the Agency:
- 6.4.1 the licence application and all associated documentation;
 - 6.4.2 the licence(s) relating to the discharge(s) to waters from the waste water works;
 - 6.4.3 the previous year's AER;
 - 6.4.4 records of all risk assessments, sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this licence and guidance produced by the Agency;
 - 6.4.5 relevant correspondence with the Agency;
 - 6.4.6 up to date drawings/plans showing the location of key process and environmental infrastructure, including monitoring locations and discharge points;
 - 6.4.7 up to date operational procedures for all monitoring and control equipment necessary to give effect to this licence.

This documentation shall be available to the Agency for inspection at all reasonable times and shall be submitted to the Agency, as required, in such a format as may be requested, including electronic submittal of the information or a summary of such information.

- 6.5 The licensee shall, within **six months** of date of grant of this licence, ensure that a documented Emergency Response Procedure is in place, that addresses any emergency situation that may originate on-site. This procedure shall include provision for minimising the effects of any emergency on the environment. This procedure shall be reviewed annually and updated as necessary.
- 6.6 The licensee shall **establish and maintain** a Public Awareness and Communications Programme to ensure that members of the public **can obtain**, at all reasonable times, environmental information relating to the discharge.
- 6.7 Unless otherwise agreed by the Agency, all reports and notifications submitted to the Agency shall:
- 6.7.1 be sent to Administration, Office of Environmental Enforcement (OEE) at the Agency's Headquarters or to such other Agency office agreed by the Agency;
 - 6.7.2 comprise one original and two copies unless additional copies are required by the Agency;
 - 6.7.3 be formatted in accordance with any written instruction or guidance issued by the Agency;
 - 6.7.4 include whatever information may be required by the Agency;
 - 6.7.5 be identified by a unique code, indicate any modification or amendment, and be correctly dated to reflect any such modification or amendment;
 - 6.7.6 be accompanied by a written interpretation setting out their significance in the case of all monitoring data; and
 - 6.7.7 be transferred electronically to the Agency's computer system if required by the Agency.

- 6.8 The licensee shall submit to the Agency, by the 28th 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 content of the AER may be revised subject to the agreement of the Agency.
- 6.9 All reports shall be certified accurate and representative by an employee of Irish Water or a nominated, suitably qualified and experienced deputy.
- 6.10 The licensee shall notify the Agency, as soon as is practicable, where a discharge from the waste water works has ceased permanently.

Reason: To provide for the collection and reporting of adequate information on the activity.

Condition 7. Financial Charges and Provisions

7.1 Agency Charges

- 7.1.1 The licensee shall pay to the Agency an annual contribution of €7,113.78 or such sum, as the Agency from time to time determines, having regard to variations in the extent of reporting, auditing, inspection, sampling and analysis or other functions carried out by the Agency, towards the cost of monitoring the discharge as the Agency considers necessary for the performance of its functions under the Waste Water Discharge (Authorisation) Regulations 2007, as amended. The first payment shall be a pro-rata amount for the period from the date of this licence to the 31st day of December, and shall be paid to the Agency within one month from the date of the licence. In subsequent years the licensee shall pay to the Agency such revised annual contribution as the Agency shall from time to time consider necessary to enable performance by the Agency of its relevant functions under the Waste Water Discharge (Authorisation) Regulations 2007, as amended, and all such payments shall be made within one month of the date upon which demanded by the Agency.
- 7.1.2 In the event that the frequency or extent of monitoring, investigations or other functions carried out by the Agency needs to be increased, the licensee shall contribute such sums as determined by the Agency to defray its costs in regard to items not covered by the said annual contribution.

7.2 Environmental Liabilities

- 7.2.1 The licensee shall as part of the AER provide an annual statement as to the measures taken or adopted in relation to the prevention of environmental damage, and the financial provisions in place in relation to the underwriting of costs for remedial actions following anticipated events (including closure) or accidents/incidents, as may be associated with discharges or overflows from the waste water works.
- 7.2.2 The licensee shall arrange for the completion, by an independent and appropriately qualified consultant, of a comprehensive and fully costed Environmental Liabilities Risk Assessment (ELRA) to address the liabilities from present or planned discharges. A report on this assessment shall be submitted to the Agency for agreement as part of the second AER (required under Condition 6.8). The ELRA shall be reviewed as necessary to reflect any significant change

to the volume or character of effluent discharged, and in any case every three years following initial agreement (the results of the review shall be notified as part of the AER).

- 7.2.3 As part of the measures identified in Condition 7.2.1 the licensee shall, to the satisfaction of the Agency, make financial provision to cover any liabilities identified in Condition 7.2.2. The amount of indemnity held shall be reviewed and revised as necessary, but at least triennially. Proof of renewal or revision of such financial indemnity shall be included in the annual 'Statement of Measures' report identified in Condition 7.2.1.
- 7.2.4 The licensee shall have regard to the Environmental Protection Agency Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision when implementing Conditions 7.2.1, 7.2.2 and 7.2.3 above.

Reason: To provide for the adequate financing for monitoring and financial provisions for measures to protect the environment.

SCHEDULE A: DISCHARGES & DISCHARGE MONITORING

A.1: Primary Waste Water Discharge & Monitoring

A.1.1 Primary Waste Water Discharge(s)					
EDEN Code	Licence Code	Discharge Location	Monitoring Location	Receiving Water Name	WFD Code Receiving Water
TPEFF0500D0044SW001	SW001	E 179911 N 72583	E 180966 N 72268	Slatty Waters Cork Harbour	IE_SW_060_0700

Discharge Emission Limit Values and Monitoring							
Parameter	Units	Discharges			Monitoring		
		Interim ELV (or Interim % Reduction)	ELV (or % Reduction)	ELV Commencement Date	Monitoring Frequency	Sampling Method	Analysis Method / Technique
Flow	<i>m³/24 hours</i>	-	-	-	Continuous	Online	Online Flow Probe Meter with Recorder
pH	<i>pH units</i>	-	6-9	-	Daily	Continuous	pH Meter and recorder
cBOD	<i>mg/l</i>	-	25	-	Monthly	Composite	Standard Method
COD	<i>mg/l</i>	-	125	-	Monthly	Composite	Standard Method
Suspended Solids	<i>mg/l</i>	-	35	-	Monthly	Composite	Standard Method
Total Nitrogen (as N)	<i>mg/l</i>	-	15	-	Monthly	Composite	Standard Method
Total Phosphorus (as P)	<i>mg/l</i>	-	1	-	Monthly	Composite	Standard Method
Faecal Coliforms	<i>cfu/100ml</i>	-	-	-	Biannually	Composite	Standard Method
Escherichia coli	<i>cfu/100ml</i>	-	-	-	Biannually	Composite	Standard Method
Intestinal Enterococci	<i>cfu/100ml</i>	-	-	-	Biannually	Composite	Standard Method

Discharge Emission Limit Values and Monitoring							
Visual Inspection	<i>Descriptive</i>	-	-	-	Weekly	Composite	Standard Method
ortho-Phosphate (as P) - unspecified	<i>mg/l</i>	-	0.5	-	Monthly	Composite	Standard Method
Total Oxidised Nitrogen (as N)	<i>mg/l</i>	-	20	-	Monthly	Composite	Standard Method
Ammonia-Total (as N)	<i>mg/l</i>	-	5	-	Monthly	Composite	Standard Method

Note 1 Any specified interim ELV (or Interim % Reduction) shall apply from the date of grant of licence until the ELV Commencement Date.

Note 2 Where no ELV Commencement Date is specified, the ELV (or % Reduction) shall apply from date of grant of licence.

Note 3 The ELVs for SW001 apply from 1st January 2017.

A.1.2 Primary Waste Water Discharge(s)					
EDEN Code	Licence Code	Discharge Location	Monitoring Location	Receiving Water Name	WFD Code Receiving Water
TPEFF0500D0044SW002	SW002	E 180594 N 72283	E 181174 N 72228	Slatty Waters Cork Harbour	IE_SW_060_0700

Discharge Emission Limit Values and Monitoring							
Parameter	Discharges				Monitoring		
	Units	Interim ELV (or Interim % Reduction)	ELV (or % Reduction)	ELV Commencement Date	Monitoring Frequency	Sampling Method	Analysis Method / Technique
Flow	<i>m³/24 hours</i>	-	-	-	Continuous	Online	Online Flow Probe Meter with Recorder
pH	<i>pH units</i>	-	6-9	-	Daily	Continuous	pH Meter and recorder
cBOD	<i>mg/l</i>	-	25	-	Monthly	Composite	Standard Method
COD	<i>mg/l</i>	-	125	-	Monthly	Composite	Standard Method
Suspended Solids	<i>mg/l</i>	-	35	-	Monthly	Composite	Standard Method
Total Nitrogen (as N)	<i>mg/l</i>	-	15	-	Monthly	Composite	Standard Method
Total Phosphorus (as P)	<i>mg/l</i>	-	2	-	Monthly	Composite	Standard Method
Faecal Coliforms	<i>cfu/100ml</i>	-	-	-	Biannually	Composite	Standard Method
Escherichia coli	<i>cfu/100ml</i>	-	-	-	Biannually	Composite	Standard Method
Intestinal Enterococci	<i>cfu/100ml</i>	-	-	-	Biannually	Composite	Standard Method
Visual Inspection	<i>Descriptive</i>	-	-	-	Weekly	Grab	Standard Method

Note 1 Any specified interim ELV shall apply from the date of grant of licence until the ELV Commencement Date.

Note 2 Where no ELV Commencement Date is specified, the ELV shall apply from date of grant of licence.

Note 3 The ELVs for SW002 apply until 31st December 2016.

A.2: Secondary Waste Water Discharge(s) & Monitoring

There shall be no Secondary Waste Water Discharges associated with this agglomeration.

A.3: Storm Water Overflows

A.3.1 Storm Water Overflows					
EDEN Code	Licence Code	Discharge Location	Storm Water Overflow Location	Name of Receiving Water	WFD Code Receiving Water
TPEFF0500D0044SW003	SW003	E 181268 N 72266	E 181268 N 72266	Anngrove	IE_SW_19_1693
TPEFF0500D0044SW004	SW004	E 181182 N 72317	E 181182 N 72317	Tibbotstown	Not WFD waterbody.

A.4 Interpretation of Discharge Monitoring Results

A.4 Interpretation of Discharge Monitoring Results			
No. of Samples taken in any one year ^{Note 1}	Max. number of samples which may exceed ELV	No. of Samples taken in any one year ^{Note 1}	Max. number of samples which may exceed ELV
4-7	1	172-187	14
8-16	2	188-203	15
17-28	3	204-219	16
29-40	4	220-235	17
41-53	5	236-251	18
54-67	6	252-268	19
68-81	7	269-284	20
82-95	8	285-300	21
96-110	9	301-317	22
111-125	10	318-334	23
126-140	11	335-350	24
141-155	12	351-365	25
156-171	13		

Note 1: Where the licensee has taken samples which exceed the number specified in this Schedule, the licensee shall submit to the Agency all results of analysis.

SCHEDULE B: AMBIENT MONITORING

B.1: Groundwater Monitoring

There is no ground water monitoring required in this licence.

B.2: Receiving Water Monitoring

B.2.1 Receiving Water Monitoring							
EDEN Code	Licence Code	Monitoring Location				Point Type	Name of Receiving Water
TW05003153LE6001	SW001	E	179127	N	70773	Transitional	North Channel Great Island
TW05003153LE6001	SW002	E	179127	N	70773	Transitional	North Channel Great Island

Parameter	Units	Monitoring Frequency	Analysis Method / Technique
pH	<i>pH units</i>	Quarterly	pH Meter and recorder
Dissolved Oxygen	<i>% O₂</i>	Quarterly	Standard Method
BOD	<i>mg/l</i>	Quarterly	Standard Method
Orthophosphate (as P)	<i>mg/l</i>	Quarterly	Standard Method
Faecal Coliforms	<i>cfu/100ml</i>	Quarterly	Standard Method
Escherichia coli	<i>cfu/100ml</i>	Quarterly	Standard Method
Intestinal Enterococci	<i>cfu/100ml</i>	Quarterly	Standard Method
Total Ammonia	<i>mg/l</i>	Quarterly	Standard Method
Total Oxidised Nitrogen (as N)	<i>mg/l</i>	Quarterly	Standard Method

SCHEDULE C: SPECIFIED IMPROVEMENT PROGRAMME

C.1: Specified Improvement Programme

<i>C.1 Specified Improvements Programme</i>			
1	2	3	4
Location	Type	Specified Improvement	Completion Date
Waste Water Works	Treatment Plant	Installation of new WWTP to meet ELVs as specified in Schedule A	31/12/2016
Waste Water Works	Treatment Plant	Nutrient removal to meet ELVs as specified in Schedule A	31/12/2016
TPEFF0500D0044SW003	Storm Water Overflow	Installation of storm water holding tank.	31/12/2016
TPEFF0500D0044SW004	Storm Water Overflow	Installation of storm water holding tank.	31/12/2016

C.2: Discharges to be Discontinued

<i>C.2 Discharges to be Discontinued</i>				
1	2	3	4	5
EDEN Code	Licence Code	Type	Action	Discontinuation Date
TPEFF0500D0044SW001	SW002	Primary Discharge Point	Discontinue	31/12/2016

SCHEDULE D: ANNUAL ENVIRONMENTAL REPORT

D.1 Annual Environmental Report Content

Discharges from the agglomeration.

Summary report on monthly influent monitoring.

Data collection and reporting requirements under the Urban Waste Water Treatment Directive.

Complaints summary.

Pollutant Release and Transfer Register - report for previous year.

Pollutant Release and Transfer Register - proposal for current year.

Summary report on ambient water quality of **Slatty Waters Cork Harbour**, pursuant to the requirements of the **Great Island North Channel** and **Rostellan West, North and South Pollution Reduction Programmes (Revised/Updated)**.

Ambient monitoring summary.

Storm water overflow identification and inspection report.

Reported incidents summary.

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

Development/Infrastructural works summary (completed in previous year or prepared for current year).

Risk based assessment to identify possible presence of priority substances.

Any other items specified by the Agency.

Sealed by the seal of the Agency on this the **xx st/th/rd/nd** day of **MM YYYY**

PRESENT when the seal of the Agency
was affixed hereto:

tbc