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**INTEGRATED POLLUTION PREVENTION & CONTROL LICENCE  
Recommended Determination**

<b>Licence Register Number:</b>	<b>P0442-02</b>
<b>Company Register Number:</b>	<b>23732</b>
<b>Applicant/Licensee:</b>	<b>Irish Distillers Limited</b>
<b>Location of Installation:</b>	<b>Midleton Distilleries Midleton County Cork</b>

## ***INTRODUCTION***

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

Irish Distillers Limited is a wholly owned subsidiary of Pernod Ricard. The Middleton Distillery employs 111 people and operates 24 hours a day, 7 days a week for an average of 303 days a year. The distillery produces two main types of Irish Whiskey: Pot Still Whiskey and Grain Whiskey.

This licence review is for the purposes of facilitating production capacity expansion from 33.5 million litres of alcohol to 64 million litres of alcohol per annum. The main features of the expansion includes a brewhouse extension, 24 additional fermenters, new still house, new distillation column building, expansion of wastewater treatment plant and installation of 8 new groundwater wells to provide cooling and process water.

For the purposes of the EU IED Directive (2010/75/EC), the activity carried on by Irish Distillers Limited, is included in category 1.1 – Combustion of fuels in installations with a total rated thermal input of 50 MW or more.

For the purposes of the EU IPPC Directive (2008/1/EC), the activity carried on by Irish Distillers Limited, is included in category 1.1 – Combustion installations with a rated thermal input exceeding 50MW.

The licence sets out in detail the conditions under which Irish Distillers Limited will operate and manage this installation.

## Table of Contents

	Page No
Glossary of Terms .....	1
Decision & Reasons for the Decision.....	6
Part I Schedule of Activities Licensed .....	6
Part II Schedule of Activities Refused .....	6
Part III Conditions.....	7
Condition 1.    Scope.....	7
Condition 2.    Management of the Installation/Facility .....	7
Condition 3.    Infrastructure and Operation .....	9
Condition 4.    Interpretation.....	11
Condition 5.    Emissions.....	12
Condition 6.    Control and Monitoring .....	13
Condition 7.    Resource Use and Energy Efficiency.....	16
Condition 8.    Materials Handling.....	16
Condition 9.    Accident Prevention and Emergency Response.....	17
Condition 10.   Decommissioning & Residuals Management .....	17
Condition 11.   Notification, Records and Reports .....	18
Condition 12.   Financial Charges and Provisions .....	20
SCHEDULE A:   Limitations .....	22
SCHEDULE B:   Emission Limits.....	22
SCHEDULE C:   Control & Monitoring.....	25
SCHEDULE D:   Annual Environmental Report.....	32

## *Glossary of Terms*

All terms in this licence should be interpreted in accordance with the definitions in the Environmental Protection Agency Acts 1992 to 2012 / Waste Management Acts 1996 to 2012, unless otherwise defined in the section.

<b>Adequate lighting</b>	20 lux measured at ground level.
<b>AER</b>	Annual Environmental Report.
<b>Agreement</b>	Agreement in writing.
<b>Annually</b>	All or part of a period of twelve consecutive months.
<b>Application</b>	The application by the licensee for this licence.
<b>Appropriate Facility</b>	A waste management facility, duly authorised under relevant law and technically suitable.
<b>Attachment</b>	Any reference to Attachments in this licence refers to attachments submitted as part of this licence application.
<b>BAT</b>	Best Available Techniques.
<b>Biannually</b>	At approximately six – monthly intervals.
<b>Biennially</b>	Once every two years.
<b>BOD</b>	5 day Biochemical Oxygen Demand (without nitrification suppression).
<b>CEN</b>	Comité Européen De Normalisation – European Committee for Standardisation.
<b>COD</b>	Chemical Oxygen Demand.
<b>Compliance Point</b>	The point (location, depth) at which a compliance value should be met. Generally it is represented by a borehole or monitoring well from which representative groundwater samples can be obtained.
<b>Compliance Value</b>	The concentration of a substance and associated compliance regime that, when not exceeded at the compliance point, will prevent pollution and/or achieve water quality objectives at the receptor.
<b>Containment boom</b>	A boom that can contain spillages and prevent them from entering drains or watercourses or from further contaminating watercourses.
<b>CRO Number</b>	Company Register Number.

Daily	During all days of plant operation and, in the case of emissions, when emissions are taking place; with at least one measurement on any one day.
Day	Any 24 hour period.
Daytime	0700 hrs to 1900 hrs.
dB(A)	Decibels (A weighted).
DO	Dissolved oxygen.
Documentation	Any report, record, results, data, drawing, proposal, interpretation or other document in written or electronic form which is required by this licence.
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.
Emission limits	Those limits, including concentration limits and deposition rates, established in <i>Schedule B: Emission Limits</i> , of this licence.
EMIP	Environmental Management Programme.
Environmental damage	As defined in Directive 2004/35/EC.
EPA	Environmental Protection Agency.
European Waste Catalogue (EWC)	A harmonised, non-exhaustive list of wastes drawn up by the European Commission and published as Commission Decision 2000/532/EC and any subsequent amendment published in the Official Journal of the European Community.
Evening Time	1900hrs to 2300hrs
Facility	Any site or premises used for the purpose of the recovery of disposal or waste.
Fortnightly	A minimum of 24 times per year, at approximately two week intervals.
Fusel Oil	By-product from distillation process.
Gas Oil	Gas Oil as defined in Council Directive 1999/32/EC and meeting the requirements of S.I. No. 119 of 2008.
GC/MS	Gas chromatography/mass spectroscopy.

ha	Hectare.
Heavy metals	This term is to be interpreted as set out in "Parameters of Water Quality, Interpretation and Standards" published by the Agency in 2001. ISBN 1-84095-015-3.
Hours of operation	The hours during which the installation is authorised to be operational.
ICP	Inductively coupled plasma spectroscopy.
Incident	The following shall constitute as incident for the purposes of this licence: (i) an emergency; (ii) any emission which does not comply with the requirements of this licence; (iii) any trigger level specified in this licence which is attained or exceeded; (iv) any compliance value specified in this licence which is attained or exceeded; and, (v) any indication that environmental pollution has, or may have, taken place.
IPPC	Integrated Pollution Prevention & Control.
K	Kelvin.
kPa	Kilopascals.
$L_{Aeq,T}$	This is the equivalent continuous sound level. It is a type of average and is used to describe a fluctuating noise in terms of a single noise level over the sample period (T).
$L_{A,r,T}$	The Rated Noise Level, equal to the $L_{Aeq}$ during a specified time interval (T), plus specified adjustments for tonal character and/or impulsiveness of the sound.
Licensee	Irish Distillers Limited, Midleton Distilleries, Midleton, County Cork (CRO Number 23732)
List I	As listed in the EC Directives 2006/11/EC and 80/68/EEC and amendments.
List II	As listed in the EC Directives 2006/11/EC and 80/68/EEC and amendments.
Local Authority	Cork County Council.

<b>Maintain</b>	Keep in a fit state, including such regular inspection, servicing, calibration and repair as may be necessary to perform its function adequately.
<b>Mass flow limit</b>	An emission limit value expressed as the maximum mass of a substance that can be emitted per unit time.
<b>Mass flow threshold</b>	A mass flow rate above which a concentration limit applies.
<b>Monthly</b>	A minimum of 12 times per year, at intervals of approximately one month.
<b>Night-time</b>	2300 hrs to 0700 hrs.
<b>Noise-sensitive location (NSL)</b>	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other installation or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
<b>Oil separator</b>	Device installed according to the International Standard I.S. EN 858-2:2003 (Separator system for light liquids, (e.g. oil and petrol) – Part 2: Selection of normal size, installation, operation and maintenance).
<b>Operating hours</b>	The time, expressed in hours, during which a combustion plant, in whole or in part, is operating and discharging emissions into the air, excluding start-up and shut-down periods.
<b>PRTR</b>	Pollutant Release and Transfer Register.
<b>Quarterly</b>	All or part of a period of three consecutive months beginning on the first day of January, April, July or October.
<b>Sample(s)</b>	Unless the context of this licence indicates to the contrary, the term samples shall include measurements taken by electronic instruments.
<b>Sanitary effluent</b>	Wastewater from installation toilet, washroom and canteen facilities.
<b>SOP</b>	Standard operating procedure.
<b>Specified emissions</b>	Those emissions listed in <i>Schedule B: Emission Limits</i> , of this licence.
<b>Standard method</b>	A National, European or internationally recognised procedure (e.g. I.S. EN, ISO, CEN, BS or equivalent); or an in-house documented procedure based on the above references; a procedure as detailed in the current edition of "Standard Methods for the Examination of Water and Wastewater" (prepared and published jointly by A.P.H.A., A.W.W.A. & W.E.F.), American Public Health Association, 1015 Fifteenth Street, N.W., Washington DC 20005, USA; or an alternative method as may be agreed by the Agency.
<b>Storm water</b>	Rain water run-off from roof and non-process areas.

<b>The Agency</b>	Environmental Protection Agency.
<b>TOC</b>	Total organic carbon.
<b>Trade effluent</b>	Trade effluent has the meaning given in the Water Services Act, 2007.
<b>Trigger level</b>	A parameter value, the achievement or exceedance of which requires certain actions to be taken by the licensee.
<b>Water Services Authority</b>	<b>Cork County Council.</b>
<b>Weekly</b>	During all weeks of plant operation and, in the case of emissions, when emissions are taking place: with at least one measurement in any one week.
<b>WWTP</b>	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 emissions from the activity will comply with and will not contravene any of the requirements of Section 83(5) of the Environmental Protection Agency Acts 1992 to 2012.

### **Recommended Determination**

In reaching this decision the Environmental Protection Agency has considered the application and supporting documentation received from the applicant and the report of its inspector.

## ***Part I Schedule of Activities Licensed***

In pursuance of the powers conferred on it by the Environmental Protection Agency Acts 1992 to 2012, the Agency proposes to determine the review of the existing licence (Reg. No. P0442-01) granted to:

**Irish Distillers Limited, Midleton Distilleries, Midleton, County Cork (CRO Number 23732)**

under Section 90(2) of the said Acts to carry on the following activities:

- **Class 7.3.2:** Distilling in installations where the production capacity exceeds the equivalent of 1,500 tonnes per year measured as pure alcohol, not included in paragraph 7.8
- **Class 2.1:** The operation of combustion installations with a rated thermal input equal to or greater than 50MW.

at Midleton Distilleries, Midleton, County Cork subject to the following twelve Conditions, with the reasons therefor and associated schedules attached thereto.

## ***Part II Schedule of Activities Refused***

None of the proposed activities as set out in the licence application have been refused.

## Part III Conditions

### Condition 1. Scope

- 1.1 IPPC activities at this installation shall be restricted to those listed and described in *Part I Schedule of Activities Licensed*, and shall be as set out in the licence application or as modified under Condition 1.4 of this licence and subject to the conditions of this licence.
- 1.2 Activities at this installation shall be limited as set out in *Schedule A: Limitations*, of this licence.
- 1.3 For the purposes of this licence, the installation authorised by this licence is the area of land outlined in red on Drawing No.670-02 'Site Location Plan' of the review application. Any reference in this licence to "installation" shall mean the area thus outlined in red. The licensed activities shall be carried on only within the area outlined.
- 1.4 No alteration to, or reconstruction in respect of, the activity, or any part thereof, that would, or is likely to, result in
- (i) a material change or increase in:
- the nature or quantity of any emission;
  - the abatement/treatment or recovery systems;
  - the range of processes to be carried out;
  - the fuels, raw materials, intermediates, products or wastes generated, or
- (ii) any changes in:
- site management, infrastructure or control with adverse environmental significance;
- shall be carried out or commenced without prior notice to, and without the agreement of, the Agency.
- 1.5 The installation shall be controlled, operated and maintained, and emissions shall take place as set out in the licence. All programmes required to be carried out under the terms of this licence become part of this licence.
- 1.6 This licence is for the purpose of IPPC licensing under the EPA Acts 1992 to 2012 only and nothing in this licence shall be construed as negating the licensee's statutory obligations or requirements under any other enactments or regulations.
- 1.7 This licence has been granted in substitution for the licence granted to the licensee on 06/10/1999 (Register No P0442-01). The previous IPPC licence (Reg No. P0442-01) is superseded by this revised licence.

*Reason: To clarify the scope of this licence.*

### Condition 2. Management of the Installation

- 2.1 Installation Management
- 2.1.1 The licensee shall employ a suitably qualified and experienced installation manager who shall be designated as the person in charge. The installation manager or a nominated, suitably qualified and experienced deputy shall be present on the installation at all times during its operation or as otherwise required by the Agency.
- 2.1.2 The licensee shall ensure that personnel performing specifically assigned tasks shall be qualified on the basis of appropriate education, training and experience as required and shall be aware of the requirements of this licence.

2.2 Environmental Management System (EMS)

2.2.1 The licensee shall maintain an Environmental Management System (EMS). The EMS shall be updated on an annual basis.

2.2.2 The EMS shall include, as a minimum, the following elements:

2.2.2.1 Management and Reporting Structure.

2.2.2.2 Schedule of Environmental Objectives and Targets.

The licensee shall maintain a Schedule of Environmental Objectives and Targets. The schedule shall, as a minimum, provide for a review of all operations and processes, including an evaluation of practicable options, for energy and resource efficiency, the use of cleaner technology, cleaner production and the prevention, reduction and minimisation of waste and shall include waste reduction targets. The schedule shall include time frames for the achievement of set targets and shall address a five-year period as a minimum. The schedule shall be reviewed annually and amendments thereto notified to the Agency for agreement as part of the Annual Environmental Report (AER).

2.2.2.3 Environmental Management Programme (EMP)

The licensee shall, maintain an EMP, including a time schedule, for achieving the Environmental Objectives and Targets prepared under Condition 2.2.2.2. Once agreed the EMP shall be maintained by the licensee. It shall include:

- designation of responsibility for targets;
- the means by which they may be achieved;
- the time within which they may be achieved.

The EMP shall be reviewed annually and amendments thereto notified to the Agency for agreement as part of the Annual Environmental Report (AER).

A report on the programme, including the success in meeting agreed targets, shall be prepared and submitted to the Agency as part of the AER. Such reports shall be retained on-site for a period of not less than seven years and shall be available for inspection by authorised persons of the Agency.

2.2.2.4 Documentation

(i) The licensee shall maintain an environmental management documentation system which shall be to the satisfaction of the Agency.

(ii) The licensee shall issue a copy of this licence to all relevant personnel whose duties relate to any condition of this licence.

2.2.2.5 Corrective Action

The licensee shall establish procedures to ensure that corrective action is taken 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.

2.2.2.6 Awareness and Training

The licensee shall maintain procedures for identifying training needs, and for providing appropriate training, for all personnel whose work can have a significant effect upon the environment. Appropriate records of training shall be maintained.

2.2.2.7 Communications Programme

The licensee shall maintain a Public Awareness and Communications Programme to ensure that members of the public can obtain information at

the installation, at all reasonable times, concerning the environmental performance of the installation.

2.2.2.8 Maintenance Programme

The licensee shall maintain a programme for maintenance of all plant and equipment 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 (see Condition 2.1 above).

2.2.2.9 Efficient Process Control

The licensee shall maintain a programme to ensure there is adequate control of processes under all modes of operation. The programme shall identify the key indicator parameters for process control performance, as well as identifying methods for measuring and controlling these parameters. Abnormal process operating conditions shall be documented, and analysed to identify any necessary corrective action.

*Reason:- To make provision for management of the activity on a planned basis having regard to the desirability of ongoing assessment, recording and reporting of matters affecting the environment.*

### Condition 3. Infrastructure and Operation

3.1 The licensee shall maintain, for each component of the installation, all infrastructure referred to in this licence, as required by the conditions of this licence. Infrastructure specified in the application that relates to the environmental performance of the installation and is not specified in the licence, shall be installed in accordance with the schedule submitted in the application.

3.2 Installation Notice Board

3.2.1 The licensee shall, within one month of the date of grant of this licence, provide an Installation Notice Board on the installation so that it is legible to persons outside the main entrance to the installation. The minimum dimensions of the board shall be 1200 mm by 750 mm. The notice board shall be maintained thereafter.

3.2.2 The board shall clearly show:

- (i) the name and telephone number of the installation;
- (ii) the normal hours of operation;
- (iii) the name of the licence holder;
- (iv) an emergency out of hours contact telephone number;
- (v) the licence reference number; and
- (vi) where environmental information relating to the installation can be obtained.

3.3 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.

3.4 In the case of composite sampling of aqueous emissions from the operation of the installation, a separate composite sample or homogeneous sub-sample (of sufficient volume as advised) shall be refrigerated immediately after collection and retained as required for EPA use.

- 3.5 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. The requirement with regard to off-site points is subject to the prior agreement of the landowner(s) concerned.
- 3.6 Tank, Container and Drum Storage Areas
- 3.6.1 All tank, container and drum storage areas shall be rendered impervious to the materials stored therein. Bunds shall be designed having regard to Agency guidelines 'Storage and Transfer of Materials for Scheduled Activities' (2004).
- 3.6.2 All tank and drum storage areas shall, as a minimum, be bunded, either locally or remotely, to a volume not less than the greater of the following:
- (i) 110% of the capacity of the largest tank or drum within the bunded area; or
  - (ii) 25% of the total volume of substance that could be stored within the bunded area.
- 3.6.3 All drainage from bunded areas shall be treated as contaminated waste unless it can be demonstrated to be otherwise. All drainage from bunded areas shall be diverted for collection and safe disposal, unless it can be deemed uncontaminated and does not exceed the trigger levels set for storm water emissions under 6.12.
- 3.6.4 All inlets, outlets, vent pipes, valves and gauges must be within the bunded area.
- 3.6.5 All tanks, containers and drums shall be labelled to clearly indicate their contents.
- 3.7 The licensee shall have in storage an adequate supply of containment booms and/or suitable absorbent material to contain and absorb any spillage at the installation. Once used, the absorbent material shall be disposed of at an appropriate facility.
- 3.8 Silt Traps and Oil Separators
- (i) The licensee shall maintain silt traps to ensure that all storm water discharges, other than from roofs, from the installation pass through a silt trap in advance of discharge;
  - (ii) The licensee shall maintain a Class II bypass oil separator on storm water discharge from the lower fields area, a Class II full retention separator on storm water discharge from the new waste management area and a Class I bypass oil separator on storm water discharge from the production area;
  - (iii) The licensee shall, within six months of the date of grant of this licence, install and maintain a Class I full retention separator on storm water discharge from the car park and office area at GE2.
- 3.9 Fire-water Retention
- 3.9.1 The licensee shall carry out a risk assessment to determine if the fire-water retention facility has adequate capacity. The licensee shall submit the assessment and a report to the Agency on the findings and recommendations of the assessment within six months of the date of grant of this licence.
- 3.9.2 In the event that a significant risk exists for the release of contaminated fire-water, the licensee shall, based on the findings of the risk assessment, prepare and implement, with the agreement of the Agency, a suitable risk management programme. The risk management programme shall be fully implemented within three months of date of notification by the Agency.
- 3.9.3 In the event of a fire or a spillage to storm water, the site storm water shall be diverted to the containment pond. The licensee shall examine, as part of the response programme in Condition 3.9.2 above, the provision of automatic diversion of storm water to the containment pond. The licensee shall have regard to any guidelines issued by the Agency with regard to firewater retention.
- 3.9.4 The licensee shall have regard to the Environmental Protection Agency Draft Guidance Note to Industry on the Requirements for Fire-Water Retention Facilities when implementing Conditions 3.9.1 and 3.9.2 above.

- 3.10 All pump sumps, storage tanks, lagoons or other treatment plant chambers from which spillage of environmentally significant materials might occur in such quantities as are likely to breach local or remote containment or separators, shall be fitted with high liquid level alarms (or oil detectors as appropriate) within six months from the date of grant of this licence.
- 3.11 The provision of a catchment system to collect any leaks from flanges and valves of all over-ground pipes used to transport material other than water shall be examined. This shall be incorporated into a Schedule of Environmental Objectives and Targets set out in Condition 2. of this licence for the reduction in fugitive emissions.
- 3.12 All wellheads, as shown on Figure 11.3 of the Environmental Impact Statement shall be adequately protected to prevent contamination or physical damage within six months from the date of grant of this licence.
- 3.13 The licensee shall maintain in a prominent location on the site a wind sock, or other wind direction indicator, which shall be visible from the public roadway outside the site.
- 3.14 Natural gas or fusel oil shall be used in the boilers on site. In the event of an interruption to the supply of natural gas or fusel oil, an alternative fuel such as biodiesel or gas oil may be used with the prior written agreement of the Agency.
- 3.15 **Boilers**
- 3.15.1 Natural gas or fusel oil shall be used in the boilers on site. In the event of an interruption to the supply of natural gas or fusel oil, an alternative fuel such as biodiesel or gas oil may be used with the prior written agreement of the Agency.
- 3.15.2 The licensee shall determine the duration of start-up and shut-down periods for the boilers by 1<sup>st</sup> January 2016. These periods shall be determined in accordance with the provisions of Commission Implementing Decision of 7<sup>th</sup> May 2012 concerning the determination of these periods for the purposes of Directive 2010/75/EU on industrial emissions.

*Reason: To provide for appropriate operation of the installation to ensure protection of the environment.*

## Condition 4. Interpretation

- 4.1 Emission limit values for emissions to atmosphere in this licence shall be interpreted in the following way:
- 4.1.1 Non-Continuous Monitoring
- (i) For flow, no hourly or daily mean value, calculated on the basis of appropriate spot readings, shall exceed the relevant limit value.
- (ii) For all other parameters, no 60 minute mean value shall exceed the emission limit value.
- 4.2 The concentration and volume flow limits for emissions to atmosphere specified in this licence shall be achieved without the introduction of dilution air and shall be based on gas volumes under standard conditions of:
- 4.1.2 From non-combustion sources:  
Temperature 273K, Pressure 101.3 kPa (no correction for oxygen or water content).
- 4.1.3 From combustion sources:  
Temperature 273K, Pressure 101.3 kPa, dry gas; 3% oxygen for liquid and gas fuels, 6% oxygen for solid fuels.
- 4.2 Emission limit values for emissions to sewer/waters in this licence shall be interpreted in the following way:
- 4.2.1 Continuous Monitoring

- (i) No flow value shall exceed the specific limit.
  - (ii) No pH value shall deviate from the specified range.
  - (iii) No temperature value shall exceed the limit value.
- 4.2.2 Composite Sampling
- (i) No pH value shall deviate from the specified range.
  - (ii) For parameters other than pH and flow, eight out of ten consecutive composite results, based on flow proportional composite sampling, shall not exceed the emission limit value. No individual results similarly calculated shall exceed 1.2 times the emission limit value.
- 4.2.3 Discrete Sampling
- For parameters other than pH and temperature, no grab sample value shall exceed 1.2 times the emission limit value.
- 4.3 Where the ability to measure a parameter is affected by mixing before emission, then, with agreement from the Agency, the parameter may be assessed before mixing takes place.
- 4.4 Noise
- Noise from the installation shall not give rise to sound pressure levels ( $L_{Aeq, T}$ ) measured at NSLs of the installation which exceed the limit value(s).

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

## Condition 5. Emissions

- 5.1 No specified emission from the installation shall exceed the emission limit values set out in *Schedule B: Emission Limits*, of this licence. There shall be no other emissions of environmental significance.
- 5.2 No emissions, including odours, from the activities carried on at the site shall result in an impairment of, or an interference with amenities or the environment beyond the installation boundary or any other legitimate uses of the environment beyond the installation boundary.
- 5.3 No substance shall be discharged in a manner, or at a concentration, that, following initial dilution, causes tainting of fish or shellfish.
- 5.4 The licensee shall ensure that all or any of the following: Vermin, Birds, Flies, Mud, Dust, Litter associated with the activity do not result in an impairment of, or an interference with, amenities or the environment at the installation or beyond the installation boundary or any other legitimate uses of the environment beyond the installation boundary. Any method used by the licensee to control or prevent any such impairment/interference shall not cause environmental pollution.
- 5.5 Emissions to Sewer
- The licensee shall at no time discharge or permit to be discharged into the sewer any liquid matter or thing that is or may be liable to set or congeal at average sewer temperature or is capable of giving off any inflammable or explosive gas or any acid, alkali or other substance in sufficient concentration to cause corrosion to sewer pipes, penstock and sewer fittings or the general integrity of the sewer.

**Reason:** *To provide for the protection of the environment by way of control and limitation of emissions and to provide for the requirements of the Water Services Authority in accordance with Section 99E of the EPA Acts 1992 to 2012*

## Condition 6. Control and Monitoring

- 6.1 Test Programme
- 6.1.1 The licensee shall prepare to the satisfaction of the Agency, a test programme for new or additional abatement equipment, installed after the date of grant of this licence, to abate emissions to atmosphere. This programme shall be submitted to the Agency in advance of implementation.
- 6.1.2 The programme, following agreement with the Agency, shall be completed within three months of the commencement of operation of the abatement equipment.
- 6.1.3 The criteria for the operation of the abatement equipment as determined by the test programme, shall be incorporated into the standard operating procedures.
- 6.1.4 The test programme shall as a minimum:
- (i) establish all criteria for operation, control and management of the abatement equipment to ensure compliance with the emission limit values specified in this licence; and
  - (ii) assess the performance of any monitors on the abatement system and establish a maintenance and calibration programme for each monitor.
- 6.1.5 A report on the test programme shall be submitted to the Agency within one month of completion.
- 6.2 The licensee shall carry out such sampling, analyses, measurements, examinations, maintenance and calibrations as set out below and as in accordance with *Schedule C: Control & Monitoring*, of this licence.
- 6.2.1 Analyses shall be undertaken by competent staff in accordance with documented operating procedures.
- 6.2.2 Such procedures shall be assessed for their suitability for the test matrix and performance characteristics shall be determined.
- 6.2.3 Such procedures shall be subject to a programme of Analytical Quality Control using control standards with evaluation of test responses.
- 6.2.4 Where any analysis is sub-contracted it shall be to a competent laboratory.
- 6.3 The licensee shall ensure that:
- (iv) sampling and analysis for all parameters listed in the Schedules to this licence; and
  - (v) any reference measurements for the calibration of automated measurement systems;
- shall be carried out in accordance with CEN-standards. If CEN standards are not available, ISO, national or international standards that will ensure the provision of data of an equivalent scientific quality shall apply.
- 6.4 All automatic monitors and samplers shall be functioning at all times (except during maintenance and calibration) when the activity is being carried on 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. The use of alternative equipment, other than in emergency situations, shall be as agreed by the Agency.
- 6.5 Monitoring and analysis equipment shall be operated and maintained as necessary so that monitoring accurately reflects the emission/discharge (or ambient conditions where that is the monitoring objective).
- 6.6 The licensee shall ensure that groundwater monitoring well sampling equipment is available/installed on-site and is fit for purpose at all times. The sampling equipment shall be to Agency specifications.

- 6.7 All treatment/abatement and emission control equipment shall be calibrated and maintained in accordance with the instructions issued by the manufacturer/supplier or installer.
- 6.8 The 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.
- 6.9 The licensee shall prepare a programme, to the satisfaction of the Agency, for the identification and reduction of fugitive emissions using an appropriate combination of best available techniques. This programme shall be included in the Environmental Management Programme.
- 6.10 The integrity and water tightness of all underground pipes, tanks, bunding structures and containers and their resistance to penetration by water or other materials carried or stored therein shall be tested and demonstrated by the licensee within twelve months of the date of grant of this licence. This testing shall be carried out by the licensee at least once every three years thereafter and reported to the Agency on each occasion. This testing shall be carried out in accordance with any guidance published by the Agency. A written record of all integrity tests and any maintenance or remedial work arising from them shall be maintained by the licensee.
- 6.11 The drainage system (i.e., gullies, manholes, any visible drainage conduits and such other aspects as may be agreed) and bunds, silt traps and oil separators shall be inspected weekly and desludged as necessary. All sludge and drainage from these operations shall be collected for safe disposal. The drainage system, bunds, silt traps and oil interceptors shall be properly maintained at all times.
- 6.12 **Water Management**
- 6.12.1 The maximum water abstraction rate from the combined eight production wells shall be 4,300 m<sup>3</sup>/day.
- 6.12.2 The maximum water abstraction rate from the cavern water shall be 3,640 m<sup>3</sup>/day.
- 6.12.3 The maximum water abstraction rate from the Dungourney River shall be 2,275 m<sup>3</sup>/day.
- 6.12.4 Water abstraction from the Dungourney River shall cease when the river flow, monitored at Pitch and Putt Bridge, is less than or equal to 0.06m<sup>3</sup>/s (95 percentile flow).
- 6.12.5 Spent abstracted groundwater (used as non-contact cooling water) shall be diverted from SWE1, for treatment, to the waste water treatment plant if the temperature at SW-Templ is greater than 21.5°C during low flow, monitored at Pitch and Putt Bridge ((95 percentile flow of 0.06m<sup>3</sup>/s) or greater than 19 °C during dry weather flow, monitored at Pitch and Putt Bridge (Dry Weather Flow of 0.03m<sup>3</sup>/s).
- 6.12.6 A licensee shall, within six months of the date of grant of this licence, review and establish suitable trigger levels for TOC in spent abstracted groundwater (used as non-contact cooling water). Spent abstracted groundwater exceeding these levels shall be diverted from SWE1, for treatment, to the waste water treatment plant. The licensee shall have regard to the Environmental Protection Agency "Guidance on the setting of trigger values for storm water discharges to off-site waters at EPA IPPC and Waste licensed facilities" when establishing suitable trigger levels.
- 6.12.7 The licensee shall, within six months of the date of grant of this licence and thereafter on a biannual basis, prepare and submit to the Agency an abstraction monitoring report. This report shall pay particular attention to the impacts (physical and chemical) of the abstraction on the groundwater environment, including the water table, the cone of depression, and the base flow to surface waters, the surface water environment and ecological habitats in the vicinity of the installation and downstream of SW-Templ as appropriate.

- 6.13 An Inspection for leaks on all flanges and valves on over-ground pipes used to transport materials other than water shall be carried out weekly. A log of such inspections shall be maintained.
- 6.14 Storm Water
- 6.14.1 A visual examination of the storm water discharges shall be carried out daily. A log of such inspections, shall be maintained.
- 6.14.2 A licensee shall, within six months of the date of grant of this licence, review and establish suitable trigger levels for TOC in storm water discharges at SWE3 and GE1, such that storm waters exceeding these levels shall be diverted for retention and suitable treatment and/or disposal. The licensee shall have regard to the Environmental Protection Agency "Guidance on the setting of trigger values for storm water discharges to off-site waters at EPA IPPC and Waste licensed facilities" when establishing the suitable trigger levels.
- 6.14.3 A report on progress with connecting storm water discharge at SWE2 to the new fire-water retention pond shall be submitted to the Agency within 1 year of the date of grant of this licence.
- 6.15 Ground Water
- Within eighteen months of the date of grant this licence, the licensee shall carry out a risk screening and where necessary a technical assessment in accordance with the Guidance on the Authorisation of Discharges to Groundwater, published by the Environmental Protection Agency. A report on the outcome of the screening and where relevant the recommendations of the technical assessment in relation to the setting of groundwater compliance points and values, shall be included in the next AER. Any actions required to demonstrate compliance with the European Communities Environmental Objectives (Groundwater) Regulations 2010, shall be agreed by the Agency and implemented before 22nd December 2015. Groundwater monitoring results shall be submitted annually or as required in the Schedules to this licence.
- 6.16 Noise
- The licensee shall carry out a noise survey of the site operations within twelve months of completion of the production expansion and thereafter as required by the Agency. The survey programme shall be undertaken in accordance with the methodology specified in the 'Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4)' as published by the Agency.
- 6.17 Pollutant Release and Transfer Register (PRTR)
- The licensee shall prepare and report a PRTR for the site. The substance and/or wastes to be included in the PRTR shall be as agreed by the Agency each year by reference to EC Regulations No. 166/2006 concerning the establishment of the European Pollutant Release and Transfer Register. 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.
- 6.18 The licensee shall maintain a Data Management System for collation, archiving, assessing and graphically presenting the monitoring data generated as a result of this licence.
- 6.19 The licensee shall permit authorised persons of the Agency and Water Services Authority, to inspect, examine and test, at all reasonable times, any works and apparatus installed in connection with the process effluent and to take samples of the process effluent.
- 6.20 The licensee shall carry out an assessment of the stack configuration and monitoring arrangements for air emissions A1-1, A1-2 and A1-3 in accordance with, Guidance Note on Site Safety Requirements for Air Emissions Monitoring (AG1) and Air Emissions Monitoring Guidance Note #2 (AG2) published by the Environmental Protection Agency. The licensee shall submit a report to the Agency on the findings and recommendations of the assessment within six months of the date of grant of this licence.

*Reason: To provide for the protection of the environment by way of treatment and monitoring of emissions and to provide for the requirements of the Water Services Authority in accordance with Section 99E of the EPA Acts 1992 to 2012*

## Condition 7. Resource Use and Energy Efficiency

- 7.1 The licensee shall carry out an audit of the energy efficiency of the site at intervals as required by the Agency. The audit shall be carried out in accordance with the guidance published by the Agency, "Guidance Note on Energy Efficiency Auditing".
- 7.2 The audit shall identify all practicable opportunities for energy use reduction and efficiency and the recommendations of the audit will be incorporated into the Schedule of Environmental Objectives and Targets under Condition 2 above.
- 7.3 The licensee shall identify opportunities for reduction in the quantity of water used on site including recycling and reuse initiatives, wherever possible. Reductions in water usage shall be incorporated into Schedule of Environmental Objectives and Targets.
- 7.4 The licensee shall undertake an assessment of the efficiency of use of raw materials in all processes, having particular regard to the reduction in waste generated. The assessment should take account of best international practice for this type of activity. Where improvements are identified, these shall be incorporated into the Schedule of Environmental Objectives and Targets.

*Reason: To provide for the efficient use of resources and energy in all site operations.*

## Condition 8. Materials Handling

- 8.1 Disposal or recovery of waste on-site shall only take place in accordance with the conditions of this licence and in accordance with the appropriate National and European legislation and protocols.
- 8.2 Waste sent off-site for recovery or disposal shall be transported only by an authorised waste contractor. The waste shall be transported from the site of the activity to the site of recovery/disposal only in a manner that will not adversely affect the environment and in accordance with the appropriate National and European legislation and protocols.
- 8.3 The licensee shall ensure that, in advance of transfer to another person, waste shall be classified, packaged and labelled in accordance with National, European and any other standards which are in force in relation to such labelling.
- 8.4 The loading and unloading of materials shall be carried out in designated areas protected against spillage and leachate run-off.
- 8.5 Waste shall be stored in designated areas, protected as may be appropriate against spillage and leachate run-off. The waste shall be clearly labelled and appropriately segregated.
- 8.6 No waste classified as green list waste in accordance with the EU Shipment of Waste Regulations (Council Regulation EEC No. 1013/2006, as may be amended) shall be consigned for recovery without the agreement of the Agency.
- 8.7 Waste for disposal/recovery off-site shall be analysed in accordance with *Schedule C: Control & Monitoring*, of this licence.
- 8.8 Unless approved in writing, in advance, by the Agency the licensee is prohibited from mixing a hazardous waste of one category with a hazardous waste of another category or with any other non-hazardous waste.
- 8.9 The licensee shall neither import waste into the State nor export waste out of the State except in accordance with the relevant provisions of Regulation (EC) No 1013/2006 of the European

Parliament and of the Council of 14th June 2006 on shipments of waste and associated national regulations.

*Reason: To provide for the appropriate handling of material and the protection of the environment.*

## **Condition 9. Accident Prevention and Emergency Response**

- 9.1 The licensee shall ensure that a documented Accident Prevention Procedure is in place that addresses the hazards on-site, particularly in relation to the prevention of accidents with a possible impact on the environment. This procedure shall be reviewed annually and updated as necessary.
- 9.2 The licensee shall ensure that a documented Emergency Response Procedure is in place, that addresses any emergency situation which 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.
- 9.3 Incidents
- 9.3.1 In the event of an incident the licensee shall immediately:
- (i) carry out an investigation to identify the nature, source and cause of the incident and any emission arising therefrom;
  - (ii) isolate the source of any such emission;
  - (iii) evaluate the environmental pollution, if any, caused by the incident;
  - (iv) identify and execute measures to minimise the emissions/malfunction and the effects thereof;
  - (v) identify the date, time and place of the incident;
  - (vi) notify the Agency and other relevant authorities.
- 9.3.2 The licensee shall provide a proposal to the Agency for its agreement within one month of the incident occurring or as otherwise agreed by the Agency, to:
- (i) identify and put in place measures to avoid recurrence of the incident; and
  - (ii) identify and put in place any other appropriate remedial actions.

*Reason: To provide for the protection of the environment.*

## **Condition 10. Decommissioning & Residuals Management**

- 10.1 Following termination, or planned cessation for a period greater than six months, of use or involvement of all or part of the site in the licensed activity, the licensee shall, to the satisfaction of the Agency, decommission, render safe or remove for disposal/recovery any soil, subsoil, buildings, plant or equipment, or any waste, materials or substances or other matter contained therein or thereon, that may result in environmental pollution.
- 10.2 Decommissioning Management Plan (DMP)
- 10.2.1 The licensee shall prepare, to the satisfaction of the Agency, a fully detailed and costed plan for the decommissioning or closure of the site or part thereof. This plan shall be submitted to the Agency for agreement within six months of the date of grant of the licence.

- 10.2.2 The plan shall be reviewed annually and proposed amendments thereto notified to the Agency for agreement as part of the AER. No amendments may be implemented without the agreement of the Agency.
- 10.2.3 The licensee shall have regard to the Environmental Protection Agency Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision when implementing Condition 10.2.1 above.
- 10.3 The Decommissioning Management Plan shall include, as a minimum, the following:
- (i) a scope statement for the plan;
  - (ii) the criteria that define the successful decommissioning of the activity or part thereof, which ensures minimum impact on the environment;
  - (iii) a programme to achieve the stated criteria;
  - (iv) where relevant, a test programme to demonstrate the successful implementation of the decommissioning plan; and
  - (v) details of the costings for the plan and the financial provisions to underwrite those costs.
- 10.4 A final validation report to include a certificate of completion for the Decommissioning Management Plan, for all or part of the site as necessary, shall be submitted to the Agency within three months of execution of the plan. The licensee shall carry out such tests, investigations or submit certification, as requested by the Agency, to confirm that there is no continuing risk to the environment.

**Reason:** *To make provision for the proper closure of the activity ensuring protection of the environment.*

## Condition 11. Notification, Records and Reports

- 11.1 The licensee shall notify the Agency by both telephone and facsimile, if available, to the Agency's headquarters in Wexford, or to such other Agency office as may be specified by the Agency, as soon as practicable after the occurrence of any of the following:
- (i) any release of environmental significance to atmosphere from any potential emissions point including bypasses;
  - (ii) any emission that does not comply with the requirements of this licence;
  - (iii) any malfunction or breakdown of key control equipment or monitoring equipment set out in *Schedule C: Control and Monitoring*, of this licence which is likely to lead to loss of control of the abatement system; and
  - (iv) any incident with the potential for environmental contamination of surface water or groundwater, or posing an environment threat to air or land, or requiring an emergency response by the Local Authority.
- The licensee shall include as part of the notification, date and time of the incident, summary details of the occurrence, and where available, the steps taken to minimise any emissions.
- 11.2 In the event of any incident which relates to discharges to sewer having taken place, the licensee shall notify the Local and Water Services Authority as soon as practicable after such an incident.
- 11.3 In the case of any incident relating to discharges to water, the licensee shall notify the Local and Water Services Authority and Inland Fisheries Ireland as soon as practicable after such an incident.
- 11.4 The licensee shall make a record of any incident. This record shall include details of the nature, extent, and impact of, and circumstances giving rise to, the incident. The record shall include all corrective actions taken to manage the incident, minimise wastes generated and the effect on the environment, and avoid recurrence. The licensee shall, as soon as practicable following incident notification, submit to the Agency the incident record.

- 11.5 The licensee shall record all complaints of an environmental nature related to the operation of the activity. Each such record shall give details of the date and time of the complaint, the name of the complainant (if provided), and give details of the nature of the complaint. A record shall also be kept of the response made in the case of each complaint.
- 11.6 The licensee shall record all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this licence and all other such monitoring which relates to the environmental performance of the installation.
- 11.6.1 The licensee shall report the total annual emissions of NO<sub>x</sub>, CO<sub>2</sub> and particulates annually as part of the AER. Estimates of the total annual emissions shall be determined by the operator on a basis acceptable to the Agency.
- 11.6.2 The licensee shall report the total annual amount of energy input, related to the net calorific value, broken down in terms of gas and fuel oil annually as part of the AER.
- 11.6.3 The licensee shall maintain a record, for inspection by the Agency, of the operating hours of the boilers. The licensee shall submit a record of the number of operating hours of the boilers from 1<sup>st</sup> January 2016, in accordance with Schedule B.1 as part of the AER.
- 11.7 The licensee shall as a minimum keep the following documents at the site:
- (i) the licences relating to the installation;
  - (ii) the current EMS for the installation;
  - (iii) the previous year's AER for the installation;
  - (iv) records of all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this licence and all other such monitoring which relates to the environmental performance of the installation;
  - (v) relevant correspondence with the Agency;
  - (vi) up-to-date site drawings/plans showing the location of key process and environmental infrastructure, including monitoring locations and emission points;
  - (vii) up-to-date Standard Operational Procedures for all processes, plant and equipment necessary to give effect to this licence or otherwise to ensure that standard operation of such processes, plant or equipment does not result in unauthorised emissions to the environment;
  - (viii) any elements of the licence application or EIS documentation referenced in this licence.
- This documentation shall be available to the Agency for inspection at all reasonable times.
- 11.8 The licensee shall submit to the Agency, by the 31<sup>st</sup> March 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.
- 11.9 A full record, which shall be open to inspection by authorised persons of the Agency at all times, shall be kept by the licensee on matters relating to the waste management operations and practices at this site. This record shall as a minimum contain details of the following:
- (i) the tonnages and EWC Code for the waste materials sent off-site for disposal/recovery;
  - (ii) the names of the agent and carrier of the waste, and their waste collection permit details, if required (to include issuing authority and vehicle registration number);
  - (iii) details of the ultimate disposal/recovery destination facility for the waste and its appropriateness to accept the consigned waste stream, to include its permit/licence details and issuing authority, if required;
  - (iv) written confirmation of the acceptance and disposal/recovery of any hazardous waste consignments sent off-site;

- (v) details of all waste consigned abroad for Recovery and classified as 'Green' in accordance with the EU Shipment of Waste Regulations (Council Regulation EEC No. 1013/2006, as may be amended). The rationale for the classification must form part of the record;
  - (vi) details of any rejected consignments;
  - (vii) details of any approved waste mixing;
  - (viii) the results of any waste analyses required under *Schedule C: Control & Monitoring*, of this licence; and
  - (ix) the tonnage and EWC Code for the waste materials recovered/disposed on-site.
- 11.10 The licensee shall submit report(s) as required by the conditions of this licence to the Agency's Headquarters in Wexford, or to such other Agency office as may be specified by the Agency.
- 11.11 All reports shall be certified accurate and representative by the installation manager or a nominated, suitably qualified and experienced deputy.
- 11.12 Emissions to Sewer
- 11.12.1 All results of Faecal Coliforms that are in excess of 1,000 FC/100ml shall be notified to the Cork County Council and the relevant statutory bodies as soon as possible after the results are received.
  - 11.12.2 The results of Faecal Coliforms analysis are to be submitted on a monthly basis to Cork County Council.
  - 11.12.3 The results of analytical monitoring for parameters in Schedule C.3.2. are to be submitted on a quarterly basis to Cork County Council.

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

## Condition 12. Financial Charges and Provisions

### 12.1 Agency Charges

- 12.1.1 The licensee shall pay to the Agency an annual contribution of €15,284.72, 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 activity as the Agency considers necessary for the performance of its functions under the Environmental Protection Agency Acts 1992 to 2012. The first payment shall be a pro-rata amount for the period from the date of grant of this licence to the 31<sup>st</sup> day of December, and shall be paid to the Agency within one month from the date of grant of this 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 Environmental Protection Agency Acts 1992 to 2012, and all such payments shall be made within one month of the date upon which demanded by the Agency.
- 12.1.2 In the event that the frequency or extent of monitoring 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.

### 12.2 Water Services Authority Charges

- 12.2.1 Treatment charges for the acceptance of treated wastewaters from the site may be subject to levy by Cork County Council and may be altered upon the provisions of the water pricing policy review.

- 12.2.2 An annual fee of €1,000 per annum is payable to Cork County Council as a contribution for the monitoring and reporting requirements for the relevant licence.
- 12.2.3 The licensee shall pay an annual charge amount, to be agreed with the Sanitary Authority, to the Water Services Directorate, Cork County Council towards the cost incurred by the Sanitary Authority in accepting the licensee's effluent into the public sewer. This amount will be updated in accordance with changes in the Consumer Price Index. If circumstances require any increase in the charge other than which accords the changes in the Consumer Price Index, this increase shall be determined, having regard to the circumstances by the Sanitary Authority. Payment is to be made on demand.

12.3 Environmental Liabilities

- 12.3.1 The licensee shall as part of the AER, provide an annual statement as to the measures taken or adopted at the site 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 or accidents/incidents, as may be associated with the carrying on of the activity.
- 12.3.2 The licensee shall arrange for the completion, by an independent and appropriate qualified consultant, of a comprehensive and fully costed Environmental Liabilities Risk Assessment (ELRA) which addresses the liabilities from past and present activities. The assessment shall include those liabilities and costs identified in Condition 10 for execution of the DMP. A report on this assessment shall be submitted to the Agency for agreement within twelve months of the date of grant of this licence. The ELRA shall be reviewed as necessary to reflect any significant change on site, and in any case every three years following initial agreement. Review results are to be notified as part of the AER.
- 12.3.3 As part of the measures identified in Condition 12.3.1, the licensee shall, to the satisfaction of the Agency, make financial provision to cover any liabilities associated with the operation (including closure). The amount of indemnity held shall be reviewed and revised as necessary, but at least annually. Proof of renewal or revision of such financial indemnity shall be included in the annual 'Statement of Measures' report identified in Condition 12.3.1.
- 12.3.4 The licensee shall revise the cost of closure annually and any adjustments shall be reflected in the financial provision made under Condition 12.3.3.
- 12.3.5 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 12.3.2 and 12.3.3 above.

*Reason: To provide for adequate financing for monitoring and financial provisions for measures to protect the environment and to provide for the requirements of the Water Services Authority in accordance with Section 99E of the EPA Acts, 1992 to 2012*

**SCHEDULE A: Limitations**

There are no limitations on the installation specified in the Schedule.

**SCHEDULE B: Emission Limits****B.1 Emissions to Air**

**Emission Point Reference No:** A1-1, A1-2, A1-3  
**Location:** 188714E 073678N (Boiler House Combined Stack)  
**Volume to be emitted:** Maximum in any one day: 864,000 m<sup>3</sup>  
 Maximum rate per hour: 36,000m<sup>3</sup>  
**Minimum discharges height:** 46.5 m above ground

Parameter	Emission Limit Value
Nitrogen oxides (as NO <sub>2</sub> )	250mg/m <sup>3</sup> (until 31 <sup>st</sup> December 2015) 100mg/m <sup>3</sup> (from 1 <sup>st</sup> January 2016) <sup>Note 1</sup>
Carbon monoxide	100mg/m <sup>3</sup>

**Note 1:** Where the licensee gives a written undertaking (no later than 1<sup>st</sup> January 2014) to the Agency not to operate the plant for more than 17,500 hours between January 1<sup>st</sup> 2016 and December 31<sup>st</sup> 2023 with closure thereafter, then, with the agreement of the Agency, this date will extend no later than December 31<sup>st</sup> 2023. The licensee shall submit a record of the number of operating hours of the boilers from 1<sup>st</sup> January 2016 as part of the AER.

**Emission Point Reference No:** A2-1  
**Location:** 188731E 073699N (Feeds Recovery Stack)  
**Volume to be emitted:** Maximum in any one day: 878,000 m<sup>3</sup>  
 Maximum rate per hour: 36,600 m<sup>3</sup>  
**Minimum discharges height:** 59.98 m above ground

Parameter	Emission Limit Value
Particulates	50 mg/m <sup>3</sup> (at mass flows > 0.5kg/hr)

**Emission Point Reference No:** A3-19, A3-30  
**Location:** Buhler Screen Combi Cleaner, Combi Cleaner

Parameter	Emission Limit Value
Particulates	20 mg/m <sup>3</sup>

**B.2 Emissions to Water**

Emission Point Reference No: SWE1 (cooling water)  
 Name of Receiving Waters: Dungourney River (via Mill Race)  
 Location: 188720E 073628N

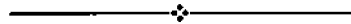
Volume to be emitted: Maximum in any one day: 4,020 m<sup>3</sup>  
 Maximum in any one hour: 167.5 m<sup>3</sup>



Emission Point Reference No: SW-Temp 1  
 Name of Receiving Waters: Dungourney River (via Mill Race)  
 Location: 188369E 073426N  
 (Mill Race behind building  
 at Heritage Gate entrance)

Parameter	Emission Limit Value
Temperature	25 °C (max) <sup>Notes 1&amp;2</sup>

Note 1: No effluent shall be discharged which results in a temperature increase at the edge of the mixing zone of greater than 1.5°C in the receiving water.  
 Note 2: Emission limit value is 21.5°C during low flow, monitored at Pitch and Putt Bridge (95 percentile of 0.06m<sup>3</sup>/s) or 19°C for dry weather flow, monitored at Pitch and Putt Bridge (DWF of 0.03m<sup>3</sup>/s).

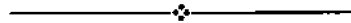


**B.3 Emissions to Sewer**

Emission Point Reference No: SE1  
 Name of Receiving Waters: North Channel Great Island  
 Location: 188793E 073506N

Volume to be emitted: Maximum in any one day: 2,500 m<sup>3</sup>  
 Maximum rate per hour: 150 m<sup>3</sup>

Parameter	Emission Limit Value
COD	125 mg/l
TOC	120 mg/l
Suspended Solids	35 mg/l
Fats, Oil and Grease	15mg/l



Emission Point Reference No: SE Final  
 Name of Receiving Waters: North Channel Great Island  
 Location: 188799E 073467N  
 Volume to be emitted: Maximum in any one day: 5,000 m<sup>3</sup>  
 Maximum rate per hour: 270 m<sup>3</sup>

Parameter	Emission Limit Value
pH	6.0 to 9.0
	mg/l
BOD <sup>Note 1&amp;3</sup>	25
COD <sup>Note 1&amp;3</sup>	125
Suspended Solids <sup>Note 1&amp;3</sup>	35
Total Nitrogen <sup>Note 4</sup>	15
Orthophosphate as Phosphorus <sup>Note 4</sup>	2
Fats, Oil and Grease	15
Sulphates	600
Faecal Coliforms	(a) Geometric Mean of 250 fc/100mls on a 50 sample rolling programme (b) 95% percentile value of 1000fc/100ml on a 50 sample rolling programme
<u>Heavy Metals</u>	-
Cadmium	0.02
Chromium	0.50
Copper	0.50
Lead	0.50
Nickel	0.50
Zinc	0.50

Note 1: Non-compliant samples shall not deviate from the parametric value by more than 100%.

Note 2: Non-compliant samples shall not deviate from the parametric value by more than 150%.

Note 3: The frequency of non-compliant samples shall be in accordance with those figures listed in the fifth schedule of the Urban Wastewater Regulations 2001, S.I. No. 254 of 2001.

Note 4: Compliance shall be assessed using the annual mean figure: the annual mean of the samples shall conform to the Emission Limit Value.

**B.4 Noise Emissions**

Daytime dB L <sub>Aeq,T</sub> (30 minutes)	Evening time dB L <sub>Aeq,T</sub> (30 minutes)	Night-time dB L <sub>Aeq,T</sub> (15-30 minutes)
55	50	45 <sup>Note 1</sup>

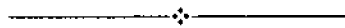
Note 1: There shall be no clearly audible tonal component or impulsive component in the noise emission from the activity at any noise-sensitive location.

## SCHEDULE C: Control & Monitoring

### C.1.1. Control of Emissions to Air

Emission Point Reference No: A1-1, A1-2, A1-3  
 Description of Treatment: Boilers

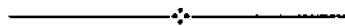
Control Parameter	Monitoring	Key Equipment <sup>Note 1</sup>
Combustion efficiency	Biannually	Flue gas analyser



Emission Point Reference No: A2-1  
 Description of Treatment: Cyclone

Control Parameter	Monitoring	Key Equipment <sup>Note 1</sup>
Particulate matter	Annually	Extract fan

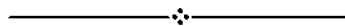
Note 1: The licensee shall maintain appropriate access to standby and/or spares to ensure the operation of the abatement system.



Emission Point Reference No: A3-19, A3-30  
 Description of Treatment: Bag filter

Control Parameter	Monitoring	Key Equipment <sup>Note 1</sup>
Bag filter integrity	Annually	Differential pressure gauge
Air flow	Annually	None

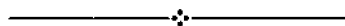
Note 1: The licensee shall maintain appropriate access to standby and/or spares to ensure the operation of the abatement system.



### C.1.2. Monitoring of Emissions to Air

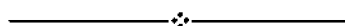
Emission Point Reference No: A1-1, A1-2, A1-3

Parameter	Monitoring Frequency	Analysis Method/Technique
NO <sub>x</sub>	Biannually	Flue gas analyser fitted with chemiluminescence cells
CO	Biannually	Flue gas analyser fitted with infra-red cells



Emission Point Reference No: A2-1, A3-19, A3-30

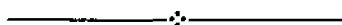
Parameter	Monitoring Frequency	Analysis Method/Technique
Particulates	Annually	Standard Method



**C.2.1. Monitoring of Emission to Water**

Emission Point Reference No: SWE1 (Cooling water)  
 Name of Receiving Waters: Dungourney River (via Mill Race)  
 Location: 188720E 073628N

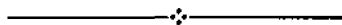
Parameter	Monitoring Frequency	Analysis Method/Technique
Flow	Continuous	On-line Flow meter with recorder
TOC	Continuous	On-line TOC meter with recorder



**C.2.2. Monitoring of Storm Water Emissions**

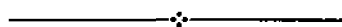
Emission Point Reference No: SWE2  
 Name of Receiving Waters: Dungourney River via Mill Race  
 Location: 188820E 073664N

Parameter	Monitoring Frequency	Analysis Method/Technique
pH	Monthly	pH electrode/meter
COD	Quarterly	Standard Methods
Visual Inspection	Weekly	Sample and examine for colour and odour.



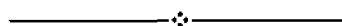
Emission Point Reference No: SWE3  
 Name of Receiving Waters: Dungourney River via Mill Race  
 Location: 188932E 073682N

Parameter	Monitoring Frequency	Analysis Method/Technique
pH	Monthly	pH electrode/meter
TOC	Continuous	On-line TOC meter with recorder
Visual Inspection	Weekly	Sample and examine for colour and odour.



Emission Point Reference No: GE1  
 Name of Receiving Waters: Groundwater  
 Location: 188899E 074078N

Parameter	Monitoring Frequency	Analysis Method/Technique
pH	Monthly	pH electrode/meter
TOC	Continuous	On-line TOC meter with recorder
Visual Inspection	Weekly	Sample and examine for colour and odour.



**C.3.1. Control of Emissions to Sewer**

Emission Point Reference No: SE Final  
 Description of Treatment: Waste Water Treatment

Control Parameter	Monitoring	Key Equipment <sup>Note 1</sup>
Oil Removal	pH output from neutralisation tank	TPS oil pump
Effluent (pH) Neutralisation		Caustic dosing pump
Effluent Transfer		Agitator Lift pumps
Suspended Solids (primary)	DO in aeration basin	Agitator
Effluent Balancing		Solid removal pumps
Dissolved Oxygen		Skimmed solids pump
Suspended Solids (secondary) Sludge Dewatering		Agitator
		Feed-forward pump
		Three surface aerators
		Six submerged flight mixers
		Fixed DO meter
		Sludge transfer pumps (x2)
		Filtration (pumps x 2)
		polyelectrolyte

Note 1: The licensee shall maintain appropriate access to standby and/or spares to ensure the operation of the abatement system.

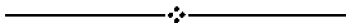


**C.3.2. Monitoring of Emissions to Sewer**

Emission Point Reference No: SE1

Control Parameter	Monitoring Frequency	Key Equipment/Technique
COD	Daily <sup>Note 1</sup>	Standard Method
TOC	Continuous	On-line TOC meter with recorder
Suspended Solids	Daily <sup>Note 1</sup>	Standard Method
Fats, Oil and Grease	Monthly	Standard Method

Note 1: All samples shall be collected on a 24 hour flow proportional composite sampler basis



Emission Point Reference No:

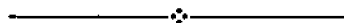
SE Final

Control Parameter	Monitoring Frequency	Key Equipment/Technique
Flow	Continuous	On-line flow meter with recorder
Temperature	Daily <sup>Note 1</sup>	On-line temperature probe with recorder
pH	Daily <sup>Note 2</sup>	pH electrode/meter with recorder
Chemical Oxygen Demand	Daily <sup>Note 2</sup>	Standard Method
Biochemical Oxygen Demand	Fortnightly <sup>Note 2</sup>	Standard Method
Suspended Solids	Weekly <sup>Note 2</sup>	Standard Method
Total Nitrogen (as N)	Fortnightly <sup>Note 2</sup>	Standard Method
Orthophosphate (as P)	Fortnightly <sup>Note 2</sup>	Standard Method
Total Ammonia (as N)	Monthly <sup>Note 2</sup>	Standard Method
Oils, fats and greases	Quarterly <sup>Note 2</sup>	Standard Method
Faecal coliforms	Weekly <sup>Note 3</sup>	Standard Method
<b>Heavy Metals</b>		
Arsenic	Biannually <sup>Note 2</sup>	Standard Method
Cadmium	Biannually <sup>Note 2</sup>	Standard Method
Chromium	Biannually <sup>Note 2</sup>	Standard Method
Copper	Biannually <sup>Note 2</sup>	Standard Method
Lead	Biannually <sup>Note 2</sup>	Standard Method
Mercury	Biannually <sup>Note 2</sup>	Standard Method
Nickel	Biannually <sup>Note 2</sup>	Standard Method
Silver	Biannually <sup>Note 2</sup>	Standard Method
Zinc	Biannually <sup>Note 2</sup>	Standard Method
Polychlorinated biphenyls	Biannually <sup>Note 2</sup>	Standard Method
Sulphates	Annually <sup>Note 2</sup>	Standard Method
Volatile Organic Compounds	Annually <sup>Note 2</sup>	Standard Method

Note 1: Total effluent discharged over the 24 hour period in which the composite sample is collected shall be recorded.

Note 2: All samples shall be collected on a 24 hour flow proportional composite sampling basis.

Note 3: Type of sampling (grab or composite) to be agreed within six months of the date of grant of this licence with the Sanitary Authority



**C.4 Waste Monitoring**

Waste Class	Frequency	Parameter	Method
Other <sup>Note 1</sup>			

Note 1: Analytical requirements to be determined on a case by case basis.

**C.5 Noise Monitoring**

Location	Measurement	Frequency
NSL1 188641E 073835N NSL2 188494E 073705N N1 188649E 073824N N2 188618E 073690N N3 188853E 073546N	L <sub>Aeq</sub> (15 minutes)	As required by Agency
Period	Minimum Survey Duration	
Daytime	A minimum of 3 sampling periods at each noise monitoring location. <sup>Note 1</sup>	
Evening-time	A minimum of 1 sampling period at each noise monitoring location	
Night-time	A minimum of 2 sampling periods at each noise monitoring location. <sup>Note 2</sup>	

Note 1: Sampling period is to be the time period T stated within the relevant licence. Typically this will be either 15 minutes or 30 minutes in duration. This applies to day, evening and night time periods.

Note 2: Night-time measurements should be made between 2300hrs and 0400hrs, Sunday to Thursday, with 2300hrs being the preferred start time.

**C.6 Ambient Monitoring****C.6.1 Surface water Monitoring**

Emission Point Reference No: SW-Temp1  
Name of Receiving Waters: Dungourney River via Mill Race  
Location: 188369E 073426N

Parameter	Monitoring Frequency	Analysis Method/Technique
Temperature	Continuous	On-line temperature probe with recorder



**C.6.2 Groundwater Monitoring**

Location: GW1 (189237E 074192N),  
 GW2 (new) (188720E 073510N)  
 GW3 (189045E 073965N)  
 GW4 (189114E 074084N)  
 GW5 (189118E 074141N)

Parameter	Monitoring Frequency	Analysis Method/Techniques
pH	Annually	pH electrode/meter
COD	Annually	Standard Method
Nitrate	Annually	Standard Method
Total Ammonia	Annually	Standard Method
Total Nitrogen	Annually	Standard Method
Conductivity	Annually	Standard Method
Chloride	Annually	Standard Method
Fluoride	Annually	Standard Method
Lead	Annually	Standard Method
Zinc	Annually	Standard Method
Potassium	Annually	Standard Method
Phosphorus	Annually	Standard Method
Arsenic	Annually	Standard Method
Sulphate	Annually	Standard Method
Mercury	Annually	Standard Method

**C.6.3 Production and Standby Well Monitoring**

Location: Cavern Water.  
 Wells: PW2, PW3, PW4, PW5, PW6, PW7, PWS, PW9

Parameter	Monitoring Frequency <sup>Note 1</sup>	Analysis Method/Techniques
Abstraction Flow Rate	Continuously	Standard Method
Groundwater Level	Continuously	Standard Method
Conductivity	Daily	Standard Method

Note 1: Monitoring only required during abstraction of groundwater



**C.6.4 River Flow and River Level Monitoring**

Location: 189838E 074544N (Upstream, Shanty Bridge)  
 188627E 073391N (Downstream, Pitch & Putt Bridge)

Parameter	Monitoring Frequency	Analysis Method/Techniques
Dungourney River flow Dungourney River water level	Continuous Monthly	Method 1: Flow meters Method 2: By river height measurement and indirect flow calculation <sup>Note 1</sup>
Temperature	Continuous	On-line temperature probe with recorder

Note 1: Monitoring of river flow by method 2 may be discontinued with the agreement of the Agency if flow data has been validated to the satisfaction of the Agency.



### SCHEDULE D: Annual Environmental Report

Annual Environmental Report Content <sup>Note 1</sup>
<p>Emissions from the installation</p> <p>Waste management record.</p> <p>Resource consumption summary.</p> <p>Complaints summary.</p> <p>Schedule of Environmental Objectives and Targets.</p> <p>Environmental management programme – report for previous year.</p> <p>Environmental management programme – proposal for current year.</p> <p>Pollutant Release and Transfer Register – report for previous year.</p> <p>Pollutant Release and transfer Register – proposal for current year.</p> <p>Noise monitoring report summary.</p> <p>Ambient monitoring summary.</p> <p>Tank and pipeline testing and inspection report.</p> <p>Reported incidents summary.</p> <p>Energy efficiency audit report summary.</p> <p>Annual energy input, related to the net calorific value, broken down in terms of gas and fuel oil.</p> <p>A record of the number of operating hours of the boilers from 1<sup>st</sup> January 2016.</p> <p>Report on the assessment of the efficiency of use of raw materials in processes and the reduction in waste generated.</p> <p>Report on progress made and proposals being developed to minimise water demand and the volume of trade effluent discharges.</p> <p>Reports on financial provision made under this licence, management and staffing structure of the installation and a programme for public information.</p> <p>Review of decommissioning management plan</p> <p>Statement of measures in relation to prevention of environmental damage and remedial actions (Environmental Liabilities).</p> <p>Environmental Liabilities Risk Assessment Review (every three years or more frequently as dictated by relevant on-site change including financial provisions.</p> <p>Any other items specified by the Agency.</p>

Note 1: Content may be revised subject to the agreement of the Agency.

Sign off for Proposed Determinations/Decisions

Signed on behalf of the said Agency \_\_\_\_\_  
 On the xx day of xxxxx, 200X      xxxxxxxxxxxx      Authorised Person

Sign Off for Final Licences/Decisions

Sealed by the seal of the Agency on this the \*\* day of \*\* 201\*.

**PRESENT** when the seal of the Agency  
 Was affixed hereto:

\_\_\_\_\_  
 XXXX Director/Authorised Person

