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Interpretation of terms

For the purposes of this Permit, and unless the context requires otherwise, the following definitions shall apply:

“Anaerobic Digestion” or “AD” has the same meaning as in the Waste Management Licensing (Scotland) Regulations 2011.

“the Application” means the application made by Aberdeen City Council for the Anaerobic Digestion Activity on 09 December 2019 and given the reference number PPC/A/1188451

“Authorised Person” means a person who is authorised in writing under Section 108 of the Environment Act 1995 to carry out duties on behalf of SEPA;

“commissioning” means the commencement in operation of the Permitted Installation or part thereof, for the first time following construction, or after any significant modification or change. It includes: the planning and management of the commissioning or the Permitted Installation or part thereof; functional testing of equipment; introducing process materials to the plant; resolution of technical and procedural problems; confirmation that all aspects of the plant operate as designed or planned; and confirmation the plant operates within the conditions of the Permit.

“emission” has the same meaning as in the Regulations;

“incident” means any of the following situations:

- Where an accident occurs which has caused or may have the potential to cause pollution;
- Where any malfunction, breakdown or failure of plant or techniques is detected which has caused or may have the potential to cause pollution;
- A breach of any condition of this Permit;
- Where any substance, vibration, heat or noise specified in any Condition of this Permit is detected in an emission from a source not authorised by a Condition of this Permit and in a quantity which may cause pollution;
- Where an emission of any pollutant not authorised to be released under any Condition of this Permit is detected;
- Where an emission of any substance, vibration, heat or noise is detected that has exceeded, or is likely to exceed, or has caused, or is likely to cause to be exceeded any limit on emissions specified in a Condition of this Permit.

“Location Plan” means the plan attached at Schedule 1;

“non-hazardous waste” means waste which is not hazardous waste;

“operating hours” means the time, expressed in hours, during which a medium combustion plant is operating and discharging emissions into the air, excluding start¬up and shut-down periods.

“operation” has the same meaning as in The Pollution Prevention and Control (Scotland) Regulations 2012, A Practical Guide (Part A Activities), Issue 2;

“the Permitted Activities” are defined in Schedule 1 of this Permit;

“the Permitted Installation” is defined in Schedule 1 of this Permit and includes references to parts of the Permitted Installation;

“pollutant” and “pollution” have the same meaning as in the Regulations;

“the Regulations” means The Pollution Prevention and Control (Scotland) Regulations 2012;

“Ringleman Shade 1” has the same meaning as in British standard BS 2742:1969; “waste” has the same meaning as in the Regulations;

“Sealed drainage system” has the same meaning as in paragraph 45(7) of Schedule 1 of the Waste Management Licensing (Scotland) Regulations 2011

“SEPA” means the Scottish Environment Protection Agency;

“SEPA’s Odour Guidance 2010” means that guidance published by SEPA, or any revision of that Guidance as subsequently published, on SEPA’s website at www.sepa.org.uk.

”the Site Boundary” is defined in Schedule 1 of this Permit;

“Site Plan” means the plan attached at Schedule 1;

“waste” has the same meaning as in the Regulations;

“water environment” has the same meaning as in the Water Environment and Water Services (Scotland) Act 2003 that is all surface water, groundwater and wetlands; and “surface water”, “groundwater” and “wetlands” shall have the same meanings as in the Act.

Any reference to a numbered Condition, group of Conditions, Schedule, Table, Appendix, Figure or Paragraph is a reference to the condition, group of conditions, schedule, table, appendix, figure or paragraph bearing that number in this licence;

Except where specified otherwise in this Permit:

- “day” means any period of 24 consecutive hours,
- “week” means any period of 7 consecutive days,
- “month” means a calendar month,
- “quarter” means a calendar quarter
- “year” means any period of 12 consecutive months;

and any derived words (e.g. “monthly”, “quarterly”) shall be interpreted accordingly;

Except where specified otherwise in this Permit, any reference to an enactment or statutory instrument includes a reference to it as amended (whether before or after the date of this Permit) and to any other enactment, which may, after the date of this Permit, directly or indirectly replace it, with or without amendment.

1 THE PERMITTED INSTALLATION

1.1 Description of the Permitted Installation

1.1.1 The permitted installation to which this Permit applies ("the Permitted Installation") is:

a) The stationary technical unit specified in paragraph 1.1.4 (the Stationary Technical Unit), where the activities specified in paragraph 1.1.3 are carried out ("the Activities"), together with the directly associated activities specified in paragraph 1.1.5 ("the Directly Associated Activities").

b) The site of the Permitted Installation is delineated in red on the Site Plan ("the Site Boundary").

1.1.2 The general location of the Permitted Installation is as shown on the Location Plan.

1.1.3 The Activities carried out at the Stationary Technical Unit are:

a) The recovery or a mix of recovery and disposal of non -hazardous waste at an installation with a capacity exceeding 100 tonnes per day if the only waste treatment activity is anaerobic digestion by biological treatment, as described in Schedule 1, Section 5.4, Part A (b) (i) of the Regulations as summarised in Figure 1.

1.1.4 The Stationary Technical Unit comprises the following units:

a) Two bunded waste reception tanks comprising:
   (i) One, 1,000m^3 capacity, steel reinforced concrete tank fed by an undergound pipe from the brewery, for storing waste brewery washwater; and
   (ii) One, 400m^3 capacity, steel reinforced concrete tank with a sub-surface pump mixing system for storing waste brewery trub.
b) The anaerobic digestion plant comprising:
   (i) One, insulated stainless steel digestor tank with a liquid capacity of 5,200m^3 and a biogas capacity of 2,000 to 2,900 m^3 in the flexible headspace;
   (ii) associated pumps, blowers and pressure release valves.
c) The solid and effluent removal plant comprising:
   (i) A bunded Coarse Air Flotation (CAF) tank with a liquid capacity of 46m^3, and two associated external air compressors; and
   (ii) A Screw Press located in the Control Building.
d) The aerobic treatment process comprising:
   (i) A bunded Anoxic tank with a liquid capacity of 238m^3, and associated mixers and pumps;
   (ii) A bunded Aeration Tank with a liquid capacity of 1,600m^3, and associated blowers and pumps;
   (iii) A bunded Membrane Bio Reactor Tank with a liquid capacity of 40m^3, and associated blowers and pumps;
   (iv) A bunded return activated sludge (RAS) tank with a liquid capacity of 13m^3;
   (v) A bunded Permeate Tank with a liquid capacity of 42m^3;

(vi) Carbon filter;
(vii) Final Water Tank;

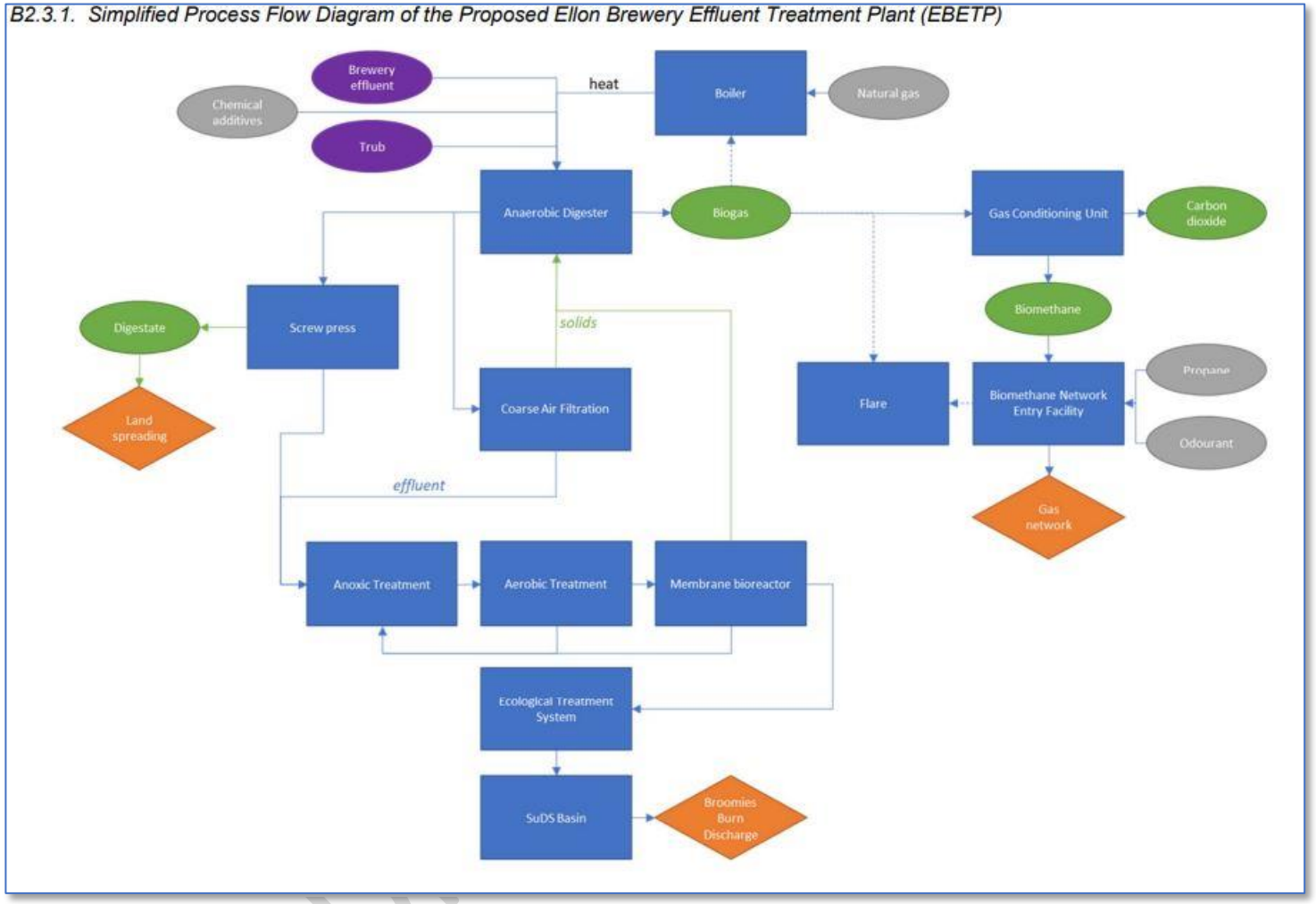
e) Ecological Treatments System consisting of 5 lined and sealed, biological wetland treatment beds.
f) The Gas Conditioning Unit comprising:
(i) Pre-treatment cooling circuit connected to a closed loop chiller, carbon filters and associated pumps;
(ii) Three Membrane separators for separating carbon dioxide and methane;
(iii) Air cooled screw compressor capable of compressing the gas to a pressure in excess of 10 bar;
(iv) Gas Conditioning Unit exhaust stack;
(v) Biomethane Network Entry Facility for injecting biogas into the National Grid. This includes continuous monitoring equipment and odorant dosing.
g) A fully enclosed ground flare with a design capacity of 1,050Nm3/h.

1.1.5 The following Directly Associated Activities are carried out on the Site:

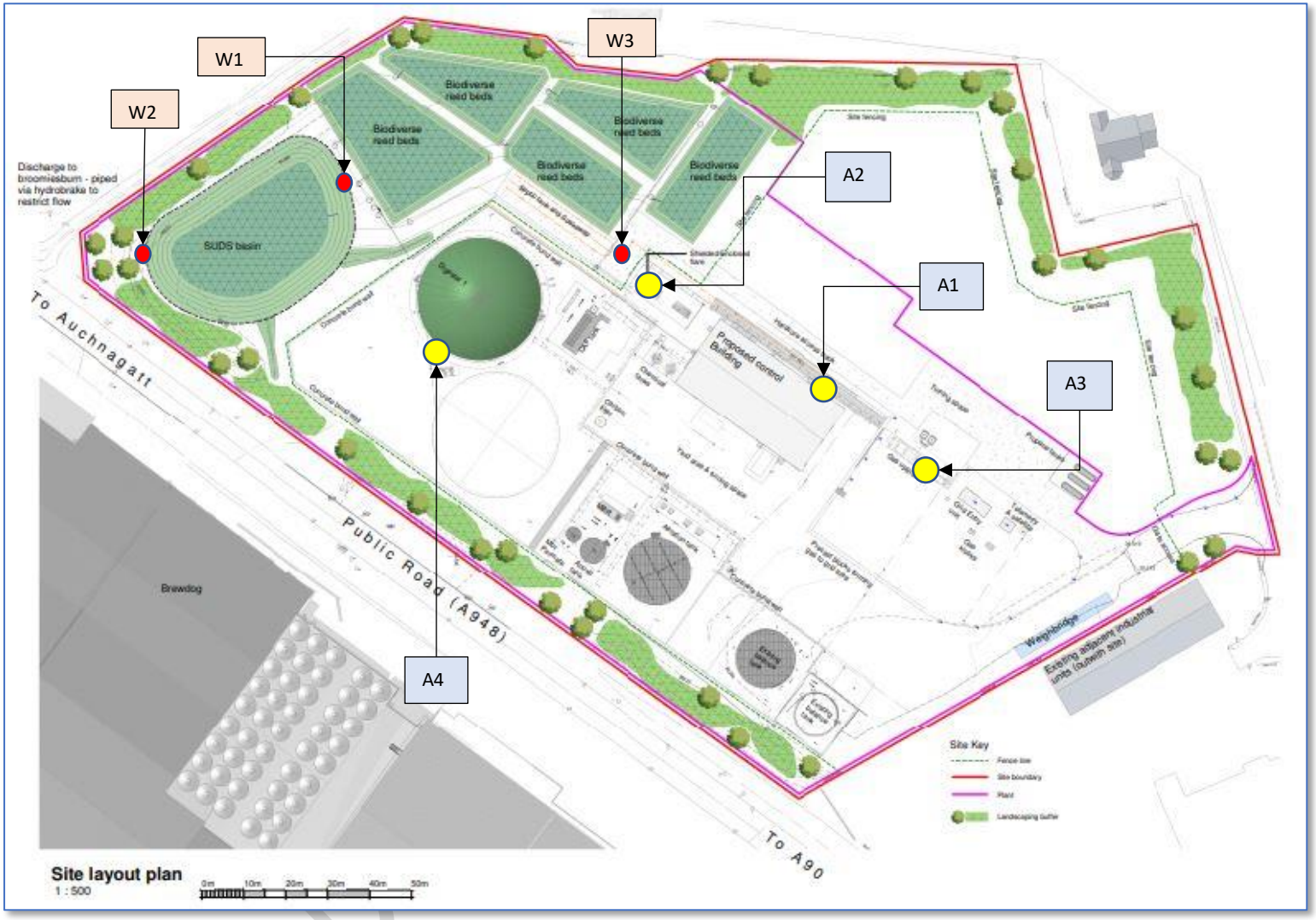
a) Low temperature hot water gas boiler (0.8MW) located in the Control Building which provides hot water to the digester feed heat exchanger.
b) Delivery, storage and handling of non-waste raw and auxiliary materials and chemicals.
c) Surface water collection, flow control and treatment in the Sustainable Urban Drainage Scheme (SUDS) comprising a detention basin for attenuation.
d) Storage, handling, and dispatch of waste.
e) Servicing and maintenance of all process equipment.
f) On site sampling and testing facilities.
g) All sampling and testing of air and water emissions.
h) Discharge from the washing and toilet facilities.

1.1.6 For the purposes of this Permit, the Activities and Directly Associated Activities shall be known together as “the Permitted Activities”.

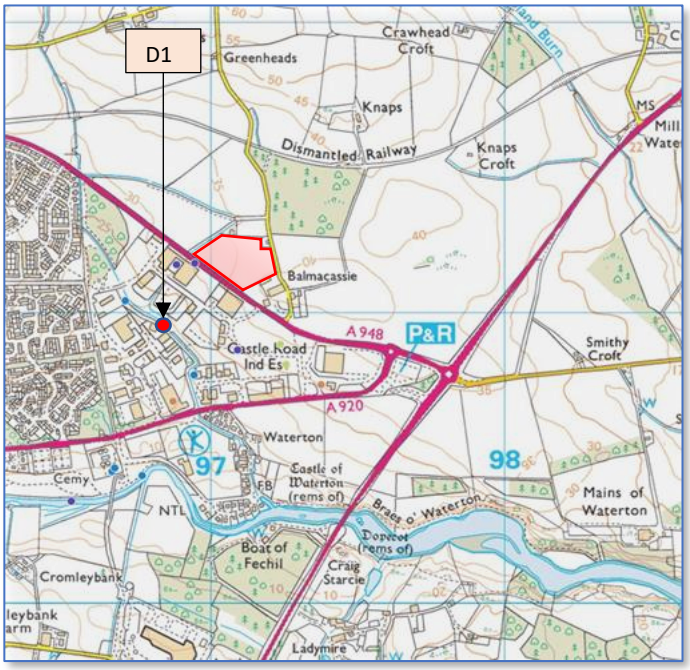
1.2 Figure 1: Summary of Process Activity



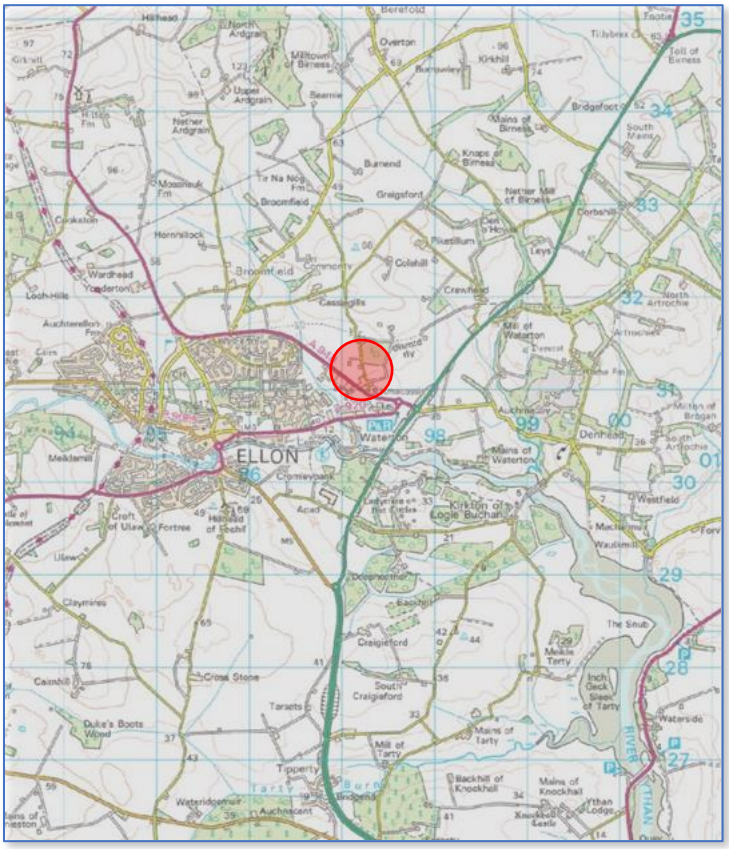
1.3 Site Plan


W1
W2
W3
A1
A2
A3
A4
Biodiverse reed beds
Biodiverse reed beds
Biodiverse reed beds
Biodiverse reed beds
Biodiverse reed beds
Discharge to broomiesburn - piped via hydrobrake to restrict flow
SUDS basin
To Auchnagatt
Public Road (A948)
To A90
Brewdog
Proposed control Building
Weighbridge
Existing adjacent industrial units (Dunesh site)
Site Key
Site layout plan
1 : 500

1.4 Site Location Plan 1



1.5 Site Location Plan 2



2 GENERAL MANAGEMENT & ADMINISTRATION CONDITIONS

2.1 Management and Administration

2.1.1 The Operator must ensure the operation of the Permitted Installation is in accordance with and to the extent permitted by this Permit.

2.1.2 SEPA shall be notified in writing of the name of the designated competent person (and deputy) within 7 days of the date of this Permit.

2.1.3 In the event of a different person being appointed to act as the designated competent person (or deputy) SEPA shall be notified in writing of the name of the new designated competent person or deputy without delay.

2.1.4 A copy of this Permit shall be kept at the Permitted Installation and shall be made readily accessible for examination by all staff.

2.2 Management Systems

2.2.1 The Permitted Installation shall be managed and operated in accordance with a written management system.

2.2.2 The written management system shall be reviewed at least once every 4 years. All reviews shall be recorded and the results of any review incorporated into the written management systems, and implemented, within a period of 3 months from the end of the review.

2.3 Financial Provision

2.3.1 The Operator must ensure that the financial provision as required by Regulation 18(4)(b) of the regulations is maintained until the permit is surrendered.

2.4 Records

2.4.1 All records made in compliance with this Permit shall be kept in a systematic manner.

2.4.2 Unless otherwise specified in a Condition of this Permit, every record made in compliance with a Condition of this Permit shall be preserved for not less than 5 years from the date of its being made. Every such record shall be kept at the Permitted Installation for not less than one year from the date of its being made and thereafter preserved at a location, previously notified to SEPA in writing, if that location is not the Permitted Installation

2.4.3 All records shall be legible, and any amendment made to any record made in compliance with a Condition of this Permit shall be made in such a way as to leave the original entry clear and legible. The reason for each amendment shall be explained in the said record.

2.4.4 Without prejudice to Condition 2.4.2, all Operators' records relevant to the operation and maintenance of the Permitted Installation shall be kept at the Permitted Installation for not less than one year from the end of the period to which they apply.

2.5 Reporting and Notifications

2.5.1 Where any condition of this Permit requires information to be reported or notified to SEPA, a report or notification shall be forwarded to SEPA by the date(s) or within the period or at the frequency specified in Table 2.1, and, where appropriate, the first report or notification shall be due on the date specified in that Table. All such reports or notifications shall include the Permit number, Permit Condition number and the name of the Operator.

2.5.2 All reports shall be submitted to SEPA in an electronic format to the email address specified by SEPA.

2.5.3 Where the Permitted Installation has not operated for the duration of any relevant reporting period specified in Table 2.1, the Operator shall provide written notification to SEPA. This shall confirm that no relevant reports have been made in terms of Condition 2.4.1, because the Permitted Installation has not operated during the said period. Such notifications shall be submitted within one month of the end of the reporting period concerned.

Table 2.1: Reporting and Notification Requirements

Summary of Information to be Reported or Notified	Condition	Date/Within period/ Frequency to be Reported	Date First Report Due
Primary point of contact with SEPA	2.1.2 & 2.1.3	Without delay following any new appointment	Within 7 days of the date of this Permit
Where the Permitted Installation has not operated for the duration of a reporting period	2.5.3	As required	Within 1 month of the end of the reporting period concerned
Waste Data Returns	2.6.1	Within 28 days of the last days of: March, June, September and December each year	As applicable after the date permit is issued
Incident investigation notification	2.7.4 & 2.7.5	Without delay by telephone. Next working day written confirmation	Not applicable
Incident investigation report	2.7.6	Within 14 days of the date of the Incident unless otherwise agreed in writing with SEPA	Not applicable
Incident Prevention and Mitigation Plan	2.8.1	Every 2 years following review	Prior to Commissioning Activities
Start-up plan	2.10.1	Every 4 years following review	Prior to Commissioning Activities
Resource Utilisation & Waste Minimisation Assessment	3.1.4	At least every 4 years	31 December 2025
Drainage, pipework, etc. assessment	4.1.4	At least every 4 years	31 December 2025
Working Surfaces Assessment	4.1.5	At least every year	31 December 2022
Revised Site Condition Report	4.2.1	One off report.	30 June 2022

Summary of Information to be Reported or Notified	Condition	Date/Within period/ Frequency to be Reported	Date First Report Due
Soil and Groundwater Monitoring Report	4.3.1	As per Soil and Groundwater Monitoring Plan	31 December 2022
Soil and Groundwater Monitoring Plan	4.3.2	As per Soil and Groundwater Monitoring Plan	31 September 2022
Noise and Vibration Systematic Assessment and Review	4.4.2	At least annually	1 year from date of permit.
Noise and Vibration – Broadband and tonal noise assessment report	4.4.4	One off report.	As per condition.
Odour Management Plan	4.5.5 & 4.5.7	At least every 2 years following systematic assessment and review	On completion of Commissioning Activities
Odour Management Systematic Assessment and Review	4.5.6	At least every 2 years	2 years from date of permit issue
Odour Complaint Reporting	4.5.8	Without delay	Not applicable
Tank Cleaning Procedure	4.5.10	One off report.	On completion of Commissioning Activities
Bund & Tanks Integrity Checks	5.3.6	At least annually	1 year from completion of Commissioning Activities
Commissioning Plan	6.1.1	As required	3 months prior to starting Commissioning Activities, or as agreed by SEPA
Commissioning – Monthly Updates	6.1.4	As required	Not applicable
Commissioning - Notifications	6.1.6	Within 24 hours	Not applicable
Commissioning Report	6.1.7	Within one month of Cessation of Commissioning.	Not applicable
Decommissioning Plan	6.2.1 & 6.2.4	At least every 4 years following review, or after any substantial change	6 months from date of issue of permit
Cessation of Activities Notification	6.2.2	1 month prior to the proposed date of cessation	Not applicable
AD Quarterly Report	8.1.10	Every 3 months for the first 2 years, thereafter every 6 months	Not applicable
Gas Use Utilisation Review	8.1.11	No later than 2 months after the limit was initially exceeded	Not applicable
Leak Detection and Review Programme	8.1.15	By the 28 February every year	28 February 2022
Pumping of Trub Waste Timeline	8.2.1	One of report	Within 3 months of the date of issue
Gas Conditioning Unit Exhaust Gas Analaysis	8.2.2	One of report	Within 3 months of the date of issue
Water Sampling Plan	10.1.6	31 December each year	On completion of Commissioning
Water Mass Emissions	10.1.7	31 December each year	31 December 2022

2.6 Waste Data Reporting

2.6.1 The Operator shall compile the data required to complete the "Licensed/Permitted Site Returns Form" located on SEPA's website at www.sepa.org.uk. This form shall be completed and reported electronically to the email address specified by SEPA.

2.7 Incidents

2.7.1 In the event of an incident all necessary measures shall immediately be taken:

a) to prevent, or where that is not practicable to reduce, emissions from the permitted installation;
b) to limit the environmental consequences as a result of that incident; and
c) to prevent further possible incidents.

2.7.2 Without prejudice to the requirements of condition 2.7.1, in the event of a breach of any condition of this permit the operator shall immediately take the measures necessary to ensure that compliance is restored in the shortest possible time.

2.7.3 Notwithstanding the requirements of Condition 2.7.1 and 2.7.2 where a breach of any condition of this Permit poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator shall immediately suspend operation of the Permitted Installation or relevant part thereof until such time as it can be operated in compliance with this Permit.

2.7.4 In the event of an incident, the Operator shall notify SEPA by telephone without delay to 0800 80 70 60. This notification shall include as far as practicable the information specified in Condition 2.75.

2.7.5 The Operator shall confirm any incident to SEPA in writing by the next working day after identification of the incident. This confirmation shall include:

a) the time and duration of the incident,
b) the receiving environmental medium or media where there has been any emission as a result of the incident,
c) an initial estimate of the quantity and composition of any emission,
d) the measures taken to prevent or minimise any emission or further emission and a preliminary assessment of the cause of the incident.

2.7.6 Any incident notified to SEPA shall be investigated by the Operator, and a report of the investigation sent to SEPA. The report shall detail, as a minimum:

a) the circumstances of the incident,
b) an assessment of any harm to the environment
c) the steps taken by the Operator to bring the incident to an end.
d) proposals for remediation, where necessary, and
e) for preventing a repetition of the incident.

2.8 Incident Prevention and Mitigation Plan

2.8.1 Prior to Commissioning Activities, the Operator shall prepare, implement and maintain an "Incident Prevention and Mitigation Plan". The plan shall set out the hazards posed by the installation and associated risks, and define steps taken by the Operator to ensure that all preventative measures are in place to avoid an Incident to any medium, and that any Incident that does occur is mitigated in the most appropriate manner. The Incident Prevention and Mitigation Plan shall be reported to SEPA.

2.8.2 At least every 2 years, the Operator shall review the Incident Prevention and Mitigation Plan. Each review shall be recorded and reported to SEPA.

2.9 Register of Permitted Activities

2.9.1 The Operator shall maintain a register of the operational requirements of the Permitted Activities operating at the Permitted Installation. The said register shall contain at least the following:

a) process flow sheets showing the origin of the emissions;
b) descriptions of process-integrated techniques and waste water/waste gas treatment at source including their performances;
c) information about the characteristics of the waste water streams, including:
   (i) average values and variability of flow, pH, temperature, and conductivity;
   (ii) average concentration and load values of relevant substances and their variability (COD/TOC, nitrogen species, phosphorus, metals, priority substances/micropollutants);
   (iii) data on bioeliminability (BOD, BOD to COD ratio)
d) information about the characteristics of the waste gas streams, such as:
   (i) average values and variability of flow and temperature;
   (ii) average concentration and load values of relevant substances and their variability;
   (iii) flammability, lower and higher explosive limits, reactivity;
   (iv) presence of other substances that may affect the waste gas treatment system or plant safety.
e) Any plant operating instructions and batch sheets that are necessary to operate the Permitted Activities in compliance with any condition of this Permit.

2.10 Start-Up

2.10.1 Prior to operating the process, the Operator shall implement and maintain the "the Start-Up Plan" setting out the necessary steps to be taken by the Operator prior to start-up of operations of the Permitted Installation to ensure that all appropriate preventative measures are taken against pollution and that no significant pollution is caused. A copy of the Start-up plan shall be reported to SEPA.

2.10.2 At least every 4 years, the Operator shall review the Start-Up Plan required under condition 2.10.1. Each review of the said Start-Up Plan shall be recorded and where the Operator makes any revisions to the said plan, said revisions shall be recorded.

3 GENERAL RESROUCE REVIEW CONDITIONS

3.1 Resource Utilisation and Waste Minimisation

3.1.1 Every 4 years, the Operator shall carry out a systematic assessment to determine:

a) How and where raw materials (including water and fuel) and energy are used within the Permitted Installation;
b) The quantities of raw materials (including water and fuel) and energy are used within the Permitted Installation;
c) How and where emissions and wastes are generated within the Permitted Installation;
d) The quantities of emissions and wastes generated within the Permitted Installation; and
e) How and where raw materials (including water) and energy can be utilised more efficiently within the Permitted Installation to minimise emissions and wastes.

3.1.2 The objective of the systematic assessment is to identify and implement opportunities and/or projects, on an ongoing basis to:

a) Prevent, or where that is not practicable, minimise emissions and wastes generated through the inefficient operation of the Permitted Installation or associated processes; and
b) Increase the efficiency of raw material (including water and fuel) and energy use.

3.1.3 When submitting the findings of the assessment, a summary of the progress of each of the opportunities/projects identified from the systematic assessment shall be included. SEPA reserve the right to periodically review progress of these opportunities and projects during inspections of the permitted Installation undertaken throughout the 4 year assessment period.

3.1.4 The assessment required by Condition 3.1.1 shall be recorded using the SEPA "systematic assessment of resource use and efficiency template" (IED-T-04), or an equivalent format as agreed by SEPA, and reported to SEPA at the end of the 4 year assessment cycle (as specified in Table 2.1).

3.1.5 Annual data totals of raw materials (including water and fuel consumed), energy utilised, and emissions and waste produced within the Permitted Installation, shall be recorded by the Operator annually in the relevant section of the "systematic assessment of resource utilisation" template. The Operator shall report the data to SEPA within 28 days of the end of the 4 year assessment cycle.

3.2 Waste Inventory

3.2.1 The Operator shall record and maintain a detailed inventory of all waste produced on the Permitted Installation which shall include:

a) a description of the waste including its EWC code;
b) if the waste is hazardous information relating to the hazards;

c) handling and storage arrangements (i.e. does it need to be segregated from other waste types);
d) its storage location within the Permitted Installation;

3.2.2 The Operator shall record the location, estimated quantities and types of all wastes stored within the Permitted Installation on a weekly basis.

4 GENERAL ENVIRONMENTAL PROTECTION CONDITIONS

4.1 Protection of Soil and Groundwater

4.1.1 Unless specified elsewhere in this permit there shall be no emission of any pollutants to groundwater or soil from the permitted Installation.

4.1.2 The operator shall maintain a record of any incident that has, or might have, impacted on the condition of any soil or groundwater under the permitted installation, either as a result of that incident or as a result of an accumulation of incidents, together with a record of any further investigation or remediation work carried out.

4.1.3 The operator shall record and maintain, up to-date plan(s) that identify the configuration and specification, of all drains and subsurface pipe-work, and the position and purpose of all sub-surface sumps and storage vessels, that are used or have been used within the permitted installation from the date of this permit until the permit is surrendered.

4.1.4 At least every four years, the operator shall carry out a systematic assessment of all drains, subsurface pipe-work and sub-surface sumps and storage vessels, to demonstrate their integrity, using tests in accordance with recognised international standards. A written report of each assessment shall be recorded and reported to SEPA. The report shall include details of and timescales for any additional measures that are required to prevent emissions to soil and groundwater.

4.1.5 At least annually, the Operator shall carry out a systematic assessment and inspection of internal floors and external yard surfaces in order to ensure compliance with Condition 4.1.1. A written report of each assessment shall be recorded and reported to SEPA. The report shall include details of and timescales for any additional measures that are required to prevent emissions to soil and groundwater.

4.1.6 Any remedial action or upgrade identified by the systematic assessment and inspection required by Conditions 4.1.45 and 4.1.5 shall be completed within 3 months of completion of the survey or within such a timescale as is agreed in writing with SEPA.

4.1.7 Notwithstanding the requirements of Condition 2.4.2, all records required by conditions 4.1.2 to 4.1.5 inclusively shall be preserved until this Permit is surrendered.

4.2 Site Condition Report

4.2.1 The Operator shall report to SEPA a revised Site Condition Report as agreed with SEPA.

4.3 Soil and Groundwater Monitoring

4.3.1 The Operator shall monitor the soil and groundwater for the Relevant Hazardous Substances (RHS) specified in Table 4.3, the purpose of which shall be to identify soil and groundwater contamination associated with the activities specified in Table 4.3 by those Relevant Hazardous Substances. Each Assessment shall be recorded and reported to SEPA within one month of completion. The assessment shall include interpretation of the

results with reference to previous monitoring undertaken, (including the site and where applicable baseline reports) and operations at the Permitted Installation and details of corrective actions that are required to protect soil and groundwater and remedy any contamination that has occurred as a result of permitted activities.

4.3.2 The Operator shall report to SEPA a detailed soil and groundwater monitoring plan, for the monitoring required by Condition 4.3.1 at least 3 months in advance of carrying out the monitoring, which shall include the locations at which monitoring shall be carried out and the frequency and methodology which shall be used.

4.3.3 The Operator shall carry out the monitoring required by Condition 4.3.1 in accordance with the soil and groundwater monitoring plan required by Condition 4.3.2.

4.3.4 The Operator shall review the plan required by Condition 4.3.2 no later than 6 months after each monitoring event. The purpose of the review shall be to determine whether any changes to monitoring locations, frequency or parameters are required and where changes are proposed, submit a revised plan to SEPA.

4.3.5 Notwithstanding the requirements of Condition 2.4.2 all plans, monitoring and assessments reports undertaken in accordance with Conditions 4.3.1 to 4.3.4 inclusively shall be preserved until the permit is surrendered.

4.3.6 The Operator shall maintain the groundwater monitoring wells detailed in the plan required in Condition 4.3.2 in a condition fit for purpose, unless otherwise agreed in writing with SEPA. Where a well's function is compromised it shall be repaired or replaced to allow sampling.

Table 4.3: Soil and Groundwater Monitoring Requirements

Relevant Hazardous Substance	Location and activity	Frequency
As per monitoring plan submitted under Condition 4.3.2 or as otherwise agreed in writing by SEPA	As per monitoring plan submitted under Condition 4.3.2 or as otherwise agreed in writing by SEPA	As per monitoring plan submitted under Condition 4.3.2 or as otherwise agreed in writing by SEPA

4.4 Noise and Vibration

4.4.1 The Operator shall develop, implement, and maintain a noise and vibration management plan ("the Noise and Vibration Management Plan") in line with BAT. Following each assessment required by Condition 4.4.2 the Operator shall review the Noise and Vibration Management Plan.

4.4.2 The Operator shall carry out a systematic assessment and review of Noise and Vibration emissions associated with the Permitted Activities annually or as agreed in writing with SEPA. The purpose of which shall be to identify methods of reducing Noise and Vibration emissions. Each assessment shall be recorded and reported to SEPA. Subsequent assessments shall compare the impact noted from previous assessments, and provide commentary on any improvements made over the period.

4.4.3 The Permitted Installation shall be operated to ensure that any tones generated by the Permitted Activities shall have a tonal audibility ($\triangle L_{ta}$), at noise sensitive receptors, less than or equal to 4dB, as defined by Annex D of BS 4142.

4.4.4 The Operator shall undertake an appropriate assessment of broadband and tonal noise at noise sensitive receptors during the operation of the Permitted Activities within 3 months of the date of this permit and again within 3 months of cessation of Commissioning. If either assessment identifies adverse impact then the operator must outline what additional BAT measures will be implemented to reduce the assessed impact. A copy of the assessments and any recommendations must be reported to SEPA within 2 months from the date the monitoring was completed.

4.5 Odour Conditions

4.5.1 All emissions to air from the Permitted Installation shall be free from offensive odour, as perceived by an Authorised Person, outside the Site Boundary.

4.5.2 Odour-masking agents or counteractants shall not be used to meet the requirements of Condition 4.5.1.

4.5.3 Olfactory monitoring shall be carried out to assess odour emissions downwind of the Site, at the Site Boundary, at least daily.

4.5.4 The Operator shall record the result of each assessment referred to in Condition 4.5.3. The records shall include the date, time, location, duration and result of the assessment as well as the name of the person making the assessment, the wind direction and strength and the general weather conditions at the time. The record shall further include the operational status of the Installation.

4.5.5 The Operator shall develop, implement and maintain an odour management plan ("the Odour Management Plan") as described in Appendix 4 to SEPA's Odour Guidance 2010. A copy of the Plan shall be reported to SEPA.

4.5.6 The Operator shall carry out a systematic assessment and review of Odour Emissions associated with the Permitted Activities, the purpose of which shall be to identify methods of reducing odour Emissions and their impact. Each assessment shall be recorded and reported to SEPA.

4.5.7 The Odour Management Plan shall be updated following each systematic assessment and review as required by Condition 4.5.6, the purpose of which shall be to implement the findings of the assessment in a systematic manner. An updated copy of the Odour Management Plan will be reported to SEPA.

4.5.8 In the event that the Operator receives a complaint of odour from a member of the public, or SEPA notifies the Operator of a complaint of odour it received from a member of the public, the Operator shall record the receipt of the complaint, report receipt of the complaint to SEPA where the complaint has been received directly by the Operator, and establish and record whether the complaint was a result of an incident at the Permitted Installation.

4.5.9 All doors and openings to the Control Building shall be kept closed at all times other than to allow entry and exit of vehicles and personnel.

4.5.10 Prior to Operation the Operator shall record and implement a procedure for the removal of sludge/solids from the bottom of all tanks which includes the techniques to be applied in order to ensure no breach of Condition 4.5.1 of this Permit. The required procedure shall be reported to SEPA.

4.6 Vermin, Litter & Dust

4.6.1 All operations shall be carried out to prevent and minimise the escape of litter and dust from the permitted Installation. Any litter lying within the Permitted Installation shall be removed on a daily basis.

4.6.2 The Permitted Installation shall be inspected at least once every 4 months for the presence of insects, birds and vermin by a person suitably qualified and experienced in pest control and a treatment programme shall be undertaken without delay to deal with any identified infestation. The results of each inspection and details of any subsequent treatment shall be recorded.

5 GENERAL INFRASTRUCTURE REQUIREMENTS

5.1 Security and Noticeboard

5.1.1 The site shall be maintained in a secure condition to prevent unauthorised access.

5.1.2 A site notice board of durable material and finish shall be displayed at the site entrance. The noticeboard shall be legible from outwith the Permitted Installation boundary and contain the following information:

a) permitted installation name, address and permit number
b) permit Holder's name
c) site opening times
d) emergency contact telephone number for the permit Holder
e) telephone number of the SEPA 24 hour pollution hotline

5.2 Sampling and Monitoring Facilities

5.2.1 Sampling, measurement and monitoring facilities at the Permitted Installation shall conform to the requirements of the relevant test methods specified in any Condition of the Permit or as otherwise agreed in writing by SEPA.

5.2.2 Unrestricted access to all sampling points required by any Condition of this Permit shall be provided at all times.

5.3 Liquid Storage and Bunding

5.3.1 All above ground containers and tanks containing liquids whose spillage or release could be harmful to the environment shall be bunded in accordance with the requirements of condition 5.3.2.

5.3.2 All bunds must confirm to the following requirements:

a) Have a capacity greater than 110% of largest container/tank, or greater than 25% of the total tankage within the bund, which-ever is the greater. In the event of any containers being connected to one another, they shall be treated as one container;
b) Be impermeable and resistant to the liquids being stored within;
c) Have no outlet (drains or taps), and must drain to a sump;
d) Have pipework routed within the bund area, with no penetration of the bund surfaces;
e) Be designed to catch leaks from tanks and fittings; and
f) Have all tanker connection points within the bunds.

5.3.3 The Operator must record and maintain an up-to-date plan showing the different bunding zones on the Permitted Installation and the types of liquid stored within each.

5.3.4 The accumulation of rainwater, spillages or leaks shall be managed to ensure that at least 95% of the capacity of the bund is always free of liquid.

5.3.5 All containers with a design capacity above 1,250 litres shall be fitted with a device for continuously monitoring the level of the contents and a high-level alarm.

5.3.6 The Operator must:

a) develop and maintain an appropriate inspection and maintenance programme to ensure that the condition and integrity of all bunds, tanks and containers are maintained.
b) Ensure that all inspections and integrity checks required by Condition 5.3.6 a) are undertaken by a competent person to appropriate standards; and
c) Record and report to SEPA, all inspections and integrity checks in compliance with Condition 5.3.6 a) on an annual basis.

5.3.7 The report required by the Condition 5.3.6 c) must detail any remedial work required to ensure that the bunding, tanks and containers maintain integrity, and a timetable for completion of said work.

5.4 Environmentally Critical Items

5.4.1 Prior to operating the Permitted Activities, the Operator shall identify and designate as environmentally critical any item or process, plant or instrumentation that it relies on for the prevention or limitation of pollution from the Permitted Installation (an “Environmentally Critical item”).

5.4.2 Without prejudice to condition 5.4.1, the Operator shall designate as an Environmentally Critical Item each of those items specified in Table 5.1.

5.4.3 The Operator shall maintain a register of Environmentally Critical Items at the Permitted Installation designated in accordance with conditions 5.4.1 and 5.4.2. The said register shall contain the following records in respect of each Environmentally Critical Item:

a) the performance standards expected of the said Environmentally Critical Item;
b) the acceptable range, with justification for each direct and indirect operating parameter that might materially affect the achievement of the performance standard referred to;
c) details of all monitoring necessary to assess compliance with the performance standard and operating parameters referred to, including details regarding the handling and storage of such data;
d) a description of the actions that should be taken in the events of any performance standard or acceptable operating parameter not being met, or the Environmentally Critical Item not being operational, monitoring failing or malfunctioning and if this is dependent upon any factor (such as the nature of the Permitted Activities undertaken);
e) a description of all maintenance and/or calibration work that is necessary to secure the performance standard referred to; and

f) a description of critical spare parts that will be held at the Permitted Installation for the said Environmentally Critical Item, the minimum required stock level for each such spare part and the current stock level for each spare part.

5.4.4 The Operator shall record the following in respect of each Environmentally Critical Item:

a) compliance assessment referred to in condition 5.4.3 c);
b) the time and date of each occasion on which the performance standard and/or acceptable operating parameter was not met and the actions taken in response;
c) for each record made as a requirement of condition 5.4.3 c) the reason why the performance standards and/or an acceptable operating parameter were not met;
d) all maintenance and /or calibration work carried out on the said Environmentally Critical Item; and
e) each occasion on which the stock level for any critical spare part drops below the specified level.

5.4.5 The Operator shall undertake and record an annual review of the maintenance records to identify equipment that has failed frequently and/or common failure modes. Subsequent to the review an improvement programme shall be developed, recorded and implemented to minimise recurrences of the identified failures and failure modes.

Table 5.1: Environmentally Critical Items

ITEM
The biogas retaining membrane and air envelope retaining membrane of the Digester
All pressure relief valves and their mechanisms
All pumps, blowers and mixers associated with the AD process
All pumps, blowers and mixers associated with the aerobic process.
The integrity of the Control Building
The ferric chloride dosing system associated with the AD process
All environmentally critical monitoring devices, including probes, sensors, etc. and associated recording systems.
The boiler
The flare
The emergency back-up generator
All tanks containing liquids
All bunds

6 COMMISSIONING CYCLE CONDITIONS

6.1 Commissioning of Permitted Installation

6.1.1 At least 3 months, or such period as otherwise agreed in writing with SEPA, prior to the Commencement of Commissioning, the Operator shall notify SEPA in writing of a detailed Commissioning Plan to include the following:

a) details of the work to be carried out including each test required by Condition 6.1.3.
b) the proposed dates on which the said work or test will be started and completed; and
c) the criteria for determining when the Commissioning has ceased.

6.1.2 The Operator shall not carry out any Permitted Activities, or any new or substantially changed activities following on from a significant modification or change to the Permitted Installation, except as part of Commissioning notified to SEPA in compliance with Condition 6.1.1 until:

a) Conditions 6.1.3 to 6.1.7 inclusive have been complied with; and
b) the Operator has received confirmation from SEPA in writing that those conditions have been complied with.

6.1.3 When carrying out any Commissioning the Operator shall carry out tests to demonstrate that the Permitted Installation can be operated in compliance with the conditions of this Permit.

6.1.4 For the period of any Commissioning the Operator shall submit a monthly report containing a summary of:

a) the Commissioning undertaken during the preceding month;
b) an update of the detailed Commissioning Plan required by Condition 6.1.1;
c) details of all tests carried out under Condition 6.1.3 during the preceding month;
d) the results of any such tests received during the preceding month;
e) the justification for any delays from the dates notified under Condition 6.1.1 b); and
f) where appropriate, confirmation that the criteria detailed in the notification required by Condition 6.1.1 c) have been met.

6.1.5 Notwithstanding any other condition in this Permit, should any test required by Condition 6.1.3. indicate that the conditions of this Permit have not or cannot be complied with; the Operator shall cease carrying on that part of the Commissioning which is the subject of the test, until either:

a) SEPA has given written permission for said part of the Commissioning to continue; or
b) the Operator has proposed in writing to SEPA remedial action to ensure compliance with the conditions of this Permit; those actions have been agreed with SEPA in writing; and those actions have been implemented.

6.1.6 Where Condition 6.1.5 applies, the Operator shall notify SEPA within 24 hours. Said notification shall include the following information:

a) Time and date that Commissioning was ceased;
b) Identification of the reason why Commissioning was ceased;
c) Proposals to restore compliance with the Permit; and,
d) An expected timescale for implementation of the proposals identified in 6.1.6 c).

6.1.7 Within one month of Cessation of Commissioning, the Operator shall prepare and submit to SEPA a written report which demonstrates that all the conditions of the permit can be complied with in full.

6.2 De-commissioning

6.2.1 The Operator shall prepare and maintain a plan ("the de-commissioning plan") for the decommissioning of the permitted installation. The de-commissioning plan shall set out the steps to be taken by the operator after final cessation of the permitted activities. A copy of the de-commissioning plan shall be reported to SEPA.

6.2.2 The Operator shall notify SEPA in writing of its intention to cease the Permitted Activities, or any part thereof, for any period exceeding 12 months, no later than 1 month prior to the proposed date of cessation.

6.2.3 The Operator shall implement the de-commissioning plan on final cessation of the Permitted Activities or any part thereof.

6.2.4 The Operator shall review, record and, where necessary, update and report the de-commissioning plan as follows:

a) at least every 4 years; and
b) where the Operator plans to make a substantial change in the extent or nature of the Permitted Installation.

7 CONDITIONS RELATING TO WASTE MANAGEMENT

7.1 Waste Types

7.1.1 Only brewery wash water and trub waste, arising from the Operators brewery operation at Ellon, shall be accepted at the installation.

7.2 Pre-Acceptance of Waste

7.2.1 Prior to accepting new streams of waste the Operator must carry out a Pre-Acceptance Assessment on the proposed waste stream(s). The assessment must be made on representative samples of the proposed waste stream, be statistically robust and should include a risk assessment of the material.

7.2.2 Waste shall only be accepted where the waste has been deemed suitable for acceptance by the pre-acceptance procedure detailed in Condition 7.2.1.

7.2.3 The Operator shall record all Pre-Acceptance Assessments.

7.2.4 If any process producing an accepted waste stream changes, then the Pre-Acceptance Assessment must be repeated using new waste samples which are representative of the process change.

7.3 Waste Acceptance

7.3.1 Waste shall only be accepted on site if there is sufficient capacity to receive it.

7.3.2 The Operator shall monitor all wastes entering the site (including weight recording of waste loads) to ensure that they are within the types/quantities permitted under the conditions of this permit.

7.4 Procedure for Rejected Waste

7.4.1 The Operator must develop, implement, and maintain contingency procedures for dealing with loads of waste which must be rejected.

7.5 Waste Storage

7.5.1 All wastes must be stored on the Permitted Installation in accordance with the requirements of Columns I to IV of Table 7.1.

Table 7.1: Waste Storage and Time

Column I	Column II	Column III	Column IV
Waste Storage Location	**Waste type**	**Maximum Quantity within the Permitted Installation**	**Other Storage Conditions**
Waste washwater Storage Tank	Waste washwater from the brewery process	1,000 m^3	N/A
Trub Storage Tank	Waste trub from the brewery process	400m^3	N/A
Waste Reception Tank Area	Screenings	1x 400 liter bin	Bin should be lidded and kept closed at all times
External Yard Area to Control Building	Dewatered Digestate	1 skip	Skip must be fully enclosed.
External Area adjacent to Control Building	Chemical Packaging including empty drums and IBCs	10 empty IBCs 12 empty drums	All empty drums and IBCs to be stored lidded and closed
Secure container within Control Building	Waste oils; oily rags	1x 400 liter bin	

8 CONDITIONS APPLYING TO THE ANAEROBIC DIGESTION PROCESS

8.1 Operation of the Anaerobic Digestion (AD) Process

8.1.1 The Operator shall record the location and settings for all pressure release valves (PRVs) associated with the AD process.

8.1.2 All PRVs shall be linked to an audible and visual alarm which shall be connected to telemetry 24 hours a day.

8.1.3 Any activation of the PRVs shall be consider as an Incident. The time, date and duration of the Incident will be automatically recorded.

8.1.4 The Operator shall continuously record the pressure in the biogas system and if the recorded pressure exceeds 10 mbar at any time, the measured pressure, time date and duration of, and the reason for the exceedance shall be recorded.

8.1.5 The Operator shall record the time, date and duration of each occasion the boiler, Gas Conditioning Unit and/or flare is unavailable for use, along with the reason for its unavailability.

8.1.6 The Operator shall continuously measure and record hydrogen sulphide concentrations in the biogas prior to the Gas Conditioning Unit specified in Paragraph 1.1.4.8. If the recorded hydrogen sulphide (H_2S) concentration exceeds 180 ppm at any time, the measured concentration, time, date, duration of and reason for the exceedance shall be automatically recorded.

8.1.7 Any occurrence where the H_2S concentration in the biogas exceeds 300ppm at any time the Operator shall be considered as an Incident.

8.1.8 Within 3 months from the date of this Permit, the Operator shall develop, implement and maintain a procedure for monitoring the effectiveness of the carbon filter associated with the Gas Conditioning unit. This procedure shall be recorded.

8.1.9 The Operator shall record the date, start time, duration, composition of the gas being flared (biogas or biomethane) and volume of gas flared during each flaring event.

8.1.10 The Operator shall prepare, and report to SEPA, a review which summarises the following:

a) The information required by Condition 8.1.4, 8.1.5, 8.1.6 and 8.1.9;
b) The volume of biogas diverted to the flare from the Gas Conditioning Unit;
c) The volume of biomethane diverted to flare from the Biomethane Network Entry Facility;
d) A summary of all the reasons that caused the diversions identified in c) and d) above.

8.1.11 If total operation of the flare in any consecutive 12-month period exceeds 876 hours, the Operator shall undertake and record a review of the gas utilisation system with the purpose of identifying the root cause to the excessive flaring. A copy of the review and recommendations from the root cause analysis, along with timescales for any identified remedial action, shall be reported to SEPA no later than 2 months after the 876 hours had initially been exceeded.

8.1.12 Whenever the flare is operating, a minimum combustion temperature of 1,000^{oC} shall be maintained.

8.1.13 Failure to maintain the flare combustion temperature above 1,000^{oC} outwith start-up and shut down, shall result in an alarm being raised. The time, date and duration of, and reason for the failure to meet the required minimum temperature shall be recorded.

8.1.14 The Operator shall implement and maintain an ongoing annual Leak Detection and Repair Programme ("the LDAR Programme") that is designed to reduce fugitive VOC emissions to air from the Permitted Installation. The Programme shall use at least one of the monitoring techniques listed in Section 6.2 of the Waste Treatment BAT Conclusions.

8.1.15 The LDAR Programme and all actions taken in accordance with the LDAR Programme shall be recorded. The Operator shall report to SEPA with the LDAR programme for the forthcoming calendar year along a review of the previous year's LDAR Programme identifying any improvements made, within two months of the end of the calendar year.

8.2 Additional Requirements

8.2.1 Within 3 months from the date of this Permit, the Operator shall provide a report to SEPA detailing the timeline for installing a pumped connection from the brewery to the trub reception tank.

8.2.2 By 31 March 2022, the Operator shall have undertaken sampling and analysis of the exhaust gas from the Gas Conditioning Unit with the purpose of confirming the chemical and odour composition of the exhaust gas. The results of the sampling and analysis shall be reported to SEPA.

9 AIR EMISSIONS MONITORING

9.1 Air Emission Conditions

9.1.1 There shall be no emissions to air from the installation other than those specified in Table 9.1 which shall only be permitted from the emissions locations specified in Table 9.1.

9.1.2 The emissions specified in condition 9.1.1 shall not exceed the limits specified in Table 9.1.

9.1.3 The Operator shall carry out spot sampling (SS) and continuous (C) monitoring of emissions of the parameters specified in Table 9.1, at the sampling location specified in Table 9.1 and subject to the requirements for monitoring specified in Table 9.2.

9.1.4 For any parameter specified in Table 9.1 other than oxygen, visible plume, smoke or odour, all results of monitoring carried out under Condition 9.1.3 shall be corrected to the reference conditions as specified in Table 9.3. The results of all tests and data used to correct the monitoring results to the reference condition specified in this condition shall be recorded.

9.1.5 The Operator shall record the date, time, duration and results of all monitoring carried out under Condition 9.1.3 and report said results. For each result, the report shall include the operational mode of the Permitted Installation at the time of monitoring, the name of the person carrying out the monitoring, any deviations from the methods specified in Table 9.2 and the associated confidence interval.

9.1.6 The Operator shall record and report the mass emission results for the parameters of the combined emissions specified in Table 9.1 using the method agreed in writing with SEPA (as summarised in Table 9.4). This information shall be reported in a format agreed in writing with SEPA.

9.1.7 Information used to estimate mass emissions in compliance with Condition 9.1.6 shall be recorded for each estimate.

Table 9.1: Air Emissions and Limit Values

	Emission point (see Site Plan)	A1	A2	A3	A4
Source of Emission	Emission source	Boiler	Flare	Gas Conditioning Unit exhaust	Pressure Relief Valve
	Stack height/ diameter (m)	7.5/ 0.2	8/ 1.52	6.5/ 0.12	11/ 0.25
	NGR	NJ 9712 3118	NJ 9708 3120	NJ 9714 3116	NJ 9703 3119
Monitoring Details	Type of Monitoring	SS	SS & C	SS	Not applicable
	Sampling Location	Stack	Stack	Stack	Not applicable

Limits for Parameters from Emission Source (All mg/m^3 unless otherwise stated)	Oxides of nitrogen (NO_x)	-	-	-	-
	Sulphur dioxide (SO_2)	-	-	-	-
	Ammonia (NH_3)	-	-	-	
	Carbon monoxide (CO)	-	-	-	-
	Hydrogen Sulphide (H_2S)	-	-	-	-
	Methane (CH_4)	-	-	-	-
	Total Volatile organic Compounds (VOCs)	-	-	-	-
	Efflux velocity (m/s)	-	11.5	-	-
	Odour	No offensive odour beyond the installation boundary			
	Temperature	-	>1,000^{oC}	-	-
	Smoke	No visible emissions	Ringlemann Shade 1		

Table 9.2: Emissions to Air Monitoring Requirements

Parameter	Emission Point Number	Spot Sampling (SS)		Continuous (C)		Operating mode
		Standard	Frequency	Standard	Frequency	
Oxides of Nitrogen (NOx)	A1, A2	BS EN 14792	A1 - Annually A2 – if flaring more than 10% in a year.			A3 - >90% design throughput
Sulphur dioxide (SO2)	A1, A2	BS EN 14791 / Alternative method based on BS EN 14791	A1 - Annually A2 – if flaring more than 10% in a year.			A3 - >90% design throughput
Ammonia (NH_3)	A2, A3	BS EN ISO 21877	A2 – if flaring more than 10% in a year. A3 -Every 4 months for the first year only.			A3 - >90% design throughput
Carbon monoxide (CO)	A1, A2	BS EN 15058	A1 - Annually A2 – if flaring more than 10% in a year.			A3 - >90% design throughput
Hydrogen sulphide (H_2S)	A2, A3	VDI 3486/1, VDI 34886/2, or as agreed in writing with SEPA	A2 – if flaring more than 10% in a year. A3 -Every 4 months for the first year only.			A3 - >90% design throughput
Methane (CH_4)	A2, A3	As agreed in writing with SEPA	A2 – if flaring more than 10% in a year. A3 - Annually			A3 - >90% design throughput
Total Volatile organic Compounds (VOCs)	A2, A3	EN 13649	A2 – if flaring more than 10% in a year. A3 - Annually			A3 - >90% design throughput
Efflux velocity (m/s)	A1,A2	BS EN 16911-1, or as agreed in writing with SEPA.	A1 - Annually A2 – if flaring more than 10% in a year.			A3 - >90% design throughput
Odour	A3, A4	A3 only - EN13725 A4 – Olfactory assessment	A3 -Every 4 months for the first year, thereafter every 6 months A4 – when operating			A3 - >90% design throughput
Temperature	A2			Traceable to National Standards.	When flaring	

Table 9.3: Reference Conditions

Emission Point Number	Reference Condition
A1, A2	273.15K, dry gas, 101.3kPa, 15% oxygen

Table 9.4: Mass Emissions to Air

Parameter	Combined Emissions Point	Method (Summary)	Mass Emissions Result to be recorded as
Oxides of nitrogen	A1 to A 4	Estimate based on monitored emissions or using method as agreed in writing with SEPA	Kg of nitrogen dioxide
Sulphur dioxide			Kg of sulphur dioxide
Ammonia			Kg of ammonia
Carbon monoxide			Kg of carbon monoxide
Hydrogen sulphide			Kg of hydrogen sulphide
Methane			Kg of methane
Total volatile organic compounds			Kg of TVOC
Carbon dioxide			Kg of CO2

10 WATER EMISSIONS MONITORING

10.1 Water Emission Conditions and Limits

10.1.1 The emissions to water specified in Table 10.1 shall only be permitted from the emission points and to the destinations specified in that table, and only after having passed through the sample points specified in that table.

10.1.2 The use of dilution to achieve the emission limit values in Table 10.1 is not permitted.

10.1.3 Other than as specifically permitted or limited by any condition of this Permit, none of the Permitted Activities shall have a significant adverse impact on, or cause pollution of, the Water Environment.

10.1.4 Where the limit for any parameter in Table 10.1 is prefixed with CL, IL, CU, IU or, A, the following conditions shall apply in respect of that parameter:

a) Subject to Conditions 10.1.4 b) and 10.1.4 c) no sample of any emission shall exceed the lower limit (LL);
b) The limit in Condition 10.1.4 a) may be exceeded where, in any series of samples of any emission taken over a year by SEPA at regular but randomised intervals (as listed in column 1 (and 3) of Table 10.3), no more than the number of samples (as listed, in the corresponding row in column 2 (and 4) of Table 10.3) exceed the LL;
c) The limit in Condition 10.1.4 a) may be exceeded where, in any series of samples of any emission taken over any year in accordance with the sampling plan required under Condition 10.1.6 (as listed in column 1 (and 3) of Table 10.3), no more than the number of samples (as listed, in the corresponding row in column 2 (and 4) of Table 10.3) exceed the LL;
d) Notwithstanding Conditions 10.1.4 a) no sample of any emission shall exceed the upper limit (UL); and
e) No sample of any emission shall exceed the absolute limit (A) for that parameter in Table 10.1.

10.1.5 Measurement and/or sampling of the emissions in Table 10.1 shall be carried out by the Operator at the sampling locations specified in that Table subject to the requirements for monitoring specified in Table 10.2.

10.1.6 A Water Sampling Plan shall be agreed in writing with SEPA and shall be maintained and reviewed annually. Said sampling plan shall detail how measurements for the determination of concentrations of water polluting substances shall be carried out representatively. The reviewed sampling plan shall be reported each year for the forthcoming calendar year.

10.1.7 The Operator shall record and report the mass emission results as kg of pollutant per tonne waste treated and kg of pollutant per year for the parameters of the combined emission points to water specified in Table 10.1. The method's used shall make reference to the guidance provided in the SPRI section of www.sepa.org.uk and shall be agreed in writing with SEPA. This information shall be reported in a format agreed in writing with SEPA.

10.1.8 The information used to estimate mass emissions in compliance with Condition 10.1.8 shall be recorded for each estimate.

Table 10.1 - Emissions to the Water Environment

Source of Emission	Emission point (See Site Plan)		W1	W2	W3
	Emission Source		Ecological Treatment System (ETS)	SUDS Basin	Toilet Block
	Destination		Broomies Burn (via SUDS Basin)	Broomies Burn (via pipe)	Groundwater
	NGR		NJ 9684 3094	NJ 9684 3094	NJ 9706 3122
Monitoring Details	Sampling location		Discharge from ETS into SUDS Basin	Discharge from SUDs Basin to discharge pipe	Outlet from septic tank to soakaway.
Emission Limit Values for Parameters from Emission Source		Units	-	-	-
	Maximum Discharge Flow	l/s	<6.9	<8	-
	pH	pH	5 - 9	5 - 9	-
	Chemical Oxygen Demand*	mg/l	(LL) 30 (UL) 60	(LL) 30 (UL) 60	-
	Biological Oxygen Demand**	mg/l	(LL) 10 (UL) 40	(LL) 10 (UL) 40	-
	Total Suspended Solids*	mg/l	(A) 5	(A) 30	-
	Total Nitrogen (N)*	mg/l	(A) 3	(A) 3	-
	Ammoniacal Nitrogen (NH4-N)**	mg/l	(LL) 0.6 (UL) 2.4	(LL) 0.6 (UL) 2.4	-
	Total Phosphorous (P)*	mg/l	(A)1	(A)1	-
	Soluble Reactive Phosphorous**	mg/l	(LL) 0.094 (UL) 0.4	(LL) 0.094 (UL) 0.4	-
	Total Copper (Cu)**	ug/l	TBD***	TBD***	-
	Dissolved Copper**	ug/l	(LL) 67 (UL) 134	(LL) 67 (UL) 134	-
	Total Zinc (Zn)**	ug/l	TBD***	TBD***	-
	Dissolved Zinc**	ug/l	(LL) 95 (UL) 190	(LL) 95 (UL) 190	-
	Total Chromium (Cr)**	ug/l	TBD***	TBD***	-

	Emission point (See Site Plan)		W1	W2	W3
	Dissolved Chromium**	ug/l	(LL) 15 (UL) 30	(LL) 15 (UL) 30	-
	Total Nickel (Ni)**	ug/l	(LL) 18 (UL) 36	(LL) 18 (UL) 36	-
	Total Lead (Pb)**	ug/l	(LL) 4 (UL) 8	(LL) 4 (UL) 8	-
	Dissolved Cadmium (Cd)**	ug/l	(LL) 0.4 (UL) 0.8	(LL) 0.4 (UL) 0.8	-
	Total Iron (Fe)**	mg/l	2 (12 consecutive month average)	2 (12 consecutive month average)	-

*Parameters listed in the Waste Treatment BAT-C

**Parameters defined in relation to compliance with Water framework Directive Environmental Quality Standards

***TBD – to be determined.

Table 10.2: Water Sampling - Test Standards and Frequency

Parameter	Emission point	Monitoring Frequency	Monitoring device/type	Test Method
Flow	W1	Continuous	Flow meter	Latest standard from EA M18 document or as otherwise agreed in writing with SEPA.
	W2	Continuous	Flow meter	Latest standard from EA M18 document or as otherwise agreed in writing with SEPA.
pH	W1	Continuous	Instantaneous analyser	Latest standard from EA M18 document or as otherwise agreed in writing with SEPA.
	W2	Continuous	Instantaneous analyser	Latest standard from EA M18 document or as otherwise agreed in writing with SEPA.
Chemical Oxygen Demand*	W1	Composite Samples - Weekly for the first 6 months after commissioning, thereafter monthly.	Time proportional composite sample (as per Condition 10.2.3) Instantaneous samples – spot samples.	As agreed in writing with SEPA.
Biological Oxygen Demand**	W1	Weekly for the first 6 months after commissioning, thereafter COD will be used as surrogate.	Time proportional composite sample (as per Condition 10.2.3) Instantaneous samples – spot samples.	As agreed in writing with SEPA.
Total Suspended Solids*	W1	Weekly for the first 6 months after commissioning, thereafter monthly.	Time proportional composite sample (as per Condition 10.2.3) Instantaneous samples – spot samples.	EN 872 or as otherwise agreed in writing with SEPA.
Total Nitrogen (N)*	W1	Weekly for the first 6 months after commissioning, thereafter monthly.	Time proportional composite sample (as per Condition 10.2.3) Instantaneous samples – spot samples.	EN 12260, EN ISO 11905-1 or as otherwise agreed in writing with SEPA.

Parameter	Emission point	Monitoring Frequency	Monitoring device/type	Test Method
Ammoniacal Nitrogen (NH4-N)**	W1	Weekly for the first 6 months after commissioning, thereafter monthly.	Time proportional composite sample (as per Condition 10.2.3) Instantaneous samples – spot samples.	As agreed in writing with SEPA.
Total Phosphorous (P)*	W1	Weekly for the first 6 months after commissioning, thereafter monthly.	Time proportional composite sample (as per Condition 10.2.3) Instantaneous samples – spot samples.	EN ISO 15681-1 and -2, EN ISO 6878, EN ISO 11885 or as otherwise agreed in writing with SEPA.
Soluble Reactive Phosphorous**	W1	Weekly for the first 6 months after commissioning, thereafter monthly.	Time proportional composite sample (as per Condition 10.2.3) Instantaneous samples – spot samples.	As agreed in writing with SEPA.
Total Copper (Cu)**	W1	Weekly for the first 6 months after commissioning, thereafter monthly.	Time proportional composite sample (as per Condition 10.2.3) Instantaneous samples – spot samples.	EN ISO 11885, EN ISO 17294-2, EN ISO 15586, or as otherwise agreed in writing with SEPA.
Dissolved Copper**	W1	Weekly for the first 6 months after commissioning, thereafter monthly.	Time proportional composite sample (as per Condition 10.2.3) Instantaneous samples – spot samples.	EN ISO 11885, EN ISO 17294-2, EN ISO 15586, or as otherwise agreed in writing with SEPA.
Total Zinc (Zn)**	W1	Weekly for the first 6 months after commissioning, thereafter monthly.	Time proportional composite sample (as per Condition 10.2.3) Instantaneous samples – spot samples.	EN ISO 11885, EN ISO 17294-2, EN ISO 15586, or as otherwise agreed in writing with SEPA.
Dissolved Zinc**	W1	Weekly for the first 6 months after commissioning, thereafter monthly.	Time proportional composite sample (as per Condition 10.2.3) Instantaneous samples – spot samples.	EN ISO 11885, EN ISO 17294-2, EN ISO 15586, or as otherwise agreed in writing with SEPA.
Total Chromium (Cr)**	W1	Weekly for the first 6 months after commissioning only.	Time proportional composite sample (as per Condition 10.2.3) Instantaneous samples – spot samples.	EN ISO 11885, EN ISO 17294-2, EN ISO 15586, or as otherwise agreed in writing with SEPA.

Parameter	Emission point	Monitoring Frequency	Monitoring device/type	Test Method
Dissolved Chromium**	W1	Weekly for the first 6 months after commissioning only.	Time proportional composite sample (as per Condition 10.2.3) Instantaneous samples – spot samples.	EN ISO 11885, EN ISO 17294-2, EN ISO 15586, or as otherwise agreed in writing with SEPA.
Total Nickel (Ni)**	W1	Weekly for the first 6 months after commissioning, thereafter monthly.	Time proportional composite sample (as per Condition 10.2.3) Instantaneous samples – spot samples.	EN ISO 11885, EN ISO 17294-2, EN ISO 15586, or as otherwise agreed in writing with SEPA.
Total Lead (Pb)**	W1	Weekly for the first 6 months after commissioning only.	Time proportional composite sample (as per Condition 10.2.3) Instantaneous samples – spot samples.	EN ISO 11885, EN ISO 17294-2, EN ISO 15586, or as otherwise agreed in writing with SEPA.
Dissolved Cadmium (Cd)**	W1	Weekly for the first 6 months after commissioning only.	Time proportional composite sample (as per Condition 10.2.3) Instantaneous samples – spot samples.	EN ISO 11885, EN ISO 17294-2, EN ISO 15586, or as otherwise agreed in writing with SEPA.
Total Iron (Fe)**	W1	Weekly for the first 6 months after commissioning, thereafter monthly.	Time proportional composite sample (as per Condition 10.2.3) Instantaneous samples – spot samples.	Latest standard from EA M18 document or as otherwise agreed in writing with SEPA.

Table 10.3: Two Tier Consent Table

Series of samples taken in any period of 12 consecutive months	Maximum permitted number of samples which fail to conform	Series of samples taken in any period of 12 consecutive months	Maximum permitted number of samples which fail to conform
1 – 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		

10.2 Provision of Automatic Sampling Facilities

10.2.1 Automatic sampling facilities, consisting of an automatic sampling device and a refrigerated lockfast facility for the housing of the automatic sampling device together with the required electricity supply and sampling facility, shall be provided at emission point W1 and maintained to enable the taking of time-based composite samples.

10.2.2 Time-based composite samples of the treated effluent flow shall be taken at the frequency stated in Table 10.2 using the automatic sampling device.

10.2.3 A time-based composite sample shall be made up of 24 equal aliquots taken at hourly intervals, beginning at 09:00 on each day and concluding at 09:00 on the following day. Any changes to this sampling procedure shall be agreed in writing with SEPA.

10.2.4 The sample shall be maintained at a temperature in accordance with BS EN ISO 5667-3. The design of the sample temperature control shall ensure that ice does not form in the sample.

10.2.5 Upon removal from the sampling device a 3 litre portion of each time-based composite sample shall be suitably labelled and retained on site for a further 24

hours, maintained at a temperature in accordance with BS EN ISO 5667-3 and shall be kept available for collection by SEPA.

10.3 Flow Monitoring

10.3.1 A continuous flow recorder with on-site visual display from which readings can be readily obtained and an associated data storage facility, shall be provided and maintained to record the instantaneous flow rates and daily volumes of the treated effluent.

10.3.2 The discharger shall provide an annual report to SEPA, in a format to be agreed, a summary of flow statistics for the period January to December for the mean daily flow and the standard deviation of daily flow of the treated effluent.

10.4 Discharge Pipe

10.4.1 The discharge pipe connecting emission point W2 (as shown on the Site Plan) to D1 at the Broomies Burn (as shown on the Site Location Plan 1), shall be maintained in good condition.

EXPLANATORY NOTES

(These Explanatory Notes do not form part of the Permit)

BAT

It should be noted that Regulation 9(11) & (12) of the Regulations specify that there is an implied Condition in every Permit that, in operating the installation or mobile plant, the Operator shall use the best available techniques (BAT) for preventing or, where that is not practicable, reducing Emissions from the installation or mobile plant.

This implied Condition does not apply in relation to any aspect of the operation of the installation or mobile plant, which is regulated by a specific Condition of the Permit.

Examples of aspects of the operation that have not been regulated by specific Conditions are management and supervision systems, training and qualification and maintenance in general.

BAT is defined in Regulation 3 of the Regulations as follows:

"Best available techniques" means the most effective and advanced stage in the development of activities and their methods of operation which indicates the practical suitability of particular techniques for providing in principle the basis for Emission limit values designed to prevent and, where that is not practicable, generally to reduce Emissions and the impact on the environment as a whole.

"available techniques" means those techniques which have been developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable Conditions, taking into consideration the cost and advantages, whether or not the techniques are used or produced inside the UK, as long as they are reasonably accessible to the operator.

"best" means in relation to techniques, the most effective in achieving a high general level of protection of the environment as a whole.

"techniques" includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

Schedule 2 of the Regulations specifies the matters to be taken into account in determining BAT.

In considering BAT, SEPA would expect the Operator to have regard to all relevant PPC sectoral or other technical guidance, including BAT Reference Documents published by the European Commission and UK technical guidance published by the Environment Agency.

GENERAL STATUTORY REQUIREMENTS

The Permit does not detract from any other statutory requirements applicable to you in respect of the Permitted Installation, such as any need to obtain planning permission or

building regulations approval or any responsibilities under legislation for health, safety and welfare in the workplace.

APPEALS

If you are aggrieved by any of the Conditions of the Permit, you should initially contact the local SEPA Office at the address or telephone number below. Further information on your right of appeal and the appeals procedure is contained Regulation 22 and Schedule 8 of the Regulations.

SUBSISTENCE CHARGES

An annual subsistence charge will be payable in respect of the Permit in terms of the Pollution Prevention and Control (Scotland) Charging Scheme 2002 or any relevant charging scheme made under Section 41 of the Environment Act 1995, copies of which are available from SEPA.

ADDRESS & TELEPHONE NUMBERS

The contact address and telephone number for all information to be reported in terms of the Permit, is as follows:

Scottish Environment Protection Agency
Inverdee House
Baxter Street
Torry
Aberdeen
AB11 9QA

Tel No: 0800 80 70 60
Email: registry@sepa.org.uk

REVIEW OF CONDITIONS

The Conditions of the Permit will be periodically reviewed by SEPA.

PROPOSED CHANGE IN OPERATION OF INSTALLATION

It is a requirement of Regulation 12 of the Regulations that if you propose to make a change in the operation of the installation, you must notify SEPA at least 14 days before making the change. The requirement under Regulation 12 does not apply if you have already made an application to SEPA for the variation of the Conditions of the Permit containing a description of the proposed change.

N.B. the requirements of Regulation 12 are in addition to any obligations you may have under the Permit itself to only operate the Permitted Installation in the manner set out in the Permit and to notify SEPA of proposed changes to the Permitted Installation. Regulation 13 and Schedule 7 of the Regulations provide details on applications for variation of the Permit in respect of proposed changes and substantial changes in operation.

“Change in operation” and “substantial change in operation” are defined in Regulation 2 of the Regulations.

ENFORCEMENT & OFFENCES

If SEPA is of the opinion that you have contravened or are contravening or are likely to contravene a Condition of the Permit it may serve an Enforcement Notice. Further details on Enforcement Notices are provided in Regulation 19 of the Regulations.

If SEPA is of the opinion that the operation of an installation or mobile plant involves a risk of serious pollution it must, in certain circumstances, serve a Suspension Notice on you.
Further details on Suspension Notices are provided in Regulation 20 of the Regulations.

It is an offence to operate an installation or mobile plant covered by the Regulations without a Permit or in breach of the Conditions of the Permit. It is an offence to fail to comply with the requirements of an Enforcement or Suspension Notice. It is an offence to intentionally make a false entry in any record required to be kept under a Condition of a Permit. Further details on offences and on penalties liable to be imposed upon conviction of an offence are provided in Regulation 30 of the Regulations.

Directors, managers and other individuals within a company may be held personally liable for offences under the Regulations.

All personnel who are responsible for fulfilling any Condition of the Permit should be made aware of these facts.

RECORDED SYSTEMS, PROCEDURES OR INFORMATION RECORDING/ RETURN REQUIREMENTS

Where a Condition requires any system, procedure or information record/return, the Operator may demonstrate compliance by making use of any relevant existing written system used for any other purpose and which meets the requirements of the relevant Condition.

SYSTEMATIC ASSESSMENT (AND REVIEW)

Where a Condition of the permit requires a “systematic assessment (and review)” the assessment should be undertaken in a methodical and arranged manner. If you require guidance on the scope or extent of any assessment (and review) required to be undertaken, you should contact your local SEPA office at the address or telephone number given above.