

INTERPRETATION OF TERMS	2
1. THE PERMITTED INSTALLATION	5
2. GENERAL CONDITIONS.....	8
3. CONDITIONS APPLYING TO THE PERMITTED INSTALLATION AS A WHOLE	16
4. WASTE TYPES, QUANTITIES AND ACCEPTANCE	18
5. EMISSIONS TO THE WATER ENVIRONMENT AND SOIL.....	25
6. SITE INFRASTRUCTURE.....	26
7. CONTAINMENT AND CAPPING	27
8. LANDFILLING OPERATIONS.....	30
9. LANDFILL GAS	31
10. ENVIRONMENTAL MONITORING AND CONTROL OF THE LANDFILL.....	35
11. CLOSURE AND AFTERCARE.....	42
APPENDIX 1 – PROCEDURES FOR THE SAMPLING AND TESTING OF WASTE.....	43
APPENDIX 2 – LIMIT VALUES FOR GRANULAR HAZARDOUS WASTE	46
APPENDIX 3 – LIMIT VALUES FOR MONOLITHIC HAZARDOUS WASTE	47
APPENDIX 4 - THE LICENSED / PERMITTED SITE RETURNS FORM	48
EXPLANATORY NOTES	49

INTERPRETATION OF TERMS

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

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

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

“the 2003 Regulations” means the Landfill (Scotland) Regulations 2003;

“the 2005 Direction” means The Criteria And Procedures For The Acceptance Of Waste At Landfills (Scotland) Direction 2005;

“Biodegradable Waste” has the same meaning as in the 2003 Regulations;

“corrosive” shall have the same meaning as in Regulation 11(3) of the 2003 Regulations;

“Emission” has the same meaning as in the 2012 Regulations;

“EWC Code” is an abbreviation of the European Waste Catalogue Code and the European Waste Catalogue Code has the same meaning as in the 2003 Regulations;

“explosive” shall have the same meaning as in Regulation 11(3) of the 2003 Regulations;

“flammable” and “highly flammable” shall have the same meanings as in Regulation 11(3) of the 2003 Regulations;

“Hazardous Waste” has the same meaning as in the 2003 Regulations;

“HRA” means the Hydrogeological Risk Assessment

“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;
- 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 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.
- Where an emission of any pollutant not authorised to be released under any Condition of this Permit is detected;

Avondale Draft Permit v10.1

“Infectious” shall have the same meaning as in Regulation 11(3) of the 2003 Regulations;

“Installation” has the same meaning as in the 2012 Regulations;

“Landfill” has the same meaning as in the 2003 Regulations;

“Landfill Gas” has the same meaning as in the 2003 Regulations;

“Leachate” has the same meaning as in the 2003 Regulations;

“Location Plan” means the plan referred to in Conditions 1.1.2 and 1.3 of this Permit;

“Management Plan” means the document(s) identified as the Management Plan in writing by SEPA at the time of grant of the Permit and any subsequent change to the Management Plan made in accordance with the conditions of the Permit;

“Municipal Waste” has the same meaning as in the 2003 Regulations;

“Non-Hazardous Waste” has the same meaning as in the 2003 Regulations;

“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 2012 Regulations;

“Operator” has the same meaning as in the 2012 Regulations;

“oxidising” has the same meaning as in Regulation 11(3) of the 2003 Regulations;

“Relevant Hazardous Substances” (RHS) – are those hazardous substances that are capable of contaminating soil and groundwater based upon consideration of the chemical and physical properties of the substance;

“Relevant Person” has the same meaning as in Regulation 18(7) of the 2012 Regulations;

“Relevant Test Method” means any method designed to test, sample, analyse, or to otherwise monitor an emission or the environment and is either specified in the permit or a CEN standard or a British Standard or such other method approved in writing by SEPA;

“Relevant Waste Acceptance Criteria” has the same meaning as in the Criteria and Procedures for the Acceptance of Waste at Landfills (Scotland) Direction 2005;

“SEPA” means the Scottish Environment Protection Agency;

“the Site” is defined in Schedule 1 of the Permit;

“Site Landfill” shall mean the engineered landfill cell, within the Site as described in Schedule 1 of the Permit.

“Site Plan” means the plan referred to in Condition 1.2 of the Permit;

“Treatment” has the same meaning as in the 2003 Regulations;

Avondale Draft Permit v10.1

“Trigger Level” has the same meaning as in the 2003 Regulations;

“the Trust Account Agreement” means the Trust Account Agreement among the Operator, SEPA and the Trustee.

“Waste” has the same meaning as in the 2003 Regulations;

“Waste regularly generated in the same process” shall mean individual and consistent wastes regularly generated in the same process, where:

- a) the installation and the process generating the waste are well known and the input materials to the process and the process itself are well defined;
- b) the Operator of the installation provides all necessary information and informs the Operator of the landfill of changes to the process (especially changes to the input material);
- c) the waste comes from a single installation or if from different installations, it can be identified as single stream with common characteristics within known boundaries (e.g. bottom ash from the incineration of municipal waste); and
- d) there is no significant change in the generation processes but shall not include wastes which do not require testing.

“Waste Framework Directive” means Directive 2008/98/EC on waste (as amended);

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

Any reference to a group of Conditions, numbered Condition, Schedule, Table, Appendix, Figure or Paragraph is a reference to a group of Conditions, numbered Condition, Schedule, Table, Appendix, Figure or Paragraph bearing that number in these Conditions.

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;

Where any Condition of this Permit requires information to be reported, “in writing”, it may be submitted either by providing two hard copies to the postal address or electronically to the e-mail address specified in the explanatory notes attached to this Permit.

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.

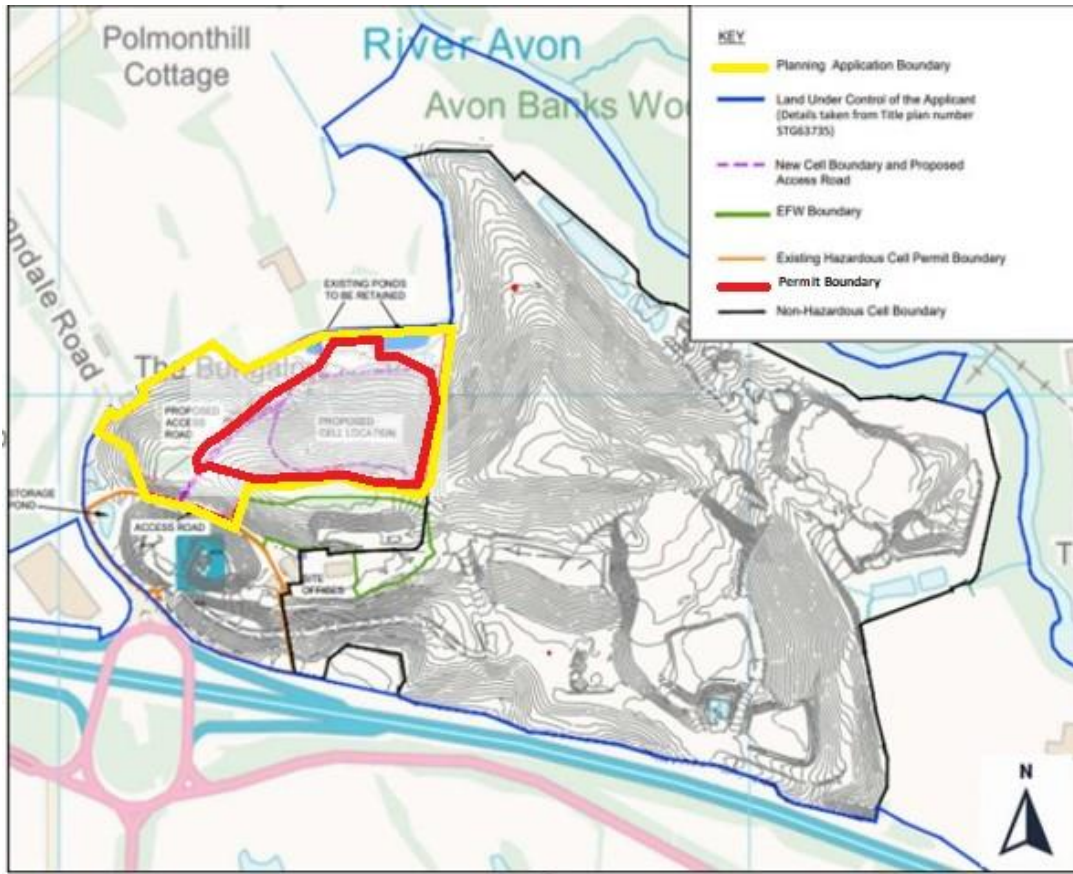
1. THE PERMITTED INSTALLATION

1.1 Description of Permitted Installation

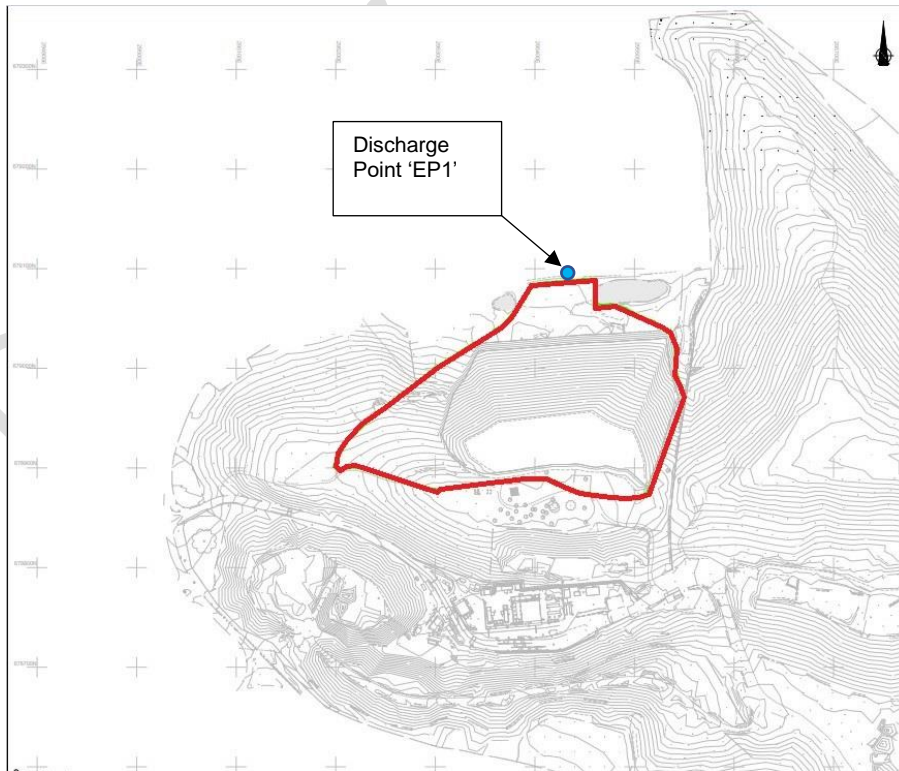
- 1.1.1 The Permitted Installation to which this Permit applies (“the Installation”) is the Installation where the activities specified in Condition 1.1.3 are carried out (“the Activities”). The site of the Permitted Installation (“the Site”) and the location of the Permitted Installation is delineated in red on the Site Plans (1.2.1 and 1.2.2).
- 1.1.2 The location of the Site is Avondale Quarry, Polmont, Falkirk, FK2 0YG as shown outlined in red on the Location Plan.
- 1.1.3 The Activities are the landfilling of waste at a landfill as described in Part A of Section 5.2 of Schedule 1 to the 2012 Regulations, namely the landfill of hazardous waste at a landfill with a total capacity exceeding 25,000 tonnes.
- 1.1.4 The following Directly Associated Activities are carried out on the site:
- a) The collection and transfer of leachate for treatment offsite.
 - b) The delivery, receipt, handling and storage of wastes.
- 1.1.5 For the purpose of this Permit, the Activities and Directly Associated Activities shall be known together as “the Permitted Activities”.

1.2 Site Plans

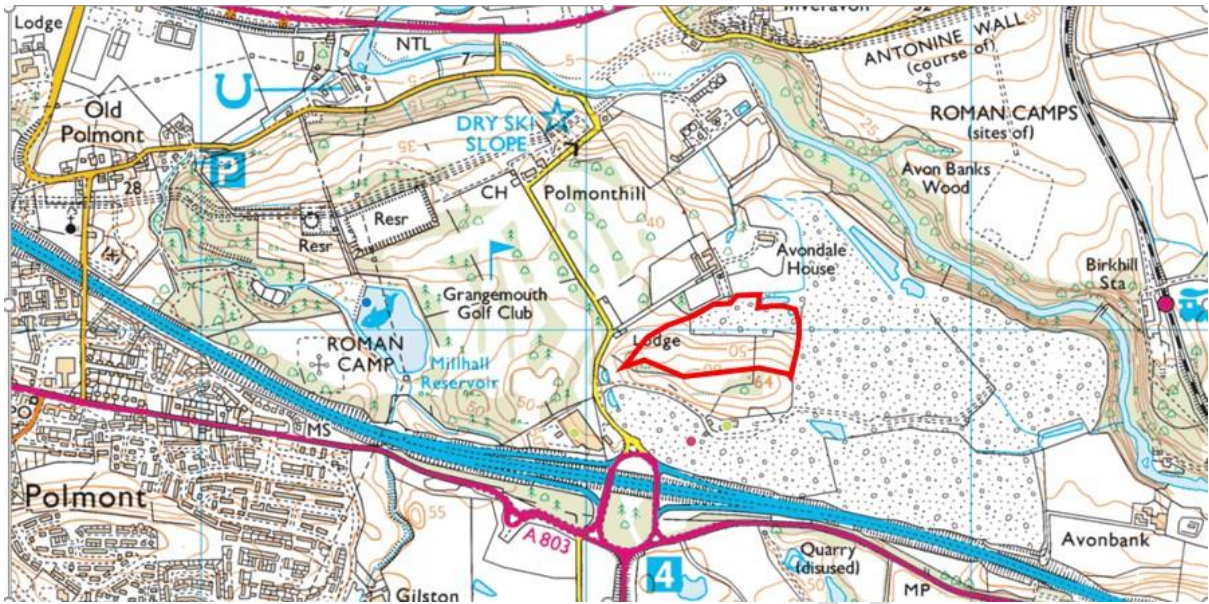
Site Plan 1.2.1



Site Plan 1.2.2



1.3 Location Plan



2. GENERAL CONDITIONS

2.1 Commencement

2.1.1 The Operator shall not commence disposal operations at the Permitted Installation until the Operator has received written confirmation from SEPA that disposal operations may commence following inspection of the Permitted Installation by SEPA in terms of Regulation 15 of the 2003 Regulations.

2.1.2 Nothing in Condition 2.1.1 shall in any way reduce the obligations of the Operator to comply with the Conditions of this Permit.

2.2 Hours of Operation

2.2.1 The site shall only receive waste within the following hours –

Monday to Friday	0600 hours – 2000 hours
Saturday	0600 hours – 1800 hours
Sunday	0730 hours – 1800 hours

2.3 Point of Contact & Accessibility of Permit

2.3.1 The Operator shall have an appropriate person (and deputy) as the primary point of contact with SEPA and shall notify SEPA in writing of the name of the appointed person (and deputy) within 4 weeks of the date of this Permit.

2.3.2 In the event of a different person being appointed to act as a primary point of contact (or deputy) the Operator shall notify SEPA in writing of the name of the appointed person without delay.

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

2.3.4 Any systems or procedures used by the Operator to demonstrate compliance with a Condition of this Permit shall be recorded.

2.4 Technical Competence and Staffing

2.4.1 All staff engaged in carrying on the Permitted Activities shall be provided with adequate professional and technical development and training and written operating instructions to enable them to carry out their duties.

2.4.2 The Operator shall maintain a record of the skills and training requirements for each job and shall keep records of all relevant training.

2.4.3 The Permitted Installation shall be managed and supervised by a designated technically competent person to ensure that the Conditions of the Permit are being complied with.

2.4.4 The Operator shall inform SEPA in writing of all persons, and their qualifications, engaged in the operation or management of the Permitted Installation, or part thereof, who are designated as technically competent, and shall notify SEPA without delay of any change to the persons designated as technically competent, including details of the new persons and their qualifications.

2.4.5 Where the Operator or another Relevant Person is convicted of an offence prescribed under section 74(6) of the Environmental Protection Act 1990 for the purposes of section 74(3)(a) of the Environmental Protection Act 1990 the Operator shall notify SEPA in writing within 7 days of the conviction, whether or not the condition is subsequently appealed.

2.5 Written Management System

2.5.1 The Permitted Installation shall be managed and operated, by using sufficient competent persons and sufficient resources, in accordance with a written management system that:

- i) ensures that the installation is operated in compliance with this Permit;
- ii) identifies and minimises risks of pollution;
- iii) ensures that all appropriate preventative measures are taken against pollution; and
- iv) ensures that no pollution is caused.

2.5.2 The written management system required by Condition 2.5.1 shall include, as a minimum, systems and procedures setting out the necessary steps to be taken:

- a) to ensure that all staff engaged in carrying on operations at the Permitted Installation are provided with adequate professional and technical development and training and written operating instructions to enable them to carry on their duties. The operator shall maintain a record of the skills and training requirements for each job and of all relevant training undertaken by staff;
- b) to ensure that the Permitted Installation is managed and supervised by a designated technical competent person responsible for ensuring that the operator complies with conditions of this Permit;
- c) to ensure that, following final cessation of waste disposal and waste acceptance activities at the Permitted Installation, the Operator takes all necessary measures to avoid any pollution risk and to return the site to a satisfactory state;
- d) to monitor the condition of, and maintain, the Permitted Installation including as a minimum, process plant, instrumentation, equipment, drains, underground structures and buildings which it relies on for the prevention, or limitation, of pollution from the Permitted Installation;
- e) to undertake maintenance of the Permitted Installation;
- f) investigate and rectify any non-conformance with this Permit or pollution resulting from the Permitted Installation identified by the operator or drawn to the attention of the operator whether by an Authorised Person or by complaint by another person; and

- g) in the event of an incident, leak, malfunction or other defect of the Permitted Installation.
- 2.5.3 The written management system required by Condition 2.5.1 shall be submitted to SEPA and implemented within 6 months from the date this Permit is granted.
- 2.5.4 The written management systems shall be reviewed on a regular basis and in any event shall be reviewed:
- a) where there is any significant change in the operations carried on at the Permitted Installation;
 - b) within a period of one year from the first operation of a new or significantly changed installation;
 - c) at least once every 4 years in any other circumstance.
- 2.5.5 All reviews required by Condition 2.5.4 shall be recorded and the results of any review incorporated in the written management systems and implemented within a period of 3 months from the end of the review. Each review and any actions taken shall be reported to SEPA.
- 2.6 Financial Provision**
- 2.6.1 The Operator shall ensure that the financial provision as required by Regulation 18(4)(b) of the 2012 Regulations is maintained until the Permit is surrendered in accordance with the 2012 Regulations.
- 2.6.2 The Operator shall ensure that the charges made for the disposal of Waste at the Permitted Installation cover:
- a) the costs of setting up and operating the Permitted Installation;
 - b) the costs of the financial provision referred to in Condition 2.6.1; and
 - c) the estimated costs for the closure and after-care of the Permitted Installation for a period of at least 30 years from its closure.
- 2.6.3 The Operator shall not proceed with any proposed change to the financial provision until they have received agreement in writing from SEPA.
- 2.6.4 Without prejudice to Conditions 2.6.1 to 2.6.3 above . The Operator shall comply with all the obligations on it specified in the Trust Account Agreement and shall, in particular, ensure that Instalment Payments are paid into the Trust Account in accordance with the said Trust Account Agreement.
- 2.7 Records**
- 2.7.1 Any systems or procedures used by the Operator to demonstrate compliance with a Condition of this Permit shall be recorded.
- 2.7.2 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.

- 2.7.3 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.
- 2.7.4 Without prejudice to Condition 2.7.2, all Operators' records relevant to the operation or 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.
- 2.7.5 Where any condition of this Permit requires information to be recorded, a record shall be maintained and, where appropriate, reviewed by the date(s) specified in Table 2.1.

2.8 Reporting

- 2.8.1 Where any condition of this Permit requires information to be reported, a report 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 shall be due on the date specified in that table. All such reports shall include the Permit number and the name of the Operator.
- 2.8.2 Where the Permitted Installation has not operated for the duration of any reporting period specified in Table 2.1, the Operator shall provide written notification to SEPA. This shall confirm that no reports have been made in terms of Condition 2.8.1 because the Permitted Installation has not operated during the said period. Notifications shall be submitted within one month of the end of the reporting period concerned.
- 2.8.3 All notifications required by any Condition of this Permit shall be made to SEPA in the manner specified in that Condition to the address specified in the explanatory notes attached to this Permit by the date(s) or within the period or at the frequency specified in Table 2.1 and, where appropriate, the first notification shall be due on the date specified in that Table. All such notifications shall include the permit number and name of the Operator.

Table 2.1: Recording Reporting, Reviews and Notification Requirements
(Required by Condition 2.8.1)

Summary of information to be recorded/ reported/reviewed or notified	Condition Number(s)	Review Frequency	Date first record due to be completed	Date reports due
Primary and deputy point of contact with SEPA	2.3.1 & 2.3.2	n/a	As required	Without delay where there is a change of contact
Written Management System review	2.5.3 & 2.5.4	Review to be undertaken at least every 4 years	Written Management System to be submitted within 6 months of permit being granted	As required
Proposed changes to Financial Provision	2.6.3	As required	3 months prior to a proposed change to Financial Provision	As required
Waste Data Reporting	2.9.2	n/a	As required	Within 28 days of last day in March, June, September and December
Incident Notification	2.10.4	n/a	n/a	Without delay
Incident Confirmation report	2.10.5	n/a	As required	Day after the incident is notified to SEPA
Incident Investigation Report	2.10.6	n/a	As required	Within 14 days of the date of the Incident unless otherwise agreed in writing with SEPA
Review of Incident Prevention and Mitigation Plan	2.10.8	Every 2 years	2 years from permit issue	Without delay
Noise Monitoring (construction and commencement of Permitted Activities)	3.5.1	n/a	Following construction of the cell and commencement of Permitted Activities	As required
Noise and Vibration Review	3.5.2	At least every 4 years	31 January 2024	As required
Noise monitoring	3.5.3	At least every 2 years	31 January 2024	As required
Site Traffic Management Plan review	3.8.1	Every 2 years	31 January 2024	As required
Waste characterisation for other hazardous wastes	4.2.3	Prior to acceptance	As required	Within 7 days of acceptance at the site, agreed in writing with SEPA.

Avondale Draft Permit v10.1

Restoration Plan	4.2.4	Prior to acceptance	As required	Prior to waste (for restoration purposes) being accepted at the Permitted Installation.
Rejected Load Notification	4.9.1	n/a	As required	Within 7 days of the rejection of the load
Systematic assessment of all measures to prevent emissions to soil and groundwater	5.1.4	At least every 4 years	31 January 2024	As required
Systematic assessment and inspection of working surfaces	6.1.2	Annually	31 January 2023	31 st January each year
Hazardous landfill cell preparatory work, cell capping and drilling work notification	7.5.2	n/a	As required	At least 14 days prior to commencement of works
CQA Plan	7.6.1	n/a	As required	At least 4 weeks prior to relevant works commencing
CQA Report	7.6.5	n/a	As required	Within 3 months of completion of relevant works
Gas Management System Review	9.1.8	Annually	31 January 2023	31 January each year
Notification of trigger level breaches for external landfill gas monitoring	9.3.3	n/a	As required	Immediately
Investigation Report on trigger level breaches for external landfill gas monitoring	9.3.3	n/a	As required	Within 14 days of the exceedance
Installation of groundwater boreholes	10.2.1	As required	As required	Within 4 months of permit issue
Trial pit reporting	10.2.2	As required	As required	Findings to be reported within 8 weeks of completion of the trial pits
Baseline monitoring of additional groundwater boreholes and reporting of results	10.3.1	As required	As required	Results to be reported within 4 months of completion of baseline monitoring
Hydrogeological Risk Assessment (HRA) review and report results to SEPA	10.4.2/10.4.3	As required	31 December 2022	As required
Groundwater trigger levels	10.5.1	n/a	As required	As required
Review of Groundwater Monitoring against approved control levels following receipt of results	10.5.2	Following monitoring	As required	As required

Sampling of surface water discharge	10.7.7	As required	To be agreed with SEPA	Monthly from date of permit issue. To be agreed with SEPA
Surface Water Sampling Plan	10.7.9	Annually	To be agreed with SEPA	Within 3 months of permit issue.
Attenuation pond design and specification	10.8.1	n/a	As required	Before construction of the hazardous landfill cell
Closure and Aftercare Plan (Landfill)	11.1.1	18 months prior to anticipated date of closure	As required	As required

2.9 Waste Data Reporting

2.9.1 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.

2.9.2 A copy of the completed form shall be submitted to SEPA within 28 days of the last day of March, June, September and December each year.

2.10 Incidents

2.10.1 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.

2.10.2 Without prejudice to the requirements of Condition 2.10.1, 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.

2.10.3 Notwithstanding the requirements of Condition 2.10.1 and 2.10.2 where a breach of any Condition of this Permit or an incident poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the Operator shall suspend operation of the Permitted Installation or relevant part thereof until such time as it can be operated in compliance with this Permit.

2.10.4 In the event of an incident and/ or a breach of any Condition of this Permit, the Operator shall notify SEPA by telephone without delay to 0800 80 70 60. A notification that relates to an incident shall include as far as practicable the information specified in Condition 2.10.5.

2.10.5 The Operator shall confirm any incident to SEPA in writing by the next working day after identification of the incident. This confirmation shall include: the time and duration of the incident, the receiving environmental medium or media where there has been any emission as a result of the incident, an initial estimate of the quantity and composition of any emission, the measures taken to prevent or minimise any

- emission or further emission and a preliminary assessment of the cause of the incident.
- 2.10.6 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, the circumstances of the incident, an assessment of any harm to the environment and the steps taken by the Operator to bring the incident to an end. The report shall also set out proposals for remediation, where necessary, and for preventing a repetition of the incident.
- 2.10.7 Prior to disposal operations commencing within the Site Landfill at the Permitted Installation, the Operator shall prepare, implement and maintain an "Incident Prevention and Mitigation Plan". This plan shall set out the 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.
- 2.10.8 At least every 2 years, the Operator shall review the Incident Prevention and Mitigation Plan required under Condition 2.10.7. Each review of the said Incident Prevention and Mitigation Plan shall be recorded and where the Operator makes any revisions to the said plan, said revisions shall be recorded and shared with SEPA.

3. CONDITIONS APPLYING TO THE PERMITTED INSTALLATION AS A WHOLE

3.1 Site Security

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

3.2 Odour

3.2.1 All emissions to air from the Permitted Installation shall be free from offensive odour, as perceived by an Authorised Person, outside the site boundary.

3.3 Dust, Litter & Wind Blown Materials

3.3.1 The emission of dust to the atmosphere shall be minimised. Dust suppression water spraying equipment shall be provided, maintained and used as detailed in the Operations Management and Control Plan.

3.3.2 All vehicles transporting waste to the Site Landfill shall be sheeted to minimise the escape of dust and waste until they reach the point of deposit.

3.3.3 All operations on the Permitted Installation shall be carried out such that the escape of litter beyond the Permitted Installation boundary, is minimised. Litter lying within the Permitted Installation shall be removed and contained to minimise the risk of escape of litter beyond the Permitted Installation boundary as detailed in the Management Plan

3.3.4 All litter or windblown materials escaping the Permitted Installation shall be collected and disposed of appropriately as soon as reasonably practicable.

3.3.5 Without prejudice to the requirements of Condition 3.3.3, the provisions contained within the Management Plan to minimise the nuisance and hazards arising from the Permitted Installation in respect of wind-blown materials shall be complied with.

3.4 Aerosols

3.4.1 The provisions contained in the Management Plan to minimise the nuisance and hazards arising from the Permitted Installation in respect of the formation of aerosols shall be complied with.

3.5 Noise and Vibration

3.5.1 Noise monitoring shall be undertaken during the construction of the Site Landfill and at the commencement of landfilling operations into that cell. The results of that monitoring shall be recorded and reported to SEPA.

3.5.2 Following the noise monitoring to be undertaken as specified in Condition 3.5.1, at least every 4 years, or whenever any equipment with a noise output which could have an impact on noise sensitive receptors is replaced, installed or relocated, the Operator shall carry out a systematic assessment of noise emissions including noise monitoring associated with the Permitted Activities, the purpose of which shall be to identify methods for reducing noise emissions, including a programme

for any proposed improvements. Each assessment, including any actions taken, shall be recorded and reported to SEPA.

- 3.5.3 All noise monitoring shall be undertaken at a frequency no less than those stated with Table 3.1 and assessments undertaken in accordance with Condition 3.5.2 shall be recorded and reported to SEPA.
- 3.5.4 Noise and Vibration emissions associated with the Permitted Installation shall not exceed the limits specified in Table 3.1.

Table 3.1 Noise and Vibration emission limits

Emission Limit	Monitoring Point	Frequency of Monitoring	Time of Day	Monitoring Method
55dB LAeq, 1 hour	Nearest noise sensitive dwelling	Every 2 years	Between 08:00hrs and 19:00hrs Monday to Friday and up to 12:00hrs on Saturday	PAN 50 Annex A
42dB LAeq, 1 hour	Nearest noise sensitive dwelling	Every 2 years	At any other time	PAN 50 Annex A
70dB LAeq, 1 hour*	Nearest noise sensitive dwelling	Following a complaint	Representative times during periods involving temporary construction work.	PAN 50 Annex A

* Once during a period of up to 8 weeks in one year during specific temporary construction work.

3.6 Fires

- 3.6.1 No waste shall be burnt within the boundaries of the Permitted Installation.

3.7 Vermin / Insect / Bird Control

- 3.7.1 All operations on the Permitted Installation shall be carried out so as to minimise the nuisance and hazards arising from the Permitted Installation in respect of the presence of birds, vermin and insects. The Permitted Installation shall be inspected at least once every 3 months by a person suitably qualified and experienced in pest control and a treatment programme shall be undertaken to deal with any identified infestation forthwith.

3.8 Traffic

- 3.8.1 The provisions contained in the Management Plan to minimise the nuisance and hazards arising from the Permitted Installation in respect of site traffic shall be reviewed every 2 years.

3.9 Leakages & Spills

- 3.9.1 Any spillages of waste, fuel or other liquids shall be cleaned up immediately. A supply of a suitable absorbent material shall be kept on site to deal with any such spillages.

4. WASTE TYPES, QUANTITIES AND ACCEPTANCE

4.1 General Requirements

- 4.1.1 The quantity of Waste accepted at the Permitted Installation annually, shall not exceed 70,000 tonnes.
- 4.1.2 The total quantity of hazardous waste deposited at the Site Landfill shall not exceed 352,000 tonnes.

4.2 Waste Types

- 4.2.1 The Operator shall ensure that the Site Landfill is only used for landfilling the following:
- Hazardous waste which fulfils the Waste Acceptance Criteria in paragraphs 1 and 2 of Schedule 2 of the 2003 Regulations.
 - Notwithstanding the above, other wastes which fulfil the Waste Acceptance Criteria in Paragraph 1 of Schedule 2 of the 2003 Regulations.
- 4.2.2 Notwithstanding the generality of Condition 4.2.1, only the hazardous waste listed in Table 4.1 shall be accepted at the Site Landfill unless otherwise agreed by SEPA in respect of Condition 4.2.3.

Table 4.1 – Accepted Wastes

EWC Permitted Wastes	
Waste Code	Description
06	Wastes from inorganic chemical processes
06 01	wastes from the manufacture, formulation, supply and use (MFSU) of acids
06 01 99	Wastes not otherwise specified
12	Wastes from shaping and physical and mechanical surface treatment of metals and plastics
12 01	Soil (including excavated soils from contaminated sites), stones and dredging soil
12 01 16	Waste blasting material containing hazardous substances
13	Oil wastes and wastes of liquid fuels (except edible oils, and those in chapters 05, 12 and 19)
13 05	Oil/water separator contents
13 05 08	Minerals (for example sand, stones)
15	Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified
15 01	Packaging (including separately collected municipal packaging waste)
15 01 10	Packaging containing residues or contaminated or dangerous substances
15 02	Absorbents, filter materials, wiping cloths and protective clothing
15 02 02	Absorbents, filter materials, wiping cloths, protective clothing contaminated by dangerous substances
16	Wastes not otherwise specified in the list
16 02	Wastes from electrical and electronic equipment

16 02 13	Discarded equipment containing hazardous components other than those mentioned in 16 02 09 to 16 02 12
16 02 15	Hazardous components removed from discarded equipment
17	Construction and demolition wastes (including excavated soil from contaminated sites)
17 03	Bituminous mixtures, coal tar and tarred products
17 03 01	Bituminous mixtures containing coal tar
17 03 03	Coal tar and tarred products
17 05	Soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 03	Soil and stones containing dangerous substances
17 06	Insulation materials and asbestos-containing construction materials
17 06 01	Insulation materials containing asbestos
17 06 05	Construction materials containing asbestos
17 08	Gypsum-based construction material
17 08 01	Gypsum-based construction materials
17 09	Other construction and demolition wastes
17 09 01	Construction and demolition wastes containing mercury
17 09 03	Construction and demolition wastes containing dangerous substances
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use.
19 01	Wastes from incineration or pyrolysis of waste
19 01 07	Solid wastes from gas treatment
19 02	Wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 05	Sludges from physico / chemical treatment containing dangerous substances
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions
20 01	Separately collected fractions (except 15 01)
20 01 21	Fluorescent tubes and other mercury containing waste.

4.2.3 Notwithstanding Condition 4.2.2 above, other hazardous waste(s) which meet the criteria specified in Condition 4.2.1 may be accepted at the Site Landfill after the waste has been characterised (in the same manner as set out in Condition 4.6.1), written details of said characterisation have been provided to SEPA and written agreement to the acceptance of said other hazardous waste(s) has been received from SEPA.

4.2.4 No waste shall be accepted, for landfill cell restoration, at the Site Landfill without a restoration plan, as agreed with SEPA .

4.3 Waste Acceptance

4.3.1 All sampling and testing of waste shall be conducted in accordance with Appendix 1 - 'Procedures for the Sampling and Testing of Waste'.

4.3.2 Without Prejudice to the other Conditions of this Permit, granular hazardous waste accepted for disposal at the Site Landfill shall comply with the following:

- a) The maximum leaching limit values set out in Table 1 of Appendix 2. Granular wastes include all wastes that are not monolithic. The applicable test methods are referenced in Appendix 1.
 - b) The additional criteria set out in Table 2 of Appendix 2; and
 - c) Granular hazardous waste shall have a load bearing capacity of at least 50kPa.
- 4.3.3 Without prejudice to the other conditions of this Permit, monolithic hazardous waste accepted for disposal at the Site Landfill shall comply with the following:
- a) The maximum leaching limit values set out in Table 1 of Appendix 3. The applicable test methods are referenced in Appendix 1;
 - b) The additional criteria set out in Table 2 of Appendix 3;
 - c) Monolithic waste shall have a load bearing capacity of at least 1.5MPa; and
 - d) The monolith shall be at least 40cm in any direction or have a fracture spacing of at least 40cm.
- 4.3.4 Where waste is subject to treatment to render it monolithic, the waste shall only be accepted at the Permitted Installation if prior to such treatment, the waste meets the following limit values:
- a) Loss of ignition of 10%; or
 - b) Total organic carbon of 6%.
- 4.3.5 Waste shall not be accepted at the Permitted Installation unless, as a minimum, the information specified in Table 4.5, is recorded and, where practicable, the load visually inspected by a suitably trained member of staff and found to comply with the requirements of this Permit.

Table 4.5 Waste Delivery Record

Information required to be kept for each delivery of waste
The origins of the waste comprising the delivery, including the names and addresses of the waste producers. Where waste is bulked up for transport, via use of a multiple uplift vehicle, this should be the name of the Company undertaking the bulking up.
The identity of the person who transported the delivery to the premises, and the registration number of the vehicle used to make the delivery
The date and time of the delivery of the waste
The quantity of each type of waste (in tonnes) and the 6 figure EWC number for each type of waste in the delivery

4.4 Prohibited Wastes

- 4.4.1 The following shall not be accepted at the Site Landfill:
- a) Any waste in liquid form (including waste waters, but excluding sludge);
 - b) Waste which, in the Conditions of Landfill, is explosive, corrosive, oxidising, flammable or highly flammable;

- c) Hospital and other clinical wastes which arise from medical or veterinary establishments and which are infectious;
- d) Chemical substances arising from research and development or teaching activities, such as laboratory residues, which are new or not identified, and the effects of which on man or the environment are not known;
- e) Used tyres other than: (i) tyres used as an engineering material ; (ii) bicycle tyres; and (iii) tyres with an outside diameter above 1400mm.

4.4.2 For the purposes of Condition 4.4.1, “corrosive”, “explosive”, “flammable”, “highly flammable”, “infectious”, and “oxidising” shall have the same meanings as in Regulation 11(3) of the 2003 Regulations.

4.5 Prior Treatment of Waste

4.5.1 Waste shall not be disposed of at the Site Landfill unless it has been subjected to Prior Treatment in accordance with the Management Plan, except where treatment would not reduce its quantity or the hazards which it poses to human health or the environment.

4.5.2 The Operator shall ensure the Site Landfill is not used for landfilling waste which has been diluted or mixed solely to meet the Relevant Waste Acceptance Criteria.

4.6 Waste Acceptance Procedures – Waste Characterisation

4.6.1 In respect of all waste accepted for deposit at the Site Landfill, the Operator shall ensure that the waste has been characterised such that all information necessary for the safe disposal of the waste in the long term is available and recorded in accordance with Condition 4.6.3 below. The characterisation information shall include at least the following:

- a) The source and origin of the waste;
- b) The process producing the waste (including a description of the process and the characteristics of its raw materials and products);
- c) The waste treatment applied in compliance with Regulation 12 of the 2003 Regulations, or a statement of reasons why such treatment is not considered necessary;
- d) The composition of the waste, including where relevant, an assessment of its leaching characteristics and, where necessary and available, its other characteristic properties, in accordance with Appendices 2 and 3;
- e) The appearance of the waste (including its smell, colour, and physical form);
- f) The code applicable to the waste under the European Waste Catalogue;
- g) In the case of hazardous waste, the relevant properties which render it hazardous according to Annex III of the Hazardous Waste Directive;
- h) Evidence demonstrating that the waste is not prohibited under Regulation 11 of the 2003 Regulations.
 - i) The landfill class at which the waste may be accepted;
 - j) The likely behaviour (including, where relevant, leaching behaviour) of the waste in a landfill and any additional precautions that need to be taken at the landfill as a consequence; and
- k) Whether the waste can be recycled or recovered.

4.6.2 In respect of all waste regularly generated in the same process, accepted for deposit at the Site Landfill, the Operator shall ensure that the following additional information shall be provided and recorded in accordance with other Conditions of this Permit:

- a) The compositional range for the individual wastes;
- b) The range and variability of characteristic properties;
- c) If appropriate, the leachability of the wastes determined by a batch leaching test, a percolation test or a pH dependence test;
- d) Identification of the key variables to be tested for compliance testing, the frequency of compliance testing and options for simplification of compliance testing;
- e) In the case of waste which is produced in the same process in different installations, the scope of the evaluation which must include a sufficient number of measurements to show the range and variability of the characteristic properties of the waste.

4.6.3 In respect of all waste deposited at the Site Landfill, the Operator shall keep a register showing;

- a) The quantities of waste deposited;
- b) Its characteristics;
- c) Its source and origin;
- d) The date or dates of its delivery;
- e) The identity of the producer;
- f) In the case of hazardous waste, its precise location on the Site Landfill;
- g) Information on the process producing the waste including a description of and the characteristics of the raw materials and products;
- h) A description of the Prior-Treatment applied to the waste or a statement of reasons why Prior-Treatment was not considered necessary, with reference to the exceptions specified in Condition 4.5.1;
- i) Data on the composition of the waste and, where relevant, the leaching behaviour;
- j) The appearance of the waste (including smell, colour and physical form);
- k) The Code according to the European Waste Catalogue;
- l) For hazardous waste, the relevant hazard properties according to Annex III of the Hazardous Waste Directive (91/689/EEC);
- m) Information to demonstrate that the waste is not a prohibited waste in terms of Condition 4.4.1;
- n) The landfill class at which the waste may be accepted;
- o) Any additional precautions required to be taken at the Permitted Installation;
- p) A consideration of whether the waste can be recycled or recovered; and
- q) confirmation that the Operator assessed the waste at the entrance to the Permitted Installation and visually inspected the waste at the point of deposit and was satisfied that it conformed with the description provided in the documentation submitted by the holder.

4.6.4 Records of the information obtained under Condition 4.6.3 shall be retained by the Operator for at least two years after the date of entry in the register and made available to SEPA on request by an Authorised Person.

4.7 Waste Compliance Testing

4.7.1 The Operator shall ensure that where appropriate, waste accepted at the Site Landfill shall be subjected to compliance testing

4.7.2 In respect of all waste regularly generated in the same process, compliance testing shall consist of testing of the key variables established under Condition 4.6.2 to demonstrate that the waste meets the limit values for those variables.

- 4.7.3 In respect of all other wastes compliance testing shall consist of:
- a) a batch leaching test (where appropriate) using the same method as was used for the test undertaken in accordance with Appendix 1; and
 - b) tests which demonstrate that the waste complies with the results of the characterisation carried out under Condition 4.6.1 and the relevant Waste Acceptance Criteria described Appendices 2 and 3.
- 4.7.4 Compliance testing shall be carried out at the times established in the characterisation but shall be no less frequent than once a year.
- 4.7.5 Records of the compliance testing shall be retained by the Operator for a period of not less than two years after and the information shall be made available to SEPA on request by an Authorised Person.
- 4.8 Monitoring of Waste Input**
- 4.8.1 Any vehicle delivering waste to the Permitted Installation shall not be permitted to proceed to the infilling area unless the Operator has assessed the waste at the entrance to the Permitted Installation and is satisfied that the waste conforms with the description in the documentation submitted by the holder, is satisfied that the waste has been found to fall within the type and quantity of waste permitted by this Permit and is satisfied that the waste has been found to comply with the requirements of this Permit.
- 4.8.2 The Operator shall visually inspect the waste at the point of deposit and shall be satisfied that the waste conforms with the description in the documentation submitted by the holder, shall be satisfied that the waste has been found to fall within the type and quantity of waste permitted by this Permit and is shall be satisfied that the waste has been found to comply with the requirements of the Permit.
- 4.8.3 A weighbridge shall be provided at the entrance to the Permitted Installation. The weighbridge shall be regularly serviced, maintained and calibrated in accordance with the manufacturer's recommendations.
- 4.8.4 All waste accepted at the Permitted Installation must be weighed and recorded using the site weighbridge.
- 4.9 Waste Acceptance Procedures – Procedure for Rejected Loads**
- 4.9.1 Where the Operator refuses any person permission to deposit waste at the Permitted Installation the Operator shall take all reasonable steps to obtain the following details: name and address of person, registration number of vehicle, quantity and type of waste, date and time of refusal. Details of the occurrence shall be passed to SEPA as soon as practicable and no later than the following working day.
- 4.9.2 Accepted wastes which are subsequently found not to conform to Permit Conditions shall be immediately removed to the Quarantine Area required by Condition 4.9.3 pending their removal from the Permitted Installation. The 6 - figure EWC number, type and quantity of any waste sent elsewhere for disposal or recovery shall be recorded.

- 4.9.3 The Operator shall maintain a quarantine area to store wastes not conforming to the Conditions of this Permit. The quarantine area shall be clearly designated and shall have an impermeable surface designed to ensure that no liquid fraction can escape beyond this area.

Draft for Consultation

5. EMISSIONS TO THE WATER ENVIRONMENT AND SOIL**5.1 Protection of Soil and Groundwater**

- 5.1.1 Other than as specifically permitted or limited by any Condition of this Permit, the Permitted Activities shall not have a significant adverse impact on, or cause pollution of, the water environment.
- 5.1.2 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.
- 5.1.3 Notwithstanding the requirements of Condition 2.7.2, the record required by Condition 5.1.2 shall be preserved until this permit is surrendered
- 5.1.4 At least every 4 years, the Operator shall carry out a systematic assessment of all measures used to prevent emissions from the permitted installation to soil and groundwater. A written report of each assessment shall be recorded and reported to SEPA within 1 month of completion. The report shall include details of and timescales for any additional measures that are required to prevent emissions to soil and groundwater.

6. SITE INFRASTRUCTURE

6.1 Impermeable Working Surfaces and Drainage

6.1.1 Impermeable surfaces shall be laid to a fall that prevents ponding and water logging and directs all surface run-off to a purpose designed sealed drainage system.

6.1.2 The Operator shall, at least once per year, carry out a systematic assessment and inspection of all working surfaces to ensure compliance with Condition 6.1.1. The assessment shall include photographs of the area inspected. Each assessment shall be recorded and reported to SEPA.

6.2 Site Access and Security

6.2.1 All roads within the Permitted Installation shall be adequate in both width and bearing capacity for all vehicles that may be required to use that particular road. All such roads shall be free of obstacles at all times that the site is open for the reception of waste. All such roads shall be maintained to ensure the safe passage of vehicles without damage to their under structure.

6.2.2 Waiting areas shall be provided and maintained for vehicles delivering waste to the Permitted Installation.

6.2.3 Wheel cleaning facilities shall be used at the site to the extent necessary to prevent fouling of the public highway. The design, type and location of the wheel cleaning facilities shall be as detailed in the Management Plan.

6.3 Liquid Storage

6.3.1 All containers used to store any hazardous liquids and/or leachate within the Permitted Installation shall be located in a bund. The minimum capacity of any bund shall be either 110% of the capacity of the largest container, or 25% of the total capacity of all the containers 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.

6.3.2 The bunded area(s) and containers shall conform to the following standards:

- a. the walls and base of the bund shall be impermeable;
- b. the base shall drain to a sump;
- c. when not in use all taps, valves, pipes and every part of each container shall be located within the area served by the bund;
- d. vent pipes shall be directed downwards into the bund;
- e. no part of the bund shall be within 10 metres of a watercourse; and
- f. all containers with a design capacity above 2500 litres shall be fitted with a device for monitoring the level of the contents.

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

7. CONTAINMENT AND CAPPING

7.1 Geological Barrier

- 7.1.1 A minimum layer of 0.5 metres of geological barrier shall be maintained below the artificially established mineral layer.
- 7.1.2 The base and sides of the Site Landfill shall consist of an artificially established, engineered, compacted mineral layer having as a minimum the following standards:
- (a) Permeability of less than or equal to 5×10^{-10} m/s; and
 - (b) Thickness of greater than or equal to 2 metres.
- 7.1.3 The mineral layer shall provide sufficient attenuation capacity to prevent a potential risk to soil and groundwater.

7.2 Leachate Collection and Sealing System

- 7.2.1 A leachate collection and sealing system shall be provided to ensure that leachate accumulation at the base of the Site Landfill is kept below a Trigger level of 2 metres depth. This system shall comprise an artificial sealing liner of 2mm HDPE suitably jointed and protected and a drainage layer. The drainage layer on the base of the Site Landfill shall be at least 0.5 metres thick with permeability greater than 1×10^{-3} metres/second and incorporating a network of collection and abstraction pipework.
- 7.2.2 Soil, groundwater and surface water is to be protected by the use of a top liner following closure and during the after-care phase.

7.3 Leachate Management

- 7.3.1 Leachate management shall be carried out in accordance with the Management Plan. Contaminated water shall be collected, treated and discharged in accordance with the Management Plan and the requirements of Schedule 10.
- 7.3.2 On cessation of waste acceptance and throughout the closure and aftercare period the Operator must continue to manage leachate head(s) within the Site Landfill. Details of the procedures for leachate head management shall be included in the Closure and Aftercare Plan.

7.4 Capping

- 7.4.1 The Site Landfill shall be capped and restored in accordance with the Management Plan.

7.5 Prior Notification

- 7.5.1 Waste shall not be disposed into the Site Landfill cell at the Permitted installation and it shall not be brought into operation until the requirements of Conditions 7.1.1, 7.1.2, 7.2.1, 7.3.1, 7.6.1, 7.6.2, 7.6.3 and 7.6.4 have been complied with in respect of that cell or phase and notification has been provided to SEPA in writing.
- 7.5.2 The Operator shall notify SEPA, in writing, at least 14 days prior to the following:

- (a) preparatory works being carried out in each of the phases of the Site Landfill;
- (b) installation of any capping being carried out;
- (c) drilling works being carried out in any area of the Site Landfill.

7.6 Construction Quality Assurance

- 7.6.1 At least 4 weeks prior to the commencement of any containment or capping works or installation of leachate or permanent landfill gas management infrastructure a Construction Quality Assurance Plan for such works (“the Construction Quality Assurance Plan”) shall be submitted in writing to SEPA. The Construction Quality Assurance Plan shall include the following:
- (a) A detailed engineering design, including location, description and objectives of such works;
 - (b) Details of construction methodology, material sampling procedures and testing specifications to be used in such works;
 - (c) Details of the materials testing laboratory for such works;
 - (d) Raw material specifications for such works;
 - (e) Quality control procedures for works supervision and material testing; and
 - (f) The identification of staff responsible for such works together with their responsibilities and experience.
- 7.6.2 With regard to containment works the Construction Quality Assurance Plan shall provide that deposition of the first 2 metres of waste shall be selected and deposited in such a manner so as not to damage the containment and leachate collection and sealing system.
- 7.6.3 All containment or capping works or installation of leachate or permanent landfill gas management infrastructure shall be carried out in accordance with the Construction Quality Assurance Plan submitted in accordance with Condition 7.6.1. Containment or capping works shall only be carried out in the presence and under the supervision of a suitably qualified Construction Quality Assurance Engineer, who shall be independent of both the Operator and the contractor.
- 7.6.4 A resistivity leak location survey of the flexible membrane artificial sealing liner shall be undertaken following completion of the containment works and any defects identified in the liner shall be repaired and re-surveyed.
- 7.6.5 Following completion of containment works or within 3 months of completion of capping works or installation of leachate or landfill gas management infrastructure, a report shall be submitted to SEPA in writing in respect of such works (“the Construction Quality Assurance Report”) which shall include the following:
- (a) Summaries of all construction activities;
 - (b) Details of all materials and equipment used;
 - (c) All design material specification changes;
 - (d) All reference to final levels to metres above ordinance datum;
 - (e) A set of all "as-built" drawings.
- In respect of containment or capping works, the report shall also include:
- (f) All daily logs;

- (g) All reports in respect of installation and testing;
- (h) All sample location plans;
- (i) All records of defects and remedial actions taken;
- (j) All methods employed to protect the lining or capping;
- (k) Certification by the Construction Quality Assurance Engineer that the works have been constructed in accordance with the Construction Quality Assurance Plan and the requirements of this Permit

Draft for Consultation

8. LANDFILLING OPERATIONS

8.1 Stability

- 8.1.1 The emplacement of Waste shall be undertaken in such a manner to ensure the stability of all the Waste in the Site Landfill and associated structures in order to avoid slippages.
- 8.1.2 Where an artificial barrier is used, the geological substratum must be sufficiently stable, taking into account the morphology of the landfill, to prevent settlement that may cause damage to the barrier.

8.2 Waste Emplacement

- 8.2.1 Without prejudice to the requirements of Condition 4.2.1, different types of waste shall only be handled, stored and deposited together where this does not pose a risk of chemical reaction, combustion or damage to the integrity or infrastructure of the Permitted Installation.
- 8.2.2 Layers of Waste deposited at the Site Landfill shall not exceed 2.5 metres in depth before compaction. Each layer shall be compacted and graded to always ensure the maintenance of the stability of the working face.
- 8.2.3 Layers of Waste and cover material shall be laid to a fall to prevent ponding of surface water.
- 8.2.4 The height of the working face in any phase of the Site Landfill shall not exceed 2.5 metres.

8.3 Plant Provision and Maintenance

- 8.3.1 All plant and equipment used at the Permitted Installation shall be maintained in good working order in accordance with the manufacturer's guidelines. A supply of spare parts for all plant and machinery shall be readily available to minimise downtime due to breakdowns. Should any plant or equipment become unserviceable or inoperable, its replacement, repair or arrangements for its repair shall be put in hand forthwith.

9. LANDFILL GAS

9.1 Landfill Gas Management Systems

9.1.1 A landfill gas management system shall be provided for each cell or phase, in order to monitor, collect, extract and dispose of or utilise landfill gas arising from the Permitted Installation in such a way that minimises damage to or deterioration of the environment and risk to human health or serious detriment to the amenities of the locality.

9.1.2 The landfill gas management system shall be operated in accordance with the Management Plan.

9.1.3 A review of the landfill gas management system shall be carried out on an annual basis, to ensure that the system is continuing to meet its design and performance standards. The first review shall be carried out not more than one year following the date of its commissioning, and subsequent reviews shall be carried out not more than one year following the previous review. The review shall incorporate a survey of capped areas to ensure their integrity is maintained. Details of the review shall be recorded.

9.2 Managing and Reporting of Landfill Gas within the Waste

9.2.1 Monitoring of landfill gas within each cell or phase shall be carried out and recorded in accordance with the standards specified in Table 9.2 below, so as to determine when the landfill gas collection, extraction or utilisation system can be made operational.

Table 9.2: Standards for internal landfill gas monitoring and sampling programme

Landfill Gas Monitoring Determinands (a)	Monitoring Frequencies (b)	Units
Methane	Monthly, from starting input of waste	% v/v
Carbon dioxide	Monthly, with methane monitoring	% v/v
Oxygen	Monthly, with methane monitoring	% v/v
Atmospheric pressure	Monthly, with methane monitoring	mbar to 1mbar, and whether rising or falling

Notes to Table 9.2

- (a) In-waste gas monitoring boreholes, or alternatively sealed leachate wells or sacrificial gas extraction system
- (b) Monthly until gas extraction commences

9.3 Landfill Gas Monitoring and Reporting External to the Waste

9.3.1 For each existing cell or phase and before any Waste is deposited in each new cell or phase an external landfill gas monitoring system shall be provided to enable monitoring of the gases in the ground outside the waste body, to determine background concentrations and whether landfill gas is migrating from the site.

9.3.2 Monitoring and sampling of landfill gas external to the waste body of each phase shall be carried out and recorded in accordance with the standards specified in Table 9.3.1

Table 9.3.1 - Standards for external landfill gas monitoring and sampling programme

Landfill Gas Monitoring	Monitoring Frequencies	Units	Trigger Levels (BH specific triggers are highlighted)
Methane	Monthly	% v/v	>1.1%
Carbon dioxide	Monthly, with methane monitoring	% v/v	GB05 >1.8% GB07 >2.2% GB15 >3.8% All other BHs 3% unless otherwise agreed with SEPA
Oxygen	Monthly, with methane monitoring	% v/v	n/a
Atmospheric pressure and trend	Monthly, with methane monitoring	mbar and to 1mbar	n/a
Differential pressure	Monthly, with methane monitoring	mbar and to 1mbar	n/a

9.3.3 Where the results of any external landfill gas monitoring exceed any of the Trigger levels stated in Table 9.3.1 above, the following action shall be taken;

- (a) SEPA shall be informed forthwith of the exceedance and the Operator shall immediately initiate the emergency measures contained within the Landfill Gas Management Plan.
- (b) Within one month of the date of the exceedance the Operator shall submit a report to SEPA, in writing, detailing the breach of the Trigger level, the emergency actions taken and any further, necessary proposed remedial actions.

9.3.4 The engineered external landfill gas monitoring system provided for each cell or phase shall be designed, constructed, inspected, maintained, documented and recorded to meet the standards specified in Table 9.3.2.

Table 9.3.2 Standards for External Landfill Gas Monitoring System

a) Design of external landfill gas monitoring	The location, spacing and depth of boreholes shall be as specified in the design report.
---	--

<p>b) Construction and installation</p>	<ul style="list-style-type: none"> • The systems shall consist of boreholes of a minimum diameter of 150mm, containing a rigid HDPE casing of minimum internal diameter of 50mm; • The annulus of the borehole shall be packed with non-calcareous pea gravel and completed at the surface with a gas tight seal; • The borehole casing shall consist of plain pipe through the gas tight seal and manufactured perforated pipe within the response zone of the borehole; • The borehole casing shall be completed at the surface with a removable gas tap, suitable for gas sampling, and these headworks shall be secure and protected from damage or vandalism. • Each borehole shall be permanently labelled with a unique identification number. • During construction of the boreholes a record shall be made of the subsurface geology encountered during drilling; and the geology shall be described by an appropriately qualified geotechnical engineer or similar person, who shall also provide a record of the 'as built' dimensions of the monitoring installation.
<p>c) Inspection and maintenance</p>	<ul style="list-style-type: none"> • Monitoring systems shall be inspected for defects and damage during each routine monitoring exercise. • Defects and damage shall be noted in the site diary, remedial measures shall be undertaken as soon as possible and in any case within 1 month. • A record shall be kept in the site diary of all remedial actions undertaken. • A review of the system shall be carried out on an annual basis, to ensure that the system is continuing to meet its design and performance standards. The first review shall be carried out not more than one year following the date of its installation, and subsequent reviews shall be carried out not more than one year following the previous review. • A written report of each review and its results shall be submitted in writing to SEPA within one calendar month of the review being completed.

9.4 Monitoring and Control of Landfill Gas Priority Trace Components

9.4.1 Monitoring of priority trace components in landfill gas shall be carried out annually. The concentration of trace gas components shall be assessed against the assumptions made in the Landfill Gas Risk Assessment (LFGRA), and dispersion modelling.

9.4.2 The monitoring of priority trace components should be carried out annually as a minimum frequency, but subject to site-specific circumstances such as significant changes to the gas management system or waste composition. In addition to the monitoring described above, the following apply:

- The sampling points shall be selected so that the landfill gas sampled is representative of the gas collected at the site;
- The gas sample shall be metered to provide an accurate value for the sample volume;

- Precautions shall be taken to avoid moisture or condensate entering the sampling system;
- Care shall be taken to prevent contamination or degradation of the sample during transfer to the laboratory and preparation for analysis;
- Any priority trace components not positively identified using the recommended methods shall be reported as being present at below their respective detection limits.

Draft for Consultation

10. ENVIRONMENTAL MONITORING AND CONTROL OF THE LANDFILL**10.1 General Requirements**

- 10.1.1 The Operator shall monitor gas, leachate, groundwater, surface water and Emissions at the Permitted Installation in accordance with the monitoring system set out in the Management Plan.
- 10.1.2 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.
- 10.1.3 All monitoring boreholes and other sampling points and access to them, shall be maintained to enable samples to be taken. Any borehole that is damaged or destroyed to the extent that sampling or monitoring in accordance with the requirements of this Permit is not possible shall be replaced where necessary as soon as possible. Damage to boreholes shall be recorded.
- 10.1.4 Borehole logs and construction details surveyed to ordnance datum shall be retained by the Operator.
- 10.1.5 The date, time and results of all samples and measurements carried out in compliance with Condition 10.1.6 shall be recorded by the Operator and the records retained on Site.
- 10.1.6 The Operator shall carry out sampling and monitoring of the parameters specified in Table 10.1 at the sampling and monitoring locations specified in Table 10.1 and subject to the requirements specified within Table 10.1 and without prejudice to other conditions of this Permit.

Table 10.1: Sampling and Monitoring Requirements

Media	Location	Parameters	Frequency - operational phase	Frequency - aftercare phase
Leachate	Each cell collection sump	Depth of leachate Electrical Conductivity (EC), Cl, NH ₄ -N	Monthly	Every 6 months
		pH, Total Alkalinity, BOD, COD, SO ₄ , TON, TOC, Na, K, Ca, Mg, Fe, Mn, Cd, Cr, Cu, Ni, Pb, Zn, As	Quarterly	Every 6 months
		CN, total phenols, Total petroleum hydrocarbons (TPH), Hg, Mecoprop, Benzene, Toluene, Ethylbenzene, Xylenes, Benzo(a)Pyrene, Naphthalene	Every 6 months	Annually
		List 1 Screen base of monitoring borehole (mbgl)	Annually	Annually
Surface Water	At discharge point (EP1) from attenuation pond, prior to discharge into un-named tributary of the River Avon.	pH, temperature, EC, DO, NH ₄ -N, Cl, BOD, COD, Hg (dissolved), Suspended Solids	Monthly	Every 6 months
Groundwater	All groundwater monitoring boreholes.	Groundwater level, pH, EC, NH ₄ -N, Cl,	Monthly	Every 6 months
		Total Alkalinity, COD, SO ₄ , TON, TOC, Na, K, Ca, Mg, Fe, Mn, Cd, Cr, Cu, Ni, Pb, Zn, As,	Quarterly	Every 6 months
		CN, total phenols, Total petroleum hydrocarbons (TPH), Hg, Mecoprop, Benzene, Benzo(a)Pyrene, Naphthalene, base of monitoring borehole (mbgl)	Annually	Annually
Landfill Gas (internal to gas field)	All in waste gas monitoring	Methane (%), Carbon Dioxide (%), Oxygen (%), atmospheric pressure (mbar rising or falling)	Monthly	Every 6 months
Landfill Gas (perimeter / external wells)	All perimeter boreholes	Methane, carbon dioxide, oxygen (all % vol), atmospheric pressure (mbar) rising or falling	Monthly	monthly

Media	Location	Parameters	Frequency - operational phase	Frequency - aftercare phase
Weather data	Weather station location	Volume of precipitation	Daily	Daily, added to monthly values
		Temperature (min/max °C)	Daily	Monthly average
		Direction and force of prevailing wind	Daily	Not required
		Atmospheric humidity	Daily	Monthly average
Topography of the Site Landfill	Site landfill	Structure and composition of landfill body; surface area occupied waste, volume and composition of waste deposited, time and duration of depositing, methods of waste deposit and calculation of remaining capacity.	Annually	N/A
Settling behaviour	Site landfill	Percentage settlement	Annually	Annually
Waste Types and quantities	Site landfill	Types and quantities of waste deposited	Quarterly	N/A
Leak detection survey	Site landfill	Resistivity	Monthly	Annually until 10 years after liner installation.
	Restored Cell		Annually	

10.1.7 Where the procedures required by Condition 10.1.6 reveal any Pollution, the Operator shall notify SEPA verbally within 24 hours of becoming aware of such Pollution and shall give details of such Pollution in writing to SEPA within 1 week.

10.1.8 The Operator shall complete the data required to complete the Licensed / Permitted Site Returns Form detailed in Appendix 4. A copy of the completed form shall be returned to SEPA within 28 days of the last day of March, June, September and December each year.

10.2 Ground Investigation – Upgrade Conditions

10.2.1 In addition to the groundwater boreholes listed in Table 10.1, the Operator must install an additional four groundwater monitoring boreholes. Two of these additional boreholes must be located to the southwest of the Site Landfill cell, between P2020_PBH06 and PBH04 and within 10 meters of each other. The monitoring installations must have response zones within the Passage Formation. Each borehole should target a separate sandstone layer.

The other two additional boreholes must be located to the north, downgradient of the Site Landfill cell, one east of P2020_PBH02 and one between P2020_PBH01 and P2020_PBH06. The monitoring installations must have response zones within

the Passage Formation. The exact borehole locations shall be confirmed with SEPA prior to drilling commences.

These boreholes must be installed by the Operator and the logs submitted to SEPA within 4 months of the issue of the permit and prior to any waste being deposited within the Site Landfill at the Permitted Installation.

- 10.2.2 Prior to construction of the Site Landfill, the Operator shall carry out trial pitting in the northern footprint of the landfill to delineate the extent of raised marine deposits in relation to the toe bund of the landfill. The findings of the trial pit investigation must be reported to SEPA within 8 weeks of completion of the trial pits.

10.3 Baseline Monitoring – Upgrade Conditions

- 10.3.1 The Site Landfill cell shall not be brought into operation until the results of baseline monitoring of the parameters listed in Table 10.1 of:

- a) The landfill gas monitoring system outside of the engineered barriers and liners;
- b) The groundwater monitoring system including the new boreholes required by condition 10.2.1; and
- c) Surface water monitoring points;

for a period of 3 consecutive months prior to the programmed date for commencing deposits in that cell or phase, have been submitted to SEPA and their receipt has been acknowledged in writing by SEPA.

10.4 Protection of Soil and Groundwater – Upgrade Conditions

- 10.4.1 The Operator shall use the information and monitoring data obtained in accordance with Conditions 10.2.1, 10.2.2 and Condition 10.3.1 to produce the following:

- a) groundwater contour figures for bedrock and superficial aquifers,
- b) hydrogeological cross-sections (two north to south and a minimum of one east to west cross section is to be included, and
- c) spatial plots of concentrations of key contaminants of concern.

- 10.4.2 The Operator shall undertake a review of the current Hydrogeological Risk Assessment (HRA) that shall include the following:

- a) A revised quantitative risk assessment, including modelling of the parameters listed in Table 10.5 and the following additional Contaminants of Concern (CoCs), unless otherwise justified:
 - Mecoprop
 - Benzene
 - Phenols
- b) a proposal for:

- i. aquifer-specific groundwater trigger levels to replace the interim trigger levels set out in Table 10.5, and
- ii. borehole-specific control levels for chloride; this shall include defined control charts and control rules for each groundwater monitoring well.

10.4.3 The review of the HRA as required by Condition 10.4.2 shall be submitted to SEPA no later than 31 December 2022.

10.5 Groundwater Trigger Levels

10.5.1 Where the results of any groundwater monitoring exceed any of the Trigger Levels stated in Table 10.5 below then the following action shall be taken unless otherwise agreed in writing with SEPA:

- a) SEPA shall be informed immediately;
- b) A repeat sample shall be taken, and submitted for analysis, within 7 days;
- c) Within 7 days of the receipt of the results of the repeat analysis the Operator shall submit a written report to SEPA, detailing the breach of the Trigger Level and proposed remedial actions.

Table 10.5 – Groundwater trigger levels

Parameter	Interim Trigger Level	
	Superficial Aquifer	Bedrock Aquifer
Ammoniacal Nitrogen	0.39 mg/l as N	0.6 mg/l as N
Chloride	250 mg/l	250 mg/l
Arsenic	0.01 mg/l	0.01 mg/l
Cadmium	0.0002 mg/l	0.0005 mg/l
Lead	0.01 mg/l	0.01 mg/l
Mercury	0.0001 mg/l	0.0001 mg/l
Nickel	0.02 mg/l	0.065 mg/l
Benzo(a)pyrene	0.00001 mg/l	0.00001 mg/l
Naphthalene	0.0001 mg/l	0.0001 mg/l

10.5.2 On completion of the requirements of Condition 10.4.2, the Operator shall evaluate all groundwater monitoring against approved control levels. Where the evaluation of the monitoring data shows any parameter exceeding a control level, the Operator shall report this to SEPA, in writing, within 28 days.

10.6 Sampling and Monitoring Facilities

10.6.1 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.

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

10.7 Discharge to the Water Environment

- 10.7.1 By 3 months prior to waste being deposited at the Site Landfill, within the Permitted Installation or part thereof, the Operator shall prepare, record and implement a plan (“the Surface Water, Drainage and Spillage Plan”), designed to prevent the release of pollutants to surface water or site drains from a spillage or leaks resulting from the Permitted Activities.
- 10.7.2 Drainage shall be provided and maintained in accordance with the Surface Water, Drainage and Spillage Plan required by Condition 10.7.1 and to ensure that:
- a) rainfall run-off from surrounding areas does not drain into the waste cell;
 - b) surface water run-off contaminated with pollutants does not enter the Water Environment directly;
 - c) notwithstanding the planned construction of the attenuation pond, the Permitted Installation does not become subject to ponding or water logging
- 10.7.3 As part of the Surface Water, Drainage and Spillage Plan required by Condition 10.7.1, the Operator shall identify what spillage prevention, mitigation and clean up equipment is to be made available on the Permitted Installation, the quantity of such equipment, and the strategic locations of any storage containing such equipment.
- 10.7.4 All surface water runoff from periphery and the haul roads of the Site Landfill shall be collected and directed into the newly constructed attenuation pond, prior to being discharged at location EP1 to the un-named tributary (known as the Ha-Ha ditch), of the River Avon at National Grid Reference NS 95422 79090, as specified in Table 10.7.5 and shown on Site Plan 1.2.2.
- 10.7.5 The sample point at EP1 shall be constructed, maintained and appropriately identified as a sample point so that representative samples of the discharge from the attenuation pond may be safely obtained. All constituents of the emission shall pass through that sample point.
- 10.7.6 There shall be no emissions to the water environment from the Permitted Installation other than those specified in Table 10.7.5 and only after having passed through the specified sample points as specified in Condition 10.7.4 and Table 10.7.5.
- 10.7.7 No emission specified in Table 10.7.5 shall exceed the limit for the parameters specified in said Table 10.7.5.
- 10.7.8 Measurement and/ or sampling of the emissions in Table 10.7.5 shall be carried out by the Operator at the sampling locations specified in that Table.
- 10.7.9 The date, time and results of all samples and measurements carried out in compliance with Condition 10.7.7 shall be recorded by the Operator and reported.
- 10.7.10 Within 3 months of the date of this Permit being issued, the Operator shall prepare and implement a Surface Water sampling plan “the Sampling Plan”. The Sampling Plan shall be agreed in writing with SEPA.

- 10.7.11 The Sampling Plan shall be maintained and reviewed annually. The reviewed Sampling Plan shall be reported each year for the forthcoming calendar year.
- 10.7.12 If an exceedance of any of the parameters in Table 10.7.5 occurs, the Operator shall follow the procedures within the relevant section of the Management Plan to investigate the breach and ensure further sample(s) are taken to confirm whether a breach occurred.

Table 10.7.5 – Emissions to Water Environment ELVs

Source of Emissions	Emission Point Number	EP1	
	Source of Emission	Attenuation Pond serving the surface water run-off from periphery of the Site Landfill and haul road	
	Destination	Unnamed tributary to the River Avon, known as the 'Ha Ha ditch'	
	Sampling Location	EP1 (NS 95422 79090)	
Limits for Parameters		Lower Limit	Upper Limit
	Total suspended solids	25 mg/l	50 mg/l
	Mercury (dissolved)	0.07 µg/l	0.14 µg/l
	Biochemical Oxygen Demand (BOD)^(a)	5 mg/l	16 mg/l
	Ammoniacal Nitrogen^(b)	0.6 mg/l	2.4 mg/l
	pH	pH not less than 5	pH not greater than 9
	Oils	No visible trace	

Notes to Table 10.7.5:

- (a) Determined in the presence of excess allyl-thiourea after 5 days at 20°C
- (b) Expressed as Nitrogen

- 10.7.13 Subject to Condition 10.7.14 below, no sample of discharge shall exceed the lower or upper limits set out in Table 10.7.5
- 10.7.14 The limit for any of the parameters set out in Condition 10.7.13 may be exceeded where, in any series of discharged effluent samples taken from the surface water outfall from the attenuation pond, at regular but randomised intervals over a year (as listed in Columns 1 and 3 of Table 10.7.6), no more than the number of samples (as listed in Columns 2 and 4 of Table 10.7.6) exceed the applicable limit for that parameter.

Table 10.7.6 Two Tier Consent Table

Series of samples taken in any period of 12 consecutive months	Maximum permitted number of samples which fail to conform
1-7	1
8-16	2
17-28	3
29-40	4

10.8 Upgrade Conditions

- 10.8.1 The design and specification for the new attenuation pond and corresponding inlet to the pond and outlet discharge pipe, referred to in Condition 10.7.4, shall be agreed with SEPA prior to construction of the Site Landfill.

11. CLOSURE AND AFTERCARE**11.1 Closure Procedures**

- 11.1.1 A Closure and Aftercare Plan shall be submitted 18 months in advance of the anticipated date of closure of the Site Landfill for approval by SEPA and prior to entering into definite closure.
- 11.1.2 The closure procedure shall only commence if either (a) the Operator has written to SEPA requesting initiation of the closure procedure and written approval of the request has been received from SEPA or (b) SEPA has issued a reasoned decision to the Operator set out in a closure notice served on the Operator by SEPA in accordance with Regulation 18 of the 2003 Regulations.
- 11.1.3 Notwithstanding the requirement of Condition 11.1.1, 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 one month prior to the proposed date of cessation.

Draft for Consultation

APPENDIX 1 – PROCEDURES FOR THE SAMPLING AND TESTING OF WASTE

Interpretation: In this Part –

Note: If any of the procedures listed below are superseded or replaced by another, following the issue of the permit, the new version of that procedure shall be taken as the appropriate applicable procedure for sampling and testing of waste.

“EN 12457/1” means the standard described in the British Standard entitled “Characterisation of waste. Leaching. Compliance test for leaching of granular waste materials and sludges. One stage batch test at a liquid to solid ratio of 2 l/kg for materials with high solid content and with particle size below 4 mm (without or with size reduction)”, published under the numbers BS EN 12457-1:2002 which came into effect on 15th October 2002. This procedure is current but under review;

“EN 12457/2” means the standard described in the British Standard entitled “Characterisation of waste. Leaching. Compliance test for leaching of granular waste materials and sludges. One stage batch test at a liquid to solid ratio of 10 l/kg for materials with particle size below 4 mm (without or with size reduction)”, published under the numbers BS EN 12457-2:2002 which came into effect on 15th October 2002;

“EN 12457/3” means the standard described in the British Standard entitled “Characterisation of waste. Leaching. Compliance test for leaching of granular waste materials and sludges. Two stage batch test at a liquid to solid ratio of 2 l/kg and 8 l/kg for materials with high solid content and with particle size below 4 mm (without or with size reduction)”, published under the numbers BS EN 12457-3: 2002 which came into effect on 15th October 2002;

“EN 13656” means the standard described in the British Standards publication entitled “Characterisation of waste. Microwave assisted digestion with hydrofluoric (HF), nitric (HNO₃) and hydrochloric acid mixture for subsequent determination of elements” published under the numbers BS EN 13656:2002 which came into effect on 22nd October 2002;

“EN 13657” means the standard described in the British Standard entitled “Characterisation of waste. Digestion for subsequent determination of aqua regia soluble portion of elements” published under the numbers BS EN 13657:2002 which came into effect on 22nd October 2002;

“CEN/TR 16192:2020” means the standard described in the British Standards document entitled “Waste – Guidance on analysis of eluates. published under the numbers CEN/TR 16192:2020 which came into effect on 31st March 2020;

“ENV 14039” means the standard described in the British Standard entitled “Characterisation of waste - Determination of hydrocarbon content in the range of C10-C40 by gas chromatography” published under the numbers EN 14039:2004 which came into effect on 29th October 2004;

“EN 14405” means the standard described in the British Standard entitled “Characterisation of waste - Leaching behaviour test - Up-flow percolation test (under specified conditions)”, published under the numbers BS EN 14405:2017 which came into effect on 31st March 2017; This procedure is current but under review;

“EN 14429” means the standard described in the British Standard entitled “Characterisation of waste. Leaching behaviour test. Influence of pH on leaching with initial acid/base addition”

published under the numbers BS EN 14429:2015, which came into effect on 31st March 2015; This procedure is current but under review ; and

“EN 14899” means the standard described in the British Standard entitled “Characterisation of waste – Sampling of waste materials: Framework for the preparation and application of a sampling plan” published under the numbers BS EN 14899:2005, which came into effect on 31st October 2006; This procedure is current but under review;

Sampling and Testing

All sampling and testing required shall be carried out in accordance with the following:

- (c) Sampling and testing shall be carried out by independent and qualified persons and institutions and only laboratories which have proven experience in waste testing and analysis and an efficient quality assurance system shall be used.
- (d) All sampling shall be carried out using a sampling plan developed in accordance with EN 14899.

The following standards shall be used for the sampling and testing of general waste properties –

- (a) EN 14346 for the calculation of dry matter by determination of dry residue or water content.

The following standards shall be used for leaching tests –

- (a) EN 14405 for leaching behaviour and up-flow percolation tests;
- (b) EN 14429 for leaching behaviour and influence of PH on leaching with initial acid/base addition;
- (c) EN12457/1-3 for compliance tests for leaching of granular waste materials and sludges.

The following standards shall be used for the digestion of raw waste –

- (a) EN 13657 for the digestion for subsequent determination of aqua regia portion of elements;
- (b) EN 13656 for the microwave assisted digestion of specified acid mixtures for subsequent determination of elements.

The following standards shall be used for analyses –

- (a) CEN/TR 16192:2020 Waste – Guidance on analysis of eluates;
- (b) ENV 14039 for determination of certain hydrocarbon contents.

For tests and analysis for which CEN standards are not available, the methods used must be approved by SEPA.

Sampling

For the sampling of waste – the basic characterisation, compliance testing on-site verification testing – a sampling plan shall be developed according to part 1 of the sampling standard currently developed by CEN.

General Waste Properties

EN 14346: Calculation of dry matter by determination of dry residue or water content

Leaching Tests

Avondale Draft Permit v10.1

EN 14405: Characterization of waste - Leaching behaviour test - Up-flow percolation test (under specified conditions) which is under review

EN 12457/1-4: Leaching – Compliance test for leaching of granular waste materials and sludges;

Part 1; L/S = 2 l/kg, particle size < 4 mm

Part 2; L/S = 10 l/kg, particle size <4mm

Part 3; L/S = 2 l/kg and 8 l/kg, particle size <4mm

Part 4; L/S = 10 l/kg, particle size <10mm.

Digestion of raw waste

EN 13657: Digestion for subsequent determination of aqua regia soluble portion of elements (partial digestion of the solid waste prior to elementary analysis, leaving the silicate matrix intact).

EN 13656: Microwave assisted digestion with hydrofluoric (HF), nitric (HNO₃) and hydrochloric (HCl) acid mixture for subsequent determination of elements (total digestion of the solid waste prior to elementary analysis)

Analysis

CEN/TR 16192:2020: Waste – Guidance on analysis of eluates

EN 14039: Determination of hydrocarbon content in the range of C10 to C40 by gas chromatography.

Draft for Consultation

APPENDIX 2 – LIMIT VALUES FOR GRANULAR HAZARDOUS WASTETable 1: Maximum Leaching Limit Values for Granular Hazardous Waste

Components	Liquid to solid ratio = 10 l/kg
As	25
Ba	300
Cd	5
Cr total	70
Cu	100
Hg	2
Mo	30
Ni	40
Pb	50
Sb	5
Se	7
Zn	200
Chloride	25000
Fluoride	500
Sulphate	50000
Dissolved organic carbon (DOC) (*)	1000
Total dissolved solids (**)	100000

Note

(*) *if the Waste does not meet these values for dissolved organic carbon at its own pH, it may alternatively be tested at liquid to solid (LS) ratio = 10 l/kg and a pH of 7.5 – 8.0. The Waste may be considered as complying with the acceptance criteria for dissolved organic carbon if the result of this determination does not exceed 1000 mg/kg.*

(**) *The values for dissolved solids can be used alternatively to the values for sulphate and chloride.*

Table 2: Additional Limit Values for Granular Hazardous Waste

Parameter	Value
LOL* (loss on Ignition)	10%
TOC** (total organic carbon)	6%
ANC (acid neutralisation capacity)	Must be evaluated between the pH of the waste in question, at pH6 and the pH of the site leachate.

Note

(*) *Either LOI or TOC must be used*

(**) *If this value is not achieved a higher limit value may be admitted by SEPA, provided that the DOC value of 1000mg/kg is achieved at the LS = 10 l/kg, either at the material's own pH or at a pH valued between 7.5 and 8.*

APPENDIX 3 – LIMIT VALUES FOR MONOLITHIC HAZARDOUS WASTE

Table 1: Maximum Leaching Limit Values for Monolithic Hazardous Waste

Components	mg/m ² *
	mg/l
As	20
Ba	150
Cd	1
Cr total	25
Cu	60
Hg	0.4
Mo	20
Ni	15
Pb	20
Sb	2.5
Se	5
Zn	100
Chloride	20000
Fluoride	200
Sulphate	20000
Dissolved organic carbon (DOC) (*)	Must be evaluated

Note:

(*) These limit values apply to tests using the 64 day tank test (NEN 7345) necessary for characterisation of the waste.

Table 2: Additional Limit Values for Monolithic Hazardous Waste

Parameter	Value
pH	Must be evaluated
Electrical Conductivity ($\mu\text{Scm}^{-1}\text{m}^{-2}$)	Must be evaluated
Acid Neutralisation Capacity(ANC)	Must be evaluated

APPENDIX 4 - THE LICENSED / PERMITTED SITE RETURNS FORM

Draft for Consultation

EXPLANATORY NOTES

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

1. BAT

It should be noted that Regulation 22(1) of the Regulations specify that there is an implied Condition in every Permit that, in operating the installation or mobile plant, the Operator must use the best available techniques (BAT) for preventing or, where that is not practicable, reducing emissions from the installation or mobile plant.

This 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 or standard rule.

BAT is defined in Regulation 4 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 and other Permit conditions 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 United Kingdom, 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 3 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 Conclusions, BAT Reference Documents published by the European Commission and technical guidance published by the Environment Agency and other relevant regulatory authorities.

2. 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.

3. 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 58 and Schedule 8 of the Regulations.

4. 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 or any relevant charging scheme made under Section 41 of the Environment Act 1995, copies of which are available from SEPA.

5. ADDRESS AND 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
Angus Smith Building
6 Parklands Avenue
Eurocentral
Holytown
North Lanarkshire
ML1 4WQ

Tel No: 0800 80 70 60 and/or 03000 99 66 99

SEPA Registry - registry@sepa.org.uk

Waste data returns can also be submitted to waste.data@sepa.org.uk

6. REVIEW OF CONDITIONS

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

7. PROPOSED CHANGE IN OPERATION OF INSTALLATION

It is a requirement of Regulation 45 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 45 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 45 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 16 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.

8. ENFORCEMENT & OFFENCES

Regulation 52 places a duty on operators to immediately give notice to SEPA of any breach of condition of the Permit for the installation or mobile plant.

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 55 of the Regulations.

If SEPA is of the opinion that the operation of an installation or mobile plant: poses an immediate danger to human health; or threatens to create an immediate significant adverse effect upon the environment; or 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 56 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 67 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.

9. BREACH OF A PERMIT CONDITION

Regulation 52 of the Regulations specifies that the operator of an installation must immediately give notice to SEPA of any breach of a condition of the Permit. It is an offence to fail, without reasonable excuse to comply with Regulation 52.

Any statement made by an operator to SEPA for the purposes of complying with regulation 52 may only be used in a prosecution for an offence where in giving evidence the operator makes a statement inconsistent with the initial notification.

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

10. 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.

11. 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.

Draft for Consultation