

20001

Nine Mile Point Waste Processing Facility

PPC Variation

**Operational Techniques and Monitoring
Plan**

V00

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Report

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5 Operational Techniques and Monitoring Plan

Overview

- 5.1 This document provides information to support the Permit Variation Application to provide details of the operational techniques that will be used to minimise and control emissions from the proposed Nine Mile Point waste processing facility.
- 5.2 The Facility occupies an area of 1.09 hectares within the approximately 16 hectare Nine Mile Point industrial estate. The site is bordered by industrial unit to the east, a road to the west beyond which are more industrial units, a road to the south beyond which is woodland and the Sirhowy River, and to the north by woodland.
- 5.3 The nearest residential properties are on New Road, approximately 470m northeast of the eastern edge of the site boundary and William Street, approximately 478m west of the western edge of the site boundary.
- 5.4 The Operator of the Facility will be Drumcastle Ltd, hereby referred to as “the Operator”.

Site Location

- 5.5 The Facility is located at:
- Nine Mile Point Industrial Estate,
Ynysddu,
Cwmfelinfach,
Caerphilly,
NP11 7HZ
- 5.6 The site boundary is illustrated on Drawing 20001-401. The site is centered at National Grid Reference (NGR) ST 19235 91305.
- 5.7 The location is shown on Drawing 20001-400 in the drawings section of this application.

Regulated Activities

- 5.8 Drumcastle Ltd is applying to Natural Resources Wales (NRW) for a Permit Variation to remove the dryer and RTOs associated with the previously approved Solid Recovered Fuel (SRF) Refuse Derived Fuel (RDF) facility. This application has been prepared to fully assess the risks posed by the activity and to fully assess the proposed activity against Best Available Techniques (BAT).
- 5.9 Permitted wastes will be limited to the waste codes included in Appendix A, and will generically include non-hazardous commercial, industrial, and household waste. This will not change from the previous approval.
- 5.10 The scope of all proposed regulated activities is summarised in Table 5.1 below. The site layout is shown on drawing 20001-402.

Table 5.1 Regulated Activities

Schedule 1 Activity	Description of the Waste operation	Annex I (D Codes) and Annex II (R Codes) and Descriptions	
Part A (1) Section 5.4 Part A(1)(b) ii)	Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day involving pre-treatment of waste for incineration or co-incineration. Bulking of recyclable wastes recovered as an incidental part of production of SRF/RDF	Annex II Codes and Descriptions	
		R3: Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).	
		R4: Recycling/reclamation of metals and metal compounds.	
		R5: Recycling/reclamation of other inorganic materials.	
		R13: Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced).	
		<u>Total waste Storage Capacity</u>	1,510 tonnes plus 600 bales (approx. 0.5 tonnes per bale) = 1,810 tonnes
		<u>Non-Hazardous Waste Treatment Capacity</u>	100,000 tonnes per annum which equates to 397 tonnes per day based on 252 operational days per year

Relevant Legislation and Guidance

- 5.11 The proposed activities are subject to a number of National, European, and International legislation and statutory and non-statutory guidance documents. Operators are required through the Environmental Permit application process, to demonstrate how they will comply with the relevant requirements of this legislation and guidance.
- 5.12 In relation to the proposed waste operations the following pieces of legislation and guidance are considered relevant:
- Waste Framework Directive;
 - Environmental Permitting (England & Wales) Regulations 2016 (as Amended 2018);
 - Environment Agency Environmental management guidance 'Develop a management system: environmental permits' available at: <https://www.gov.uk/guidance/develop-a-management-system-environmental-permits>;
 - Environment Agency Environmental Management Guidance 'Control and monitor emissions for your environmental permit' available at: <https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit>;
 - Natural Resource Wales: How to Comply with your Environmental Permit;
 - Air Emissions Risk Assessment for your Environmental Permit, Environment Agency, Defra 2016 (Updated September 2021);
 - Environmental Permitting Core Guidance, Defra; March 2013 (Updated April 2020);
 - Environmental Permitting Guidance: The Waste Framework Directive, Defra 2010;
 - Sector Guidance Note S5.06: Guidance on the Recovery and Disposal of Hazardous and Non-Hazardous Waste, Environment Agency 2004;
 - BREF, Integrated Pollution Prevention and Control Reference Document on BAT for the Waste Treatments Industries, August 2006;
 - Environment Agency, Horizontal Guidance Series; and
 - Environment Agency Regulatory Guidance Series.

Scope of Report

- 5.13 This Report considers the operating procedures of the proposed facility, and how they meet relevant guidance and best industry practice. The report also describes how emissions from the facility will be controlled and monitored, and how the site will be managed to mitigate the environmental impact of the operations and in accordance with the Environmental Permit.

Operating Techniques and BAT

Pre-Acceptance Procedures for Incoming Waste

- 5.14 Pre-acceptance procedures will be in place prior to commencement of operations at the Nine Mile Point Waste Processing Facility. The Operator will ensure that the requirements detailed in Section 2.1.1 Pre-acceptance procedures to assess waste of Sector Guidance Note 'S5.06: *Guidance on the Recovery and Disposal of Hazardous and Non-Hazardous Waste*', Environment Agency 2004 are incorporated into on-site procedures.
- 5.15 The Nine Mile Point Waste Processing Facility will have capacity to process up to 100,000 tonnes of waste per annum.
- 5.16 A complete list of waste types to be accepted at the facility is provided within Appendix A to this report.
- 5.17 All waste will be delivered by road to site and will be weighed using the on-site weighbridge. This will be the only access route into the site for waste delivery vehicles.
- 5.18 All deliveries to the site will be subject to pre-acceptance evaluation and delivery schedule as agreed with customers prior to arrival on site.
- 5.19 There will be no ad-hoc waste deliveries. In the event that a vehicle arrives on site, and it is verified that there has been no prior agreement made to receive that vehicle, the delivery will be refused, and vehicle turned away, and the incident recorded in the site diary.
- 5.20 The following information will be requested from all customers prior to waste being accepted on site:
- Waste EWC Code (where appropriate);
 - Process generating SIC Code (where appropriate);
 - Delivery container type (where appropriate);
 - Written description of the material; and
 - Anticipated date and time of delivery.
- 5.21 Waste delivery contracts will not be entered into until the operator is confident that the facility is able to receive the waste, and that the nature of material can also be processed without impacting on operations and impacting on any nearby sensitive receptors.

Acceptance Procedures

- 5.22 The Operator will ensure that the requirements detailed in Section 2.1.2 'Acceptance procedures when waste arrives at the installation' of Sector Guidance Note 'S5.06: *Guidance on the Recovery and Disposal of Hazardous and Non-Hazardous Waste*', Environment Agency 2004 are incorporated into on-site procedures.

- 5.23 Waste will be delivered to the site during the following operational hours:
- Monday – Friday 07:30 – 18:30
 - Saturday 07:30 – 13:00
 - No deliveries will take place on Sundays or Public/Bank Holidays.
- 5.24 All delivery vehicles entering the site will park at the cabin by the weighbridge to undertake Duty of Care paperwork checks.
- 5.25 Where possible, the Weighbridge Operative Clerk will carry out a visual inspection of the incoming wastes before they are off-loaded in the waste reception hall. The Machine Operator within the tipping area will also visually check each load and escalate to the Shift Supervisor if any malodorous loads or non-conforming wastes are tipped. The vehicle driver will be advised to wait in case the loads need to be rejected or dealt with separately.
- If wastes are accepted for disposal, details will be entered onto a computer system and a Waste Transfer Note prepared, consistent with fulfilling the company's responsibilities under the provisions of the Duty of Care.
 - Details and description of the vehicle delivering the waste, the driver's name, and the operator of the vehicle; and
 - A description of the waste by type and quantity.
- 5.26 Waste will only be received on site using sheeted skips/containers and following unloading will be stored within the waste reception building.
- 5.27 Waste deliveries will be prohibited from entering the site if the reception area is found to be at full capacity and there is insufficient space for storage of waste or incoming vehicles on site.
- 5.28 Any wastes which are found not to comply with the conditions of the Environmental Permit, or do not conform to the description provided by the waste carrier/producer will be rejected with records maintained.

Waste Storage and Handling On-Site

- 5.29 The Operator will ensure that the relevant requirements detailed in 'Section 2.1.3 Waste Storage' of Sector Guidance Note 'S5.06: Guidance on the Recovery and Disposal of Hazardous and Non-Hazardous Waste', Environment Agency 2004 are incorporated into on-site procedures. Storage arrangements are detailed below for each generic waste type.
- 5.30 All activities will take place within the main reception building including tipping and storage of incoming waste, and storage of recyclable and reject materials with the exception of storage of baled recyclable materials which will be stored externally. SRF/RDF will be stored within the

main building pending transport offsite. When required, baled and wrapped SRF/RDF may be stored externally.

- 5.31 Within the building, a reception bay will be designated to receive incoming waste. Waste will remain here for a maximum of 24 hours before entering the process.
- 5.32 Wastes will be segregated to separate recyclable wastes from the waste received. The remaining bulk waste will be treated to produce SRF, or RDF as outlined below. Details of storage of the separated materials is outlined in table 5.2 below.

Table 5.2 details the storage capacities of each segregated waste type.

Waste types	Containment	Approximate Storage Capacity
Ferrous Metals	In bay within main building which has an impermeable floor	75 tonnes
Non-Ferrous Metals	In bay within main building which has an impermeable floor	75 tonnes
Plastics	In bay within main building which has an impermeable floor	50 tonnes
Heavy wastes (including items such as bricks, wood, rocks, glass, some food waste)	In bay within main building which has an impermeable floor	100 tonnes
3D Heavies / bulky material	In bay within main building which has an impermeable floor	100 tonnes
Paper/Cardboard	In bay within main building which has an impermeable floor	50 tonnes
Fines	In bay within main building which has an impermeable floor	100 tonnes
SRF	Bay at the end of the waste processing equipment	350 tonnes
Bales	Stored outside the building on impermeable surface. Bales containing SRF will be wrapped five times.	600 bales
	Total	900 tonnes, plus 600 bales

- 5.33 Material will be unloaded from delivery vehicles into the tipping hall and subsequently loaded into the primary shredder via the use of a 360-grab unit. A conveyor will then transport the shredded material from the primary shredder to the waste screen on the processing side of the building to separate out the fines. The less than 70mm materials are conveyed to the fines processing plant. The 70-250mm material will be conveyed to the ballistic separators and onward to a series of optical separation units, screens, magnet, and eddy current separators

to extract various materials for recycling. Unsuitable materials are manually picked out via two quality control cabins.

- 5.34 There will be dedicated storage bays for mixed PET/HDPE and 2D fibres that feed onto a chain conveyor which will convey the material to the baler. Baled recyclable materials will be stored externally. There will also be storage bays/skips for ferrous metals, non-ferrous metals, heavy non combustibles, fines<15mm and 3D heavies. The remaining material is conveyed to a secondary shredder for further shredding to SRF quality specification and then conveyed to the dedicated SRF storage area.
- 5.35 The less than 70mm material from the waste screen is directed to the fines treatment plant whereby it undergoes treatment through a series of magnets, eddy current separator, flip flop screens and drum windshifters to both extract materials suitable for SRF and screen fines.
- 5.36 SRF/RDF will generally be stored inside the main building, however on certain occasions, it may be necessary to bale and wrap the SRF/RDF material and store externally. The bales will be wrapped with five layers of wrapping. This is necessary to protect the SRF/RDF and keep the moisture content down. It also acts as a protection measure to prevent litter. Bales will be monitored daily to ensure that any splitting of wrapping is identified at an early stage and rectified immediately.
- 5.37 Bales will be stored to a maximum height of 4 metres or 4 bales (whichever is lower). The storage area for bales of RDF/SRF is 267m². There is storage capacity on site for approximately 600 bales.
- 5.38 It is anticipated that typical storage times for baled wastes will be less than 1 month. The maximum storage time will be 3 months. This is so sufficient loads are available to fill transportation containers to minimise vehicle movements and associated costs and environmental impact.

General Waste Storage

- 5.39 Waste will be delivered to the site in bulk waste carriers, and once discharged will be stored within the main reception area. The waste will be sorted into different fractions, for recycling, recovery, or disposal.
- 5.40 The reception building floor will be an impermeable surface capable of being cleaned.
- 5.41 The waste reception building will be fitted with roller shutter doors and kept under negative pressure with internal air being treated via dust filters and a carbon filter prior to its release via a stack.

5.42 A regular review will be maintained of the use and the effectiveness of all media in the carbon filters. If the media is becoming ineffective in the treatment of odour the media will be replaced. This replacement of media will be recorded in the site diary. All spent media will be disposed to an appropriately licenced disposal facility.

5.43 Recyclates for example metals and plastics will be stored inside the building in bays following segregation undertaken in the reception building and will be removed off site for recycling.

Emissions Control

Overview of Releases

5.44 There are no point source emissions to land, groundwater, or water (other than surface water). Foul drainage is discharged via sewer.

5.45 A qualitative assessment of emissions to air, water and land plus amenity and accident risks is provided in Chapter 4 of this Application Referenced Environmental Risk Assessment.

Control of Point Source Emissions to Air, Water, and Land

5.46 The removal of the gas burners and RTO means that there will no longer be any emissions to air associated with the facility (other than odorous extracted air treated with a carbon filter). The proposed emission limit from the top of the stack will be 1,000 odour units per cubic meter (OUE/m³).

Table 5.3 Point Source Emissions to Air

Air Emission Point Reference and Location	Receiving Media	Source of Emission
A1	Release into the Atmosphere	Extracted air treated with a carbon filter and released to the atmosphere via stack.

5.47 Surface water drainage and clean run-off from the roof will be discharged via full retention interceptors to storage crates. Surface water will then be released to the existing surface water drains on the industrial estate. See document reference 20001-403.

Control of Fugitive Emissions to Air

5.48 The main sources of any fugitive emissions will be dust from waste handling.

5.49 Sector Guidance Note 'S5.06: Guidance on the Recovery and Disposal of Hazardous and Non-Hazardous Waste', Environment Agency 2004 references specific controls for minimisation of dust emissions in Section 3.3.4. Good management practices and procedures

proposed will minimise emissions will prevent unacceptable levels of dust impacting local receptors.

5.50 Table 5.4 below compared with indicative BAT requirements.

Table 5.4 Indicative BAT Requirements for Control of Fugitive Emissions to Air (Dust)

Requirement	Mitigation measures proposed by Operator	Meets requirements of TGN 5.06?
Covering of skips and vessels	Loaded vehicles are sheeted to minimise spillages and prevent wind-blown dust and litter.	Yes
Avoidance of outdoor or uncovered stockpiles (where possible)	All loose waste will be stored within the reception building.	Yes
Where dust creation is unavoidable, use of sprays, binders, stockpile management techniques, windbreaks and so on	All activities are carried out within the main reception building. Dust extraction and filtration is provided on the extracted building air and specific items of equipment. The tipping hall and processing areas will have high level ductwork installed to extract the air. As part of the processing area ductwork, dust extraction hoods will be installed at Optical Separators. A dedicated dust extraction system will be installed as part of the light and heavy separation process. This will circulate the air through three dust silos located externally on the eastern perimeter of the SRF building. The dust silos will collect dust into externally located bins for safe disposal. This system will ensure that clean air is circulated into the light and heavy separation processes.	Yes
Regular wheel and road cleaning (avoiding transfer of	Wheel cleaning will be in place on-site and will be employed as required should inspection deem it necessary.	Yes

Requirement	Mitigation measures proposed by Operator	Meets requirements of TGN 5.06?
pollution to water and wind blow)	Vehicles are inspected for mud, litter, dust, and debris prior to leaving site.	
Closed conveyors, pneumatic or screw conveying (noting the higher energy needs), minimising drops. Filters on the conveyors to clean the transport air prior to release	All processing activities are carried out within the main reception building. A dust extraction and filter system will be in place.	Yes
Regular housekeeping	The site access road & hardstanding will be inspected by the Site Manager on a daily basis to determine the need for maintenance and cleaning, and litter picking. All departing road transport will be inspected for cleanliness, prior to leaving the site. Paved roads will be swept and washed regularly as determined by Site Manager inspections.	Yes
Enclosed silos (for storage of bulk powder materials) vented to fabric filters. The recycling of collected material should be considered under Section 2.6.	Not applicable, no storage silos are required on-site.	Not applicable
Enclosed containers or sealed bags used for smaller quantities of fine materials	All material will be stored within a fully enclosed building except for the SRD/RDF. This will be wrapped five times and stored within an external bay.	Yes

- 5.51 It can be concluded that the measures proposed to control fugitive emissions to air will meet the requirements laid out in Sector Guidance Note 'S5.06: *Guidance on the Recovery and Disposal of Hazardous and Non-Hazardous Waste*', Environment Agency 2004.

Control of Fugitive Releases to Water, Land, and Groundwater

- 5.52 The main source of any fugitive emissions is site surface water drainage which is directed to storage crates via full retention interceptors then released into the industrial estate's existing surface water drainage system. There are no wastes stored externally, with the exception of

baled recyclable material and RDF/SRF. The baled RDF/SRF will be wrapped five times and inspected for splits in the packaging. Any splits will be repaired immediately.

- 5.53 Waste received for SRF production will be dry in nature and therefore there will be no runoff.
- 5.54 Silt traps and oil interceptors will be inspected on a regular basis to check their integrity and be maintained to prevent overfilling along with the site drainage system.
- 5.55 Operational procedures will ensure that hard standing areas are inspected for damage on a daily basis and any repairs are carried out promptly and to the original standard and specification.
- 5.56 All site personnel will be tasked with monitoring for evidence of spills and debris during their day to day routine. Any evidence of spills and debris will be reported to the Site Manager. Clean-up procedures will be implemented to contain and remove potentially polluting material. Records of any pollution incidents including corrective actions will be maintained. Natural Resources Wales will be notified as per requirements of the Environmental Permit.
- 5.57 Spill kits will be maintained in order to respond to any spill. The Operator will also have in place emergency measures to deal with any spillages (e.g., the deployment of absorbent mats and booms).
- 5.58 Training will be provided to all staff relating to the use of spill kits and the Spill Clean-Up Procedures.
- 5.59 All site personnel will be tasked with monitoring for evidence of spillages and leakage during their day-to-day routine. Any evidence of spillage or leakage will be reported to the Site Manager or his nominated deputy for remedial action.
- 5.60 Sector Guidance Note '*S5.06: Guidance on the Recovery and Disposal of Hazardous and Non-Hazardous Waste*', Environment Agency 2004 references specific controls for minimisation of fugitive releases to water, sewer and groundwater in Section 2.2.5 which has been compared with measures proposed by the Operator in Table 5.5 below:

Table 5.5 Indicative BAT Requirements for Control of Fugitive Emissions to Water and Groundwater

Requirement	Mitigation measures proposed by Operator	Meets requirements of TGN 5.06?
<p>For surfacing:</p> <ul style="list-style-type: none"> ▪ Design appropriate surfacing and containment or drainage facilities for all operational areas, taking into consideration collection capacities, surface thicknesses, strength/reinforcement; falls, materials of construction, permeability, resistance to chemical attack, and inspection and maintenance procedures; ▪ Have an inspection and maintenance programme for impervious surfaces and containment facilities; ▪ Unless the risk is negligible, have improvement plans in place where operational areas have not been equipped with: <ul style="list-style-type: none"> – an impervious surface – spill containment kerbs – sealed construction joints – connection to a sealed drainage system 	<ul style="list-style-type: none"> ▪ Waste materials are non-hazardous therefore the pollution risk is considered low. ▪ Drainage system is connected to an interceptor which is subject to regular inspection and maintenance. ▪ The waste reception building will be constructed on impermeable hard standing. ▪ All surfacing will be inspected regularly in accordance with the site's EMS. 	<p>Yes</p>
<p>Above ground tanks:</p> <p>All above-ground tanks containing liquids whose spillage could be harmful to the environment should be bunded.</p>	<p>No above ground storage tanks with the exception of a sprinkler tank. Fuel will be stored in a self-bunded tank.</p>	<p>Yes</p>
<p>All sumps should:</p>	<p>There are no sumps</p>	<p>Yes</p>

Requirement	Mitigation measures proposed by Operator	Meets requirements of TGN 5.06?
<ul style="list-style-type: none"> ▪ Be impermeable and resistant to stored materials; ▪ Be subject to regular visual inspection and any contents pumped out or otherwise removed after checking for contamination; ▪ Where not frequently inspected, be fitted with a high level probe and alarm, as appropriate; ▪ Be subject to programmed engineering inspection (normally visual but extending to water testing where structural integrity is in doubt). 		

5.61 It can be concluded that the measures proposed to control fugitive releases to water, land and groundwater will meet the requirements laid out in Sector Guidance Note 'S5.06: *Guidance on the Recovery and Disposal of Hazardous and Non-Hazardous Waste*', Environment Agency 2004.

Control of Emissions of Odour

5.62 Handling and storage of waste on-site has the potential to generate odour. Odour emissions are considered in detail with the Environmental Risk Assessment. An onsite Odour Management Plan has also been provided as part of this application.

5.63 Only a small quantity of wastes stored on site have the potential to generate odour. Activities are limited to sorting, shredding, bailing, and bulking which are not inherently odorous compared with higher risk waste treatment activities. All of these activities are carried out within the main reception building, which is kept under negative pressure to prevent fugitive emissions of odorous air from the buildings. The waste reception building will be fitted with fast acting roller shutter doors. Before release to air via a stack the gas will be treated firstly to remove dust via dust filters then via carbon filters to remove odours.

- 5.64 Sector Guidance Note 'S5.06: Guidance on the Recovery and Disposal of Hazardous and Non-Hazardous Waste', Environment Agency 2004 references specific controls for minimisation of odorous emissions in Section 2.2.6 5 which has been compared with measures proposed by the Operator in Table 5.6 below:

Table 5.6: Indicative BAT requirements for control of odour

Requirement	Mitigation measures proposed by Operator	Meets requirements of TGN 5.06?
Where odour can be contained, for example within buildings, the Operator should maintain the containment and manage the operations to prevent its release at all times.	<ul style="list-style-type: none"> All potentially odorous activities will be carried out within the main reception building, which will be kept under negative pressure. Roller shutter doors will be fitted to the building Good housekeeping measures will be put in place. The Operator will adhere to the site's Odour Management Plan The Operator will implement an EMS with specific controls relating to minimising emissions of odour. 	Yes
Where odour releases are expected to be acknowledged in the Permit, (i.e., contained and treated prior to discharge or discharged for atmospheric dispersion) requirements are detailed in Section 2.2.6 of the sector guidance in relation to	<ul style="list-style-type: none"> There is one potential point source of odour, from the stack following the carbon filter. The proposed emission limit from the top of the stack will be a maximum of 1,000 odour units per cubic meter (OUE/m³). Odour generating wastes comprise a small proportion of wastes accepted on-site. All potentially odorous wastes are handled in the main reception building only. An Air Quality and Odour Assessment has been carried out. 	Yes

Requirement	Mitigation measures proposed by Operator	Meets requirements of TGN 5.06?
modelling of odour and plant design.		
Where odour generating activities take place in the open, (or potentially odorous materials are stored outside) a high level of management control and use of best practice will be expected.	<ul style="list-style-type: none"> All potentially odorous wastes are handled in the main reception building only. Baled recyclable material and RDF/SRF will be stored outside. RDF/SRF bales will be wrapped 5 times and regular inspections will be carried out to identify damaged bales. Any damaged bales will be brought back into the building to be re-wrapped. 	Not applicable
Where an installation releases odours but has a low environmental impact by virtue of its remoteness from sensitive receptors, it is expected that the Operator will work towards achieving the standards described in this Note, but the timescales allowed to achieve this might be adjusted according to the perceived risk.	Not applicable.	Not applicable.
The objective is to prevent emissions of	Noted	Not applicable

Requirement	Mitigation measures proposed by Operator	Meets requirements of TGN 5.06?
odorous releases that are offensive and detectable beyond the site boundary. This may be judged by the likelihood of complaints. However, the lack of complaint should not necessarily imply the absence of an odour problem.		
Assessment of odour impact should cover a range of reasonably foreseeable odour generation and receptor exposure scenarios, including emergency events and the effect of different mitigation options.	This is presented in Chapter 4 of this Application referenced Environmental Risk Assessment	Yes
For complex installations, for example where there are a number of potential sources of odorous releases or where there is an extensive programme of improvements to bring odour under control, an odour management plan should be maintained	Nine Mile Point Waste Processing Facility is not a complex installation however an Odour Management Plan has been submitted as part of this application to address the small volume of potentially odorous wastes proposed to be accepted on-site. See Odour Management Plan provided as Chapter 8 of this Application.	Yes

Requirement	Mitigation measures proposed by Operator	Meets requirements of TGN 5.06?
Emphasis should be placed on pre-acceptance screening (see Section 2.1.1 on page 20) and the rejection of specific wastes, for example, mercaptans, low molecular weight amines, acrylates or other similarly highly odorous materials that are only suitable for acceptance under special handling requirements. These may include dedicated sealed handling areas with extraction to abatement.	Pre-acceptance measures meet the requirements of Section 2.1.1.	Yes
Scrubber liquors should be monitored to ensure optimum performance, i.e., correct pH, replenishment, and replacement.	A regular review will be maintained of the use and the effectiveness of all media in the carbon filters. If the media is becoming ineffective in the treatment of odour the media will be replaced. This replacement of media will be recorded in the site diary. All spent media will be disposed to an appropriately licenced disposal facility.	Yes

5.65 It can be concluded that the measures proposed to control odour meet the requirements laid out in Sector Guidance Note 'S5.06: Guidance on the Recovery and Disposal of Hazardous and Non-Hazardous Waste', Environment Agency 2004.

Site Security

- 5.66 The site will be surrounded by a perimeter fence. The main reception building, and cabin will be locked when not in use.
- 5.67 Access to the site will generally be restricted to the workforce other than site visitors during opening hours. The location of the cabin will ensure that any persons or vehicles entering the site will be identified prior to accessing the main waste activity and storage areas.
- 5.68 Unauthorised access will not be permitted at any time. The site will be locked and secured when closed.
- 5.69 CCTV will be used onsite both to deter unauthorised access to the site, and to capture any unpermitted activity.

Management

- 5.70 The approach to permitting and regulation under the Environmental Permitting Regulations 2010 (as amended 2015) by Natural Resources Wales relies heavily upon the use of Environmental Management Systems (EMS) as a driver for environmental compliance and improvement. In England, under the Environmental Permitting Regime, modern regulation is fundamentally driven by applying a risk-based approach to activities, where operators are encouraged to implement suitable management systems with which to operate, and to implement self-regulation and reporting. An operator who holds a permit under the Environmental Permitting (England & Wales) Regulations 2010 (as amended 2015) Natural Resources Wales is required to have an appropriate Environmental Management System in place.
- 5.71 Drumcastle Ltd will implement an Environmental Management System which will meet Natural Resources Wales requirements.

Waste Recovery or Disposal

- 5.72 The waste processing facility will divert approximately circa 85% of the waste throughput from landfill by either recycling or recovery of waste.
- 5.73 Waste generated on site will be limited to the office and staff welfare facilities at the facility. This waste production will be negligible.

Noise

- 5.74 *'Noise Impact Assessment September 2015 Land at Nine Mile Point Industrial Estate, Caerphilly'* has been carried out for the proposed facility, which is provided with the original permit application.

- 5.75 The assessment concluded that ‘...*subject to the implementation of the inherent design measures, noise from the proposed activities would be considered by the Standard to be an indication of the specific sound source having a low impact. As such it is considered that noise associated with the operation of the proposed facility, as defined within the scope of this report, would not be significantly detrimental to the noise climate of the area...*’.
- 5.76 Sector Guidance Note ‘S5.06: *Guidance on the Recovery and Disposal of Hazardous and Non-Hazardous Waste*’, Environment Agency 2004 references specific controls for minimisation of noise emissions in Section 2.9: Noise which has been compared with measures proposed by the Operator in Table 5.7 below.

Table 5.7 Indicative BAT Requirements for Control of Noise and Vibration

Requirement	Mitigation measures proposed by Operator	Meets requirements of TGN 5.06?
The Operator should employ basic good practice measures for the control of noise, including adequate maintenance of any parts of plant or equipment whose deterioration may give rise to increases in noise (for example, bearings, air handling plant, the building fabric, and specific noise attenuation kit associated with plant or machinery).	Operator will employ basic good practice measures for the control of noise. Equipment associated with waste processing is covered by a maintenance contract and/or a programme of planned preventative maintenance.	Yes
The Operator should employ such other noise control techniques necessary to ensure that the noise from the installation does not give rise to reasonable cause for annoyance, in the view of the Regulator. In particular, the Operator should justify where Rating Levels ($L_{Aeq, T}$) from the installation exceed the numerical value of the Background Sound Level ($L_{A90, T}$).	All noise generating equipment is located within the main process building. A noise assessment has been undertaken for the site which confirms that the facility will have a low noise impact.	Yes

Requirement	Mitigation measures proposed by Operator	Meets requirements of TGN 5.06?
In some circumstances "creeping background" (i.e., creeping ambient) may be an issue.	All noise generating equipment is located within the main process building.	Yes
Further justification will be required should the resulting field rating level ($L_{AR, TR}$) exceed 50 dB by day and a facade rating level exceed 45 dB by night, with day being defined as 07:00 to 23:00 and night 23:00 to 07:00.	Please see noise assessment submitted with the original Permit Application.	Yes
Noise surveys, measurements, investigations (e.g., on sound power levels of individual items of plant) or modelling may be necessary for either new or for existing installations, depending upon the potential for noise problems. Where appropriate, the Operator should have a noise management plan as part of its management system.	Please see noise assessment submitted with the original Permit Application.	Yes

- 5.77 It can be concluded that the measures proposed to control odour meet the requirements laid out in Sector Guidance *Note 'S5.06: Guidance on the Recovery and Disposal of Hazardous and Non-Hazardous Waste'*, Environment Agency 2004.

Accidents

- 5.78 An assessment of potential accidents and measures to reduce the risk of them occurring has been undertaken in line with Environment Agency H1 Part 1 Guidance for Environmental Risk Assessment (Annex a) – Amenity and Accidents and is included within the Environmental Risk Assessment (ERA) chapter of this permit application.
- 5.79 The site-specific ERA and Odour Management Plans (OMP) prepared identify the potential hazards posed by the facility under both normal and abnormal operating conditions. An

assessment of each hazard identified has been evaluated and the potential risk and prevention measures described.

- 5.80 Operational procedures which identify the actions to be taken to minimise the potential causes of accidents, and the consequences in the event of an accident occurring will be implemented through the site's Environment Management System.
- 5.81 All personnel will be provided with suitable training to ensure they are familiar with the site's Environment Management System and their individual responsibilities in the event of an incident.
- 5.82 A standalone Accident Management Plan (AMP) will be prepared for the site prior to full commissioning and operations commencing on site. A copy of the AMP will be submitted to Natural Resources Wales for their approval.

Monitoring

- 5.83 Point source emissions to air will be subject to a programme of monitoring as detailed in table 5.8 below. The emission point sampling locations meet the requirements stipulated in Environment Agency document M1: Technical Guidance Note (Monitoring): sampling requirements for stack emissions monitoring
- 5.84 The removal of the gas burners and RTO means that there will no longer be any emissions to air associated with the facility (other than odorous extracted air treated with a carbon filter). The proposed maximum emission limit from the top of the stack will be 1,000 odour units per cubic meter (OUE/m³).

Table 5.8 Point Source Emissions to Air

Emission Point Ref.	Description	Monitoring Frequency	Limit	Monitoring Standard or Methodology
A1	Odour Concentration	Biannual (Every 6 months)	Max 1,000 OUE/m ³	UKAS and MCERTS accredited Odour Monitoring to BSEN 13725

- 5.85 There will be no point source emissions to groundwater, land, or water.
- 5.86 Surface water and clean roof water drainage which is directed to the existing surface waste drainage system on the industrial estate.
- 5.87 There will be one point source emission to sewer which will be controlled by the sewerage undertaker's consent limits.

- 5.88 Table 5.9 below shows emissions points for discharge of surface water from the facility.

Table 5.9 Point Source Emissions to Water and Land

Emission Point Ref.	Parameter	Emission Limit Value	Comments	Discharges to
SW1 Approximate NGR: ST 19178 91244	Sediment and oil	No Limits Proposed	Surface water run-off from the site and full retention interceptor and clean roof water, (inspected visually).	Storage crates then existing surface water drain as shown on <u>20001-403</u> .

- 5.89 Routine odour monitoring will be carried out when the site is handling potentially odorous materials. Full details are provided in the Odour Management Plan submitted with this Application.

Decommissioning and Closure

- 5.90 The Operator will prepare a site closure plan in line with Natural Resources Wales Guidance in the event of cessation of operations on site. The Site Closure Plan will confirm how the site will be decommissioned to return it to a satisfactory state upon the cessation of activities. Records will be maintained of the location of facilities and infrastructure, as well as the services and sub-surface structures installed during the operating phases of the facility
- 5.91 De-commissioning will be in compliance with procedures outlined in the Site Closure Plan. If areas of deterioration during the operation of the site are identified these areas will be re-examined and the site will be returned to a satisfactory state as defined at the Permit application stage.

Operator Competency

- 5.92 Drumcastle Ltd have a number of staff that are WAMITAB qualified. One of these technically competent managers will be in place for the commencement of operation.

Records and Reporting

- 5.93 The operator will ensure the following information is recorded:
- Any material changes to the site layout and operations;
 - Site inspections by the operator or other body and any subsequent issues and corrective actions taken;
 - Emergencies;
 - Complaints and actions taken;
 - Critical plant/equipment failure;

- A record of any rejection of waste;
- Records relating to pre-acceptance for cross-reference and verification at the waste acceptance stage;
- Technically competent manager – attendance on site;
- Any Incidents/accidents on site and actions taken;
- Security failures;
- Severe weather conditions;
- Waste accepted and dispatched from the site;
- Natural Resources Wales Compliance Assessment Reports (CARs); and
- Details of emissions reportable incidents in accordance with the Permit.

5.94 All records will be held in the site office and will be available on request. All records, which are required under the conditions of the Environmental Permit, will be maintained, and kept secure from loss, damage, or deterioration for a minimum period of 3 years. Any records held electronically will be backed up on a regular basis.

5.95 Electronic back up records will be held in the company's head office.

Reporting

5.96 As part of the sites Environment Management System, audits will be carried out on an annual basis to check that all activities are being carried out in line with the requirements of the Environmental Permit, Management Procedures, and associated legislation.

5.97 A summary record of the waste types and quantities received and removed from the site will be made at the frequencies and in a format to be agreed in writing with Natural Resources Wales.

5.98 Records of internal site inspections by the Site Manager will be logged and available for inspection by Natural Resources Wales during routine audits.

Appendices
Appendix A - List of Permitted Waste Types

EWC Code	Description of Waste
02 01	Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 03	Plant-tissue waste
02 01 04	Waste plastics (except packaging)
02 01 07	Wastes from forestry
02 03	Wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation
02 03 02	Wastes from preserving agents
02 03 03	Wastes from solvent extraction
02 03 04	Materials unsuitable for consumption or processing
02 05	Wastes from the dairy products industry
02 05 01	Materials unsuitable for consumption or processing
02 07	Wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea, and cocoa)
02 07 01	Wastes from washing, cleaning, and mechanical reduction of raw materials
02 07 02	Wastes from spirits distillation
02 07 04	Materials unsuitable for consumption or processing
03 01	Wastes from wood processing and the production of panels and furniture
03 01 01	Waste bark and cork
03 01 05	Sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04
03 03	Wastes from pulp, paper and cardboard production and processing
03 03 01	Waste bark and wood
03 03 07	Mechanically separated rejects from pulping of wastepaper and cardboard
03 03 08	Wastes from sorting of paper and cardboard destined for recycling
03 03 10	Fibre rejects, fibre-, filler- and coating-sludges from mechanical separation

EWG Code	Description of Waste
04 02	Wastes from the textile industry
04 02 09	Wastes from composite materials (impregnated textile, elastomer, plastomer)
04 02 15	Wastes from finishing other than those mentioned in 04 02 14
04 02 21	Wastes from unprocessed textile fibres
04 02 22	Wastes from processed textile fibres
07 02	Wastes from the MFSU of plastics, synthetic rubber, and man-made fibres
07 02 13	Waste plastic
09 01	Wastes from the photographic industry
09 01 07	Photographic film and paper containing silver or silver compounds
09 01 08	Photographic film and paper free of silver or silver compounds
09 01 10	Single-use cameras without batteries
15 01	Packaging (including separately collected municipal packaging waste)
15 01 01	Paper and cardboard packaging
15 01 02	Plastic packaging
15 01 03	Wooden packaging
15 01 05	Composite packaging
15 01 06	Mixed packaging
15 01 09	Textile packaging
15 02	Absorbents, filter materials, wiping cloths and protective clothing
15 02 03	Absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
16 01	End-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)
16 01 19	Plastic
16 01 22	Discharged components not otherwise specified
17 02	Wood, glass, and plastic
17 02 01	Wood
17 02 03	Plastic

EWG Code	Description of Waste
17 05	Soil, including excavated soil from contaminated sites), stones and dredging spoil
17 05 04	Soils and stones other than those mentioned in 17 05 03
17 09	Other construction and demolition wastes
17 09 04	Mixed construction and demolition waste other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
18 01	Wastes from natal care, diagnoses, treatment, or prevention of disease in humans
18 01 04	Wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, linen, disposable clothing, diapers)
19 02	Wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 03	Premixed wastes composed of only non-hazardous wastes
19 02 10	Combustible wastes other than those mentioned in 19 02 08 and 19 02 09
19 04	Vitrified waste and wastes from vitrification
19 04 01	Vitrified waste
19 05	19 05 wastes from aerobic treatment of solid wastes
19 05 01	Non-composted fraction of municipal and similar wastes
19 05 02	Non-composted fraction of animal and vegetable waste
19 10	Wastes from shredding of metal-containing wastes
19 10 04	Fluff-light fraction and dust other than those mentioned in 19 10 03
19 10 06	Other fractions other than those mentioned in 19 10 05
19 12	Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 01	Paper and cardboard
19 12 04	Plastic and rubber
19 12 07	Wood other than that mentioned in 19 12 06
19 12 08	Textiles
19 12 09	Minerals (for example sand, stones)
19 12 10	Combustible waste (refuse derived fuel)
19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11

EWG Code	Description of Waste
19 13	Wastes from soil and groundwater remediation
19 13 02	Solid wastes from soil remediation other than those mentioned in 19 13 01
20 01	Separately collected fractions (except 15 01)
20 01 01	Paper and cardboard
20 01 10	Clothes
20 01 11	Textiles
20 01 38	Wood other than that mentioned in 20 01 37
20 01 39	Plastics
20 01 40	Metals
20 02	Garden and park waste (including cemetery waste)
20 02 03	Other non-biodegradable waste
20 03	Other municipal wastes
20 03 01	Mixed municipal waste
20 03 02	Waste from markets
20 03 03	Street-cleaning residues
20 03 07	Bulky waste

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Taggarts