

Finmere Quarry Site

Landfill Environmental Permit - EPR/FB3301CP MRF Environmental Permit - EPR/AB3908CZ

Landfill and MRF Management Plan

OPES MRF 2013 Ltd

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Quality information

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1. Report Context

1.1 Introduction

AECOM has been commissioned by OPES MRF 2013 Limited ('the Operator') to prepare a Management Plan (MP) which covers both the landfill operations and Material Recycling Facility (MRF) operations being undertaken at the Finmere Quarry Site, Finmere, Buckinghamshire.

The Finmere Quarry site is located approximately 0.76km to the southwest of the village of Finmere in Buckinghamshire. The landfill site currently comprises:

- the operational landfill areas;
- areas in which landfilling has been completed and where restoration work is complete or underway;
- leachate storage tanks;
- · landfill gas engines and flares within the generation compound; and
- a waste reception area which includes a weighbridge, site offices and wheel wash.

In addition to the landfill operations, the site also houses a MRF facility which is in a more central location in the site and shares the access road and waste reception area with the adjacent landfill. The MRF currently additionally comprises:

- Sorting and separation activities using mechanical and/or manual means;
- Processing activities including shredding and/or crushing; and
- Waste storage areas that facilitate bulking and transfer of the processing outputs.

1.2 Background

The landfill operations are regulated under Environmental Permit EPR/FB3301CV (previously EPR/KB3531RR) and the MRF is regulated under Environmental Permit EPR/AB3908CZ. Both are subject to regulation by the Environment Agency (EA).

Both permits contain conditions at section 1 and section 4 which relate to the management system as shown in table 1 below

Table 1-1: Permit Conditions for Management System

Permit	Condition No	Requirement
	1.1.1	The operator shall manage and operate the activities: a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and b) using sufficient competent persons and resources.
EPR/FB3301CV and	1.1.2	Records demonstrating compliance with condition 1.1.1 shall be maintained.
EPR/AB3908CZ	1.1.3	Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.
	1.1.4	The operator shall comply with the requirements of an approved competence scheme.
	4.1.2	The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

This Management Plan (MP) has been prepared to address the requirements of Section 1 of each environmental permit.

2. Management System

2.1 Introduction

The Environment Agency has adopted an approach to the Environmental Permitting Regulations 2016 (as amended) (EPR hereafter) which couples regulatory requirements and a company's voluntary environmental management system. This approach is intended to enable more effective and efficient environmental protection with the management of a regulated installation.

This section of the application provides an overview of regulatory requirements and defines Best Available Technique (BAT) with respect to the site's overall management systems. The information in the following sections outlines the systems at Finmere Quarry covering environmental, general operations, management and health & safety.

The focus of the report is to provide an overview of management responsibility and management techniques to be employed at the site.

2.2 Management Commitment

Opes operate a site management system (SMS) which integrates Health, Safety and Environment. The SMS is subject to annual audit and review.

The SMS has been designed to broadly follow the principles of BS EN ISO 14001:2015 – Environmental Management System, and BS OHSAS 18001 – Health & Safety Certification.

The senior management are committed to high standards of protection for people and the environment which is further defined in company policies and procedures. The key commitments include:

- Establishment of management systems to aid control of safety, health, environment and quality;
- Communication of information to those that work on behalf of the organisation that could impact on these systems;
- Selection criteria for personnel within key roles supported by appropriate training;
- Objectives and targets to drive continual improvement; and
- Allocation of resources to ensure systems are implemented and developed to a high standard.

2.3 SMS Outline

The system will incorporate the following elements:

Table 2-1: Overview of the SMS

System Aspect	Issues Incorporated
Policy	OPES MRF 2013 Ltd has a policy statement covering health and safety, environment and quality. This policy reflects the principles set out by the main board.
	The Policy and its implementation will be reviewed annually and the policy revised and updated as required.
	The Policy gives a commitment to:
	Comply with applicable environmental legislation as a minimum; and Pursue continuous improvements in its environmental performance and management system.
Planning	 Identification of potential/actual environmental impacts of an activity, including significance; Identification of legal requirements affecting an activity including the requirements for obtaining a permit or planning permission;

	 Identification of site controls required to reduce the potential/actual impact, actions required to mitigate any actual issues and actions required to ensure compliance with site legal requirements; Determination of site resource levels (e.g. manpower, equipment, etc.) required for the above controls to be effectives; and Identification of key environmental performance indicators. 	
Implementation	 Ensuring review of competence requirements and levels for key personnel – including contractors where required; Provision of adequate levels of training and written instruction to ensure that personnel have knowledge of or access to information required to ensure safe and efficient operation of the facility; Implementation of process control procedures including records maintenance, and logging of events/issues with the potential to impact on the environment; and 	
	 Ensuring effective maintenance of the plant to ensure performance is optimised and risk to the environment especially in the event of plant failure is minimised. 	
Monitoring	 Emissions monitoring and reporting requirements; Waste Monitoring – this addresses the ongoing checking of waste produced; and Non-Compliance and Corrective Action – detailing reporting requirements in the event of an incident (Actual/potential) and the action required to mitigate the issue and prevent a recurrence. 	
Auditing	Internal auditing is undertaken by site personnel and/or appointed consultants trained in auditing techniques and is used for an ongoing assessment of the compliance of the site with specified controls, EMS and legal requirements.	
Management Review	Management undertakes a review of key data to ensure ongoing effective operation of the facility. The information review will include audit report, performance against operational targets, risk identificational incident management.	
Reporting	Management undertakes a review of key data to ensure ongoing effective operation of the facility. The information review will include – audit report, performance against operational targets, risk identification and incident management.	

This system will ensure consideration of environmental issues at all stages of management and control.

3. Organisation and Responsibilities

3.1 Organisation Structure

Environmental responsibility for individual operations will be assigned throughout the site management structure and are defined through the management system.

The General Site Manager is the designated management representative, with overall control of the management system at the plant including the ability to ensure programmes are realised and translated into activities on the plant.

The organogram for the site is shown in Figure 1 below.

Figure 1: Site Organogram



3.2 Roles and Responsibilities

Operational staff for the landfill and MRF are shared to provide operational flexibility. Some brief descriptions of the responsibilities of those staff that are involved in operating the plant are outlined below.

Table 3-1: Roles and Responsibilities

Position	Responsibility
Managing Director	The Managing Director will have overall responsibility for employees and operations; will report into and liaise with the Board on contract and operational issues; will have overall responsibility for maintenance and refurbishment; and will work with the Board to source suitable third party waste for disposal at the Facility.
General Site Manager	The General Site Manager acting as the day-to-day manager of facility operatives, will have responsibility for ensuring that: • The site is available to receive waste;

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Management Plan

Position	Responsibility
	 The site is operating within the parameters of the Environmental Permit and appropriate planning regulations including odour management requirements; Any odour complaints are fully investigated, and appropriate corrective action is taken as necessary; and Regular daily 'sniff tests' are undertaken to check for odour. Responsibility for ensuring that structural and moving parts are operating as per the operating manual and in line with SHE requirements. Will be responsible for ensuring that sufficient replacement parts and consumables are on site for continuous operation to occur.
TCM Landfill TCM MRF	The Assistant Site Managers will report directly to the General Site Manager. The TCM is the CoTC (Certificates of Technical Competence) Holder for the Landfill and is responsible for: Ensuring compliance with the landfill environmental permit; Completion of daily SNIFF tests; Completion of monthly perimeter ambient and perimeter boundary gas borehole monitoring Completion of leachate monitoring; and Ensuring completion of any surface/ambient monitoring using FID. The TCM is the CoTC (Certificates of Technical Competence) Holder for the
	 MRF and is responsible for : Ensuring compliance with the MRF environmental permit; and Liaising with the Landfill TCM regarding any potential odour issues identified by monitoring which are due to MRF operations.
Assistant Site Managers – each permit area Plant Operators	Will be responsible for overseeing team operatives in the operation of the MRF and landfill, will have responsibility for ensuring plant operation in line with the operating manual and in line with SHE requirements. The Plant Operators will be experienced in operating loading equipment and will be contified to a contract via the CITP to initial the contribution.
	 will be certified as competent via the CITB training scheme or equivalent. MRF plant operator: Responsible for the daily inspection of the shredders, conveyors and other MRF equipment. Ensure that the mobile deodoriser is positioned and operating correctly if required at MRF. Ensure that dust is supressed via the mobile bowser on equipment and facilities to prevent fugitive releases of odour and dust. Construct stockpiles away from doorways so fugitive odour is reduced from becoming windblown.
	 Landfill plant operator: Responsible for the daily inspection of landfill compactors and other landfill equipment; Responsible for the application of daily cover to reduce fugitive releases from the cells; Ensure that the static/mobile deodorisers are positioned and operating correctly at the landfill. Ensure that integrity of current boreholes, gas infrastructure is upheld, and any damage is recorded.
Accounts Manager	The Plant Operator will be responsible for the daily inspection of the equipment, defect reporting, stockpiling and loading operations and maintaining the safety and security of the tipping floor. Liaison with the Weighbridge Operator with regard to incoming and outgoing vehicles will form part of the postholder's duty. Will be responsible for sourcing suitable third-party waste for disposal at the
Weighbridge Operator	Landfill or processing through the MRF. An experienced Weighbridge Operator will ensure that vehicles entering the site are authorised using the computerised transaction system. In addition, the correct operation of the weighbridge, the computerised transaction recording, duty of care checks and liaising with the Plant Operator by radio will form part of the postholder's duties.

Position	Responsibility		
	The weighbridge operator will be responsible for identifying any particularly odorous waste loads delivered at the point of waste acceptance.		
Construction Manager	In liaison with the Landfill TCM is responsible for construction operations at the site including:		
	Developing designs for landfill development (e.g. cells, leachate, gas infrastructure;		
	Selection, appointment and management of competent contractors to undertake construction activities		
	Development of construction quality assurance (CQA) plans and production of CQA reports		
Site Surveyor	Qualified surveyor who is responsible for undertaking all site survey requirements including monitoring cell levels to ensure filling in accordance with approved plan and monitoring of relevant levels to facilitate accurate monitoring of leachate in accordance with site permit requirements.		

The site management team is also assisted by external appointed specialists including:

- Liaison Manager appointed sub-contractor which is a resource shared with the Land/Quarry Owner to facilitate discussions with the local community;
- External Environment Manager appointed sub-contractor to provide support in relation to environmental management;
- Gas and Leachate contractors to facilitate development and management of the relevant gas and leachate management infrastructure; and
- Other specialist consultants providing support in relation to regulatory compliance, engineering and design, planning support and odour investigation.

3.3 Technical Competence

A technically competent person will be available on site in accordance with the regulatory attendance requirements. In his absence a nominated deputy will be available. The technically competent person, or nominated deputy, will be responsible for the control of incoming and outgoing vehicles, checking Duty of Care documentation, inspecting waste to ensure compliance with permit conditions, keeping and maintaining all records. The technically competent person, or nominated deputy, will have overall responsibility for ensuring high standards of housekeeping and dust control are maintained throughout the site.

3.4 Training Provision

All staff will receive instruction and training, both verbal and documented, in all relevant aspects of operational procedures, permit requirements in relation to operations and the environment, health and safety and general requirements of the site management plan. A copy of the permit and approved site management plan will be kept available on site for reference when required by all site staff carrying out work under the requirements of the permit.

Training will be delivered in the workplace by internal training staff or by managers, although formal training courses such as CITB certification for plant operators or CoTC certification for TCM personnel will be employed were required.

3.4.1 New Starters

Each position at the site will be covered by a general job description detailing key skills, responsibilities and reporting structure. It will be standard procedure for new process operators to be given comprehensive "on the job" training before they take full responsibility for their post. Supervision will be provided for as long as is necessary to ensure that the required skills have been imparted.

3.4.2 Contractors

Site rules will be provided to all contractors using or visiting the site. These rules will describe basic safety and operational precautions to be observed while at the site.

Instances of drivers or contractors not following site rules or behaving inappropriately will result in warnings. If necessary, requests to leave site and/or barring from future visits to the site will be implemented.

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4. Operational Controls

4.1 Operational Areas

4.1.1 Landfill Operations

The landfill is regulated under Environmental Permit EPR/FB3301CV which permits the following activities:

Table 4-1: Permitted Landfill Activities

Activity Reference	WFD Annex I and II Operations	Activity Listed in Schedule 1 of EPR 2016, as amended	Description of Specified Activity	Limits of Specified Activity
A1 – boundary as shown in red on the plan in Schedule 7	D5 –Specially engineered landfill and R10 – Land treatment resulting in benefit to agriculture or ecology	Section 5.2 Part A(1) (a), The disposal of waste in a landfill.	Landfill for non- hazardous waste and landfill restoration	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in conditions 2.7, as an integral part of landfilling. The activity shall not extend beyond the area of land edged in red on the site plan at Schedule 7 to this permit.
Directly Assoc	ciated Activities	I	I	
A2 boundary as shown in red on the plan in schedule 7	D8 – Biological treatment of waste D9 - Physico- chemical treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12	Leachate management. Physico-chemical and or biological treatment of leachate	Storage and physico chemical and/or biological treatment of leachate in a facility with a capacity of <50 t/day	Leachate arising from the landfill.
A3 –	R1 - Use principally	Landfill gas utilisation	Pre-treatment and utilisation	Treatment and utilisation of landfill gas arising from the
A4 – boundary as shown in red on the plan in schedule 7	D10 - Incineration on land	Landfill gas flaring	Flaring of landfill gas for disposal in an appliance.	Landfill gas arising from the landfill.
A5 – boundary as shown in red on the plan in schedule 7	D6 - Release into a water body except seas / oceans	Water discharges to controlled waters	Discharges of site drainage from the landfill	From surface water management system to point of entry to controlled waters
A6 – boundary as shown in red on the plan in schedule 7	D6 – release to water body except seas / oceans	Water discharges to land	Discharges of site drainage from the landfill	From surface water and groundwater management system to point of entry to land
A7 – boundary as shown in red on the plan	N/A	Fuel storage	Storage of fuel for operation of plant and equipment.	Fuel storage tank.

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Activity Reference	WFD Annex I and II Operations	Activity Listed in Schedule 1 of EPR 2016, as amended	Description of Specified Activity	Limits of Specified Activity
in schedule 7				
Waste Operati	ons			
A8 - boundary as shown in yellow on the plan in schedule 7	D1 – Deposit into or on land	Landfill for inert waste	Landfill for inert waste (landfill classification under the landfill directive)	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in condition 2.7, as an integral part of landfilling. The activity shall not extend beyond the area of land edged in yellow on the site plan at Schedule 7 to this permit.

The key operations of the landfill is listed below:

- Unloading waste;
- Waste acceptance of non-hazardous waste streams;
- Disposal of wastes in lined landfill cells and later capped;
- Collection and storage of leachate;
- Offsite treatment and disposal of leachate;
- Dust suppression;
- Odour neutralisation;
- Gas utilisation; and
- LFG flaring operations.

4.1.2 MRF Operations

The MRF is regulated under Environmental Permit EPR/ AB3908CZ. which permits the following activities:

Table 4-2: Permitted MRF Activities

Activity Reference	Listed in Schedule 1 of EPR 2016, as amended	WFD Annex I and II Operations Activity	Limits of Specified Activity	
A1	Section 5.4 A(1) a) (iii) - Disposal of non-hazardous waste with a capacity exceeding 50 tpd involving pre-treatment of waste for incineration or co-incineration.	R3: Recycling/reclamation of organic substances which are not used as solvents R4: Recycling/reclamation of metals and metal compounds.	Treatment consisting only of manual sorting, separation, screening, and shredding. Separation and sorting of	
A2	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 tpd involving pre-treatment of waste for incineration or co-incineration.	R5: Recycling/reclamation of other inorganic materials D9: Physico-chemical treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D 1 to D 12	recovered materials, with light materials suitable for the production of SRF or RDF fed back into the SRF/RDF production line.	
A3	Section 5.4 Part A(1)(a) (iv) - Disposal of non-hazardous waste with a capacity exceeding 50 tpd involving treatment of slags and ashes.	R4: Recycling/reclamation of metals and metal compounds. R5: Recycling/reclamation of other inorganic materials D9: Physico-chemical treatment not	Treatment consisting only of manual sorting, separation, screening, and shredding. Separation and sorting of recovered materials, with materials comprising slags and ashes	
A4	Section Part A(1)(b) (iii) – Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tpd involving treatment of slags and ashes.	specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D 1 to D 12		

Activity Reference	Listed in Schedule 1 of EPR 2016, as amended	WFD Annex I and II Operations Activity	Limits of Specified Activity
A5	Section 5.4 Part A(1)(a) (ii) - Disposal of non-hazardous waste with a capacity exceeding 50 tpd involving physico-chemical treatment of waste.	D9: Physico-chemical treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D 1 to D 12	Treatment consisting only of manual sorting, separation, screening, and shredding. Separation and sorting of recovered materials, with materials comprising slags and ashes
Waste Opera	ations		
A6	Material recycling operation	R3 – Recycling/ reclamation of organic substances which are not used as solvents R4 - Recycling/ reclamation of metals and metal compounds R5 - Recycling/ reclamation of other inorganic substances R13 – Storage of wastes pending removal off site	The storage, treatment and sorting of mineral and CD&E wastes. Treatment consisting only of manual sorting, separation, crushing, screening, baling, shredding, blending and compaction of waste into different components for recovery.
Directly Ass	cociated Activities		recovery.
A7	Storage of waste prior to treatment	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)	Storage of non-hazardous waste prior to treatment from receipt of waste to treatment. Waste types suitable for acceptance are limited to those specified in Table S2.2.
A8	Pre-treatment via physical treatment	R4: Recycling/reclamation of metals and metal compounds R5: Recycling/reclamation of other inorganic materials	Pre-shredding of the waste to facilitate treatment. There shall be no treatment of hazardous waste. Waste types suitable for acceptance are limited to those specified in Table S2.2.
A9	Bulking of recyclable wastes recovered as an incidental part of the production of Solid Recovered Fuel and Refuse Derived Fuel	R3 – Recycling/ reclamation of organic substances which are not used as solvents R4 - Recycling/ reclamation of metals and metal compounds R5 - Recycling/ reclamation of other inorganic substances R13 – Storage of wastes pending removal off site	Waste types as specified in Table S2.2
A10	Storage of processed materials for recycling	R13: Storage of waste pending the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced).	From storage of processed materials to dispatch off site for recovery.
A11	Physical treatment of waste prior to recovery or disposal	R3: Recycling/reclamation of organic substances which are not used as solvents R4: Recycling/reclamation of metals and metal compounds R5: Recycling/reclamation of other inorganic compounds	Baling, compaction and wrapping the SRF and RDF to aid storage and transport
A12	Storage of processed materials for recovery or disposal	R13: Storage of waste pending the operations numbered R1 to R12 (excluding temporary storage, pending	Storage of SRF and RDF prior to removal off site

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Activity Reference	Listed in Schedule 1 of EPR 2016, as amended	WFD Annex I and II Operations Activity	Limits of Specified Activity
		collection, on the site where it is produced). D15: Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced)	
A13	Surface water collection and storage	Collection and storage of uncontaminated roof and site surface water.	From the collection of uncontaminated roof and site surface water from non-operational areas only to reuse within the facility or discharge off-site.

The key operations that take place within the MRF are listed below:

- Unloading waste/recyclates;
- Waste storage and acceptance of non-hazardous waste streams within containers;
- Storage of wastes/recyclates in containers;
- · Removal of recyclates;
- Treatment of wastes through mechanical shredding and crushing;
- · Separations of wastes via hand picking and over band magnet;
- Dust suppression;
- Odour neutralisation; and
- Disposal of wastes.

4.2 Hours of Operation

Operating Day	Hours for Waste Acceptance	
Monday to Friday	07.00 – 18.00	
Saturdays	07.00 – 13.00	
Sundays and Bank holidays	Closed	

4.3 Waste Acceptance

The site requirements for the waste acceptance are defined in the written site procedure (SMS-002 Landfill Classification & Waste Acceptance) which meet EA regulatory requirements as detailed in SGN S5.02 and SGN S5.06 and will be subject to ongoing review and revision as appropriate. The current version will be kept at the site and will be made available for inspection.

4.3.1 Waste Acceptance Procedures

4.3.1.1 Prohibited Waste

The following wastes are specifically prohibited from disposal at the installation:

- Whole used tyres (from July 2003); excluding those used as engineering material, and shredded used tyres (from July 2006).
- Liquid waste;
- Chemical substances arising from research and development or teaching activities which are not identified and/or are new and whose effects on man and/or the environment are not known (e.g. laboratory residues); and
- Wastes with a code beginning 07 05 and 16 03 that include waste medicinal products and pharmaceutically active materials arising from their manufacture
- Wastes that have been diluted or mixed solely to meet the relevant waste acceptance criteria

Finmere Quarry Landfill is also not permitted to accept hazardous waste, it is classified as a landfill for non-hazardous and inert waste.

4.3.1.2 Stable and Non-Reactive Hazardous Wastes

Stable and non-reactive waste will not be disposed of at Finmere Quarry Landfill.

4.3.1.3 Other wastes that are prohibited at the site

The site will not accept any Plasterboard or Gypsum Wastes for disposal. This includes loads where plasterboard / gypsum have been mixed with other wastes.

The site will not accept any asbestos waste in either bonded or unbounded form.

4.3.2 Permitted Wastes

Waste types accepted at the Landfill site are as specified in the Environmental Permit EPR/FB3301CV, Schedule 2 and those accepted at the MRF are as specified in the Environmental Permit EPR/AB3908CZ Schedule 2.

4.3.3 Annual Throughput

4.3.3.1 Landfill annual tonnages:

Category	Limit Tonnes / Year
Non-hazardous waste	250,000
Inert waste	155,000
Waste for restoration	50,000
Total	455,000

4.3.3.2 MRF annual tonnages:

Category	Limit Tonnes / Year
Commercial and Industrial waste	250,000
Total	250,000

4.4 General Operational Control

4.4.1 Trained Operators

There is reliance upon trained staff to operate the plant and bring to the job a considerable body of expertise to ensure correct and proper procedures for operating equipment are followed.

4.4.2 Prevention of Pollution

All vehicles, plant and equipment used on site in connection with the specified waste management operations will be operated and maintained with the objective of preventing potentially polluting leaks, spillages of wastes or other potentially polluting materials.

Site control measures include:

- The MRF yard area and main access road is constructed from concrete designed to an appropriate British Standard to enhance surface durability. Pavements will be laid to falls which facilitate surface water drainage;
- Daily site inspections will check all containment bunds and plant areas for signs of leak or defect –
 repairs will be undertaken promptly and accumulated material in the containment bund will be
 removed to ensure that containment capacity is not compromised; and

• Tanks, pumps and site vehicles will be maintained in line with a defined preventative maintenance schedule to ensure the plant integrity and operational efficiency is maintained.

In the unlikely event of a pollution incident occurring on site:

- Minor spillages will be dealt with by use of appropriate absorbent materials and used absorbent will be subsequently appropriately disposed; and
- In the event of a major spillage, immediate action will be taken to contain the spill. Absorbent
 materials will be used for spillage control and containment. Absorbents will be stored in waterproof
 container(s) and all operatives will be made aware of their location. Immediately following clean up
 and appropriate containment the Environment Agency shall be informed and a note to this effect
 will be made in the site diary.

4.4.3 **Dust Management**

Due to the nature of some wastes, particulate matter may pose a nuisance. The following are likely sources:

- The placement of wastes
- Vehicle movement on site
- Site engineering works
- · Weather erosion of landfill surfaces

It will be the Site Managers responsibility to ensure that the nuisances and hazards arising from the site due to dust are minimised. Dust will be prevented on the site wherever possible and the following mitigation measures will be employed:

- Vehicle Speed Limits To minimise the emissions of dust arising from the use of installation roads speed limits of 15 mph will be imposed for all vehicles using the installation.
- Sweeping of Access Road and Highway The main access road and installation road will be swept with a mechanical road sweeper as and when conditions dictate to minimise emissions of dust.
- **Spraying of Roads and Operational Areas -** During dry conditions a water bowser will be used to spray the installation roads and the operational area, prior to and during vehicle movements.
- Static Water Sprays In particularly sensitive locations or during adverse weather conditions consideration will be given to the operation of static water sprays, which will provide continuous protection against dust.
- Seeding of Earth Bunds, Stockpiles and Surfaces If necessary, bare earth surfaces will be seeded to provide protection against wind erosion and associated dust emissions. Stockpiles will be carefully sited to minimise potential for wind erosion.
- Acceptance of Waste May Cause Dust Waste which could cause a potential dust problem during and immediately following its deposit will only be accepted if the waste is bagged, otherwise contained or has been conditioned with water prior to delivery. Those waste streams that are considered to represent a high risk of emissions of particulate matter are identified in the Nuisance Risk Assessment (PR/FI/NW/1308/01/NRA). As such wastes will be pre-treated or contained, closure of the installation to these waste streams or use of an emergency tipping area for these waste streams, in certain meteorological conditions is not considered necessary.
- Filling Direction and Sequence In order to minimise the escape of dust from operational areas
 and minimise the impact of any escape that may occur consideration will be given to the strength
 and direction of the prevailing wind and the proximity of receptors when planning the sequence and
 direction of filling.
- Sheeting of Vehicles All vehicles using the installation will be instructed to ensure that their loads
 are adequately sheeted or otherwise contained. All loads of secondary aggregates or soils leaving
 the installation will also be sheeted. To avoid the escape of dust from vehicles whilst they are
 traversing site roads, they will not be permitted to unsheet (other than for the purposes of waste

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inspection) other than at the designated unsheeting area, which will be located immediately adjacent to the active landfilling area.

- Wheel Wash A wheel wash is provided at the Site adjacent to the Site office. This mechanical
 wheel wash will be maintained in accordance with the manufacturer's instructions and the water will
 be recirculated where possible. When deemed necessary by the Site Manager, all vehicles exiting
 the installation will use the wheel wash in order to prevent materials being deposited on the highway.
- Landfill Construction Work Engineering works carried out as part of the installation construction
 activities can be a potential source of dust, particularly bulk excavation and earthmoving activities.
 Procedures to minimise the environmental impacts of these activities with respect to dust emissions
 will be incorporated within the contract documentation.

For further details Please refer to the SMS-003 Dust Management Plan (60557533-ACM-ZZ-OO-RP-ENV-DMP-R03).

4.4.4 Odour Management

The main sources of odours at the facilities are likely to arise from the following:

- Biodegradable waste that has been stored for significant periods prior to delivery (e.g. wastes from transfer stations);
- Malodorous waste;;
- Old waste, which is partially degraded, and is disturbed by digging or drilling;
- Landfill gas and leachate containing compounds with low odour thresholds, e.g. organo-sulphur compounds, aromatic hydrocarbons, hydrogen sulphide, esters and carboxylic acids; and
- Restoration activities involving the spreading of agricultural or sewage sludges.

It will be the Site Managers responsibility to ensure that the nuisances and hazards arising from the site due to odour are minimised. Odour will be prevented on the site wherever possible and the following mitigation measures will be employed:

- Liaison with Neighbours If at any time an action that is likely to cause temporary odour is being
 considered then before such action is taken the Site Manager will be informed. Neighbours who
 may be affected will be contacted in advance to advise them of the operation being undertaken and
 that any odour will be of a temporary nature.
- Waste Storage and Transport For biodegradable potentially odorous waste, the Site Manager
 will liaise with the waste producers and transport contractors, with a view to minimising the storage
 and transport periods for waste being delivered to the site.
- Installation Trials Activities which are known to present a potential odour risk will only be undertaken after small scale trials have been carried out to assess the odour impact and will only be undertaken when the prevailing wind direction is away from sensitive receptors.
- Location of Gas and Leachate Infrastructure As far as possible gas and leachate infrastructure will not be located in close proximity to sensitive receptors.
- Plant and Equipment Sufficient plant and equipment will be maintained at the landfilling area to ensure that all delivered waste can be adequately and progressively placed, compacted and covered. These operational procedures will ensure that only a small area of waste is exposed at any one time, thereby minimising the risk of odour emissions from imported waste.
- **Provision of Cover Materials** The Site Manager will ensure that there are adequate supplies of daily and intermediate cover material available at the installation..
- **Compaction of Waste -** The process of progressively compacting the waste during the day using mobile compaction equipment will assist in the prevention of odours.

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- Application of Daily and Intermediate Cover A layer of cover material will be applied to
 deposited waste at the end of the working day and this will assist in controlling odour from recently
 deposited waste. The application of additional intermediate cover over areas where landfilling will
 be temporarily suspended will provide additional protection.
- Progressive Capping of Completed Areas Completed areas of the installation will be capped promptly.
- Avoiding Disturbance to Previously Emplaced Waste Wherever possible, measures will be
 taken to ensure that previously emplaced waste is not disturbed, exposed or moved. In the event
 that it is disturbed, (e.g. during the installation of gas and leachate monitoring and extraction wells,
 it will be removed and buried on the same day). Larger areas taking more than one day to complete
 will be subject to a method statement to be agreed with the Environment Agency.
- **Pre-Booking of Odorous Waste -** Wastes identified as being difficult due to their odorous nature will be required to book in the day before.
- Pre-Treatment of Odorous Waste Discussions will be held with the producer of the waste, prior
 to the acceptance of odorous waste at the installation, to ensure pre-treatment of the waste to
 reduce its odour potential is undertaken prior to delivery.
- Disposal of High Odour Risk Waste Streams The management practices in place at the installation include the pre-vetting of odorous waste and development of a plan to handle these wastes giving consideration of the distance to sensitive receptors. Therefore, the criteria that will be adopted for the closure of the installation to high-risk waste streams are not considered necessary. The Weighbridge Operator will advise the plant operatives of the arrival of any high odour risk waste so that appropriate preparations to receive the waste can be made at the operational area. The odorous waste will be disposed of in accordance with the plan previously developed for the specific waste. The plans usually specify that high odour risk waste will be deposited in front of the working face and will be covered immediately by other non-malodorous waste materials.
- Emergency Tipping Area The criteria for using an emergency tipping area will be dependent
 upon the height of the landfilling area, its proximity to sensitive receptors and prevailing weather
 conditions.
- Landfill Gas Management As filling progresses a horizontal gas collection system will be installed in operational areas and following completion of operations a gas extraction system will be installed progressively in the parts of the installation that have been capped and restored. This active extraction system will be operated during the operational and post closure period. It will be maintained regularly to ensure its continued integrity and will therefore minimise potential odorous emissions caused by the uncontrolled venting of landfill gas. Gas collected by the extraction system will be utilised in a power generation plant where practicable or alternatively be flared.
- Leachate Management All leachate extraction wells and monitoring points will be fitted with a cap
 or bullet to minimise potentially odorous emissions. Leachate is stored in a sealed tank. The
 leachate management system is checked weekly and this includes checking and maintenance of
 seals to minimise any odour emission.
- Odour Management Sprays If considered necessary, odour management sprays containing
 either a masking or neutralising agent may be utilised around sensitive areas of the installation.
 However, their use will be monitored closely to ensure their effectiveness and avoid the use of
 compounds that are considered more offensive than the smell they are being used to mask.

For further details Please refer to the SMS-004 Odour Management Plan (60537533-ACM-XX-00-RP-ENV-OMP-R03).

4.4.5 Noise Management

Due to the nature of the operations carried out at the site, there will be emissions of noise. The main sources of noise are considered to be as follows:

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- Vehicles using the installation;
- Reversing bleepers;
- Mobile plant, (e.g. excavators, compactors, bulldozers, dump trucks);
- Fixed plant, (e.g. pumps, generators, gas flares, leachate treatment equipment, MRF processing equipment, crusher and screening equipment and;
- Audible bird scaring equipment.

It will be the Site Managers responsibility to ensure that the nuisances and hazards arising from the site due to noise are minimised. Noise will be prevented on the site wherever possible and the following mitigation measures will be employed:

- **Liaison with Neighbours** Regular liaison will be maintained with neighbours to ensure they are notified in advance of activities that may give rise to increased noise levels.
- **Training-** All installation personnel will be trained in the need to minimise installation noise and will be responsible for monitoring and reporting excessive noise when carrying out their everyday roles.
- Operational Hours In order to minimise disturbance to neighbours waste disposal operations
 involving the use of mobile plant and equipment and the importation of waste will not be carried on
 outside permitted operational hours.
- **Engineering Works** Contract documentation governing engineering works will incorporate specific responsibility for minimising emissions of noise during the work.
- Noise Suppression Equipment Where appropriate all site equipment and plant are fitted with
 silencers or noise management equipment; such as manual overrides on audible alarms, white
 noise reversing alarms and exhaust silencers. The site maintenance programme ensures that all
 site vehicles, plant and equipment is checked regularly and is serviced and maintained in
 accordance with the manufacturers' instructions. Also where appropriate pumps are electric, where
 this is not possible, the diesel pumps used are enclosed to reduce noise.
- Selection of Plant and Equipment During the selection process for new plant and equipment
 consideration will be given to the need to meet all legislation and statutory guidance on noise levels
 and to minimise levels of noise from selected equipment. If older items of plant are found to give
 rise to unacceptable noise levels consideration will be given to their replacement with quieter
 designs.
- **Siting of Plant and Equipment** When siting noisy equipment consideration will be given to the proximity of receptors and also the prevailing wind direction.
- Maintenance of Plant and Equipment All plant and equipment in use at the installation will be regularly maintained to minimise noise resulting from inefficient operation of pumps, generators and engines.
- Modification to Plant and Equipment If an item of plant is found to generate unacceptable noise levels consideration will be given to modifying the equipment to incorporate noise suppression equipment.
- Reversing Alarms Reversing alarms at the Site have been replaced with white noise reversing alarms, in order to reduce the noise emanating from the Site.
- Sound Barriers If noise levels are unacceptable in the vicinity of receptors, sound bunds and barriers may be constructed around operational areas and acoustic screening erected around fixed plant. For temporary plant, portable acoustic screens or straw bale enclosures will be considered if necessary.
- **Speed Limits** The imposition of a speed limit of 15 mph for all vehicles driving on the Site will reduce noise associated with high engine speeds.

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- Vehicle Circulation Routes Vehicles using the installation will travel across designated routes
 that have been designed and located so as to minimise nuisance and hazard to both internal
 installation users and receptors located outside the installation boundary.
- Road Maintenance The regular maintenance of roads to prevent the development of potholes will
 significantly reduce the noise generated particularly by empty waste carrying vehicles exiting the
 installation.
- Audible Bird Scaring Equipment Preference will be given to the use of passive methods of bird control. However, in the event it is found necessary to utilise audible techniques they will be located and operated so as to minimise the impacts of the noise.
- Monitoring of Meteorological Conditions Wind speed and direction will be routinely monitored
 and in certain circumstances i.e. when landfilling close to receptors, this will enable potential noise
 problems to be predicted and necessary remedial action, such as modifications to the method of
 working, to be planned and implemented.
- Regular Inspection/Monitoring The Site Manager or his deputy will ensure that daily inspections
 are made of the installation and its perimeter in order to identify any unacceptable or unexpected
 sources of noise and to establish whether noise is discernible at the perimeter of the installation.
 Particular attention will be paid to the active landfilling area, to areas where gas and leachate is
 actively being managed and the perimeter of the installation, which is close to sensitive receptors.

For further details Please refer to the SMS-005 Noise Management Plan (60556545-ACM-XX-00-RP-ENV-NVMP-R02)..

4.4.6 Pest Management

The site may accept wastes that attract pests. It will be the Site Managers responsibility to ensure that the nuisances and hazards arising from the site due to pests are minimised. The following mitigation measures will be employed:

- Plant and equipment Sufficient plant and equipment will be maintained at the operational area
 to ensure that all delivered waste can be adequately and progressively placed, compacted and
 covered. These operational procedures will ensure that only a small area of waste is exposed at
 any one time and that a high waste density is achieved, thereby reducing the opportunities for rats
 to feed on and shelter within the waste mass, and reduce the probability of flies emerging from eggs
 present within the waste.
- Provision of Cover Materials The Site Management or his deputy will ensure there are adequate supplies of daily and intermediate cover material available at the installation.
- High Risk Waste Streams For those waste streams that have been identified as a high risk within
 the risk assessment, the following additional measures will be taken:
 - Prior to acceptance of the waste at the installation, the producer of the waste will be contacted to ensure all practicable measures are taken prior to delivery to minimise the risk associated with birds, vermin and flies; and
 - In the event of problems developing, raised either by complaints or as monitored by
 installation staff, which cannot be remedied by immediate action, the installation will
 cease to accept the problematic waste stream until further measures have been agreed
 with the producer to prevent problems from re-occurring.
- Restricted Operational Area The installation will be operated in a cellular manner, with operations
 being restricted to a relatively small area. This factor combined with the high levels of operational
 activity within this area will serve to discourage birds and other scavengers from the installation.
- Compaction of Waste The process of progressively compacting the waste during the day using
 mobile compaction equipment will minimise the risk of infestation by vermin and insects.
- Application of Daily and Intermediate Cover A layer of cover material will be applied to
 deposited waste at the end of the working day and this will assist in preventing vermin and insect
 infestation and scavenging by birds. The application of additional intermediate cover over areas
 where landfilling will be temporarily suspended will provide additional protection, particularly against
 birds that are liable to scavenge through daily cover materials.

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- Capping of Completed Areas Completed areas of the installation will be capped promptly; this
 will provide further protection against pest infestation and scavenging.
- Avoiding Disturbance to Previously Emplaced Waste Wherever possible, measures will be taken to ensure that previously emplaced waste is not disturbed, exposed or moved.
- Bird Abatement Techniques In the event that scavenging birds give rise to problems at the installation the following bird abatement techniques will be considered:
 - Human Presence;
 - Intermittent gas cannons;
 - Pre-recorded distress calls;
 - Bird kites which mimic birds of prey;
 - Helium balloons;
 - Birds of prey (this has to be for limited time only due to Kite being present in area);
 - Scarecrows.

Selection of the most appropriate technique/s will be dependent upon a number of factors (e.g. preference will be given to passive techniques to minimise disturbance to neighbours). Consideration will be given to the presence of protected bird species in the vicinity of the installation, prior to utilising falconry/birds of prey. Techniques can also be rendered ineffective due to habituation and therefore a combination of different techniques will be used to ensure their individual effectiveness.

For further information please refer to the sites Pest Management Plan (60556545-ACM-XX-00-RP-ENV-PMP-R02).

4.4.7 Management of Litter, Dust and Mud

Site operations may generate levels of litter, dust and mud. It will be the site managers responsibility to ensure that that nuisances and hazards from the site are minimised. Please refer to the mitigations section 4.4.3, the Dust Management (SMS-003) and the SMS007 Nuisance Management Plan (60537533-ACM-XX-00-RP-ENV-NUMP-R02).

4.5 Landfill Specific Operational Control

4.5.1 Engineering Management

The landfill areas at Finmere will be engineered to meet regulatory requirements. This takes into account the sub-grade, geological barriers, artificial mineral barriers, artificial sealing liners, leachate collection layer, leachate collection pipework, leachate extraction wells, surface water drainage layer, groundwater management system, leakage detection systems, leachate storage and treatment. Documents have been drawn up to include engineering landfill phasing and pre settlement models, and a restoration plan.

For further information please refer to the SMS-011 Environmental Setting and Site Design (60556545-ACM-XX-00-RP-ENV-ESSD-R02). The precise engineering requirements for individual cells and landfill infrastructure will be detailed in construction quality assurance (CQA) plans that are subject to EA approval prior to implementation.

4.5.2 Leachate Management

There are no leachate treatment operations occurring at Finmere Quarry Landfill. Leachate from non-hazardous cells is collected via leachate pipework and wells prior to pumping to dedicated storage tanks located adjacent to the gas compound in the centre of the site. The leachate is subsequently transferred offsite for treatment via road tanker.

For further information please refer to the SMS-012Leachate Management (60537533-ACM-ZZ-00-RP-ENV-LMP-R04)

4.5.3 Gas Management

Non-hazardous waste cells will be equipped with a network of gas extraction pipes and wells which are installed in a grid pattern. These feed an utilisation plant where the landfill gas can be monitored, controlled and utilised via the onsite gas engines to generate electricity. Gas which is of insufficient quality to combust in the engine or during periods when the engine is not available gas will be combusted in one of two permanent flares.

Landfill gas is monitored to ensure compliance with permit limits at the in-waste wells, the gas compound (engine and flares), and at perimeter gas boreholes along with monitoring of ambient conditions at points around the boundary.

For further information please refer to the SMS-013 Gas Management Plan (GMP Finmere 2020 V4).

4.5.4 Surface Water Management

Finmere Quarry Landfill collects surface run-off within a network of surface water drainage ditches which flow to:

- The Clean Water Lagoon in the centre of the site or to the surface water lagoon to the south of Cell 7 for surface run off from within the site; or
- The discharge point SWMP1 located on the eastern perimeter of the site close to Foxley Fields cottages. Perimeter drains to the north and east flow to this point.

Surface water monitoring takes place as per the environmental permit to ensure compliance with any defined permit limits.

Surface water management for the MRF is for surface run-off only which is collected through a central drain flowing to a perimeter drain equipped with an interceptor and collection tank. Water is removed by bowser for suppression use or removed by tanker for offsite treatment.

For further information please refer to the SMS-014 Surface Water Management Plans (60556545-ACM-XX-00-RP-ENV-SWMP-R02 for the landfill and 60537533-ACM-XX-00-RP-ENV-SWMP-R02 for the MRF)

4.5.5 Groundwater Management

No groundwater abstractions will take place onsite. Landfill cells will be engineered with appropriate liners and/or geological barriers to meet the requirements of the Landfill Directive.

Groundwater monitoring will be undertaken at groundwater monitoring boreholes around the perimeter of the site to ensure compliance with limits in the environmental permit.

For more detailed information please refer to the SMS-015 Groundwater Management Plan (60556545-ACM-XX-00-RP-ENV-GWMP-R02).

4.6 MRF Specific Operational Control

To enhance the work / process experience provided by operators, procedures will be defined covering relevant aspects of the operation of mechanical treatment and recycling plant to ensure safe operation and to minimise the risk of impact on the environment. Such procedures will be subject to periodic review.

4.7 Maintenance Management

Maintenance management for the facility will include:

- A series of maintenance procedures will be developed for the main items of plant at the site including
 mobile and fixed plant equipment. This procedure will provide an indication of reference documents
 along with procedural steps including who will undertake the work, the relevant mechanism for
 recording the information and the action/reporting to be completed if an issue is identified.
- There will be a significant element of planned preventative maintenance to ensure high standards of performance.
- Maintenance scheduling will be undertaken making reference to statutory requirements, manufacturer's recommendations and from plant history.
- Following maintenance, details of work undertaken will be recorded.
- Monthly reports relating to maintenance activities and effectiveness are provided to senior management including any recommendations for further action.

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 All plant items will be serviced and maintained according to manufacturer's schedules and recommendations. Plant and equipment will be inspected and serviced by OPES MRF 2013 Limited utilising a plant inspection pro-forma.

4.8 Monitoring and Control Systems

4.8.1 Emissions Monitoring

As part of the management system, the Operator has established and maintains documented procedures for monitoring and measuring the key characteristics of operations and activities which details the requirements for infrastructure and emissions monitoring in accordance with permit requirements. Monitoring may be undertaken by internal operators or third party specialists in accordance with relevant standards. For further information on monitoring requirements, please refer to the SMS 08 Site Protection and Monitoring Plan (60556545-ACM-XX-00-RP-ENV-SPMP-R02).

4.8.2 Audits

Periodic audits are undertaken to verify the operation of the management system, compliance with requirements and to assess effectiveness. The General Manager will establish the audit programme, ensure that it is carried out, and report the outcome to the management team. The auditors (either internal and/or external) will report their audits to the General Manager and the Managing Director who will formulate any corrective actions necessary and report on their completion; progress will be monitored by the TCM. During audits all personnel will be expected to identify any need for improvement.

4.8.3 Management Review

The Management Review covers the whole management system and includes feedback from Stakeholders as appropriate. These reviews will take place on an annual basis, as a minimum. An output from the Senior Management Review will be used to prepare improvement plans as appropriate.

4.9 Contingency Plans

Mechanical problems or breakdowns which may require the replacement or repair of component parts and render plant/equipment required for general site operations ineffective or non-operational have been considered.

To minimise and mitigate the potential impact of such breakdowns the following will be in place:

- A preventative maintenance schedule will be developed to reduce the risk of plant breakdown;
- A list of suppliers or contractors for critical equipment and/or standby equipment will be maintained;
- Third party maintenance personnel for the LFG Utilisation Compound can be called to the site in the event of any breakdown of critical plant. The site will respond within 8 hours of such breakdowns and repairs will be effected within 24 hours if practicable. The EA will be notified of any breakdown which has the potential to cause environmental pollution or in the event that repairs will mean the plant outage will take longer than 24 hours to rectify.

4.10 Site Infrastructure

4.10.1 Roads and Pavements

A concrete installation access road is provided from the installation entrance at the A421 to the site to the entrance gate at which point the road changes to compacted hardstanding and continues towards the weighbridge area and then down to the MRF at the back of site. Site roads are constructed with falls to facilitate drainage.

4.10.2 Weighbridge

A weighbridge and associated office is installed on the main internal access road towards the centre of the site. All vehicles arriving at the facility are required to report to the weighbridge office. A Weighbridge Operator will be stationed in the office to administer incoming loads of waste.

4.10.3 Wheel Wash

A wheel wash is provided on the internal access road at the front of the site prior to vehicles exiting through the gate onto the access road to the A421. This mechanical wheel wash will be maintained in accordance with the manufacturer's instructions. Water will be recirculated and when necessary will be topped up using water from the surface water lagoon to the south of cell 7. All delivery and collection vehicles exiting the installation will use the wheel wash in order to prevent materials being deposited on the highway.

4.10.4 Fencing and Security

The installation will have the benefit of either a post and wire stock fencing (minimum 1m high) or hedgerows which extend around the perimeter of the installation.

4.10.5 Lighting

The car-parking area between the Site office and the changing rooms will have security lighting to discourage unauthorised visitors during the hours of darkness.

4.10.6 Infrastructure Plan

This Management Plan is supported by site plans and drawings which highlight where the activities will occur including installations, buildings, storage facilities, vulnerable receptors, drainage and utilities. Please refer to the Figures attached in the ESSD document (60556545-ACM-XX-00-RP-ENV-SWMP-R02).

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5. Resource Management

5.1 Raw Material Inventory

5.1.1 Engineering Materials

The primary materials that will be used to engineer the installation are as follows:-

- HDPE and clay for basal and side slope engineering;
- VFPE for capping laver:
- Gravel for leachate drainage blanket;
- Concrete and/or tarmacadam and associated materials for construction of main access road and hard standing areas;
- Aggregate for construction and maintenance of installation roads; and
- High and medium density polyethylene for construction of leachate drains, landfill gas pipelines, well components and monitoring installations.

The use of these specific materials will be a requirement of the Permit and their primary role will be to protect the environment. The quantity of material to be used will also be a requirement of the Permit. They are considered to be fundamentally inert and therefore their environmental impact is considered negligible. The consideration of alternatives is not therefore appropriate or necessary.

5.1.2 Fuels

Fuels utilised at the installation will include:-

- Gas oil/diesel:
- Hydraulic oil and;
- Engine oils.

The use of fuels at the installation will be optimised through an annual review and inventory of energy use.

Specific fuels to be used will be those recommended by the plant manufacturer, bearing in mind the need to minimise environmental impacts.

5.1.3 Amenity Control Chemicals

A number of chemicals may be used at the installation, which will primarily be associated with control of amenity impacts, these will possibly include:-

- Pesticides to control insect and vermin infestation;
- Herbicide for amenity management; and
- Odour control chemicals.

The compounds to be used will be as recommended by specialist suppliers in order to optimise the effectiveness of the treatment and the biodegradability of the selected materials.

The quantity of such chemicals will be the minimum necessary to achieve successful control of amenity impacts.

5.1.4 Process Control Chemicals

The Site does not have a leachate treatment plant; therefore no process control chemicals will be required or stored at the Site.

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5.2 Raw Materials Management

5.2.1 Material Selection and Procurement

Raw materials will be selected and procured in accordance with defined SMS procedural requirements, taking into consideration:

- The environmental impact of materials across their entire life cycle;
- The impact on human health by considering harmful or hazardous properties;
- Sourcing from renewable and sustainable sources, where practicable;
- · Achieving design specifications and standards:
- Sourcing from local sources, where practicable; and
- The quality of the materials to be used, and their efficient use on site.

5.2.2 Material Management

Raw materials will be stored in the designated storage areas and relevant chemical data sheets will be held by the General Site Manager and will be located in the site offices.

5.2.3 Control of Substances Hazardous to Health (COSHH) Regulations Records

The Site COSHH File will contain details of all those substances used at the installation, which are considered to present a hazard to health. It will contain product safety data sheets, which will include details of chemical compositions, the associated hazards and recommended measures to control exposure. The file is held in the Site Manager's office.

5.2.4 Construction Quality Assurance Reports

The construction quality assurance reports will contain details on all the engineering materials, which were utilised during the construction of the various elements of the installation, including where applicable chemical composition and quantities used.

5.3 Water Use

Water use requirements for the site relate to water for:

- Dust suppression and road sweeping could be up to 25,000 m³ per annum dependent on ambient conditions: and
- Wheel wash approximately 1040 m³ per annum.

The above water requirements will be met from the surface water lagoon located to the south of cell 7. Water for the wheel wash will be recirculated as far as practicable.

5.4 Material Input Minimisation

As the majority of raw and auxiliary materials used at the installation are required to minimise the impact of the activities on the environment, any attempts to minimise their use may compromise the control and abatement systems and may not be appropriate. However wherever possible and where such systems will not be compromised, alternative materials will be considered, e.g. the use of suitable inert waste for the construction of installation roads.

5.5 Application of Waste Hierarchy

In line with Regulation 4 of the Waste Framework Directive, the waste hierarchy will be applied to wastes generated at site as follows:

5.5.1 Prevention

A waste minimisation audit will be undertaken at the installation repeated every four years in accordance with SGN guidance. Minimisation techniques which will be employed at the site will include:

• Routine inspections for early detection of leakage and other emission issues – this will be followed by prompt action to address any issues noted;

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- Maintenance of high standard of housekeeping across the Site; while
- The aim of the operation as a whole is to reduce the overall volume of the waste material going to landfill.

5.5.2 Preparing For Reuse

Waste materials will be stored in designated areas, such that material segregation is achieved where practicable, and the risk of damage/contamination is minimised. This will facilitate the reuse, recycling or recovery of materials where possible.

5.5.3 Recycling

Opportunities for recycling of wastes will be identified by passing wastes through the MRF and where possible, to including:

- Recovery of ferrous metals using overband magnets; collected materials will be sent to an offsite recycling facility;
- Recovery of sand and aggregate during MRF processing collected materials will be sent offsite for recycling; and
- Collection of waste oils and lubricants from maintenance activities, which will then be sent to an off-site recycling facility or where this is not suitable to an off-site recovery facility.

5.5.4 Other Recovery

Where reuse and recycling of a material is not appropriate, alternative recovery options will be sought, including recovering materials for use as landfill engineering material or for similar use where possible.

5.5.5 Disposal

Materials sent for final disposal will be minimised where possible. Currently disposal is anticipated to be the option for general waste not suitable for reuse, recycling or recovery.

Options for materials sent for disposal will be kept under review to ensure that reuse, recycling and recovery opportunities are identified and used as they become available in the future.

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6. Energy Management

6.1 Introduction

The waste management sector is not considered to be a significant energy user and therefore the opportunity for significant energy efficiency is limited. However, the following section provides details on the proposed measures for energy efficiency that will be adopted at the installation.

6.2 Basic Energy Consumption Requirements

6.2.1 Consumption

The site uses electricity to facilitate power supplies for the site offices, welfare, wheel wash and air compressors which are used to power the leachate system. The most recent annual usage equated to 170206 kWh.

6.2.2 H1 Assessment of Energy Consumption

An assessment of the energy consumption for the site based on the most recent year has been completed using H1 method and is summarised in Table 6 below.

Table 3 Annual Energy Consumption

Energy Source	Delivered Mwh	Primary Mwh	Specific Energy Consumption (Mwh/Te Waste)	Emissions Co ₂ Te/Yr
Electricity (Public Supply)	170.206	408.49	0.001	69.44

6.2.3 Specific Energy Consumption

There is no specific industry benchmark set within SGN S5.02 regarding the SEC for landfill

The specific energy consumption for the site has been calculated to be around 1 KWh/Te.

6.3 Energy Efficiency Management

6.3.1 Introduction

This section provides evidence of the existence of relevant controls for the management of energy to the standard indicated by the Environment Agency guidance in:

- "Energy Efficiency Standards for Industrial Plants to Get Environmental Permits"; and
- "Reference Document on Best Available Techniques for Energy Efficiency".

6.3.2 Energy Policy

Opes recognises and accepts its responsibility for the environment as an integral part of its services and operations and will be committed to excellence and leadership in protecting the environment. The corporate policy is to:

- Meet all applicable compliance obligations;
- Evaluate environmental risks and opportunities associated with aspects and impacts of its operations including those associated with energy consumption; and
- identify risks and opportunities and direct resources where it can make significant improvements in environmental performance including energy.

6.3.3 Planning

As part of its management system, the Operator will implement a programme which includes the assessment of environmental effects, preventive action, targets and objectives and responsibilities. As

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part of the Environmental Aspects addressed in this manner there will be a focus on energy use and energy recovery

6.3.4 Implementation and Operation

6.3.4.1 Organisation and Responsibility

Responsibility for effective energy management will lie across various levels of the organisation, with the main areas being:

- Site Manager will be responsible for the overall efficiency of the site operations with to regards energy consumption;
- Maintenance personnel will be responsible for maintaining all plant and equipment within the facility in efficient operating order, and for ensuring that energy efficiency considerations are undertaken when plant or equipment needs to be replaced.

It is also acknowledged that all staff will have a part to play in the successful implementation of the energy management system at the site.

6.3.4.2 Motivation and Training

The Company has established procedures to ensure that its employees, at all levels, are aware of:

- their roles and responsibilities in achieving compliance with the Environmental Policy and Objectives, the requirements of the standard and, in particular, the correct implementation of management system procedures;
- the potential environmental effects of their work activities and the environmental benefits of improved performance; and
- the potential consequences of departure from agreed operating procedures.

6.3.4.3 Control Measures

All plant and equipment will be operated by trained personnel, in accordance with management procedures defined within the site's management system.

6.3.4.4 Energy Monitoring and Reporting

Energy consumption will be monitored annually.

6.3.5 Control and Corrective Actions

6.3.5.1 Monitoring and Measurement

The KPIs for energy will be monitored annually to identify trends and facilitate the prompt rectification of issues.

6.3.5.2 Corrective and Preventive Actions

Non-conformances will be investigated and the outcome of such investigations will result in action to mitigate any impact along with corrective and preventive action to prevent a recurrence of the identified issue. Such action will be commensurate to the magnitude of the issue and the energy efficiency impact encountered.

6.3.5.3 Records and Reporting

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The site reports on energy use annually.

6.3.6 Reviewing Performance

An annual management review is completed. The review will include:

- Consideration of company policy;
- Comparison of quantitative performance against targets;
- Comparison with benchmark data where available; and
- Review of the implementation of energy efficiency improvements.

The energy plan will subsequently be revised to take account the results of this review.

6.4 Energy Efficiency Techniques

This section provides evidence of the existence of relevant controls for the management of energy to the standard indicated by the Environment Agency guidance in:

- "Energy Efficiency Standards for Industrial Plants to Get Environmental Permits"; and
- "Reference Document on Best Available Techniques for Energy Efficiency".

6.4.1 Maintaining Plant Reliability

This applies to all areas of the site and is aimed at reducing the number of stops on each item of plant such as the gas and leachate management system. As energy drawn is generally higher during start-up/shut down, reducing the number of stops on an item of plant will assist with reducing overall energy consumption. This will be achieved by:

- Effective planned maintenance which will ensure that equipment is kept in good operational order, thus minimising energy consumption during operation, and also reducing the number of breakdown stops;
- Stabilising the operation of the gas engines to maintain steady plant operation gas throughput;
- All maintenance will be undertaken by trained/experienced personnel, and particular areas which will benefit from regular maintenance with respect to energy management are: and
- Lubrication of plant drives and motors on defined lubrication strategy supplemented by planned maintenance checks ensures the load on motors and drives is minimised as much as possible – this reduction of load, in turn assists in improving energy efficiency

6.4.2 Specific Equipment Considerations

6.4.2.1 Cooling Systems and Air Compressors

Cooling systems and air compressors will be regularly maintained. Maintenance procedures such as cleaning, filter changing diagnosis and rebalancing, motor overhauls and drive/ fan belt changes will ensure that the energy efficiency of the systems is maintained.

6.4.2.2 Electrical Motors

Variable speed motors or soft starters will be provided on motor drivers to limit the start-up current where possible. The preventative maintenance programme conducted on site will ensure that the motor and drive systems remain in good condition and are properly adjusted. These systems will also be lubricated in order to avoid high-friction energy loss. Vibration monitoring will also be employed.

6.4.3 Building Services

6.4.3.1 Heating and Hot Water Systems

Administration, offices, meeting rooms, mess, kitchen, and shower areas for the site as a whole has suitable local heating and ventilation systems controlled by zone, time and temperature.

6.4.3.2 Lighting

In general fluorescent lighting will be used extensively and on occasion light emitting diode (LED) lighting. In all cases the type and disposition of fittings will be selected to give a good uniformity. Certain lighting areas shall adopt automatic light level / PIR activated switches.

6.4.3.3 Water

The Facility has been designed to reuse the water within the wheel wash so as to minimise overall water consumption.

6.4.3.4 Vehicle Operation

All vehicles operated by the Operator will be regularly maintained to ensure high levels of availability and optimum fuel consumption.

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6.4.3.5 Landfill Gas Utilisation

Where viable, recoverable landfill gas generated at the installation will be used for power generation and therefore the installation will in these circumstances become a net producer of energy.

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7. Emergency and Accident Management

7.1 Introduction

The site operates in a way to avoid accidents as far as possible, and to mitigate any environmental impact. The Environmental Permitting Regulations 2016, as amended require that an operator maintains an accident management plan for each installation permitted and implements it in the event that an accident occurs. The plan must take into consideration:

- Events or failures which could harm the environment;
- · Assess how likely they are to happen, and the potential environmental consequences; and
- The actions needed to both minimise the potential causes and consequences of accident.

7.2 Accident Prevention and Management Plan

The emergency procedures are maintained within the SMS-009 Accident Prevention and Management Plan ((60556545-ACM-XX-00-RP-ENV-APMP-R02). Adequate stocks of suitable equipment retained at the Facility. The APMP contains procedures are present for dealing with all reasonably foreseeable incidents including:

- Flood
- Subsidence
- Landslide
- Fire
- Explosion
- Failure of landfill liner
- · material spillage
- · personal injury

7.3 MRF Fire Prevention Plan

In accordance with current regulatory requirements, operations at the MRF is subject to a Fire Prevention Plan (FPP) which governs any waste activities which involvement the acceptance, treatment and storage of combustible waste streams.

The SMS-017 FPP (60537533-ACM-XX-00-RP-ENV-OMP-R03) for the MRF operations has been prepared in accordance with the latest EA Guidance – Fire Prevention Plans for Environmental Permit.

7.4 Records and Reporting

All emergency incidents involving fire, explosion, landfill liner failure, landslide, subsidence or material release (fume/spillage) shall be reported to the Environment Agency as soon as practicable. A written report of the nature of the incident, causes and any remedial action shall be presented to the Agency within two weeks of any such incident

The effectiveness of the site controls are reviewed at least annually during the audit process but are also verified during the accident/incident investigation to ensure that the site system remains effective.

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8. Non-Conformance and complaints management

OPES MRF 2013 Limited implements a near miss / incident / non-conformance reporting system to encourage the reporting of all accidents and incidents with health and safety or environmental implications. The system will also be used to report any unusual occurrences. Examples of what may be recorded include:

- Office or site accidents, minor or otherwise;
- Near misses:
- · Regulatory non-compliances;
- Spillages;
- Problems with contractors, drivers and visitors; and
- Complaints and feedback.

Site management will review the reports as appropriate and identified corrective or other actions will be recorded.

8.1 Management of Incidents and Non-Conformances

Non-conformance will be managed in accordance with the Company Procedure (SMS-001a). Documentation will be raised and retained to record environmental incidents and work.

The procedure will define the requirements for:

- · Reporting the incident/ accident;
- The mitigation measures to be taken while dealing with the incident/ accident;
- · The recording of the incident/ accident and subsequent investigation requirements; and
- The identification, implementation and recording of relevant corrective action required to prevent a recurrence.

Reports are reviewed by site management or senior management as appropriate and corrective or other action recorded. All reports are reviewed on monthly basis by senior management.

8.2 Complaints

The site maintains a procedure SMS-001b, detailing the requirements for recording complaints (e.g. odour, noise, and other environmental/operational issues) and the actions to be taken to:

- investigate the issues
- record details of any corrective action required
- Provide feedback to the individual making the complaint.

8.2.1 Complaint Management and Registration

The principal arrangements are:

- Complaints can be made in person and on the telephone or in writing using post or email;
- Complaints will be recorded in a complaint registration system that will ensure the data is collected and recorded in a systematic manner. The complaints register will be reviewed monthly for trend analysis; and
- The General Site Manager will be responsible for ensuring the complaint is investigated, for
 ensuring the appropriate corrective action is implemented and for providing feedback to the
 complainant. The Site Manager is also responsible for ensuring the complaints register is
 completed with all relevant details, for reviewing the register for adverse events.

8.2.2 Complaint Investigation

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Initial screening of the complaint will be undertaken in order to establish if an incident has actually taken place, which will consider:

Knowledge of potential sources at the facility;

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- Consideration of potential external sources;
- Location and distance of complainant from the site; and
- Results of any site monitoring already taking place.

If no such incident can be confirmed, then further investigation will not be required. However, if an incident is confirmed as valid, a more detailed investigation will occur.

Knowledge of operational issues or plant defects that could contribute to cause of the complaint;

Once screening has been completed, Opes will provide feedback to the complainant including details of any action that has/will be taken.

8.2.3 Communication with Complainant

Where complaints are received by email, letter or answer-phone, an acknowledgement and initial response will be made to the complainant by telephone or email within 48 hours, provided their contact details were provided.

Where complaints cannot be resolved on initial contact or require further investigation, then a written response will be made within 10 working days of the receipt of the complaint.

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9. Document Management and Control

9.1 Documented Systems

Documents will be held on OPES MRF 2013 Limited servers, which functions as the document management system (DMS). Documents with specific review dates will have this information recorded on the intranet so that this information is available to schedule reviews.

Copies will be distributed to relevant personnel under a document control procedure.

9.2 Document Control

OPES MRF 2013 maintains procedures for document control, environmental monitoring and training within the management system to maintain a system of environmental records which include the following:

- monitoring of environmental performance according to specified significant effects;
- · suppliers details and environmental performance;
- training records;
- audit results: and
- review results.

9.3 Environmental Records

Appropriate personnel will complete environmental monitoring site checklists on a daily basis, and the site will be regularly inspected. Problems identified from the inspections will be brought to the attention of the Operations Manager for rectification. Copies of the completed forms will be maintained by the Operations Manager.

The Environmental Monitoring Checklists will be modified if required by the TCM to take into account future legislative requirements. Monitoring data will be collected in accordance with appropriate regulations.

Instrumentation used to measure data required for monitoring environmental performance are subject to the inspection and calibration requirements of the Management System.

9.4 Maintaining Records

Site operational records will be maintained in written, electronic or other approved format, and will include, but may not be limited to, the following:

- Complaints records;
- Non-conformance and non-compliance records;
- Monitoring data; and
- · Site inspections, audits and reviews

Electronic records will be stored on drives which are automatically backed up.

Site operational records will be retained for at least 6 years.

9.5 Data Contingency

The document management system (DMS) will be used to control all facility documentation. As facility data is stored electronically, suitable arrangements have been implemented to ensure the data is backed up off-site and maintained for the purposes of business continuity.

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When specific documents are required in hard copy format, they will be printed and stored in a site-specific filing system. This same system will be used to store documents that have been generated as hard copy only, (e.g. handwritten inspection logs and documents of external origin).

Documents will be retained for the statutory minimum period of time. OPES MRF 2013 has guidance documents for the storage and archiving of documentation. When OPES MRF 2013 is required to maintain hard copy archives of project data these will be suitably indexed and then stored in an archive storage facility.

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