CARDIFF DOCKS, ROVER WAY

ENVIRONMENTAL PERMIT APPLICATION

Operating Techniques

Prepared for: Alun Griffiths (Contractors) Limited

SLR Ref: 416.08187.00002
Version No: 2
August 2020

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CONTENTS

DOCUMENT REFERENCES

TABLES

DRAWINGS

Drawing 001	Site Location Plan
Drawing 002	Environmental Permit Boundary
Drawing 003	Environmental Receptors
Drawing 004	Cultural and natural Heritage

APPENDICES

Appendix 01: Environmental Permit[1]

[1] To be included as Appendix 01 when an Environmental Permit is issued

1.0 Introduction

Alun Griffiths (Contractors) Limited (Griffiths) has instructed SLR Consulting Limited (SLR) to prepare an Environmental Permit (EP) application for the proposed soil and aggregate recycling waste operation located at Rover Way, Cardiff Docks under the Environmental Permitting (England and Wales) Regulations 2016 (as amended).

This Operating Techniques document will be reviewed and updated on an annual basis or as a result of any of the following circumstances (list not exhaustive):

- Issue of an EP variation by Natural Resources Wales (NRW);
- Finalisation of the site construction;
- A material change to an operational process;
- A significant substantiated complaint; or
- A material change to any legislation or guidance documents applicable to the site.

This Operating Techniques document is supplemented by the following documents prepared for in the EP application:

- Environmental Risk Assessment (SLR Ref: 416.08187.00002 /ERA);
- Site Condition Report (SLR Ref: 416.08187.00002/SCR); and
- Site drawings.

1.1 Site Location

The site is situated in Cardiff Docks within an area predominately occupied by commercial/industrial premises associated with Roath Dock. The site is accessed via Rover Way at the north of the site. The National Grid Reference (NGR) for the site is 320590, 174687.

The location of the site is illustrated on Drawing 001 and the permit boundary and detailed site layout is shown on Drawing 002. The surrounding land uses and local receptors within 500m are shown on Drawing 003 and cultural and natural heritage receptors within 1km and 2km are illustrated on Drawing 004.

A summary of the site's immediate surrounding land uses is identified in Table 1-1 below.

Table 1-1
Surrounding Land Uses

Boundary	Description
North	Mix of commercial/industrial premises, Roath Dock and the railway line.
East	Mix of commercial/industrial premises with a recreational facility and Heliport and beyond is Orchard Ledges (Cardiff flats) part of the Severn Estuary.
South	Mix of commercial/industrial premises and beyond is Orchard Ledges (Cardiff flats) part of the Severn Estuary.
West	Mix of commercial/industrial premises, Roath Dock and the railway line.

1.2 Report Structure

This report describes the operating techniques that will be implemented at the facility to ensure compliance with the conditions of the EP. The report has been drafted to satisfy the requirements of NRW Guidance.

2.0 Management

2.1 Management System

The in-house management system operated by Griffiths will ensure that:

- The risks that the activities pose to the environment are identified;
- The measures that are required to minimise the risks are identified;
- The activities are managed in accordance with this management system;
- Performance against this management system is audited at regular intervals; and
- The EP is complied with.

2.2 Management Structure and Responsibilities

The site Manager will be responsible for day to day operations and compliance with the EP, included as Appendix 01 to this report.

Whenever the site is open to receive or dispatch wastes, or carries out waste management operations, it will be supervised by at least one member of staff who is suitably trained and fully conversant with the requirements of the permit regarding:

- Waste acceptance and control procedures;
- Operational controls;
- Maintenance;
- Record-keeping;
- Emergency action plans; and
- Notifications to NRW.

2.3 Technical Competence and Training

The site will be managed by sufficient staff, competent to operate the site. The management system will ensure the following:

- All staff will have clearly defined roles and responsibilities;
- Records will be maintained of the skills required for each post;
- Records will be maintained of the training and relevant qualifications undertaken by staff to meet the requirement of each post; and
- Operations will be governed by standard operating instructions.

Operations at the site will be under the overall control of a technically competent person who holds the relevant Certificate of Technical Competence (COTC) under the Waste Management Industry Training and Advisory Board (WAMITAB) scheme.

An assessment of staff training needs will be carried out to identify the posts for which specific environmental awareness training is needed, and to determine the scope and level of such training. The assessment of training needs will be reviewed on an annual basis.

The training programme will ensure that relevant staff are aware of the following:

- Regulatory implications of the permit for the site and their specific work activity;
- All potential environmental effects from operations under normal and abnormal circumstances;
- The need to report deviations from the permit; and
- Prevention of accidental emissions and the required action to be taken should accidental emissions occur.

2.4 Site Security

In order to prevent unauthorised access, the site has the benefit of a perimeter fence surrounding the entire site. In addition, the site has a perimeter confinement bund surrounding the raw feed stockpiling and processed aggregate stockpile areas. The site also benefits from lockable entrance gates and its location is within a commercial/industrial area, associated with Roath Dock.

The site will be inspected at the commencement of each working day. Any defects or damage which compromise the integrity of the site's enclosure will be made secure by temporary repairs by the end of the working day. Permanent repairs will be completed as soon as practicable.

All inspections, any defects, damage or repairs will be recorded in the site diary.

2.5 Permit Surrender

A Site Condition Report, reference 416.08187.00002/SCR, has been prepared in support of this EP application. This document sets out the conditions of the site at EP issue and will be updated during the operational life of the site as appropriate.

To assist in permit surrender, records will be maintained to demonstrate how the land beneath the site has been protected at all times between the date of EP issue and at the end of EP operations.

Records to be maintained will include, but not be limited to:

- Maintenance of the compacted hardstanding surfacing;
- Maintenance of drains;
- Inspections and monitoring;
- Incidents and spillages; and
- Actions taken to clean up incidents and spillages.

2.6 Display of Environmental Permit

A copy of the EP will be kept available for reference by all staff and contractors whose work may have an impact on the environment.

2.7 Managing Documentation and Records

Controls will be in place to ensure that all documents are issued, revised and maintained in a consistent fashion.

The documents that will be included within the scope of the controls are as follows:

- Policies;
- Responsibilities;

- Targets;
- Maintenance records;
- Procedures;
- Monitoring records;
- Results of audits;
- Results of reviews;
- Complaints;
- Incident records; and
- Training records.

Records will be made and kept up to date on a daily basis to reflect deliveries, on-site treatment and dispatches. All records relating to waste acceptance will be maintained and kept readily available on site and kept for a minimum of 2 years after the waste has been removed off site.

2.8 Reporting Non-Compliance and Taking Corrective Action

Non-compliances detected on site will be reported, investigated and rectified. Staff will maintain awareness of non-compliances in the following areas:

- Actual or potential non-compliance with conditions of the EP;
- System failure discovered at internal audit;
- Suppliers or subcontractor's non-compliance with site operational rules;
- Incidents, accidents, and emergencies;
- Malfunction, breakdown or failure of plant;
- Other operational system failure; and
- Complaints.

The action taken in response to the non-conformance may include:

- Obtaining additional information on the nature and extent of the non-conformance;
- Discussing and testing alternative solutions;
- Modifying procedures and responsibilities;
- Seeking approval for additional resources and training; and
- Contacting suppliers and contractors (as applicable).

2.9 Auditing and Legal Compliance

The site will benefit from regular formalised internal auditing to ensure that the waste operations are compliant with the conditions of its EP, namely record keeping and monitoring. The audit will be carried out by the site Manager, or other Technically Competent Person and will confirm that all activities on site are in accordance with the conditions of the EP. The outcome of the audit will be reviewed and tracked to identify any frequent non-compliances and corrective and preventative actions taken.

2.10 Monitoring, Measuring and Reviewing Environmental Performance

A formalised management structure will monitor, measure and review environmental performance, and ensure any necessary actions are taken.

2.11 Operational Control, Preventative Maintenance and Calibration

The management system will contain operational procedures that will ensure effective control of site operations, the use of approved suppliers and contract services, the maintenance of operational equipment and the calibration of monitoring equipment.

All plant and equipment will be subject to a programme of planned preventative maintenance which will follow the inspection and maintenance schedule recommended by the manufacturer.

2.12 Design and Construction Quality Assurance

All relevant elements of the proposed site (not yet constructed) will be designed in accordance with recognised standards, methodologies and practices.

The design process will use a risk-based approach and will be appropriately documented using drawings, specifications and method statements to provide an adequate audit trail.

Construction Quality Assurance (CQA) plans will govern all construction activities necessary in the future. These CQA plans will be prepared by competent and suitably qualified persons.

A competent and suitably qualified person will supervise the construction activities.

2.13 Hazard Identification

The following hazards are identified in the Environmental Risk Assessment (ERA) that was submitted in support of this EP application (reference 416.08187.00002/ERA):

- Potential odour;
- Dust emissions;
- Unauthorised waste;
- Fire;
- Noise;
- Loss of containment - spillage and leakage;
- Security and vandalism;
- Flooding; and
- Plant failure.

The following sections summarise the measures necessary to minimise the potential causes and consequences of accidents, as detailed in the ERA.

2.13.1 Potential odour

Only inert or uncontaminated non-hazardous wastes from construction & demolition sources will be accepted on site, therefore the risk of odour impact is low. The site will be monitored for odours by site personnel throughout each shift. Odorous waste will not be accepted at site however, if odours are detected, investigations will be undertaken to determine the cause and appropriate mitigation measures implemented.

In the event that unauthorised odorous waste is delivered to the site, the waste will be segregated and stored in a designated quarantine/isolation area prior to export from site to an appropriately permitted treatment or disposal facility.

2.13.2 Dust emissions

Site operations could result in potential dust emissions at the site. Site operatives will complete ongoing visual monitoring throughout the working day to identify unacceptable dust levels. The following mitigation measures will be in place to reduce potential dust emissions:

- Speed limits will be implemented;
- Traffic calming measures will be in place;
- All vehicles/mobile plant will be subject to a programme of planned preventative maintenance;
- Site surfacing will be maintained in good condition;
- The site will have periodic clean downs;
- Drop heights will be minimised;
- The use of a water bowser; and
- Enclosed or sheeted waste deliveries/export.

2.13.3 Unauthorised Waste

Acceptance of unauthorised materials could result in unacceptable wastes being stored and treated at the site. All wastes will be subject to inspection and checking against the declaration on the waste transfer note.

In the event that unauthorised waste is delivered to the site, the waste will be segregated and stored in a designated quarantine/isolation area prior to export from site to an appropriately permitted treatment or disposal facility.

2.13.4 Fire

To prevent and minimise the potential impact of fire, the following action will be taken:

- Flammable wastes and incompatible materials will not be accepted at the site;
- The plant inspection schedule will include checks of electrical equipment within the site to ensure that any faults are identified and repaired;
- Fire extinguishers will be provided at designated locations;
- Smoking will not be permitted in the operational areas of the site;
- Working practices will ensure the assessment of fire hazards and training of employees in fire prevention, e.g. the use of fire extinguishers and emergency procedures; and
- No wastes will be burned on the site and any fire at the site will be treated as an emergency.

In the event of a major fire, the following action will be taken:

- The Site Manager and Fire Brigade will be notified immediately;
- NRW will be notified as soon as practicable;
- The burning area will be isolated, and attempts will be made to extinguish the fire utilising the on-site fire extinguishers if safe to do so; and

- The site and buildings will be evacuated.

2.13.5 Loss of Containment

Loss of containment could lead to spillage and leakage of potentially contaminating liquids. To prevent loss of containment and minimise the risk and impact of releases the following measures will be implemented:

- *Containment system:* any facilities for the storage of oils, fuels or chemicals will be sited above ground on impervious bases and surrounded by impervious bund walls. The volume of the bunded compound will be at least the equivalent to the capacity of the tank plus 10%. All filling points, vents and gauges will be located within the bund;
- *Storage vessels:* storage tanks will be constructed to the appropriate British Standard;
- *Inspection:* tanks will be inspected visually on a daily basis by the site staff to ensure the continued integrity of the tanks, and identify the requirement for any remedial action;
- *Spill kits*: materials suitable for absorbing and containing minor spillages will be maintained on site; and
- *Monitoring techniques:* the site staff will undertake daily monitoring for evidence of spillage and leakage.

In the event of any potentially polluting leak or spillage occurring on site, the following action will be taken:

- Minor spillages will be cleaned up immediately, using sand or an absorbent. The resultant materials will be placed into containers and will then be removed from site and disposed of at a suitably permitted facility and the incident will be logged in the site diary;
- Any dry wastes spilled on site will be collected and transported to the appropriate area of the site; and
- In the event of a major spillage, which is causing or is likely to cause polluting emissions to the environment, immediate action will be taken to contain the spillage and prevent liquid from entering surface water or drains. The spillage will be cleared immediately and placed in containers for offsite disposal, and NRW will be informed.

2.13.6 Security and Vandalism

The following security measures will be in place:

- *Site fencing*: the site will benefit from fencing around the entire site;
- *Security gates*: the gates to the site will be locked at all times when the facility is unattended or not in use at the entrance of the site;
- *Perimeter bund*: the site will benefit from a perimeter bund around the raw feed stockpiling and processed aggregate stockpiling areas;
- *Inspection*: gates and fencing extending around the site will be inspected regularly by the operations staff to identify deterioration and damage, and the need for any repairs;
- *Maintenance and repair*: fencing and gates will be maintained and repaired to ensure their continued integrity. In the event that damage is sustained repairs will be made by the end of the working day. If this is not possible, suitable measures will be taken to prevent any unauthorised access to the site and permanent repairs will be affected as soon as practicable;
- *Authorised access system*: all visitors to the site will be required to register in the visitor's book and sign out again on exit to minimise the risk of unauthorised visitors being present on site; and
- *Monitoring techniques*: operational procedures, including regular inspections will ensure continual monitoring of security provision at the site.

In the event of a breach of security at the site, the cause will be investigated, and appropriate mitigation measures implemented. Records to be maintained include inspections and maintenance of security fencing, perimeter bunds and gates, breaches of security, investigations and actions taken.

2.13.7 Flooding

There are no surface water features within the proposed site boundary.

According to NRW flood risk map[2] and Envirocheck Analysis report (appendix SCR2) the site doesn't lie within a flood zone and there are no flood defences in place.

Only inert waste and uncontaminated non-hazardous construction and demolition waste will be accepted onto the site. Strict waste acceptance procedures are in use at the site to ensure that only permitted wastes are accepted on site.

The site will not treat any contaminated or non-conforming waste. Therefore, the risk of contamination of flood water is low.

2.13.8 Plant failure

All equipment will be subject to a pre-planned preventative maintenance checks and maintained to the manufacturer's recommendations. Should any problems, malfunctions or breakdowns occur, which affects the ability to safely process waste, waste acceptance and treatment will stop until the problem is rectified.

[2] NRW flood risk map - https://naturalresources.wales/evidence-and-data/maps/long-term-flood-risk/?lang=en accessed July 2019.

3.0 Operations

3.1 Process Description

The proposed operations at the site will be to store and treat inert, non-hazardous waste to produce soil, soil substitutes and aggregate. The quantity of waste that can be stored and subsequently treated at the site will be no more than 75,000 tonnes per annum (tpa). The storage of waste shall not exceed 50,000 tonnes in total at any one time.

The proposed site layout and EP boundary are illustrated in Drawing 002.

Vehicles will enter the site from Rover Way and report to the weighbridge office. The wastes will be weighed at the weighbridge and each driver will be issued with a delivery ticket including a reference number. A site operative will conduct a visual inspection of the vehicle's load to ensure it complies with the description provided on the waste transfer note.

If at this stage the checks identify the wastes as being compliant, the vehicle will be directed to the raw feed stockpile area to discharge their load. A secondary visual inspection will take place in this designated area.

At the waste processing area, the following treatment operations will be carried out;

- Sorting;
- Separation;
- Crushing;
- Screening; and
- Blending.

The materials will then be transferred to the processed aggregate stockpiles, ready to be transported off site for recovery and sold to the local market as secondary aggregates.

3.2 Specified Waste Management Activities

The activities that will be carried out at the site as defined under Annex II of the Waste Framework Directive can be summarised as follows:

- **R3**: Recycling/reclamation of organic substances which are not used as solvents;
- **R5**: Recycling/reclamation of other inorganic materials; and
- **R13**: Storage of wastes pending any of the operations numbered R3 to R5.

3.3 Waste Types and Storage

This permit application seeks to permit the treatment and processing of up to 75,000 tpa.

The types of waste that will be accepted at the site are construction and demolition waste and soil and stones, as illustrated in Table 3-1 below.

Table 3-1
Waste List

Waste	Code Description
01	WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS
01 04	**wastes from physical and chemical processing of non-metalliferous minerals**
01 04 08	waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	waste sand and clays
02	WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING
02 02	**wastes from the preparation and processing of meat, fish and other foods of animal origin**
02 02 02	animal-tissue waste (shellfish shells from which the soft tissue or flesh has been removed only)
03	WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD
03 01	**wastes from wood processing and the production of panels and furniture**
03 01 01	waste bark and cork
03 03	**wastes from pulp, paper and cardboard production and processing**
03 03 01	waste bark and wood
10	WASTES FROM THERMAL PROCESSES
10 01	**wastes from power stations and other combustion plants (except 19)**
10 01 01	bottom ash and slag only
10 01 02	pulverized fuel ash only
10 01 05	calcium-based reaction wastes from flue-gas desulphurisation in solid form (gypsum (solid) only)
10 01 07	calcium-based reaction wastes from flue-gas desulphurisation in sludge form (gypsum (sludge) only)
10 01 15	bottom ash and slag only from co-incineration other than those mentioned in 10 01 14
10 11	**wastes from manufacture of glass and glass products**
10 11 12	glass other than those mentioned in 10 11 11 (clean glass only)
10 12	**wastes from manufacture of ceramic goods, bricks, tiles and construction products**
10 12 08	waste ceramics, bricks, tiles and construction products (after thermal processing)
10 13	**wastes from manufacture of cement, lime and plaster and articles and products made from them**
10 13 14	wastes from calcination and hydration of lime (waste concrete only)
15 01	**packaging (including separately collected municipal packaging waste)**
15 01 07	glass packaging (clean glass only)
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 01	**concrete, bricks, tiles and ceramics**
17 01 01	concrete
17 01 02	bricks
17 01 03	tiles and ceramics
17 01 07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
17 02	**wood, glass and plastic**
17 02 02	glass (clean glass only)

17 03	**bituminous mixtures, coal tar and tarred products**
17 03 02	bituminous mixtures other than those mentioned in 17 03 01(road base and road planings (other than those containing coal tar) only)
17 05	**soil (including excavated soil from contaminated sites), stones and dredging spoil**
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 06	dredging spoil other than those mentioned in 17 05 05
17 05 08	track ballast other than those mentioned in 17 05 07
17 08	**gypsum-based construction material**
17 08 02	gypsum-based construction materials other than those mentioned in 17 08 01(gypsum only)
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE
19 05	**wastes from aerobic treatment of solid wastes**
19 05 03	off-specification compost (compost from source segregated biodegradable waste only)
19 08	**wastes from waste water treatment plants not otherwise specified**
19 08 02	waste from de-sanding (washed sewage grit free from sewage contamination only)
19 08 99	wastes not otherwise specified (stone filter media if free from sewage contamination only)
19 09	**wastes from the preparation of water intended for human consumption or water for industrial use**
19 09 02	sludges from water clarification
19 12	**wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified**
19 12 05	glass (clean glass only)
19 12 09	minerals (for example sand, stones)
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11(treated bottom ash including IBA and slag other than that containing dangerous substances only)
19 13	**wastes from soil and groundwater remediation**
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01
19 13 04	sludges from soil remediation other than those mentioned in 19 13 03
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	**separately collected fractions (except 15 01)**
20 01 02	glass (clean glass only)
20 02	**garden and park wastes (including cemetery waste)**
20 02 02	soil and stones

3.4 Waste Acceptance

3.4.1 Hours of Operation

The site will operate in accordance with the current planning permission.

3.4.2 Waste Pre-acceptance Checks

To ensure that only non-hazardous wastes are accepted on site, the following pre-acceptance checks will be carried out.

For each new waste enquiry, Griffiths will request information regarding the nature of the process producing the waste and the composition of the waste. The requirements for waste testing are detailed below.

Following a review of the information provided by the waste producer, Griffiths will confirm to the enquirer whether or not the waste is suitable for acceptance at the site.

A record will be created of the enquiry/waste stream which will go on to follow the waste if it goes on to be accepted at the site.

Basic Characterisation and Compliance Testing

The following wastes will be subjected to Basic Characterisation and where relevant Compliance testing undertaken by the producer of the waste.

Table 3-2
Waste Types that will be subject to Testing

Waste Code	Description
01 04 08	Waste gravel and crushed rocks other than those mentioned in 01 04 07
17 01 01	Concrete
17 01 02	Bricks
17 01 03	Tiles and ceramic
17 01 07	Mixtures of concrete, bricks, tiles and ceramics
17 02 02	Glass (clean glass only)
17 03 02	Bituminous mixtures other than those mentioned in 17 05 03
17 05 04	Soil and stones other than those mentioned in 17 05 03
17 05 08	Track ballast other than those mentioned in 17 05 07
17 08 99	Wastes not otherwise specified (consisting of stone filter media if free from sewage contamination only)

Basic characterisation is a comprehensive assessment of the properties of the waste and incorporates the following information where relevant:

- source and origin of waste;
- waste production process;
- waste treatment carried out (or reason for not treating);
- composition of the waste, and assessment of the likely behaviour of the waste in the site;
- appearance, smell, consistency, form of waste;
- EWC code;
- hazardous properties if relevant;

- whether the waste can be recycled or recovered;
- for process wastes – an assessment of the likely variability and proposed compliance testing regime.

Alun Griffiths will review the information provided by the waste producer against the waste codes authorised for disposal at the site and the site- specific waste acceptance criteria in order to determine whether the waste can be accepted at the site.

Verification Testing

In addition to the basic characterisation testing and compliance testing undertaken by the waste producer, will also undertake verification testing of wastes accepted at the site. All waste deliveries will be subject to visual inspection.

3.4.3 Load Inspection and Waste Control

All waste brought to site will be inspected in accordance with the following procedure:

- All vehicles bringing waste material to the site will report to the site entrance where the load will be visually inspected, where possible, in order to confirm its description and composition against the relevant waste transfer note, and other accompanying documentation;
- All wastes will undergo a further visual inspection during deposition;
- Wastes will only be accepted at the site if the description in the accompanying documentation is in accordance with the EP and that onsite inspection confirms waste is consistent with the description provided;
- Should the wastes be found not to conform during the initial visual inspection, then the details will be recorded, and the vehicle turned away; and
- Should wastes already be discharged within the stockpile area, and deemed not to conform or are otherwise not be permitted, then the waste will be:
    - Reloaded on to the delivery vehicle; or
    - Removed to a designated quarantine area as appropriate.

Records of non-compliant waste received at the site will include details on:

- The quantity;
- Characteristics;
- Origin;
- Delivery date and time; and
- The identity of the producer and carrier.

Wastes will not be accepted unless the site is adequately resourced to receive the waste.

A record will be kept in the site diary of all rejected wastes. The waste producer and NRW will be notified of the non-conformance.

3.4.4 Means of Measurement

The quantity of waste accepted and despatched from the facility will be measured via the weighbridge.

All wastes entering the site will be recorded upon arrival. Wastes and materials removed for disposal, further recovery or reuse will have a record produced upon exit from the site.

3.5 Waste storage

All waste will be stored in stockpiles or bays within the external yard area.

3.6 Site Infrastructure and Equipment

3.6.1 Site Identification Board

A site identification board which is easily readable from outside the entrance during hours of daylight will be provided at or near the main site entrance.

The identification board will be inspected at least once per week. In the event of damage or defect that significantly affects the legibility of the board it will be repaired or replaced within a timescale agreed with NRW.

The board will display the following information:

- Site name and address;
- Permit holder;
- Permit number(s);
- Emergency contact name and telephone number;
- NRW national telephone numbers; and
- Days and hours the site is open to receive waste.

3.6.2 Plant and Equipment

The following items of plant and equipment will be held on-site from time to time dependant on the waste stream being processed on-site. This is not a fixed list of plant:

- McCloskey J40 Mobile Crusher;
- McCloskey J45 Mobile Crusher;
- McCloskey R105 Mobile Screen;
- McCloskey R155 Mobile Screen;
- JCB J30 Excavator;
- JCB 3CX Loader; and
- Komatsu WA480 Loading Shovel.

Additional plant and equipment including, but not limited to, water bowser, spray equipment and road sweeper will be made available as required.

All items of plant and equipment used on-site will be maintained in accordance with manufacturer's recommendations.

3.6.3 Plant Maintenance

All maintenance audits and monitoring will be carried out in accordance with the Manufacturer's specifications, which are kept in the site office.

Griffiths will take a proactive approach involving a planned preventative maintenance program for the site. A Maintenance Checklist will allow all site operatives to actively take part in the site's maintenance schedule.

The checklist will be completed and maintained by the Site Manager, with the following information compiled:

- The item that requires maintenance;
- How often maintenance needs to be carried out (daily, weekly, monthly or yearly);
- A record of any particular maintenance instructions; and
- Who on site is responsible for each maintenance check.

The checklist will ensure that all site operatives are aware of their particular responsibilities for maintenance checking. The Site Manager shall ensure that all site operatives are aware of any amendments and additions to the checklist.

When a maintenance issue is dealt with, a maintenance record form will be completed for each separate piece of equipment or infrastructure. The record form will include the following information to be recorded:

- The item requiring maintenance;
- The frequency of the required maintenance;
- Completed date;
- Site personnel it was completed by; and
- Any additional comments.

The record forms will be kept in the site office to ensure there is access for all site operatives to the records.

In the event that plant replacement is required, Alun will choose new plant with the lowest emission standard available at the time of purchase.

The following control measures will be in place to reduce emissions as much as possible during operations:

- Use of low sulphur fuel;
- Mobile plant to be switched off when not in use to avoid idling; and
- Planned, preventative maintenance schedule to be rigidly followed to avoid the operation of poor performing or inefficient plant.

3.6.4 Site Surfacing

All waste storage and treatment will take place on compacted hardstanding. The surface will be maintained to ensure that ruts from vehicles movements are minimised and that surface pooling of water is avoided. The site also has a perimeter confinement bund surrounding the raw feed stockpiling and processed aggregate stockpile areas.

4.0 Emissions and Monitoring

4.1 Point Source Emissions

- The operations will not result in any point source emissions to air, surface water, groundwater or land.

4.2 Fugitive Emissions

4.2.1 Surface Water and Groundwater

The site will be designed to prevent fugitive emissions to surface water and groundwater.

Engineered Containment

All waste operations will occur on compacted aggregate/hardstanding, with uncontaminated surface water runoff flowing to the ground.

Due to the types of wastes accepted on site, there will be no contaminated process water produced on site.

Site surfacing will be maintained as required to ensure surfacing is fit for purpose. The surface shall be maintained such that the working surface will;

- Remain even;
- Not be subject to settlement of differential settlement;
- Not be subject to rutting by vehicles even when wet;
- Have sufficient durability to allow cleaning, for example, by scraping; and
- Remain free of standing water.

All operational areas, quarantine and fuel storage areas will be inspected to ensure full integrity and the purpose of construction is maintained at all times.

Containment Bunding

All tanks containing potentially polluting liquids will be bunded. Bunds will:

- Be impermeable and resistant to the stored materials;
- Have no outlet, and drain to a blind collection point;
- Have pipework routed within bunded areas with no penetration of contained surfaced;
- Be designed to catch leaks from tanks or fittings;
- Have a capacity greater than 110% of the largest tank or 25% of the total tankage (whichever is greater);
- Have tanker connection points within the bund; and
- Be subject to regular visual inspection.

4.2.2 Sewer

There will be no direct discharges to sewer from waste management operations at the facility.

4.2.3 Odour

No putrescible or readily degradable wastes will be accepted at the site. Only inert waste will be accepted on site. Due to the strict control of the waste that will be accepted at the site, odour is not expected to pose a significant risk.

In regard to garden and park waste in the form of soil and stones (EWC code 20 02 02) the waste is considered to be predominately inert and would not contain a high proportion of biodegradable wastes. Soil is not considered a source of offensive odour and therefore not considered a source of offsite impacts.

4.2.4 Noise

Waste treatment operations will only be carried out during operational hours as specified in the planning permission. All equipment will be maintained and operated in accordance with manufacturer's guidance and will be maintained in good working order.

The site will be operated with best practice to minimise noise emissions from the site. Measures that will be taken at the site include:

- Where possible plant will be located away from potentially noise-sensitive receptors;
- Minimising drop heights;
- All plant will be switched off when not in use;
- The enforcement of a speed limit for vehicles delivering waste to the site. This will reduce noise associated with high engine speeds;
- All site personnel will be trained in the need to minimise site noise, and will be responsible for monitoring and reporting excessive noise when carrying out their everyday roles;
- All plant and equipment in use at the site will be regularly maintained to minimise noise resulting from inefficient operation of pumps, generators and engines;
- In the event that reversing alarms are found to give rise to complaints, alternative alarms or technology will be investigated;
- The regular maintenance of roads to prevent the development of potholes will significantly reduce noise generated, particularly by empty vehicles exiting the site;
- Consideration will be given to the fitting of noise suppression kits on items of plant and equipment, if deemed necessary; and
- All plant will be maintained in accordance with manufacturer's recommendations to minimise noise emissions.

Any complaint received will be logged in the site diary. The Site Manager will investigate the complaint and will take action to identify the source of the noise and implement remedial measures where appropriate.

4.2.5 Dust

The ERA, submitted in Section 4 of this EP application, details the local receptors and surrounding land use, which are also illustrated on Drawing 003. A windrose is also included in the ERA (Section 3.8), which concluded that the most prominent wind direction is from the west to east. Local receptors in the east are generally commercial/industrial facilities with one recreational facility, Cardiff Moors Heliport and the Severn Estuary.

The following activities on site have been identified as potentially dust emitting operations on site:

- Incoming waste on vehicles;

- Vehicles entering and/or leaving the site with mud on wheels, and tracking dust onto or off the site;
- Debris falling off vehicles which arrive uncovered;
- Vehicles and plant moving around the site producing dust;
- Vehicles depositing waste;
- Site surfaces including around plant and equipment;
- Particulate emissions from the exhaust of vehicles/plant/machinery on site; and
- Generators, plant and other non-road going mobile machinery.

In order to minimise the emissions of dust from the facility, the following measures will be implemented:

- Speed limits will be implemented for vehicles using the site;
- Traffic calming measures will be implemented;
- Site access and haul roads and operational areas will be maintained and repaired to minimise emissions of dust due to uneven and poor surfacing;
- All roads and operational areas will be swept when necessary to reduce dust emissions;
- All vehicles delivering waste to the site shall be enclosed/sheeted to minimise emissions of dust;
- Drop heights from any loading operations will be kept as low as possible;
- Dust suppression systems will be implemented at the site when necessary. This will include use of water bowsers, and fixed spray bars on waste processing plant;
- Daily, visual inspection at all areas of the site and site boundary will be carried out by site personnel;
- Meteorological conditions will be taken into account when depositing potentially dusty wastes on site;
- In the event that significant visual dust is observed at the boundaries of the operational areas, action will be taken to suppress the dust;
- A record of the inspection findings and remedial action taken will be made in the site diary; and
- The Site Manager will be responsible for implementing the dust management, monitoring and action plan.

Visual Dust Monitoring, Management and Mitigation

The site will undertake regular visual monitoring to ensure that dust control techniques are being followed and are effective. The objective of the visual monitoring will be to determine whether dust has been transported off-site in such a quantity or concentration that a nuisance may occur and if immediate further actions are required to be taken.

Griffiths will carry out daily visual dust monitoring as detailed below;

- The Site Manager or designated qualified person will carry out a daily site walkover including the extent of the site boundary. The walkover will focus at boundary points downwind; and
- Visual inspections that will include airborne dust and dust settlement on surfaces, such as buildings, vehicles and other surfaces.

Should dust emissions be observed during site operations or during the site walkover, the following mitigation measures will be immediately implemented;

1. The Site Manager will be notified if not already aware;

2. The source of the dust generation will be identified;
3. Immediate remediation will be carried out as required, which will include the following mitigation methods (to be decided by the Site Manager) including;
    - Dampening of waste;
    - Sheeting of vehicles;
    - Washing down of vehicles;
    - Road sweeping; or
    - Cessation or modification of activity.
4. Records will be made of any action taken within the site log.

If the above mitigation measures do not rapidly minimise dust emissions, or if significant amounts[3] of dust continue to escape the site boundary, it will be the responsibility of the Site Manager to determine what further mitigation measures shall be required and / or whether operations need to cease until these measures are implemented.

It is considered that the potential for dust generation will only arise during operational activities and as such no out of hour's action shall be required.

Reporting and Complaints Response

The Site Manager will be responsible for recording and investigating any complaints received regarding dust issues on site.

All reported complaints shall be investigated, and steps will be taken to prevent any continuing issues by putting in place additional control or management measures to prevent re-occurrence of the incident.

Investigations will include but not be limited to:

- A visit by the Site Manager to the location of complainant to verify the issue (if the complaint is made 'after' rather than 'during' a dust event this may not be possible);
- A review of site activities at the time of the incident to investigate potential sources;
- If the dust event is occurring or a recurring event, more frequent on-site and off-site visual monitoring will be undertaken, and the finding recorded;
- A review of control measures and management actions at the time of the incident;
- A review of the meteorological conditions at the time of incident; and
- The reporting of findings (in a Site Log Book).

All site operatives will be responsible for ensuring operations occur on site with a minimal risk of dust emissions.

Signs will be placed at the site boundary with information on who to contact in the case of a complaint.

4.2.6 Pests

Due to the nature of the wastes proposed to be accepted at the site, it is not anticipated that pests will pose a risk at the facility.

[3] Significant amounts are considered amounts capable of forming a visible layer of deposit onto surfaces directly surrounding the site or continuous visible emissions of dust obviously leaving the site boundary.

The facility will be inspected by both site management and operatives for infestations of pests, vermin and insects on a routine basis. In the event that specific waste is found to be responsible for attracting scavengers, pests or infestation, this waste will be removed from the site as soon as practicable.

A specialist pest control contractor will be deployed if required.

4.2.7 Litter

Due to the nature of the wastes proposed to be accepted at the site, it is not anticipated that litter will pose a serious risk. However, the boundary of the site and the surrounding area will be regularly checked, and any windblown litter will be collected and disposed of appropriately.

It will be the responsibility of the site staff to constantly monitor the site for any signs of escaping materials either from within the site or from vehicles delivering or removing materials to and from the site.

Inspections will be carried out on a daily basis and a record maintained within the site diary.

4.2.8 Mud and Debris

Access to the facility is gained from Rover Way. Within the site, the following measures will be taken in order to prevent the deposition or tracking of mud and debris from the site onto public areas or highways:

- The site surface will be maintained free of significant quantities of mud and debris;
- All operational areas will be subject to monitoring by staff throughout the working day to identify accumulations of mud requiring remedial action;
- Where necessary road cleaning equipment will be deployed;
- All vehicles leaving operational areas will be checked to ensure that they are clear of loose waste; and
- Before leaving the site, vehicles will be cleaned as necessary and checked to ensure that their load is secure.

In the event that mud, debris or waste arising from the site is deposited onto public areas outside the site, the following remedial measures will be implemented:

- The affected public areas outside the site will be cleaned;
- Traffic will be isolated from sources of mud and debris within the site to prevent further tracking, and measures will be taken to clear any such sources as soon as practicable; and
- Provision will be made for road sweepers on the site access roads to stop any mud being carried onto public roads, and bowsers made available to damp down areas during dry periods to ensure dust is kept to a minimum.

5.0 Information

All relevant notifications and submissions to NRW regarding the site will be made in writing and will quote the permit reference number and the name of the permit holder.

Records will be maintained for at least six years. However, in the case of off-site environmental effects and matters which affect the condition of land and groundwater the records shall be kept until permit surrender. Duty of Care records will be kept for a minimum of two years.

5.1 Reporting and Notifications

5.1.1 Changes in Technically Competent Persons

NRW will be informed in writing of any changes in the technically competent management of the site and the name of any incoming person, together with evidence that such person has the required technical competence.

5.1.2 Waste Types and Quantities

A summary report of waste types and quantities accepted and removed from the site for each quarter, will be submitted to NRW within one month of the end of the quarter unless otherwise required by the EP conditions.

5.1.3 Relevant Convictions

NRW will be notified of the following events:

- Griffiths being convicted of any relevant offences; and
- Any appeal against a conviction for a relevant offence and the results of such an appeal.

5.1.4 Notification of Change of Operator's or Holder's Details

NRW will be notified of the following:

- Any change in the operator's trading name;
- Any change in the operator's registered name;
- Any change in the operator's registered office address; and
- Any steps taken with a view to the company going into administration, entering into a company voluntary arrangement or being wound up.

5.1.5 Adverse Effects

NRW will be notified without delay following the detection of the following:

- Any malfunction, breakdown or failure of equipment or techniques;
- Any accident;
- Fugitive emissions which have caused, is causing or may cause significant pollution; and
- Any significant adverse environmental and health effect.

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