

# NEWPORT QUARRY RESTORATION

## Site Operating Techniques

Prepared for: Ingrebourne Valley Limited

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## 1.0 INTRODUCTION

### 1.1 Overview

Ingrebourne Valley Limited (IV) has instructed SLR Consulting Limited (SLR) to prepare a bespoke Environmental Permit (EP) application to authorise a waste soils and aggregates recycling process and the deposit of waste for recovery in the restoration of Newport Quarry, Chalk Farm Lane, Saffron Walden, Essex, hereafter referred to as 'the Site'.

This Site Operating Techniques forms part of the EP application and provides the following information:

- A summary of the operating times and staffing of the site.
- Details of the types of waste that can be deposited at the site, where they can be deposited in the site, and the procedures that must be followed for their acceptance.
- Details of the site preparation before and during filling.
- A description of how the waste is to be deposited.
- Details of the site infrastructure.
- An environmental nuisance risk assessment.
- Details of the measures that will be implemented to control environmental nuisance.
- Details of the records that are to be maintained.

### 1.2 The Project

The proposed development can be summarised as the establishment of importation of inert waste materials for the purpose of recycling to produce secondary aggregates for off-site export. Recycling operations will comprise physical treatment including crushing and screening. Residual and unrecyclable inert waste materials will be employed in the restoration of the quarry.

Up to 100,000 tonnes per annum (tpa) of waste will be accepted at the Site. Of this, up to 75,000 tpa will be employed in the restoration of the quarry and 25,000 tpa will be accepted for recycling. In total approximately 500,000m<sup>3</sup> of residual and unrecyclable inert waste will be used to restore the quarry to calcareous grassland. The proposed restoration landform seeks to mimic the natural ground levels as far as possible and includes a swale, infiltration pond and exposed areas of chalk rock face.

At a lower level, the Site will be restored to calcareous grassland, while at the upper level, the chalk surface will be left exposed to maintain drainage and exhibit its geological importance.

Restoration of the Site is proposed to be undertaken in four phases over a 7-10 year period. Recycling operations will run in parallel with restoration operations.

The proposed restoration of the quarry is illustrated in the following drawings:

- EP4 Site Layout and Waste; and
- EP5 Restoration.

Key points regarding the proposed restoration are as follows.

- Restoration will be undertaken in four phases with restoration in a phase following mineral extraction in each phase.

- A geological and sidewall barrier will be constructed using indigenous low permeability clay overburden and suitable, low permeability imported waste materials from excavations where there is no suspicion of contamination. During construction, the geological barrier will be overseen and verified in accordance with a Construction Quality Assurance (CQA) Plan.
- Restoration will be undertaken in lifts using indigenous overburden material and residual and unrecyclable inert waste materials to achieve the restoration profile minus lower and upper calcareous soil layers.
- A lower soil layer of indigenous chalk fines will be laid at a thickness of approximately 0.3-0.5m.
- An upper calcareous soil layer will be laid at a thickness of approximately 0.25-0.3m. The upper calcareous soil layer will be manufactured on Site by blending very fine indigenous chalk with residual soil material to produce a chalky soil.
- The Site will be restored as close as possible to the Site's natural contours prior to chalk extraction at the quarry although the exact original profile is unknown.
- An infiltration area will be constructed in the north eastern corner of the Site. Once restored, a swale which divides the Site into an upper and lower catchment area will direct runoff from the upper catchment to the infiltration pond. The lower catchment area will drain to an existing low-lying grassland area which acts as a soakaway.
- Additional woodland and hedgerow planting is proposed along the northern boundary of the swale to mimic that visible on historic mapping records.
- It is estimated that approximately 500,000 m<sup>3</sup> of imported material is required to restore the Site.
- Assuming an average density of 1.8 t/m<sup>3</sup>, the mass of imported inert waste materials will be approximately 900,000 tonnes.

The proposed layout of the soil and aggregate recycling facility is shown on Drawing EP6a Site Layout - Office and Weighbridge Area.

## 2.0 GENERAL CONSIDERATIONS

### 2.1 Hours of Operation

Working hours will be between 07:00 – 18:00 hours Monday – Friday, 07:00 – 13:00 hours on Saturdays and no working on Sundays or Bank Holidays. No removal of material, acceptance of waste or operations will be conducted outside of these hours.

### 2.2 Staffing and Supervision

The aim of the Company is to provide a well-managed Site operated in accordance with the EP and all associated documents and in particular this Site Operating Plan, using technically competent and trained staff.

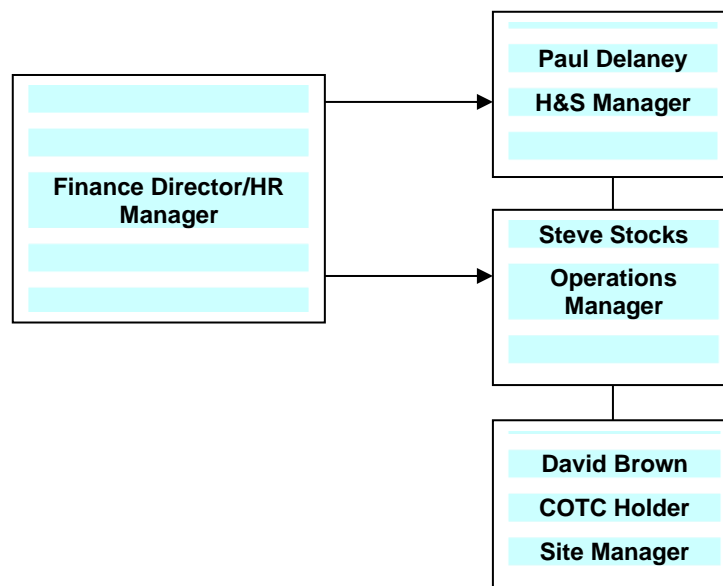
The Site management structure is shown in the diagram on the following page.

The Site will have a full complement of 5 staff, this may increase subject to operations to a maximum of 6 or 7 dependent on the site operations and requirements. During busy times and holidays, additional suitably qualified staff are available as back up. In addition, IVL's Health and Safety Manager provides health and safety support and human resources advice.

The Site supervisor has the main responsibility for the day-to-day operation of the facility.

Amy McDonagh, one of the company technical competent managers, will carry out the duties of the COTC holder. Copies of the appropriate WAMITAB Certificates (for Technical Competence and Qualifying Experience) for the operation of open inert landfill sites are provided in Section 2, Appendix B of the application.

**Figure 1**  
**Project Management Structure**



All the personnel will be familiar with, and understand the relevant aspects of the EP, the Site Operating Plan and its accompanying documentation, and the Company’s Health and Safety Policy.

The Company has an environmental management system and is certified to ISO 14001. This will ensure that a continuing programme of environmental monitoring and improvements are incorporated into all aspects of the Site operations.

All existing and new personnel will undergo training in environmental awareness in relation to this new programme, and this will be updated on a regular basis in accordance with the principles involved in the ISO 14001 system.

All new personnel will undergo induction training and will be supervised by an appropriate senior member of staff in respect of the Environmental Permit, the Site Operating Plan and accompanying documentation, and the Company’s Health and Safety Policy.

### 2.3 Changes in Technically Competent Persons

Information on any changes in the technically competent management of the Site will be submitted to the Environment Agency (EA) in writing within 5 working days of the change in management, along with evidence of the required technical competence.

Technically Competent Management and Technical Competence shall be as defined under Section 74 of the Environmental Protection Act 1990 and Regulations 4 and 5 of the 1994 Regulations.



## 2.4 Notification of Commencement, Cessation and Recommencement of Waste Handling Operations

### 2.4.1 Commencement of Permitted Waste Management Operations

The management will notify the EA of its intention to commence the acceptance of waste in accordance with the number of day's notice set out in the permit.

### 2.4.2 Cessation and Recommencement of Receiving Wastes

In the event that the Site ceases receiving waste either permanently or for longer than three months, the Company will advise the Agency in writing of the date of the cessation and of the planned date of recommencement. In the event that the Site recommences receiving waste sooner than the notified date, the Company will give the Agency at least five working day's notice in writing.

## 3.0 WASTE QUANTITIES AND TYPES OF WASTE

### 3.1 Waste Quantities

#### 3.1.1 Maximum Capacity of Operation

The total quantity of waste that shall be deposited at the Site shall be limited by the pre-settlement levels.

#### 3.1.2 Waste Input Rates and Time to Completion of Filling

The proposed waste quantities for acceptance at the site are shown in Table 1 below.

**Table 1 Proposed Waste Input**

Waste Types	Waste Input Rates
Inert waste as specified in Tables 2 and 3 below	Shall not exceed 100,000 tonnes per year

All wastes coming into the site will be recorded at the weighbridge.

It is estimated that the overall period of life for the Site is between 7-10 years. The sequence of work will be in accordance with the phases of the planning permission and the method statement for the protection and conservation of flora and fauna on the site submitted in accordance with the planning permission.

### 3.2 Permitted Waste

#### 3.2.1 Soil, Soil Substitute and Aggregate Recycling

The Site has permission to accept only the waste types in Table 2 for recycling.

- Materials are only acceptable if they arise from a single identified source.
- Mixtures of different types of these wastes from the same single source are acceptable without testing.

- Mixtures of these wastes from different sources are not accepted unless pre-acceptance testing is carried out.
- Wastes having any of the following characteristics shall not be accepted:
  - Consisting solely or mainly of dusts, powders or loose fibres.
  - Wastes that are in a form which is either sludge or liquid.

**Table 2 Acceptable Waste Types for Recycling**

EWC Code	Description	Exclusions
01	WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS	
01 01	wastes from mineral excavation	
01 01 02	wastes from mineral non-metalliferous excavation	
01 04	wastes from physical and chemical processing of non-metalliferous minerals	
01 04 08	waste gravel and crushed rocks	
01 04 09	waste sand and clays	
01 04 12	tailings and other wastes from washing and cleaning of minerals other than those mentioned in 01 04 07 and 01 04 11	
01 05	drilling muds and other drilling wastes	
01 05 04	freshwater drilling muds and wastes	
10	WASTES FROM THERMAL PROCESSES	
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)	
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	
17 01	concrete, bricks, tiles and ceramics	
17 01 01	concrete	Selected C & D waste only <sup>(a)</sup>
17 01 02	bricks	Selected C & D waste only <sup>(a)</sup>
17 01 03	tiles and ceramics	Selected C & D waste only <sup>(a)</sup>
17 01 07	mixtures of concrete, bricks, tiles and ceramics	Selected C & D waste only <sup>(a)</sup>
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil	
17 05 04	soil and stones	Excluding soil and stones from contaminated sites

EWC Code	Description	Exclusions
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 09	other construction and demolition wastes	
17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03	
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 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified	
19 12 09	minerals (for example sand, stones)	
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	
20 02	garden and park wastes (including cemetery waste)	
20 02 02	soil and stones	
<p><sup>(a)</sup> Selected C &amp; D waste (construction and demolition waste): with low contents of other types of materials (like metals, plastics, organics, wood, rubber etc). The origin of the waste must be known.                      No C &amp; D waste from buildings polluted with dangerous substances                      No C &amp; D waste from buildings treated or painted with materials containing dangerous substances in significant amounts</p>		

### 3.2.2 Deposit of Waste for Recovery

The Site has permission to accept only the waste types in Table 3 for deposit of waste for recovery:

**Table 3 Acceptable Waste Types for Deposit of Waste for Recovery**

EWC Code	Description	Exclusions
01	WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS	
01 01	wastes from mineral excavation	
01 01 02	wastes from mineral non-metalliferous excavation	
01 04	wastes from physical and chemical processing of non-metalliferous minerals	

EWC Code	Description	Exclusions
01 04 09	waste sand and clays	
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	
17 01	concrete, bricks, tiles and ceramics	
17 01 01	concrete	Selected C & D waste only <sup>(a)</sup>
17 01 02	bricks	Selected C & D waste only <sup>(a)</sup>
17 01 03	tiles and ceramics	Selected C & D waste only <sup>(a)</sup>
17 01 07	mixtures of concrete, bricks, tiles and ceramics	Selected C & D waste only <sup>(a)</sup>
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil	
17 05 04	soil and stones	Excluding topsoil and peat, excluding soil and stones from contaminated sites
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 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified	
19 12 05	glass	
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	
20 02	garden and park wastes (including cemetery waste)	
20 02 02	soil and stones	Excluding topsoil and peat
<sup>(a)</sup> Selected C & D waste (construction and demolition waste): with low contents of other types of materials (like metals, plastics, organics, wood, rubber etc). The origin of the waste must be known. No C & D waste from buildings polluted with dangerous substances No C & D waste from buildings treated or painted with materials containing dangerous substances in significant amounts		

Of those listed in Table 3, the waste types in Table 4 are assumed to fulfil the criteria of inert waste and therefore can be accepted without testing provided the waste stream is:

- a single waste type from a single source;

- are well characterised and described; and
- there is no suspicion of contamination.

**Table 4 Waste Types Which Can Be Accepted Without Testing**

EWC Code	Description	Comments
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	
17 01	concrete, bricks, tiles and ceramics	
17 01 01	concrete	Selected C & D waste only <sup>(a)</sup>
17 01 02	bricks	Selected C & D waste only <sup>(a)</sup>
17 01 03	tiles and ceramics	Selected C & D waste only <sup>(a)</sup>
17 01 07	mixtures of concrete, bricks, tiles and ceramics	Selected C & D waste only <sup>(a)</sup>
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil	
17 05 04	soil and stones	Excluding topsoil and peat, excluding soil and stones from contaminated sites
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 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified	
19 12 05	glass	
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	
20 02	garden and park wastes (including cemetery waste)	
20 02 02	soil and stones	Only from garden and parks waste. Excluding top soil and peat.
<sup>(a)</sup> Selected C & D waste (construction and demolition waste): with low contents of other types of materials (like metals, plastics, organics, wood, rubber etc). The origin of the waste must be known. No C & D waste from buildings polluted with dangerous substances No C & D waste from buildings treated or painted with materials containing dangerous substances in significant amounts		

### 3.2.3 Restoration

Only waste materials suitable for the intended use of the Site are used in the manufacture of the upper calcareous soil layer by blending with very fine indigenous chalk to produce a chalky soil. The waste categories to be employed are detailed in Table 5 below:

**Table 5 Proposed Waste Types for Restoration**

Waste Code	Description
17 05 04	Soil* and stones other than those mentioned in 17 05 03
20 02 02	Soil* and stones

\*For the purposes of waste acceptance, soil includes naturally occurring sands and clays.

The waste types specified in Table 5 are both included in Appendix 2 of the EA's Regulatory Guidance Note 13 as being potentially suitable for use in restoration operations.

There is no intention to accept contaminated materials.

The waste acceptance criteria (WAC) that will apply to waste soils being accepted at the site for restoration purposes will as described in Waste Acceptance Procedures with this EP application, namely Landfill Directive inert WAC.

The exception to this is when top soil is accepted. In these circumstances the limit value for total organic carbon will not apply.

## 4.0 WASTE IDENTIFICATION AND RECEPTION

### 4.1 Waste Acceptance Procedure

The Waste Acceptance Procedure (WAP) will ensure that the site only accepts waste that is:

- Suitable for the activity;
- Is allowed by the permit; and
- Is appropriately considered by the environmental risk assessment.

### 4.2 Record Keeping Procedures

Records will be maintained of all waste transactions relating Newport Quarry. Records will comprise the following.

#### 4.2.1 Waste Transfer Notes

All waste accepted for disposal at the site will be accompanied by a waste transfer note (unless it is a multiple consignment) as required by the Duty of Care Regulations, which will provide the following details:

- waste description including appropriate waste classification code;
- waste origin;
- transferor and transferee; and
- signatures of transferor and transferee.

#### 4.2.2 Records of Quantity Received

A register of the quantities and characteristics of waste accepted at the site will be maintained via written records kept at the head office including:

- date of delivery;
- waste quantity;
- waste description and classification code; and
- waste producer and/or carrier.

A record will also be maintained of all waste that is removed from the facility.

#### 4.2.3 Waste Information Forms, Waste Rejection Forms and Correspondence

Copies of relevant paperwork and correspondence will be maintained at the Head Office.

#### 4.2.4 Waste Characterisation and Analysis Records

Copies of all information relating to the characterisation and analysis of waste accepted at the site will be maintained as a digital record on IVL's Environmental Advisor's computer database.

#### 4.2.5 Site Log/Diary

The foregoing records will be supplemented by the site log/diary which will be used to record further details relating to waste acceptance and rejection including communication with the Environment Agency.

## 5.0 SITE PREPARATION

The proposed phasing of filling of the site is detailed in planning permission and the associated application drawings.

### 5.1 Maintenance of Surface Water Drainage System

Any surface water drainage ditches, culverts etc. will be inspected monthly for signs of erosion, instability, accumulation of sediment or vegetation or blockages. In the event that any deterioration is observed remedial works will be carried out as soon as practicable.

## 6.0 WASTE DEPOSIT AND PLACEMENT

### 6.1 Phased Infilling

Key points regarding the proposed restoration are as follows.

- Restoration will be undertaken in four phases with restoration in a phase following mineral extraction in each phase.
- A geological and sidewall barrier will be constructed using indigenous low permeability clay overburden and suitable, low permeability imported waste materials from excavations where there is no suspicion of contamination. During construction, the geological barrier will be overseen and verified in accordance with a Construction Quality Assurance (CQA) Plan.
- Restoration will be undertaken in lifts using indigenous overburden material and residual and unrecyclable inert waste materials to achieve the restoration profile minus lower and upper calcareous soil layers.

- A lower soil layer of indigenous chalk fines will be laid at a thickness of approximately 0.3-0.5m.
- An upper calcareous soil layer will be laid at a thickness of approximately 0.25-0.3m. The upper calcareous soil layer will be manufactured on Site by blending very fine indigenous chalk with residual soil material to produce a chalky soil.
- The Site will be restored as close as possible to the Site's natural contours prior to chalk extraction at the quarry although the exact original profile is unknown.
- An infiltration area will be constructed in the north eastern corner of the Site. Once restored, a swale which divides the Site into an upper and lower catchment area will direct runoff from the upper catchment to the infiltration pond. The lower catchment area will drain to an existing low-lying grassland area which acts as a soakaway.
- Additional woodland and hedgerow planting is proposed along the northern boundary of the swale to mimic that visible on historic mapping records.
- It is estimated that approximately 500,000 m<sup>3</sup> of imported material is required to restore the Site.
- Assuming an average density of 1.8 t/m<sup>3</sup>, the mass of imported inert waste materials will be approximately 900,000 tonnes.

## 6.2 Aftercare Strategy

There will be a three year after care period during which remedial work would be undertaken on any areas that required it, e.g. due to settlement or poor drainage.

Annual aftercare meetings will be held with the Planning Authority to review progress on the Site to agree operations and management for the forthcoming year.

Monitoring of the site will be in accordance with the site closure plan.

## 7.0 SITE INFRASTRUCTURE

### 7.1 General

The infrastructure that will be present on Site within the EP boundary to support recycling and restoration activities will comprise of the following;

- Mobile dry crushing unit;
- Mobile dry screening unit;
- Wheel cleaner;
- Wheel spinner;
- Weighbridge, office and fuelling area;
- Messroom;
- Car park; and
- Existing office & weighbridge and existing buildings.



## 7.2 Site Access, Internal Haul Roads

Access to the Site is gained from an existing road which joins the Site on the western boundary. The access road extends for approximately 800m to the south and can be joined from a side road extending from the B1383 London Road.

Waste will be delivered to Site in HGV's via the local road network. There will be a maximum of 80 movements (40 in, 40 out) on Site per day delivering inert waste.

Internal haul roads will be constructed from screened hardcore and will be lifted and re-used as the project progresses.

All vehicles entering the Site are required to report to the Site office.

## 7.3 Site Identification Board

A notice board is erected at the Site entrance. The notice board is constructed from durable materials and displays the following details:

- Name and address of the waste management facility;
- Statement that the Site is permitted by the Environment Agency;
- Name, address and telephone number of the permit holder;
- The Environment Agency's national numbers for general enquiries and emergencies;
- The emergency contact and telephone number of the licence holder;
- The opening hours of the Site;
- Permit reference number.

### 7.3.1 Maintenance

The notice board will be inspected on a weekly basis and checked for integrity and accuracy of the information. Repairs/alterations will be carried out as soon as possible after any defect is noted.

## 7.4 Site Setting and Fencing

Risk assessments will be carried out and appropriate measures will be taken to ensure that public safety and the safety of the company's assets are safeguarded.

A palisaded security compound will be erected for the storage of mobile plant and, when operations are taking place, security guards will be in attendance outside of normal working hours if necessary.

Once per week all boundary fencing will be inspected, and any necessary repairs put in hand. Any damage that exposes members of the public to significant risk or that allows unauthorised vehicular access to the Site will be made good with a temporary repair until a permanent repair can be made.

A note will be made in the Site Diary of when the inspections are carried out, and a record will be made of any damage discovered and the remedial action taken.

At the end of each working day the Site will be checked to ensure it is secure (i.e. all gates and buildings are locked).

All mobile plant will be parked securely at the end of each working day.

## 7.5 Site Office

The Site office will contain relevant documentation for the site operations e.g. a copy of the Environmental Permit and associated documents, Site plans, emergency procedures etc.

## 7.6 Fuel Storage

A diesel bowser will be stored in the 'bundled refuelling area'. Measures which will be in place to prevent and manage leaks from this tank are;

- It will sit on top of a concrete slab to prevent any infiltration if there is a spillage or leak;
- The bunded area will have the carrying capacity of 110% of the bowser's maximum capacity;
- The refuelling area will comprise a small concreted area designed to contain and direct any drainage to an oil and silt trap which discharges to a soakaway;

The refuelling tank contains a maximum of 5,000 litres of diesel.

## 7.7 Control of Mud and Debris – Wheel Cleaning

A wheel spinner and wheel cleaner will be located on Site, at the top of the access road, for use before vehicles leave the Site.

The Site will have dust control equipment available for use when required, including a waster bowser based on Site.

Regular daily checks will be made by the Site supervisor, or nominated Site employee, of the state of the surface of the Site roads.

## 7.8 Public and Private Utilities

There are no utilities crossing the Site.

## 7.9 Site Plant, Equipment and Vehicles

The main machinery employed on Site will be CAT D6s or similar bulldozers, articulated dump trucks and back-actors. Along with this, mobile screening and crushing plants will be located on Site in the recycling area.

A water bowser will be available on Site for dust control, which is pulled by a Ford tractor. A tractor mounted road brush is also available on Site for road-cleaning purposes as required.

## 7.10 Visitors

Unauthorised persons are not allowed on company premises.

Visitors must call at the Site office, identify themselves and state the nature of their business. Unless the caller is known he/she MUST NOT be allowed to find their destination unaccompanied.

## 7.11 Report of Thefts

Any staff must immediately inform the Site supervisor or nominee of any occurrence of:

- Breaking and entering of company premises;
- Vandalism;
- Theft from company premises;

- Any act or suspected act of dishonesty; and
- Stock or cash deficiencies.

## 8.0 ENVIRONMENTAL NUISANCE CONTROL

The Company has an approved BS EN ISO 14001.

This system ensures that management techniques are instigated to ensure compliance with all planning permissions, Waste Management Licenses, Environmental Permits and other legal requirements. The company has committed itself to a programme of environmental improvements.

The following sections deal with particular potential environmental problems.

### 8.1 Control of Litter

As the Site will only be taking construction waste, there should not be a litter problem as the wastes are of a heavy nature, not capable of being windblown. Any unauthorised paper etc., delivered with a load would be placed in the skip provided at the tipping area, which would be sheeted.

### 8.2 Control of Odour

It is unlikely that there will be an odour problem from the construction material delivered to the Site.

### 8.3 Control of Dust

#### 8.3.1 Prevention and Control of Releases of Dust, Fibres and Particulates

Dust, fibres and particulates may be found in the construction materials with a fines content and in soils. They may be generated during periods of dry weather in combination with windy conditions.

The focus of the dust management plan is to control dust generation and movement at source. The main sources of dust at the Site are likely to be from recycling of waste.

Dust may also arise from on-Site transportation on internal haul roads, infilling and contouring of waste and during the restoration phase on Site.

Dust impact risk from handling of materials and stockpiling is considered to be less significant.

A number of measures will be implemented and maintained throughout the operational life of the Site as listed below. The objective of these measures will be to prevent and minimise the release of airborne dusts, fibres and particulates arising from the permitted waste management operations in such quantities or concentrations that are likely to cause pollution of the environment or harm to human health.

#### 8.3.2 Control Measures During Recycling of Waste

The following control measures will be implemented during all periods when the Site is operational:

- Mobile screening and crushing plants will always be used to the manufacturer's instructions;
- Screening and crushing plants will be located away from the Site boundary when possible, especially if near sensitive receptors;
- Recycling/treatment activities will take place below ground level in the base of the quarry; and
- A 1.5m high soil bund will be installed behind the recycling area on Site to help mitigate any emissions which may come from the area.

When visible dust plumes are carried towards/across the Site boundary, the following control measures will be implemented:

- On Site water suppression system, water bowser, will dampen material as required in dry weather conditions.

### 8.3.3 Management Procedures

The Site Supervisor, or their nominee, will exercise day to day control on Site at all times. They will have particular responsibility for ensuring full compliance with the conditions attached to the permit. Specifically, they will assume control either personally or by delegation to suitably trained and responsible staff of:

- Vehicle movements;
- All loading, tipping and materials handling operations;
- Operation of dust suppression measures; and
- Inspection, cleaning and maintenance of all plant and equipment.

Staff at all levels will receive the necessary training and instruction in their duties relating to the control of all operations and the potential sources of dust emissions. Particular emphasis will be given to dealing with plant malfunctions and abnormal conditions. Site staff will inform the manager whenever visible dust emissions are observed or appear likely to occur, as a result of any Site operation.

If at any time dust emissions likely to cause a nuisance beyond the Site boundary are detected by the Site staff or any complaints relating to dust is received, the incident will be recorded in the Site Diary, and immediate action taken to identify the cause of the problem.

If the problem is related to a specific type of waste, then action will immediately be taken to suppress any aerial emissions by damping down or covering the waste with non-dusty materials.

The continuing effectiveness of this dust management scheme will be reviewed regularly.

### 8.3.4 Complaints Procedure

A complaints procedure will be established to ensure that any nuisance being caused to local residents is dealt with effectively. A register of complaints will be kept on site to record all concerns made either directly to the Site manager or via the regulatory authorities.

Each complaint will be investigated. The Site Supervisor will report the findings and the action taken to the Site Manager. The Minerals Planning Authority (and any other regulatory authority) will be advised in writing within two weeks of any dust complaint together with the findings of the investigation and any corrective action taken.

## 8.4 Noise Control

Due to the absence of noise sensitive properties in proximity to the Site noise from the Site is unlikely to be an issue.

## 8.5 Control of Pests and Vermin

The construction materials to be placed at the Site will not attract pests and vermin e.g. flies and birds. Nevertheless, the Site Supervisor will undertake regular inspection of the working areas and surrounding areas to check for signs of infestation, and if necessary, will instigate measures to control the infestation.

The results of these inspection will be recorded in the Site Diary.

## 8.6 Potentially Polluting Spillages and Leaks

### 8.6.1 Potentially Polluting Spillages and Leaks of Waste

Potentially polluting wastes will not be accepted at the site, therefore control measures and action plans are not considered necessary.

### 8.6.2 Potentially Polluting Spillages and Leaks of Raw Materials

#### Fuels and Oils

All fuels, oils and liquids used on the Site will be kept in a safe place which will be securely locked at the end of each working day.

The fuel storage tank is enclosed within a bund to catch any leakages or spills of fuels.

- The bund capacity will be at least 110% of the total capacity of the bowsers' maximum capacity.
- All pipes and gauges will be positioned within the bund wall.
- There will be no drainage outlets to allow the removal of trapped spillages by gravity drainage.
- Any liquid that accumulates within the bunded area will be removed by pumping and will be disposed of at a suitably licensed facility.
- Unconnected single-skinned containers or drums will be located within a bund, having a capacity of not less than 25% of the total capacity of all of the containers or 110% of the capacity of the largest container, whichever is the greater.

Spill kits will be kept on Site to deal with any minor spillages that might occur outside the bunded area. All staff on Site will be trained in the use of these kits.

Should a spillage occur on the construction site, the affected area will be excavated and removed for disposal at an appropriately licensed facility.

## 8.7 Fires on Site

No wastes will be burned on Site.

The types of waste which will be accepted at the Site are not likely to give rise to fires or heating, therefore no specific control measures or action plan are required.

Office and accommodation areas will have the necessary firefighting equipment to fight fires.

All mobile plant will carry a fire extinguisher and will be inspected and maintained in accordance with the plant maintenance schedule to mitigate against potential fires.

## 9.0 SITE RECORDS

### 9.1 Security of Records

The Company appreciate that accurate and reliable record keeping procedures are a vital part of a modern construction operation. All records that are required to be made under the conditions of the Permit and the Site Operating Plan will be maintained and kept secure from loss, damage or deterioration as detailed in the following sections.

## 9.2 Written Records

The following records and documents will be available for inspection at the site office:

- Visitors Book;
- Site Diary;
- Environmental Permit;
- Site Operating Plan;
- Site Monitoring Plan;
- Company Daily Landfill Inspection Reports;
- Copies of all Environment Agency visit or inspection reports;
- Company Safety Policy; and
- Emergency Procedures.

The following documentation will be available for inspection at the company's head office in Harlow:

- Daily Waste Input Forms;
- Waste Transfer and Acceptance Documentation – i.e. Duty of Care Transfer Notes, conveyance notes and weighbridge tickets;
- Site Environmental Monitoring Data reports;
- Random Waste Sampling Forms;
- Random Waste Sampling Analytical Results;
- Waste Information Forms;
- Unacceptable Waste Analysis Forms; and
- Rejected Waste Forms.

## 9.3 Digital Records

The following records will be maintained in digital format on the Company's environmental advisor's computer database, copies of which will be sent quarterly to the Company for storage on their computer system:

- Random waste sampling analysis records

Monitoring data will be sent to the EA in digital format by the Company's environmental advisor.

## 9.4 Availability of Records

All records which are required to be made under the conditions of the EP will be made available for immediate inspection when required by an authorised officer of the Environment Agency.

A noticeboard will be maintained in the office with up-to-date versions of the following prominently displayed:

- Environmental Permit with conditions;
- Plan of method and direction of working;
- Certificate of Employers Liability Insurance;

- Emergency Telephone Numbers;
- The Company's Conditions for Acceptance of Waste (Printed copies will be available for issue should these be required); and
- The Company's Site Safety Rules for customers/visitors (Printed copies will be available for issue should these be required);

Records of waste that are accepted at the Site, records of waste that are rejected and dispatched from the Site and Site diary records will be kept for a minimum period of two years.

Environmental Monitoring records will be kept until a certificate of completion is issued for the Site.

## 9.5 Recording Hazardous Waste Deposits

No hazardous waste will be deposited at the Site therefore this matter need not be addressed.

## 9.6 Records of Waste Movements

A record will be kept of each cargo of waste accepted. This record will include the following details:

- The nature of the waste i.e. Solid, liquid;
- Waste Type (see Tables 2, 3 and 5);
- Quantity – tonnes;
- Date received; and
- Origin of waste, in terms of place.

A summary record of the waste types accepted and removed from the Site will be made for each quarter of the financial year and will be submitted to the EA within one month following the end of the quarter. The format of the summary record will be agreed with the Agency.

## 9.7 Site Diary

A Site Diary will be maintained by the Site supervisor and will be kept secure. The Site Diary will be available for inspection when required by an authorised officer of the Environment Agency.

The diary will include a record of the following:

- Plant breakdowns and course of action to provide necessary replacement plant;
- Plant maintenance;
- Adverse weather conditions;
- Dust conditions;
- Noise conditions;
- Commencement of working or filling in a new area;
- Completion of working in specified area;
- Soil-stripping;
- Soil-replacement;
- Emergencies and actions taken;

- Unauthorised waste receipts and actions taken;
- Sampling or monitoring exercises;
- Site inspections by company staff, problems identified, and actions taken to resolve them; and
- Complaints received and actions taken.

## 9.8 Daily Inspection Checklist

To assist in the completion of the Site Diary, the Site supervisor will refer to the “Daily Inspection Check List”. The daily inspection may consist of the following:

- All Site plant is operating and maintained according to schedule;
- Dust observations have been carried out;
- Any high environmental monitoring readings have been reported;
- The water bowser and tractor are in use for dust suppression if necessary;
- If litter is a problem;
- The surface water drainage system is available, and functioning should it be necessary at times of high rainfall;
- Fuel storage levels;
- Signs of leakage or spillage from the fuel store;
- Unacceptable waste deliveries -if so, ensure segregation, removal and reporting in Site Diary;
- The standard of haul roads and whether any repairs are required;
- Cleanliness of access road;
- Cleanliness of site office and surrounds;
- Conditions of signs and notice boards;
- Damage to fences and gates;
- Any fly tipping;
- Stability of slopes around the Site, sand faces, waste faces etc.;
- Odours;
- Signs of discoloration of surface water;
- Vandalism; and
- Completion of the Site Diary.

## 9.9 Reporting of Environmental Performance

The Company will prepare a review of the environmental monitoring data every year during the operational life of the site and during the post closure phase and will undertake a review of the Hydrogeological Risk Assessment every six years. The reports will be submitted to the EA at intervals required in the permit, or as otherwise agreed with the EA.

A completion report will be prepared at the end of the Site completion phase.



The report will include the following information:

- An analysis and review of the environmental monitoring results recorded for the Site, with an interpretation of the results against background and trigger levels.
- A review of the risk management systems provided for the Site.

## 9.10 COTC Holder Visits

The named COTC holder will visit Site at least twice/week or such other frequency as may be agreed with the EA. A visit report will be placed in the Site file for each visit.

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