MUNDAYS HILL QUARRY RESTORATION

Environmental Permit Application

Waste Acceptance Procedure

Prepared for: **Fox (Owmby) Limited**

Client Ref: EPR/KB3609MU/A001

SLR Ref: 416.00583.00012
Version No: 1
October 2022

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1.0 Introduction

1.1 Report Context

Fox (Owmby) Limited (Fox) has instructed SLR Consulting Limited (SLR) to prepare a Waste Acceptance Procedure (WAP) as part of an Environmental Permit (EP) application to authorise the use of suitable waste in the restoration of Mundays Hill Quarry (the site), located near Heath and Reach, Bedfordshire LU7 9LE as a waste recovery operation. The location of the site is illustrated on Drawing 003.

The purpose of the WAP is to ensure that the site only accepts waste that is:

- Suitable for the activity;
- Allowed by the permit; and
- Appropriately considered by the environmental risk assessment.

The WAP will also assist with:

- Ensuring the activities do not cause pollution;
- Assist in the waste sourcing decision making process; and
- Prevent the receipt of non-permitted wastes.

This Waste Acceptance Procedure has been prepared with reference to the Environment Agency (EA) guidance 'Waste Acceptance Procedures for Deposit for Recovery' dated 21st April 2021[1].

[1] Waste acceptance procedures for deposit for recovery - GOV.UK (www.gov.uk)

2.0 Waste Pre-Acceptance Procedure – Basic Characterisation

The objective of the waste pre-acceptance procedure is to evaluate customer information at the enquiry stage to determine whether the waste could be accepted at the site.

The waste producer/holder will be required to send the necessary waste characterisation information to Fox in advance of delivery of waste materials to the site.

The information enables Fox to determine whether the waste stream can be accepted at the site.

No waste will be accepted at the site unless the necessary characterisation information has been received in advance and approved for receipt.

Both new and existing customers will be required to provide characterisation information for each new waste stream.

The waste producer/holder must provide the following waste characterisation information for each new waste stream proposed for recovery at Mundays Hill Quarry. The description must include the following:

- Waste source and origin;
- The process producing the waste (including a description of the process, its SIC code and characteristics of the waste types used to comprise the batch of material);
- The waste treatment applied;
- The appearance of the waste (including smell, colour, consistency and physical form); and
- Analysis and determination of waste code in accordance with WM3.

An assessment of the reliability of the information received by Fox, which could include:

- Ensuring all waste analysis certificates are complete, and analysis has been carried out for all relevant parameters;
- Analysis has been carried out by well-known and reputable laboratories which hold suitable quality accreditation and have used relevant test methods;
- Ensuring that the analytical information is provided in secure PDF format;
- Undertaking a visit to the waste producer's site; and
- Ensuring that data is current and relates to the waste proposed for delivery to the site.

If necessary, the customer will be asked to provide additional supporting information before a decision can be made on whether the waste could be accepted at the site. This may include, but not be limited to:

- Test results against waste acceptance criteria for landfill; and
- Confirmation of class of landfill the waste could be accepted at.

New waste streams shall only be approved for delivery to the site, if the basic characterisation information is found to be completed, it has been coded correctly in accordance with WM3 and the waste stream passes inert waste acceptance criteria as outlined below.

2.1 Waste Pre-Acceptance Criteria

The waste types shown in Table 1 are assumed to fulfil the criteria of inert waste (as outlined within section 2.1.2 of the Landfill Directive 2003/33/EC) 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.

2.2 Waste Types

The waste types which will be used for the development are detailed in Table 1 below with their associated European Waste Catalogue (EWC) code. These waste types have historically been accepted by the EA as being potentially suitable for recovery (and are listed in the Standard Rules SR2015 No39 Use of Waste in a Deposit for Recovery Operation and/or the Check if Your Waste is Suitable for Deposit for Recovery Guidance).

2.2.1 General Fill

The waste categories which will be accepted on site as general fill are detailed in Table 1 below.

Table 1
List of Waste Types to be Accepted for General Fill

European Waste Code	Description
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 other than those containing dangerous substances
01 04 09	Waste sand and clays
10	WASTES FROM THERMAL PROCESSESS
10 01	Waste from power station and other combustion
10 01 01	Bottom ash, slag and boiler dust (excluding boiler dust mentioned in 10 01 04)
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
17 01 02	Bricks
17 01 03	Tiles and ceramics
17 01 07	Mixtures of concrete, bricks, tiles and ceramics
17 03	Bituminous mixtures, coal tar and tarred products
17 03 02	Bituminous mixtures other than those mentioned in 17 03 01
17 05	Soils Stones and Dredging Soil
17 05 04	Soil and Stones
17 05 06	Dredging spoil other than those mentioned in 17 05 05

European Waste Code	Description
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
19 12 09	Minerals (excluding residual fines)
19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 – excluding trommel and residual fines
20	MUNICIPAL WASTE (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATEY COLLECTED FRACTIONS
20 02	Garden and Park Wastes
20 02 02	Soil and Stones

2.2.2 Topsoil

The waste categories which will be accepted as topsoil are detailed in Table 2 below.

Table 2
List of Waste Types to be Accepted for Topsoil

European Waste Code	Description
17 05	Soils Stones and Dredging Soil
17 05 04	Soil and Stones
20	MUNICIPAL WASTE (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATEY COLLECTED FRACTIONS
20 02	Garden and Park Wastes
20 02 02	Soil and Stones

In addition, the wastes highlighted in yellow and detailed in Tables 1 and 2 will be accepted at the site if they confirm to the following requirements:

- The limit values for leaching set out in Table 4; and
- The limit values for total content of organic parameters set out in Table 5.

London Clay

London clay can be accepted on site, with a 3 x WAC derogation for selenium and sulphate. Therefore, the limits for these two determinants are as follows, whilst all other determinants must meet the limits detailed in Table 4;

- Selenium – 0.3mg/kg; and
- Sulphate – 3,000mg/kg.

Table 3
Limit Values for Leaching

COMPONENT	SYMBOL	L/S = 10 l/kg mg/kg dry substance
Arsenic	As	0.5
Barium	Ba	20
Cadmium	Cd	0.04
Total Chromium	Cr_{total}	0.5
Copper	Cu	2
Mercury	Hg	0.01
Molybdenum	Mo	0.5
Nickel	Ni	0.4
Lead	Pb	0.5
Antimony	Sb	0.06
Selenium	Se	0.1
Zinc	Zn	4
Chloride	Cl^-	800
Fluoride	F^-	10
Sulphate[(a)]	SO_4^{2-}	1,000
Phenol index	PI	1
Dissolved Organic Carbon[(b)]	DOC	500
Total Dissolved Solids[(c)]	TDS	4,000

(a) This limit value for sulphate may be increased to 6,000 mg/kg, provided that the value of C0 (the first eluate of a percolation test at L/S = 0.1 l/kg) does not exceed 1,500 mg/l. It will be necessary to use a percolation test to determine the limit value at L/S = 0.1 l/kg under initial equilibrium conditions.

(b) If the waste does not meet this value for Dissolved Organic Carbon (DOC) at its own pH value, it may alternatively be tested at L/S = 10 l/kg and a pH between 7.5 and 8.0. The waste may be considered as complying with the acceptance criteria for DOC, if the result of this determination does not exceed 500 mg/kg.

(c) The value for Total Dissolved Solids can be used alternatively to the values for Sulphate and Chloride.

Table 4
Limit Values for Total Content of Organic Parameters

PARAMETER	VALUE, mg/kg
Total Organic Carbon (TOC)[(a)]	30,000
BTEX compounds (benzene, toluene, ethyl benzene & xylenes)	6
Polychlorinated biphenyls (PCBs) (7 congeners)	1

Mineral oil (C10 to C40)	500
PAHs (Polycyclic aromatic hydrocarbons) (Total of 17)	100

(a) In the case of soils, a higher limit value may be permitted by the Environment Agency, provided a Dissolved Organic Carbon value of 500 mg/kg is achieved at L/S 10 l/kg at the pH of the soil or at a pH value of between 7.5 and 8.0.

2.3 Decision to Approve/Not Approve

The pre-acceptance procedure will result in either the waste:

- Being approved for delivery to the site as a suitable inert waste and therefore suitable for disposal at the site; or
- Failing the site's waste pre-acceptance criteria and therefore not approved for delivery to the site.

If the waste is not approved, the customer will be advised that the waste is unsuitable for receipt at the site.

The waste producer is responsible for ensuring that the sampling procedure employed characterises the waste both chemically and physically, and accounts for the variability of the waste stream.

3.0 Waste Acceptance Procedure – On-Site Verification

3.1 Procedures at the Site Control Office

On-site verification of waste is to ensure each delivery of waste is the expected waste and that it has not been contaminated in storage or transport to the site.

Upon delivery of waste to the site, the objectives of the Waste Acceptance Procedure implemented at the site Control Office are to undertake:

- Visual inspection of pre-approved loads;
- Checking and completion of paperwork accompanying each load;
- Rejection of unacceptable loads; and
- Ensuring that only pre-approved wastes are accepted at the site.

3.1.1 Visual Inspection of Pre-Approved Loads

All waste entering the site will be required to report to the Site Control Office. The drivers will be required to disclose the nature of the waste they are carrying and provide relevant documentation.

All loads of waste delivered to site will be visually inspected at the Site Control Office where practicable. The objective of this inspection is to detect the presence of unauthorised waste. Vehicles that arrive at the site sheeted will be required to unsheet to allow this inspection to take place before they are issued with a ticket.

Where visual inspection is not possible at the Site Control Office, all loads will be visually inspected at the operational area prior to being disposed of. No waste will be disposed of at the site unless a visual inspection has been carried out.

3.1.2 Checking and Completion of Paperwork Accompanying Each Load

The Site Control Clerk will ensure that a fully completed waste transfer note is received for every load (unless part of a multiple consignment) and will issue the delivery driver with a receipt.

Only authorised waste carriers (and exempt authorities) will be allowed on site. Any new waste carrier must provide evidence of registration before being allowed to deposit the load.

After inspection of the load, the Site Control Clerk will sign the waste transfer note to confirm that the details are correct.

Only when the Site Control Clerk is satisfied that everything relating to a load is acceptable will the load be directed to the active deposit area. However, if inspection is not possible in the waste reception area, the Site Control Clerk will only sign the waste transfer note when the vehicle returns to the Site Control Office after the deposit of waste has taken place.

3.1.3 Verification – Sampling and Testing

In order to provide further assurance as the chemical suitability of the accepted waste, Fox will carry out verification testing of waste delivered to the site to confirm that it meets the site's waste acceptance criteria for leaching and total content of organics. Verification testing will be undertaken on loads accepted regularly on site and will be decided on an annual basis.

Upon arrival to the site, waste deliveries identified for verification testing will be directed to deposit at a safe holding area so that material can be stored while samples are taken and until the results of the testing are received.

Sampling

Sampling of waste for verification by Fox will be undertaken as soon as the waste has been accepted on site and will be carried out in accordance with the following procedure:

- The segregated load will be sampled from at least 9 sub sample locations using a stainless steel trowel or spade after removal of the exposed surface of the tipped load;
- The sub samples will be selected as representative of the waste mass as a whole and include a range of grain sizes, where appropriate;
- The sub samples will be placed in a large plastic bag and mixed thoroughly;
- The sample tub or jar will then be filled from this mixed material and sealed as soon as practicable to prevent loss of volatiles or sample deterioration; and
- The trowel will be washed with distilled water and dried between the sampling of each waste load.

An analysis request form will be completed and samples will be labelled with the following information:

- Site name;
- Sample number;
- Sample description;
- Waste producer;
- Waste carrier;
- Drivers name;
- Waste ticket number;
- Date sample was taken; and
- Name of sampler.

Analytical Suite

Fox will test the sample to confirm that the delivery meets the inert waste limit values for leaching and total content of organics, listed in Table 4 and Table 5.

Analytical Methods

Waste will be analysed in accordance with the analytical methods set out in the 'Sampling Waste' section of the EA Guidance, 'Dispose of Waste to Landfill, April 2021[2]'.

Results

Upon receipt of the analysis, the results will be reviewed.

If the results of validation testing deem the waste to fail the site's waste acceptance criteria, a record will be made and the quarantine and rejection procedures will be implemented in accordance with Section 4.0 Quarantine & Rejection procedures.

If the results of validation testing deem the waste to pass the site's waste acceptance criteria, the load will delivered to the operational area.

[2] Dispose of waste to landfill - GOV.UK (www.gov.uk)

3.1.4 Management and Monitoring of Approved Job List

The Site Control Clerk will only accept waste that is detailed on an Approved Job List, which contains details on the wastes that have been approved for receipt.

3.1.5 Rejection of Unacceptable Loads

Waste will be rejected from site by the Site Control Clerk in the following circumstances:

- If the waste has not been pre-approved and is not on the Approved Job List;
- If the waste does not conform to the description on accompanying paperwork, the waste transfer note of the Approved Job List;
- If the waste is delivered by an unauthorised carrier; or
- If the visual and olfactory inspection reveals the presence of unauthorised waste.

In these circumstances the load will be rejected from site and the Site Control Clerk will advise the driver that the load is rejected. The producer and carrier of the waste will be informed. Relevant paperwork will be completed.

If a load is rejected before completion of paperwork accepting the waste on site, there will have been no 'transfer' of the waste from the carrier and accordingly a new waste transfer note will not be created. In the event that waste is rejected following a completion of the original transfer note, a new transfer note will be generated.

3.2 Procedures at the Operational Area

The objectives of the Waste Acceptance Procedures at the operational area are:

- To carry out further visual inspection of the loads during and following discharge from the delivery vehicle;
- To communicate with the Site Control Clerk as necessary regarding issues relating to individual loads of waste; and
- To implement quarantine and rejection procedures as necessary for non-conforming waste.

3.2.1 Visual Inspection of Loads During and Following Discharge

On arrival at the working area, the load will be deposited as directed by Site Operatives behind the working face.

Every load of waste will be observed by a Site Operative as it is discharged from the vehicle. The waste will be visually inspected at that stage to ensure there are no unauthorised materials present within the load. The visual inspection will generally be undertaken from the cab of the vehicle, however in the event of suspicion regarding the waste, the cab driver will get out of the vehicle and undertake further inspection.

When the Operative has satisfied themselves as to the acceptability of the waste it will be deposited over the working face.

In the event that unauthorised waste is observed or suspected it will be dealt with in accordance with the waste rejection procedures.

3.2.2 Communications with Site Control Clerk

The Site Operatives at the active operational area will be in direct radio contact with the Site Control Clerk. This will enable instructions to be given regarding particular loads of waste and ensure appropriate precautions are taken during the recovery process.

3.2.3 Quarantine and Rejection Procedures

In the event that non-conforming waste is identified during the visual inspection at the operational area, quarantine and rejection procedures will be implemented in accordance with Section 4.0 Quarantine & Rejection procedures.

4.0 Quarantine & Rejection procedures

The objectives of the quarantine and rejection procedures are to ensure that all non-conforming waste is removed from site and that the waste producer and carrier are informed so that appropriate action can be taken to prevent recurrence.

Non-conforming waste will be identified by either the Site Control Clerk at the Site Control Office, or by Site Operatives at the operational area. Non-conforming waste will be identified by visual and olfactory means.

Visual criteria used to assess potentially unsuitable loads will be the presence of material not specifically authorised by the permit, or discolouration and staining. Any odorous materials will be rejected as potentially contaminated.

4.1 Rejection at Site Control Office

Waste will be rejected from site by the Site Control Clerk in the following circumstances:

- If the waste has not been pre-approved and is not on the Approved Job List;
- If the waste does not conform to the description on the accompanying paperwork, the waste transfer note or the Approved Job List;
- If the waste is delivered by an unauthorised carrier;
- If the visual and olfactory inspection reveals the presence of unauthorised waste.

In these circumstances the load will be rejected from site and the Site Control Clerk will issue relevant paperwork to the driver.

4.2 Rejection at Operational Area

If unauthorised waste is observed by a Site Operative either during or after deposit, the driver of the vehicle will be alerted and the waste will be reloaded onto the vehicle where possible. The vehicle will then be redirected to the Site Control Office, issued with relevant paperwork and asked to leave the site.

If the vehicle has left the operational area, the Site Operative will contact the Site Control Office and efforts made to intercept the vehicle before leaving the site so that the waste can be re loaded, and relevant paperwork issued.

In the event that the vehicle has left the site before the presence of unauthorised waste is identified, the waste will be isolated or moved to a temporary ‘quarantine’ storage area.

The waste carrier will then be contacted and asked to remove the waste from site. If the carrier is unable to remove the waste it will be consigned to an alternative suitably authorised facility by a registered waste carrier. A duty of care transfer note will be completed for all such transactions. In the event it is necessary to sample such waste to identify a suitable treatment facility, the necessary sampling will be carried out. The waste will be maintained in the quarantine area until such time as a suitable alternative facility has been identified.

A skip will be maintained close to the operational area. This skip will be used for the storage of isolated contaminants identified within loads of waste which would not warrant rejection of the load. Such inclusions may include small amounts of plastic or wood. These minor inclusions will be removed from the load and placed in the skip prior to off-site removal.

4.3 Communication with Producer and Carrier

The producer and carrier of any rejected waste will be advised by the completion of relevant paperwork. In the event of repeated deliveries of non-conforming waste, formal letters will be sent to the offending producers and carriers and the ultimate sanction will be to prohibit them from using the site. A record of prohibited producers and carriers will be maintained on site, and will be available for inspection by the EA.

5.0 Record keeping

Records will be maintained of all waste transactions relation to the Mundays Hill Quarry Restoration. Records will comprise the following:

5.1 Waste Transfer Notes

All waste accepted 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.

5.2 Records of Quantity Received

A register of the quantities and characteristics of waste accepted at the site will be maintained on a computerised database. The database will include the following details:

- 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.

5.3 Waste Information Forms, Waste Rejection Forms & Correspondence

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

5.4 Waste Characterisation & Analysis Records

Copies of all information relating to the characterisation and analysis of waste accepted at the site will be maintained at the Site Office.

5.5 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 EA.

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