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Lydiate Lane Quarry

Waste Acceptance Criteria

J A Jackson Contractors (Leyland) Limited

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1 Introduction

1.1 Report Objectives

This Waste Acceptance Criteria (WAC) report has been prepared by ByrneLooby Partners (UK) Limited on behalf of J A Jackson Contractors (Leyland) Limited (the Operator) to support a permit variation to environmental permit reference EPR/LB3834AE/V004 for Lydiate Lane Quarry (the Site). The Site is permitted to operate as an inert landfill. This permit variation application proposes to vary the permit to a non-hazardous landfill, accepting only qualifying materials.

HM Revenue and Customs (HMRC) made specific allowance for quarry restoration identifying a very limited list of suitable wastes in accordance with The Landfill Tax (Qualifying Material) Order 2011 (as amended). In accordance with HMRC's LFT1 guidance¹, condition 8.4.1 states:

“Lower rate material which is used for the purpose of filling existing or former quarries may qualify for exemption. The following table provides a summary of the conditions that must be met to qualify for exemption. If the material disposed of consists only of materials listed in the Landfill Tax (Qualifying Material) Order 2011, a summary of which is set out of paragraph 4.2, or the material disposed of consists mainly of materials listed in the Landfill Tax (Qualifying Material) Order 2011 save for incidental amount of standard rate material as described in paragraph 7.3 and:

- *the disposal takes place in a quarry;*
- *there is planning consent in place to fill (or partly fill) the quarry; and*
- *the permit only authorises the disposal of qualifying material.*

Then the disposal of material is exempt.”

This report describes the wastes acceptance procedures which are also detailed in the site's Environmental Management System (EMS) and updates the Waste Types and Acceptance Procedures (reference: 1607/R/006/1, dated December 2012) submitted with the original application.

1.2 Structure of Application and Accompanying Details

Section 2 of this report details the waste acceptance protocol (structured characterisation, compliance testing and verification) and the waste types to be accepted. Section 3 of this report introduces the rationale behind the derivation of an appropriate source term, the review forms part of a substantial dataset held by ByrneLooby (formerly TerraConsult) on similar infilling schemes throughout the UK. This section of the report explains how a leachate source term has been calculated for the proposed wastes taking account of actual leachate composition collected from similar and identical schemes.

¹ [Excise Notice LFT1: a general guide to Landfill Tax - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/344441/Excise_Note_LFT1_a_general_guide_to_Landfill_Tax.pdf)

2 Waste Acceptance

2.1 Waste Acceptance Procedures

Waste acceptance will be a structured hierarchy with appropriate points of control for the identification and validation of suitable wastes for disposal or recovery at the site. This is summarised as follows:

- Level 1. Basic characterisation through pre-submission of an appropriate waste classification (European Waste Catalogue (EWC) codes, site investigations etc);
- Level 2. Compliance testing; and
- Level 3. On-site verification.

Each stage in the proposed waste acceptance scheme is detailed further below.

2.1.1 Level 1: Waste Characterisation

The EWC code of wastes will be checked against any relevant available data provided (e.g. waste description, waste source or chemical testing) to confirm that the waste coding is correct, it can be accepted under the permit and it is suitable for the proposed activities. The waste enquiry procedure requires the following information, where available and applicable, to be gathered from any potential waste load prior to acceptance:

- Details of the waste producer including their organisation name, address and contact details;
- Source and origin of the waste (including full site address);
- Volume of the material to be deposited;
- Information on the process producing the waste (description and characteristics of raw materials and products);
- If the waste has gone through some treatment, then a full description of the waste treatment applied;
- A description of the waste;
- Code according to the EWC;
- Appearance of the waste (smell, colour, physical form); and
- Data on the composition and chemical properties of the waste. For wastes to be landfilled this is provided by customers as a site investigation report including full laboratory chemical analysis. The Operator will ensure the analysis provided for any material is

sufficient for a hazardous waste assessment, which will be undertaken in accordance with the Waste Framework Directive and relevant Environment Agency (Agency) guidance².

This data will be reviewed by a suitably qualified person to ensure that all sampling is representative of the source of the waste and an appraisal of the composition, including the likelihood of hazardous properties, will be undertaken.

Wastes will only be accepted at the site if they fall within the limited types of wastes permitted in the EWC code list set out in the site permit and then only to that particular permitted activity.

If the composition of a waste stream subsequently changes, the Operator will stop the importation of the material and request additional / new information to enable them to carry out basic waste characterisation again.

Where the results of basic waste characterisation show a waste stream is not acceptable at the site, the customer will be informed, and the waste will not be accepted.

A copy of the site investigation report, analytical test data and any other relevant documentation relating to a waste stream that has been accepted, is kept on file and can be made available for inspection by the Agency if requested.

2.1.2 Level 2: Compliance Testing

If the Operator has a regularly arising waste stream from the same source, checks are carried out to ensure that the waste streams are unchanged and continue to comply with the results of the basic characterisation, the acceptance criteria for the site, and its permit requirements.

The Operator always ensure that the site investigation information, provided as part of the basic waste characterisation, is fully representative of all material proposed for import at the site. Any additional information requested is kept on file and can be made available for inspection by the Agency if requested.

Sampling of material from random loads arriving at the site is carried out once a year. On the designated day, the site operative will select and stop a vehicle at random, at any point during that day, to allow the collection of a sample from the vehicle. The samples are sent to a laboratory for chemical analysis to ensure the material meets the conditions of the sites permit.

2.1.3 Level 3: On-Site Verification

Assuming the initial checks have been completed to the satisfaction of the site management / chemist, the weighbridge operator will be the next point of control prior to deposit of wastes in the site.

Each load arriving at the site will be subject to a Level 3 Verification. This constitutes, where appropriate, two visual inspections, by site office personnel prior to deposit of the waste and by the operative at the place of deposit. Given that loads may arrive at the site in wagons with

² [Waste classification technical guidance - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/616222/Waste_classification_technical_guidance.pdf)

sheeted bodies, an inspection at the weighbridge may be impractical. In such instances, verification of the load at the point of receipt will be limited to checking the accompanying Duty of Care documentation, with a visual inspection being carried out by the operative at the place of deposit.

The information to be recorded in respect of each load will be where appropriate:

- Pre-treatment details;
- Waste type;
- Date;
- Time;
- Customer name;
- Vehicle registration number and type;
- Ticket number; and
- Carriers registration number.

2.1.4 Rejection Procedures

In the event that any load or part load is found, prior to its deposit, to be outside those permitted at the site it will be rejected from the site.

Loads which are found to be potentially unsuitable after deposit will be referred to the site manager for action. This could include rejection of further loads from the source, isolation and removal of the waste materials and restrictions on futures waste inputs from the producer.

In each instance, the Technically Competent Manager or nominated deputy will issue a Load Rejection Form to the waste producer or carrier.

In such circumstances where a waste load is rejected, the Agency will be notified and a record kept in the site diary of:

- nature and quantity of waste load;
- name and address of waste producer / waste carrier;
- waste carrier registration number;
- vehicle registration number; and
- date and time of load rejection.

All rejected loads will be accompanied by the correct documentation.

2.1.5 Site Records

Copies of all records required in accordance with the permit are maintained and kept on file and can be made available for inspection by the Agency if required.

All waste transfer notes will be kept on file for a minimum of two years. Waste transfer notes can be made available during this period for inspection by the Agency if required.

3 Wastes and Leachate Source Term

3.1 Change to Waste Types to be Landfilled

The proposed wastes (a change from inert to non-hazardous) will consist of excavation, construction/demolition wastes and similar industrial wastes within the Qualifying Materials Order that have similar low pollution potential to inert wastes. Currently the permit allows for disposal of mineral wastes (e.g. sand and clays), ceramics, bricks, concrete and glass, tiles, ceramics, and soil excluding top soil. All these waste types will continue to be accepted. Top-soil will continue to be excluded.

The current permit also allows disposal of wastes from the processing of sand excavated on site (washing with water to remove silt and clay). However, similar wastes from processing inert construction and excavation wastes are not permitted by the inert landfill permit. This is because the Agency now advise that "soil and aggregate washing is a physico-chemical treatment activity" and consequently the appropriate EWC code for wet silt/clay washed from inert waste would be "19 02 06 sludges from physico/chemical treatment other than those mentioned in 19 02 05". EWC code 19 02 06 cannot be accepted at inert landfill without leaching tests as specified in Council Decision (2003/33/EC). Overall chemical composition of the washed silt/clay residue and leachability are very low. However, sulphate exceeds the inert limit when compared to the L/S 10 l/kg methodology specified in Schedule 10 of the Environmental Permitting (England and Wales) Regulations 2016 (as amended) but noting the sulphate results are comparable with the first eluate percolation test for inert landfill as specified in Council Decision. The elevated sulphate is considered to be a result of small residual fragments of Calcium Sulphate based materials found in construction wastes and natural occurring gypsum materials.

The silt/clay residue meets the definition of Qualifying Material as prescribed by the Landfill Tax (Qualifying Material) Order 2011 (as amended) and does not undergo any significant physical, chemical or biological transformation.

Qualifying Materials include wastes in the following groups:

- Group 1 Rocks and soils
- Group 2 Ceramics or concrete materials
- Group 3 Minerals, processed or prepared
- Group 4 Furnace slags
- Group 5 Ash

Of these the vast majority of the materials accepted in the current inert landfill and expected to continue to be accepted are:

- Soil (including mixed clays, silts and sands); and

- Stones.

Construction based materials are expected to be diverted from landfill and recovered as recycled aggregate with only the silt and clay component landfilled. The process of screening and washing wastes to generate a recycled aggregate removes the small amounts of organic materials (e.g. leaf litter, wood, plastics) that may have been present and may have historically been accepted at inert landfills.

Therefore, it is not expected that the change from inert waste to limited non-hazardous waste (consisting only of qualifying materials) will generate landfill gas, malodorous emissions or that active management of landfill gas will be required.

Such restrictions will also ensure that the generation of the primary soluble landfill leachate pollutant (i.e. ammonium) as well as the organic degradation by-products, namely hydrolysis products such as the phenols and the hazardous substances such as BTEX (benzene, toluene, ethylbenzene and xylene) compounds will continue to be prevented.

The proposed change to the wastes will maintain the negligible pollution potential solubility and settlement potential; thus, the site is highly likely to rapidly stabilise (akin to the previously deposited inert waste) to a state where the permitted area could be surrendered upon or shortly after completion of the restoration works.

The soil washing residues (with a high silt and clay content) will be incorporated into leachate source term for the site. A wash plant is currently operational at another site within the applicant's portfolio and leachable and water data is available to inform the likely leachate composition.

In addition to the inclusion of the source term for data relevant to the silt and clay washing residue overall source term for the inert landfill has been updated to consider the potential leachate generation from non-hazardous Qualifying Material. Although it is anticipated that the majority of wastes accepted will continue to be classed as inert.

How the amended waste types may impact leachate quality and an appropriate source term is discussed in the Hydrogeological Risk Assessment, permit variation application document referenced 14-K0217-BLP-ENV-00013.

Table S2.1 of the existent permit lists the permitted waste types. The proposed additional waste for the landfill is limited to 19 02 06 sludges from physico/chemical treatment other than those mentioned in 19 02 05.

4 Summary

The application proposes to utilise non-hazardous soils for the infilling and restoration of the current void, waste acceptance criteria will accord with WM3 guidance in regard to the definition of non-hazardous. A significant dataset has been reviewed in deriving a source term from similar infilling schemes. Hence the source term is considered statistically robust.

The only additional waste to be landfilled is 19 02 06 sludges from physico/chemical treatment other than those mentioned in 19 02 05.

Waste Acceptance Procedures outlined in this report in addition to the site's EMS will ensure that wastes are acceptable for either landfill disposal or recovery by treatment.

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