



THOMPSONS OF PRUDHOE

**Silvertop Quarry, Hallbankgate
Application for an Environmental Permit**

Operating Techniques

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DRAWINGS

Drawing No	Title	Scale
NT12629-013	Site Location	1:50000
NT12629-012	Waste Recovery Permit Application Area	As Shown

APPENDICES

Appendix 1	Waste Acceptance, Sampling and Testing
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1 INTRODUCTION

1.1 Context

1.1.1 Wardell Armstrong (Newcastle upon Tyne) were appointed by Thompsons of Prudhoe to prepare an application for a Waste Recovery Permit for the proposed restoration of the western part of Silvertop Quarry, Hallbankgate, Cumbria (re Drawing Number NT12629/013 for site location), henceforth referred to as the “Site”.

1.1.2 This document details the operating techniques at the site and has been produced to answer the relevant questions in Part B of the permit application form.

1.1.3 The application is for a Bespoke Waste Recovery Permit, with the aim of continuing restoration at the quarry in the same approved manner as for the existing excavation areas at the site. The application follows preparation of a Waste Recovery Plan for the site (ref Waste Recovery Plan, Report NT12629/003, dated January 2019), which was approved by Environment Agency on 4th April 2019 (EA ref EPR/EB3204UZ/A001). The plan is included within the supporting information of the main application.

1.2 Site details

1.2.1 The site is an active limestone quarry, which is being restored using a combination of site based overburden and importation of inert materials. The restoration will restore the quarry back to agriculture, incorporating grass and woodland.

1.2.2 The existing main quarry void has been subject to a standard rules permit (SR2015 N0.39) for waste recovery, for the import of 60,000 cubic metres of material.

1.2.3 The west quarry void area is worked under a variation of the planning consent and is subject to an obligation to restore back to original surface levels, it is for this area that the Waste Recovery Plan has been prepared.

1.2.4 Silvertop Quarry is located approximately 0.7 km north east of Hallbankgate village, which is approximately 5 km east of Brampton, Cumbria. The Grid Reference for the site is NY588 605.

2 CONSTRUCTION DETAILS

2.1 Use of Waste

2.1.1 The waste, comprising principally clays and subsoils, will be placed in 1m to 2m thick layers and suitable plant, including, but not limited to, bulldozers, will be used to spread and layer these materials. The depths and compaction will be checked against

- does not undergo any significant physical, chemical or biological transformations;
- does not dissolve, burn or otherwise physically or chemically react, biodegrade, or adversely affect other matter with which it comes into contact, in a way likely to give rise to environmental pollution or harm to human health; and
- its total leachability and pollutant content of the waste and the Eco toxicity of the leachate is insignificant, and in particular, does not endanger the quality of surface water or groundwater.

3.1.4 The types of waste that will be received at Silvertop are identified in Table 1 below.

Table 1: Waste Types

Waste Code	Description
01 01 02	Wastes from mineral non metalliferous excavation (waste overburden and interburden only)
01 04 08	Waste gravel and crushed rocks other than those mentioned in 01 04 06
01 04 09	Waste sand and clays
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 (Metal from reinforced concrete must have been removed)
17 03 02	Bituminous mixtures other than those mentioned in 17 03 01 (Road planings only)
17 05 04	Soil and stones other than those mentioned in 17 05 03 (restricted to topsoil, peat, subsoil and stones only)
19 12 09	Minerals (for example sand, stones) only (From the treatment of waste aggregates that are otherwise naturally occurring minerals. Does not include fines from treatment of any non-hazardous waste or gypsum from recovered plasterboard)
19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 (restricted to crushed bricks, tiles, concrete, and ceramics only, Metal from reinforced concrete must have been removed. Does not include fines from treatment of any non-hazardous waste or gypsum from recovered plasterboard)
20 02 02	Soil and Stones (restricted to topsoil, peat, subsoil and stones only)

4 WASTE ACCEPTANCE

4.1 Introduction

4.1.1 Stringent waste acceptance procedures are already employed at Silvertop for the quarry restoration work and this will continue for the recovery plan area in order to ensure that waste is compliant with the permit requirements. There are three stages of Waste Acceptance, namely Pre-Site, Site Entrance and Restoration Area. Further details on the waste acceptance, sampling and testing procedures are provided in Appendix 1.

Pre-Site

4.1.2 The pre-site waste acceptance procedure provides an initial assessment of each waste stream. Information will be required detailing the physical characteristics of the waste, its source and origin and details of the process that has generated the waste.

4.1.3 The waste producer must confirm the following:

- The waste is not non-hazardous and that it is inert;
- The waste is appropriate for recovery at the quarry;
- Where appropriate identify the key chemical characteristics for future; compliance testing, and
- identify the key chemical characteristics to allow the operator to undertake on-site verification testing.

4.1.4 Wastes that are regularly generated by the same process can initially be characterised in detail, enabling further reduced testing to demonstrate consistency.

4.1.5 Wastes that do not regularly arise from the same process including for example excavated soils from a building development (Brownfield site) will need to be subject to testing as part of the waste characterisation process. The form of testing to be undertaken by the producer and presented to the operator shall comply with BS EN 12457 Part 2 or Part 3. The Part 3 two stage, leaching test should be used for all basic waste characterisation (ie waste type, quantity, physical and chemical properties).

4.1.6 As part of pre-site compliance testing, waste analysis data will be reviewed to determine whether the waste complies with the results of the basic characterisation and the acceptance criteria for the conditions of the permit.

4.1.7 If the waste is not compliant with the permit it shall be rejected in accordance with

waste rejection procedure.

Site Entrance

4.1.8 The acceptance of waste for recovery will be via the main site entrance at the south of the site (re Drawing No NT12629-0012).

4.1.9 On arrival at the site, site staff will obtain Duty of Care notes from driver of the vehicle. These notes will include:

- a description of waste;
- the Waste Code
- the quantity of waste;
- the current holder of the waste; and
- the receiver of the waste.

4.1.10 A record will be made of every delivery to the site, along with a copy of the ticket that is issued to drivers once the waste is accepted.

4.1.11 If the waste is not compliant with the permit it shall be rejected in accordance with waste rejection procedure.

4.1.12 Wherever possible, all deliveries of waste loads will be pre-arranged. Weighbridge tickets are written out by hand and stored on to computer at the main office.

4.1.13 When necessary, for example, when a vehicle is using the site for the first time or for the purpose of checking weighing, the exit weighbridge will be used to quantify the weight of the empty vehicle.

4.1.14 The information to be recorded in respect of each load is:

- Weight (by Tonne);
- Waste Type (as per relevant licence category);
- Source of material;
- Date;
- Time;
- Customer Name;
- Vehicle Registration Number and Type;
- Ticket Number;
- Origin of waste.

Restoration Area

- 4.1.15 Following acceptance, the vehicle carrying the waste will be directed to the area being restored at that time. Final observations from site staff will be undertaken once the waste is discharged, to ensure that non-compliant waste is not present.
- 4.1.16 Each stage of waste acceptance will be supervised by suitably competent site staff, to ensure that specifications are maintained and that non-compliant restoration materials are not accepted.
- 4.1.17 If the waste is not compliant with the permit it shall be rejected in accordance with the waste rejection procedure.

4.2 Non-conforming wastes

- 4.2.1 Wastes that are found to be unacceptable for recovery at the site during any part of the waste acceptance procedure will be prevented from being sent to the site. All incidents of rejected loads/materials will be recorded in the site's operational log and rejected wastes will be removed from the site within 5 days of receipt.

4.3 Waste rejection procedure

- 4.3.1 Wherever possible, non-conforming waste streams will be prevented from being unloaded. The rejection procedure covers the system for controlling all actions involved with the rejection of a load or part load of waste, which has been determined by inspection to be unsuitable for recovery at the site. The procedure outlines what is to be done to deal with waste, which has been rejected either at the weighbridge reception area or at the working area.
- 4.3.2 A quarantine area (re Drawing No NT12629-012) is assigned to accommodate waste, which is found to contain waste types that do not comply with the definition of inert wastes, or loads which are awaiting the results of testing. In the event that this is impractical, the unlicensed waste will be segregated in the quarantine area and reloaded onto a suitable vehicle for off-site disposal at the earliest opportunity (within 5 days of receipt). Liaison will be undertaken with the Environment Agency to secure regulatory compliance in respect of the movement of the waste.
- 4.3.3 Wastes, that are found not to conform to the conditions of the Permit, will be dealt with according to the following procedures:
- Wherever possible reload onto the delivery vehicle for offsite removal;
 - Isolation of deposited wastes at the operational area by creation of inert barriers

or erection of temporary fencing;

- Immediate notification to the Environment Agency;
- Removal of waste to the quarantine area for temporary storage prior to off-site removal to the waste producer or suitably licensed facility within 5 days or receipt.
- All incidents of rejected loads will be recorded in the site log.

4.4 Waste quantity measurement systems

4.4.1 All waste received at the site will be weighed using the site weighbridge. The records of waste receipt and inspection will be maintained and made available to authorised officers of the Environment Agency. The weighbridge will be maintained and calibrated in accordance with the manufacturers' service schedule, by an approved supplier and in accordance with statutory requirements. Calibration certificates and details of maintenance inspections will be retained for inspection by authorised officers of the Environment Agency and the Local Authority.

4.4.2 In the event of weighbridge failure, the weight of waste loads will be recorded manually using a volume to weight conversion factor. This is achieved by multiplying the volume of the container in cubic metres by the factor that applies to the type of waste in the load (usually between 1.5 and 2.0).

4.5 Site records

4.5.1 Copies of all records required in accordance with the Permit will be maintained in the site manual. The site manual will be kept in a secure place on site and will be made available for inspection by authorised officers of the Environment Agency.

4.5.2 Current copies of weighbridge tickets and waste transfer notes will be kept in a secure place on site and will be made available for inspection by authorised officers of the Environment Agency. Back copies of tickets are removed to head office on a regular basis.

4.5.3 In the event that copies of weighbridge tickets and waste transfer notes kept at the site are lost or destroyed, e.g. due to fire or theft, duplicate copies will be made available for inspection. Weighbridge tickets are written out by hand and stored on computer at the main office at the end of each working day.

5 ENVIRONMENTAL PROTECTION MEASURES

5.1.1 Measures will be employed throughout the life of the site to ensure that operations do not impact on the environment or amenity of the locality as outlined below. It is

worth noting that these measures are already employed at the site under the conditions of the existing permit.

5.1.2 Any equipment or infrastructure failures will be rectified without delay. This will be managed through the site Environmental Management System (EMS).

5.1.3 Details of any spills/accidents will be notified to the Environment Agency in accordance with the permit requirements.

Dust and Mud

5.1.4 The site will be kept tidy and site access roads will be maintained on a regular basis to minimise mud and dust arisings. Haul roads are constructed from hardcore.

5.1.5 The site entrance road will be swept at regular intervals to prevent any build-up of mud or debris. Vehicles will be inspected before leaving the site and will be cleaned if necessary, to prevent mud being tracked onto the adjacent highway.

5.1.6 All highways, tracks and accesses used for the transport of plant, labour and materials will be kept free from mud, dust or spillages as far as possible. Internal haul roads will be maintained with hardcore and will be damped down when necessary to suppress dust. A bowser is provided on site to dampen down site roads and working areas in dry weather.

5.1.7 Staff will be made aware of the importance of visual observations and reporting procedures for instances of dust, noise, odour or other environmental impacts.

5.1.8 Vehicle movements within the Site will be subject to the following speed limits:

- 5mph on tip surfaces and unmade roads; and
- 10mph on metalled roads.

5.1.9 Vehicles wastes will be covered or sheeted.

Odour

5.1.10 The wastes to be used at the site are inert and thus not inherently odorous. Should any noticeable odour be detected the source will be identified and appropriate remedial action will be taken.

Noise

5.1.11 All plant and equipment will be maintained in accordance with the manufacturer's recommendations and site EMS to ensure that it functions correctly and without

excessive noise. Staff are trained to report any problems so that remedial maintenance work can be carried out as soon as practicable.

Litter

5.1.12 Due to the nature of the site, litter is not an issue. Inspections of the site will periodically be undertaken, and any litter noted will be collected and placed in an appropriate container pending removal to an authorised site.

5.1.13 Site derived waste will be deposited into dedicated bins or skips and removed as appropriate by a registered waste carrier to a permitted site.

Discharges

5.1.14 No potentially polluting materials will be stored near a watercourse or in such a situation that these can fall or be carried into a watercourse.

5.1.15 All works are to be contained in the quarry void, as such there will be no surface water drainage to local water courses.

Fuels and Oils

5.1.16 All fuel or lubricating oil stored in bulk on the site will be located as far as reasonably practical from any watercourse and such stores shall be contained by an effective bund in accordance with the oil storage regulations. All fuel and oil deliveries are to be supervised by a competent person.

6 CONTROL AND MONITORING

6.1.1 Due to the nature of the works and material composition, the extent of monitoring will be restricted to the pre operational phase.

6.1.2 There will be no direct or indirect emissions to groundwater, surface water or air from or after the deposition of this waste derived material.

6.1.3 Due to the low leaching potential of the permitted wastes and it being without pollutants, it is not expected that ground or surface water monitoring will be necessary at the site. This is justified further in the Hydrogeological Risk Assessment included with the application.

6.1.4 There is little potential for gas generation from the inert waste materials at the site and no ongoing monitoring is proposed during the operational phase.

6.1.5 The site will be inspected daily with staff carrying out a visual assessment around the site boundary to check for emissions of litter, noise or dust.

- 6.1.6 Routine and regular observation and inspections of the spreading and landscaping for aspects such as cracking, subsidence and weathering will be undertaken by site staff throughout the spreading and recovery operational life.
- 6.1.7 Records of all observations and actions will be made available to the Environment Agency upon request.

7 AFTERCARE MONITORING

- 7.1.1 The imported wastes are inert clays and subsoils and will not degrade once used as part of restoration. The wastes will not leach or cause pollution to ground or surface water and it is expected there will be no requirement for a prolonged aftercare period.
- 7.1.2 Aftercare monitoring will be undertaken in accordance with the conditions of the permit and/or the surrender process until such an application is accepted.

DRAWINGS

Appendix 1 Waste Acceptance, Sampling and Testing