



Crimplesham Inert Landfill Site

Environmental Permit Application

Operating Techniques

September 2020

Prepared on behalf of Mick George Limited





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1.0 Introduction

1.1 Report Context

- 1.1.1 This section of the Environmental Permit application corresponds to Section 3 of Part B4 of the Environmental Permit application forms and specifically details the operating and management procedures for the filling of void space using inert waste that will be in place at the site.
- 1.1.2 This Environmental Permit application has been prepared by WYG on behalf of the Operator, Mick George Limited (Mick George).

1.2 Site Setting

- 1.2.1 The application site forms part of the Crimplesham Quarry site which is located approximately 855m east from the village of Crimplesham in Norfolk. The Crimplesham Quarry site comprises two areas of land that are separated by a road (Main Road) that runs through the middle. This application solely relates to the southern section of the quarry which is centred at approximate National Grid Reference (NGR) TF 66346 03464 and the environmental permit boundary is shown on Drawing Number P2734 D3, Rev F.
- 1.2.2 Access to the application site will be achieved via an unnamed access road off Main Road which runs along the northern boundary of the application site. The immediate surroundings of the site comprise agricultural land and the nearest residential dwelling is an isolated property off Mill Lane and is located approximately 455m north of the application site.

1.3 Geology

- 1.3.1 According to the British Geological Survey's (BGS) 'Geology of Britain Viewer', the bedrock below the site comprises Chalk of the West Melbury Marly Chalk Formation and the Gault Clay. However as per the Hydrogeological Risk assessment it is actually thought that the site lies on the edge of the lithological boundary between the Chalk and underlying Gault Formation where the Chalk formation would be at its shallowest and there is no evidence of limestone bands which would characterise the Chalk member as reported in the logs.
- 1.3.2 The superficial deposits comprise Lowestoft Formation which will be removed as a result of the approved extraction works.



1.4 Hydrogeology

- 1.4.1 With reference to the Multi-Agency Geographic Information for the Countryside's (MAGIC) website, the site is not situated within a Groundwater Source Protection Zone (GSPZ).
- 1.4.2 According to the MAGIC website, the application site overlies a Principal Aquifer which are defined as layers of rock or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage.

1.5 Hydrology

- 1.5.1 The nearest surface water feature to the site is an unnamed pond which is located approximately 415m south from the application site.
- 1.5.2 According to the Flood Map for Planning Service (FMPS), the application site is not situated in an area at risk of flooding.

1.6 Ecology

- 1.6.1 A 'Nature and Heritage Conservation Screen' (EPR/GB3902FH/A001) was requested from the Environment Agency. The screen determines the presence of any site of nature and heritage conservation, or protected species or habitats that may be impacted by the proposal. The results of the screen identified one area of deciduous woodland (Teakettle Wood) which is designated as a Priority Habitat.
- 1.6.2 Reference was also made to the Multi-Agency Geographic Information for the Countryside's (MAGIC) website which identified areas of deciduous woodland that are designated as Priority Habitats.
- 1.6.3 Further details of these Priority Habitats are provided in the Environmental Risk Assessment (Appendix C of the Environmental Permit Application).



2.0 Operating Procedures

2.1 Operating Hours

2.1.1 The hours of operation will be as per the planning permission for the site (Reference Number C/2/2015/2038), as follows:-

- Monday to Friday: 07:00 - 18:00; and
- Saturday: 07:00 – 13:00.

2.1.2 There would be no work on Sundays or Bank and National Holidays.

2.2 Permitted Activities

2.2.1 The proposal entails the importation of inert waste to infill and restore the quarry void that will be created following mineral extraction activities. Works will be completed in accordance with the restoration scheme (Drawing Number P2734 D1, Rev G) which was originally approved under planning permission C/2/2008/2006 and has been incorporated in to the most recent planning permission (C/2/2015/2038).

2.2.2 It is considered that the proposed activities at the Crimplesham Inert Landfill Site will fall under the Recovery and Disposal codes set out in Table 1 below, provided for in Annex II to Directive 2008/98/EC of the European Parliament and The Council of 19th November 2008 Waste.

Table 1: Proposed Permitted R/D Codes

R/D Code	Description of Activity
D1	Deposit into or on to land.

2.3 Waste Types

2.3.1 Waste is defined as 'Any substance or object the holder discards, intends to discard or is required to discard' under the Waste Framework Directive (European Directive 2008/98/EC), which repeals the European Directive 75/442/EC as amended.

2.3.2 Permitted wastes accepted at the site will be strictly inert as classified under the Landfill Directive (1999/31/EC) and Council Decision (2003/33/EC) of 19th December 2002 'establishing criteria and procedures for the acceptance of waste landfills'.

2.3.3 Inert waste is defined in Article 2 of the Landfill Directive 1999/31/EC as follows:-



'Inert waste' means waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will 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. The total leachability and pollutant content and the ecotoxicity of its leachate are insignificant and, in particular, do not endanger the quality of any surface water and/or groundwater.

2.3.4 Table 2 lists those wastes that may be accepted at the site, which do not require Waste Acceptance Criteria (WAC) testing under Council Decision (2003/33/EC) provided that they are inert and from a single source only (mixed loads from more than one site cannot be accepted without testing).

Table 2: Permitted Waste Types

EWC Code	Description	Restriction
10	WASTES FROM THERMAL PROCESSES	
10 11	Wastes from manufacture of glass and glass products	
10 11 03	Waste glass-based fibrous materials	Only without organic binders
15	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED	
15 01	Packaging (including separately collected municipal packaging waste)	
15 01 07	Glass packaging	
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*
17 01 02	Bricks	Selected C&D waste only*
17 01 03	Tiles and ceramics	Selected C&D waste only*
17 01 07	Mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	Selected C&D waste only*
17 02	Wood, glass and plastic	
17 02 02	Glass	
17 05	Soil (including excavated soil from contaminated sites), stones and dredging spoil	
17 05 04	Soil and stones other than those mentioned in 17 05 03	Excluding topsoil, 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	
19 13	Wastes from soil and groundwater remediation	
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01	
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	
20 01	Separately collected fractions (Except 15 01)	
20 01 02	Glass	Separately collected glass only
20 02	Garden and park wastes (including cemetery waste)	
20 02 02	Soil and stones**	Only from garden and parks waste; excluding topsoil, peat.

*The origin of the wastes must be known and they will have low contents (<5% by mass per load) of other types of materials (like metals, plastics, soils, organics, wood rubber, etc.

No C&D waste from construction, polluted with inorganic or organic dangerous substances e.g. because of production processes in the construction, soil pollution, storage and usage of pesticides or other dangerous substances etc., unless it is made clear that the demolished construction was not significantly polluted.

No C&D waste from constructions treated, covered or painted with materials, containing dangerous substances in significant amounts.

2.4 Waste Quantities

2.4.1 In order to complete the proposed works at Crimplesham Inert Landfill Site, approximately 735,000m³ of inert materials will be required in total. When using a bulk density conversion factor of 1.6 tonnes/m³ this equates to approximately 1,176,000 tonnes of imported material.

2.5 Waste Acceptance Procedures

2.5.1 The site will accept inert waste as defined by the Landfill Directive in accordance with the details provided in the Council Decision 2003/33/EC. Inert wastes are insoluble, inorganic materials and they:-

- a) Will not undergo any significant physical, chemical or biological transformations;
- b) Will not dissolve;
- c) Will not burn;
- d) Will not physically or chemically react;
- e) Will not biodegrade;



- f) Will not adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health;
- g) Have insignificant total leachability and pollutant content; and
- h) Produce a leachate with an eco-toxicity that is insignificant (if they produce a leachate).

2.5.2 In order to demonstrate the acceptability of waste at the regulated facility, Mick George will implement waste acceptance procedures in accordance with Annex I of Council Decision 2003/33/EC which includes the following stages:-

- Basic Characterisation (Level 1);
- Compliance Testing (Level 2); and
- On-site Verification (Level 3).

Basic Characterisation (Level 1)

2.5.3 Basic characterisation will ensure that the waste is suitable for acceptance at the regulated facility. The information to be supplied at this stage includes:-

- Source and origin of the waste;
- Information on the process producing the waste;
- Appearance of the waste, e.g. physical form; and
- The List of Wastes (England) Regulations 2005 code.

2.5.4 The inert wastes detailed in Table 2 will be accepted at the site without testing. The information above will be provided, together with confirmation that the wastes are single stream materials from known and reliable sources. Different wastes contained in the list will be accepted together provided they are from the same source. The inert wastes considered in Table 2 are considered to meet the inert waste criteria set out the Landfill Directive.

2.5.5 As previously mentioned, only inert wastes will be accepted at the site. For any wastes where there is uncertainty regarding their acceptance at the site, testing will be required.

Compliance Testing (Level 2)

2.5.6 With reference to Annex I, Section 1.2 of Council Decision 2003/33/EC, wastes that are exempt from the testing requirements for basic characterisation are also exempt from compliance



testing.

- 2.5.7 As mentioned in Section 2.5.4, Mick George will only accept waste types listed in Table 2 which are considered to meet the inert waste criteria set out in the Landfill Directive and therefore do not require testing as part of the basic characterisation phase.
- 2.5.8 In light of the above, Mick George does not propose to undertake any compliance testing as part of the proposed activities at Crimplesham Inert Landfill.

On Site Verification (Level 3)

- 2.5.9 Each load of waste delivered to the site shall be, where possible, visually inspected before unloading. Each load will be inspected after unloading. These inspections will ensure that the waste conforms to the description compiled as part of the basic characterisation.

2.6 Unauthorised and Rejected Wastes

- 2.6.1 Any loads or part loads identified as unacceptable upon discharge of the load shall be reloaded into the container and isolated whilst the Environment Agency are contacted by telephone. The most appropriate course of action shall then be agreed with the Environment Agency.
- 2.6.2 Any load or part load identified as unacceptable upon discharge of the load when the haulier has exited the site shall be isolated or quarantined on the site. The Environment Agency shall be kept informed of the subsequent course of action.
- 2.6.3 The following details of the rejected waste will be kept on site:-
- Time and date of incident;
 - Haulier and vehicle registration number;
 - Customer;
 - Waste type; and
 - Reason for rejection.
- 2.6.4 Records will be kept of all rejected loads and these will be made available to the Environment Agency.



3.0 Regulated Facility Infrastructure

3.1 Weighbridge and Vehicle Cleaning Facilities

3.1.1 A weighbridge and vehicle cleaning facilities will be provided on site as shown on the Plant Site Layout Plan (Drawing Number TM_001, Rev B). The weighbridge will be maintained according to the manufacturer's specifications. The cleaning facilities will be checked on a monthly basis and any necessary work will be carried out as soon as practicable. In the event of a breakdown, additional road cleaning equipment will be provided. If necessary, a road sweeper will be contracted to clean the site access road and Main Road where vehicles exit the site.

3.2 Fuel Tanks

3.2.1 All fuel, oil and lubricants will be contained within appropriate 110% capacity bunded tanks to allow the quick and efficient fuelling and repair of the site machinery. The tanks will be maintained and inspected in accordance with the manufacturer's recommendations.

3.3 Security

3.3.1 All vehicles delivering waste to the landfill will be required to report to the site office. Upon request, they may have to provide evidence of Registration as Waste Carriers. All other visitors to the site must sign the Visitors Book before proceeding onto the site and sign out prior to leaving.

3.3.2 A sign will be located at the site entrance detailing the name, address and telephone numbers of the permit holder, emergency contact numbers, site operating hours and the contact details of the Environment Agency. Any permanent changes to these details will be updated within 30 days. The sign will be located so that it does not encourage fly tipping and will be maintained in a satisfactory condition at all times. Signs will be erected on peripheral fences giving warnings of operations at the site.

3.3.3 A notice board will be maintained in the site reception area. A copy of the Environmental Permit and a copy of the company's 'Health and Safety Policy' will be displayed, together with any other relevant notices. A copy of all documents accompanying this application, detailing all site procedures, will be kept in the site office.

3.3.4 The site will be secured from the public highway by substantial lockable gates at the site entrance and all reasonable precautions will be taken to prevent the unauthorised entry of the general public and the unauthorised depositing of wastes.



4.0 Emissions Control

4.1 Point Source Emissions to Air

4.1.1 There will be no point source emissions to air as a result of this application.

4.2 Point Source Emissions to Groundwater

4.2.1 There will be no point source emissions to groundwater as a result of this application.

4.3 Point Source Emissions to Surface Water and Sewers

4.3.1 There will be no point source emissions to surface water or sewer as a result of this application.

4.4 Fugitive Emissions

4.4.1 Fugitive emissions have been identified as a potential environmental risk resulting from the proposal, as detailed in the Environmental Risk Assessment that accompanies this application.

Particulate Matter (Dust)

4.4.2 The Site Manager will undertake daily visual assessments of dust levels and all site operatives will be vigilant and report any problems to the Site Manager. The following operational procedures may be implemented to reduce the risk of dust:-

- Enforcement of a speed limit on site to prevent re-suspension and entrainment;
- Use of water to dampen site roads and operational area as necessary;
- Utilisation of a road sweeper to maintain site roads as necessary; and
- Operations will be halted if necessary.

4.4.3 The Site Manager will be responsible for monitoring wind strength and direction and implementing any necessary preventive measures.

Contaminated Surface Water Runoff

4.4.4 The potential fugitive emissions of contaminated surface water runoff resulting from the proposed activities must be considered. However, the proposed waste types are inert and therefore should not pose a risk to surface water.



- 4.4.5 There will be strict waste acceptance procedures in place at the site to prevent the acceptance of non-conforming waste types.

Mud

- 4.4.6 HGV movements could result in the tracking of mud on to the access road and local highways. Therefore, the site will have access to vehicle cleaning facilities.
- 4.4.7 The amount of mud on local roads will be monitored daily by site operatives. In the event that mud is deposited on the access road and/or highway then a road sweeper will be employed if necessary.

Noise

- 4.4.8 All noise and vibration generating activities will be confined to the operating hours stipulated in the planning permission, with the exception of emergency repairs.
- 4.4.9 As detailed on the Phasing Plan (Drawing Number P2734 D3, Rev F) a series of bunds will be placed along the perimeter of the working phases using topsoil and overburden soils. This will minimise the potential for noise to impact receptors that are situated beyond the site boundary as detailed in the Environmental Risk Assessment (Appendix C of the Environmental Permit Application).
- 4.4.10 All equipment and vehicles will have effective silencers where practicable and will be maintained in accordance with the manufacturer's requirements. Further, all equipment and vehicles will be switched off when not in regular use.
- 4.4.11 All noise generating activity will be monitored closely and site operatives will be vigilant and report any excessive noise or vibration issues to the Site Manager.



5.0 Accident Management

- 5.0.1 All necessary measures will be taken to prevent the occurrence of accidents. The types of accidents and the potential environmental consequences associated with them have been identified in the Environmental Risk Assessment that accompanies this application.
- 5.0.2 It is considered that the most significant risk associated with the site is the unauthorised acceptance of non-compliant waste types. The waste acceptance procedures listed in Section 2.5 of this document aim to control and minimise this risk.

5.1 Fire Control

- 5.1.1 Fires from the acceptance of inert waste are considered unlikely due to the nature of the waste material. However, the operation and/or maintenance of mobile plant do pose a potential fire hazard, if precautions are not taken.
- 5.1.2 Fire-fighting equipment of a suitable type shall be kept at appropriate locations as advised by the Health and Safety Manager or the local Fire Service. Where appropriate, mobile plant will be fitted with fire-fighting equipment. All fire-fighting equipment shall be kept in good condition, be unobstructed and be serviced at least once a year by a competent person. The site will be designated as a "no smoking area" and signed accordingly.
- 5.1.3 Any fire on the site will be treated as an emergency and will be extinguished at the earliest opportunity. If necessary, the Fire Service will be summoned. Any incidents of fire will be reported to the Environment Agency and recorded in the Site Diary.

5.2 Spillage Procedure

- 5.2.1 Material accepted at the site will be inert. The most likely source for spillages will be from fuel tanks or spillages of fuel or oil associated with plant and machinery.
- 5.2.2 In the event of a spillage of fuel/oil from site machinery or vehicles, the following procedures will be implemented:-
- Clear the area straight away;
 - Lay absorbent granules over the spill to soak up the spillage;
 - Use Personal Protective Equipment (PPE) provided on site if required;



- Once the liquid has all been absorbed use a shovel to clear up the waste, put it in a plastic sack and then place it in the container for non-compliant waste for disposal at a suitably permitted facility; and
- Record the spill incident and any remedial action taken in the Site Diary.

5.2.3 Spillage kits will be maintained on site in order to respond to any spillage incident. The spillage kits will be kept securely in the site office.

5.3 Maintenance Procedures

5.3.1 A Planned Preventative Maintenance programme (PPM) will be put in place to minimise the risk to safety, health and the environment by ensuring that all appropriate items and elements within the site are serviced and inspected on a regular basis or to the manufacturers' maintenance schedules.

5.3.2 Details of faults, breakdowns and repairs will be documented and records maintained at the site office. Faults and breakdowns will be investigated and the service schedule revised if necessary.



6.0 Site Management

6.1 Technical Competence

6.1.1 The Site Manager possesses the required level of technical competence (see Appendix A for the Certificate of Technical Competence).

6.2 Management System

6.2.1 The operator, Mick George, has a certified Environmental Management System (EMS) in place which is compliant with the requirements of ISO 14001. A copy of the company's ISO 14001 Certificate is provided as Appendix B.

6.2.2 All site operatives will be adequately trained in health, safety and environmental issues. Staff will only be permitted to undertake activities that they have been trained for. They will be made aware of the procedures they must follow in the event of an accident or incident and will be able to access any relevant documentation that they may require. All training, experience and qualifications of staff will be noted, and these records will be maintained and kept up to date.



7.0 Management of Documentation

7.1 Record Keeping

- 7.1.1 Mick George have an EMS which is compliant with ISO 14001 and this includes procedures for the management of documentation.
- 7.1.2 A record will be kept that provides details on all wastes deposited at the site. This will include details on waste types, quantities and the date of deposition. This will be provided to the Environment Agency on a quarterly basis, within one month of the end of each period. A record of basic waste characterisation and any compliance testing or on-site verification will be maintained in the site office.
- 7.1.3 A site diary will be kept in the site office, and this will be updated daily. The diary will be used to record any accidents, incidents or complaints. This will provide an ongoing record throughout the period of operation at the site, enabling any investigative or corrective action that may be required.
- 7.1.4 The Environmental Permit and other documents containing information regarding the operation of the site will be kept in a convenient location, allowing access for any person that may be working at or visiting the site.



8.0 Incidents and Non-Conformances

8.0.1 Mick George have procedures for investigating and recording any incidents and non-conformances at the site, and for taking any corrective action. Mick George have an EMS which is compliant with ISO 14001 and this includes procedures for handling incidents and non-conformances.

8.0.2 The following types of incidents will require investigation:-

- Malfunction, breakdown or failure of plant and equipment;
- Deviation from site procedures and operating techniques;
- Near misses; and
- Complaints from external parties.

8.0.3 All staff will be trained to detect and report any such occurrences. Procedures will be taken to allow operations to resume and preventative measures may be put in place to ensure that the incident does not reoccur.



Drawings

P2734 D3, Rev F – Working Plan and Environmental Permit Boundary

P2734 D1, Rev G – Restoration Plan

TM_001, Rev B – Plant Site Layout



Appendices



Appendix A – Certificate of Technical Competence



Appendix B – ISO 14001 Certificate