Environmental Management System

Use of Waste for Recovery

Land at Brent Hall, Russell Green, Boreham Road, Chelmsford

Land Logical Dartford Limited

February 2024

[LLDL-RG-EMS-V1]

DOCUMENT CONTROL SHEET

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1. INTRODUCTION

1.1 The application is made on behalf of Land Logical Dartford Limited (LLDL) to apply for an Environmental Permit to Use Waste for Reclamation, Restoration and Improvement.

1.2 The application is made under the Environmental Permitting Regulations.

1.3 This document provides the operational procedures for the scheme, which will form part of the Environment Management System (EMS).

Site History

1.4 Permission was granted in September 1983 for the extraction of sand and gravel from the site with subsequent restoration to farmland and a small, landscaped lake following mineral extraction. The site has not been restored and retains a large former sand and gravel quarry pit(s) located centrally within the site extending to approximately 2ha. The former quarry pit(s) have become established as a series of ponds and the remainder of the site contains grassland, scrub, trees and hedgerow.

1.5 The former sand and gravel extraction operations left a steep bank along the south west edge of the site. It is 12m high, with a steep gradient. The stability of the bank has been assessed by third party geotechnical specialists. The average slope angle is 1:2. The Stability Risk Assessment confirms that the slope along the western quarry face will fail if not restored. Progressive failures have occurred at the unrestored western quarry faces since 2013.

1.6 In 2014, planning permission was granted by Essex County Council (ECC) to import 85,000 tonnes of inert waste material to stabilise former quarry face and satisfactorily restore former mineral site to landscaped grassland and ponds, and associated improvements to existing site access to facilitate delivery of waste material.

1.7 Condition 1 required the development to be started before the expiry of 5 years from the date of the permission. The works should have commenced by 29 January 2019.

1.8 The officer's report for determining this application noted that "*the site has previously been poorly restored leaving a steep bank which looks unnatural within the context of the surrounding landscape*." The planning decision was issued on the basis that it sought to secure the long term stability and restoration of this site.

1.9 Unfortunately, the planning permission was not implemented.

1.10 A new planning application was submitted and ECC granted consent on the 14 December 2023. This permits the importation of 85,000 tonnes of inert material to stabilise the former quarry face and restore the former mineral site to a landscaped habitat mosaic and pond with associated improvements to existing site access.

1.11 On 10 March 2023, the Environment Agency issued its RvD Advice. At the time when the advice was sought, planning permission had not been granted by ECC. The advice was therefore based on this and stated *"Currently there is no planning permission for the activity. Without this, it is not clear that the work would go ahead if waste were not available*."

1.12 The Waste Recovery Plan was updated and provided to the Environment Agency on 2 January 2024. The pre-application advice was received on 13 February 2024, confirming the operation is recovery. The approved Waste Recovery Plan, J000857/REC-V2 is provided with this application. It has not changed since the issue of the advice.

The Applicant

1.13 LLDL has vast experience in restoring and contributing to provide sustainable re-uses of land.

1.14 They have existing waste permits to carry out recovery operations and use mobile plant.

1.15 The company invest in staff training and development.

Site Setting

1.16 The site is located on land at Brent Hall, Russell Green, Boreham, CM3 3BA, centred at NGR 574600 212600. It is approximately 1.6 miles north west of Chelmsford.

1.17 The site extends to approximately 2.6 hectares(ha) located to the north-east of Chelmsford and approximately 1.6 miles north-west of Boreham village. The site is adjacent to Boreham Road with an existing access to the site via a gated concrete-surfaced entrance to the north east of the site. Bulls Lodge Quarry abuts the application site to the south-west.

1.18 The closest residential properties are Russell Green Cottages which lie approximately 130 metres to the north of the site.

Geology

1.19 The underlying superficial deposits comprise the clay, silt, sand and gravel. These have been worked.

1.20 The bedrock geology is the London Clay Formation.

1.21 The southern slope is exposed and reveals 10m of sand and gravel with 1-2m overburden.

Hydrogeology and Hydrology

1.22 The bedrock geology is unproductive. The superficial drift geology provides a secondary (undifferentiated) aquifer.

1.23 The site is not located in any Groundwater Source Protection Zone.

1.24 The site is in Flood Zone 1 and therefore has a low probability of flooding from rivers, sea and surface water.

Ecology

1.25 There are no European Sites (SPAs, Ramsar or SACs) or SSSIs within 2km of the site.

Air Quality

1.26 The site is not in an Air Quality Management Area.

Cultural Heritage

1.27 The Gin House and Brent Hall are both Grade II Listed Buildings. These are approximately 280m east of the site boundary.

Recovery Plan

1.28 An initial Waste Recovery Plan was submitted to the Environment Agency for pre-application advice in December 2022. The Environment Agency provided advice in March 2023.

1.29 The advice confirmed the following:

- Suitability of the proposed waste types
- There is a worthwhile benefit to carry out the works to provide slope stability.
- Confirmation of the quantity of waste to be used in m^3 and tonnes.
- Scheme will be designed and constructed to be fit for purpose.

1.30 With regards to the latter point, a separate Stability Risk Assessment has been prepared. This was technically assessed as part of the pre-application advice.

1.31 At the time of the Agency assessment, the planning permission was not available. The EA's advice therefore could not confirm that the scheme would go ahead if waste was not available. ECC has subsequently approved planning.

1.32 The Waste Recovery Plan was updated and provided to the Environment Agency on 2 January 2024.

Proposed Operation

1.33 It is proposed to import inert material to stabilise the former quarry face and satisfactorily restore the former mineral site to a landscaped habitat mosaic and pond.

1.34 The scheme will require the importation of 60,150m^3 (85,000 tonnes) of inert material. There is already 3,300m^3 of material on site which will be incorporated into the restoration.

1.35 A conversion factor of 1.8 has been used to calculate the tonnage.

1.36 There is also a need to import 23,270 tonnes of topsoil to create the final surface layer for planting and creating the biodiversity enhancement scheme.

1.37 The imported material will be used to stabilise the former western bank of the quarry from 12m high with a 1:2 gradient to a 1:4 slope. This will create a gentler and more naturalistic landform.

1.38 The following plans are provided:

Existing Contours	8198-001-001
Proposed Contours	8198-001-002
Cross Sections	8198-001-003
Planting Plan	70071_002_001 (Rev B)
Phasing Plan	LLDL-RG-PHS-01
Infrastructure Plan	LLDL-RG-INF-01

2. MANAGEMENT

2.1 An Environmental Management System is required for all permitted activities. This section provides the necessary information and has been prepared in accordance with EA Guidance Develop a Management System: Environmental Permits.[1]

Reporting

2.2 A Site Diary will be maintained to report any daily incidents or events that may have an impact on the environment. Such information will include:

- Start and finish of daily waste management activities on site
- Staff Attendance on site
- Technically competent management attendance on site
- Maintenance/Breakdowns
- Emergencies
- Problems with waste delivered and action taken
- Vandalism and other breaches in security
- Site inspections and consequent actions carried out by the operator
- Weather conditions
- Complaints about site operations and actions taken
- Environmental problems and remedial actions

2.3 The site diary will be kept in the site office and updated daily. A temporary office will be provided for the duration of the works.

2.4 A record of the types, quantities and dates of wastes deposited on the site will be maintained and provided to the Environment Agency at quarterly intervals.

2.5 A copy of all records will be maintained in the site office.

Site and Equipment Maintenance Plan

2.6 All plant and machinery will be operated and maintained in accordance with the manufacturer's specification. All plant and equipment will be supported by a maintenance log.

2.7 Plant and machinery on site will be visually inspected by the operator before it is used as part of management of their own risks and health and safety. This is covered in training for staff and operatives. In addition, an equipment check is made by the Site Manager daily as part of Daily Checks and recorded on the Daily Checks Form.

2.8 A fuel tank will be provided on site for the duration of the works. It will be a bunded tank. Spill kits will be kept in the site office and used in the event of a spillage.

[1] https://www.gov.uk/guidance/develop-a-management-system-environmental-permits

Contingency Planning

2.9 In conjunction with the Accident Prevention and Management Plan, the EMS includes Contingency Planning. This includes measures to be implement if the site is forced to closed due to unplanned events, or in the event of breakdowns. The procedures will be used to ensure business continuity without impacting the environment.

Accident Prevention and Management Plan

2.10 The Company recognises the importance of the prevention of accidents that may have environmental consequences and that it is crucial to limit those consequences.

2.11 An accident management plan will be maintained at the facility to ensure the facility, and facility staff are fully prepared for such incidents. The accident management plan will be reviewed at least every four years or as soon as practicable after an incident with changes made accordingly to minimise the risk of recurrence. The plan is provided with LLDL-RG-ERA-V1.

2.12 The Accident Prevention and Management Plan sets out the contingency measures required to deal with plant breakdowns, vandalism, fires, flooding, and bad weather. These measures are provided for the situations which could change the normal operations.

2.13 For each unforeseen event, the plan set out the following:

- Likelihood of the accident/event occurring
- Consequence of the accident/event occurring
- Measures taken to avoid the accident occurring
- Measures taken to minimise the impact.

Non Conformance

2.14 The site will use waste that is source by the applicant and known to meet the waste acceptance criteria for the site. The likelihood of non-conformance will be low.

2.15 A Non Conformance reporting form is provided in Appendix B.

Complaints and Action Plan

2.16 It is assumed that any complaints will be reported to the Council or Environment Agency directly. The site will then be notified of the date and nature of the complaint. In order to provide a swift response to complaints, the site must be made aware of such complaints as soon as possible. Prior to operations commencing, the operator will provide contact details for the Site Manager to the nearest properties. Therefore any specific issues can be dealt with as quickly as possible. In the event that a complaint is received, the procedure in Appendix B will be implemented.

A Changing Climate

2.17 The operator is aware of the changing climate the UK is experiencing now and likely to experience in the future. With reference to the EA guidance, the UK can expect the following:

- Higher average temperatures – particularly in summer and winter
- More heat waves and hot days
- Rising sea levels
- Changes in rainfall patterns and intensity
- More storms

2.18 The operator will monitor weather forecasts and may cease operations during Red Alerts issued by the Met Office for heavy rain.

Training and Operator Competence

2.19 The overall operations will be overseen by a Technically Competent Manager (TCM). The TCM will make regular visits to the site to oversee the day to day operations. Appropriate level of cover will be provided during sickness and holiday.

2.20 A Site Manager will be responsible for the control of incoming and outgoing vehicles, checking Duty of Care documentation, keeping and maintaining all records, checking in visitors, issuing Health & Safety instructions and dealing with any complaints.

2.21 All personnel will have access to a copy of the Environmental Permit and Environmental Management System.

2.22 All site staff will be trained in the operational procedures to ensure that the site operates without causing an impact to the environment. A Training Matrix has been prepared to identify the training needs for each position. This is provided Appendix B.

2.23 Any third party contractors will be required to report to the site office and sign the visitor's book. The TCM will provide a brief overview of the site rules and show the position of the site in relation to the nearest receptors, with reference to the Permit plan (EP/01). An induction form will need to be completed, see Appendix B.

2.24 All staff will be trained to a standard which enables them to perform the responsibilities and the detailed role as set out in job descriptions.

2.25 For this project, there will be 3 staff based on site. These will be multi skilled personnel that can oversee the waste acceptance procedures and operate the plant to place and grade the imported material.

2.26 A record of staff training will be kept for each staff member which includes inductions to new processes and procedures as needed.

2.27 The following training matrix will be adopted to guide training needs.

Training	TCM/Site Manager	Plant Manager	Site Operative	Admin
Induction	x	x	x	x
Accidents and Emergency	x	x	x	x
Amenity Management	x	x	x	x
Plant Training	x	x		
Vehicle marshalling	x	x	x	
Waste handling	x	x	x	
Environmental Permitting	x	x	x	x
Complaints and Incidents	x	x	x	x
Spillage Procedure	x	x	x	

Records

2.28 All records required to be made by this permit shall be comprehensible, legible, and consistent. If amendments need to be made, they are done so in such a way that any subsequent amendments remain legible. Records, plans and management systems required to be maintained by this permit shall also be kept on site.

2.29 All reports and notifications required to the permit by the Environment Agency shall be made to the Environment Agency using the contact details supplied in writing by the Environment Agency. Within one month of the end of each quarter, the operator shall submit waste returns to the environment agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

Review Management System

2.30 The EMS will be reviewed and updated if any of the following occur:

- Any compliance issues on the site which require mitigation or management intervention.
- Changes to the site operations.

- Changes to local environment which introduces new receptors to the area.

2.31 Some changes may require staff training, this will be carried out and records updated accordingly.

Site Closure

2.32 On completion of the work, the land will be surveyed to ensure that the approved levels have been achieved.

2.33 The site infrastructure will be removed (site compound, wheel wash, haul road).

2.34 The planting will be implemented in accordance with the approved planning consent.

2.35 An application to surrender the permit will be submitted to the Environment Agency.

3. SITE OPERATIONS

Waste Acceptance

3.1 All waste deliveries will be pre-arranged. The source of the waste will be identified, and the nature of the waste verified as being suitable for use. This may include soil testing to ensure that only clean, inert waste is deposited at the site. The pre-acceptance checks will include obtaining the following information:

- Nature of waste
- Source
- Volume of waste to be removed
- Any chemical analysis and classification.

3.2 For small scale projects which will generate less than 100m^3, no testing will be required. This will apply to sites for which there is no history of previous uses that may have led to contamination, for example greenfield sites, naturally occurring material, excavation waste from small house extensions.

3.3 For projects that will generate more than 100m^3, or there is uncertainty about the nature of the material (regardless of volume), chemical analysis will be required to confirm that the waste is correctly classified and suitable for use at the site.

3.4 Once the waste has been confirmed as acceptable, arrangements will be made to collect and transfer the waste to the site.

3.5 Drivers collecting the waste will carry out a visual inspection at the time of collection.

3.6 The site will accept the wastes listed in Table 1.

Table 1 – Proposed Wastes

Waste Code	Waste Description
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
17 05 04	Soils and stones
19 12 09	Minerals (for example sand, stones)
20 02 02	Soils and stones

3.7 All incoming loads will be checked by the site staff at the office. Paperwork will be provided confirming the source and nature of the waste matches the pre-acceptance checks.

3.8 The driver will only unsheet the vehicle when ready to discharge at the correct location, as directed by the site staff.

3.9 A further check will take place when the waste is unloaded. Any incidental items found at this stage, for example any plastic or wood, will be collected and placed in a skip.

Waste Placement

3.10 The working area will be set out by a surveyor to ensure the operations work to the approved restoration profile.

3.11 Waste unloading will be supervised by site staff and the waste placed in the correct working area. The site staff will use machinery to grade the waste into layers to achieve the restoration profile.

3.12 No treatment will take place.

3.13 Once the driver has unloaded the waste, they will exit the site via a drive through wheel wash. The wheel wash will be on site for the duration of the works.

Records

3.14 Paperwork will be kept in the site office and transferred to the Head Office at the end of each working week.

Security

3.15 The site entrance gates will be locked when the site is not manned.

3.16 The site owner lives adjacent to the site and will notify the operator of any unauthorised access.

Dust Management

3.17 Dust may be generated from unloading and placement of waste. The following measures will be implemented to minimise the likelihood of dust being generated and to also ensure dust does not travel off site.

- All vehicles to be sheeted on arrival.
- Vehicles to unsheet only when ready to discharge.
- Water bowser to be used during dry weather to damp soils during unloading.
- Once unloaded, the waste will be graded and compacted to reduce wind whip.
- Speed limit to be enforced on site (5mph)
- Temporary haul road between site entrance and working area.
- Provision of wheel wash for the duration of the work.

Appendix A - Fire Action Plan

Fire fighting equipment will be in the site office, in accordance with Fire Regulations.

The site will enforce a 'no smoking policy' and prohibit any other sources of ignition. No waste will be burnt within the curtilage of the site.

Any fire on site will be treated as an emergency and will be extinguished at the earliest opportunity. If necessary, the Fire Brigade will be summoned.

Site operatives will be trained in the fire procedure and the use of fire-fighting equipment. Any incidents of fire will be reported to the Environment Agency and recorded in the site diary.

Any incidents of fire will result in the accumulation of fire residues. It will be the responsibility of the Site Manager to arrange for the disposal of the fire residues. A shovel will be used to collect the residues for placement in a plastic sack. This will then be placed in the container for non recyclable waste for disposal at a licensed facility.

Appendix B – Management System Procedures and Forms

Maintenance Plan

Scope: the Maintenance Programme applies to on-site plant/machinery**.** All plant, machinery and vehicles will be maintained in accordance with the manufacturers' specification. The following sets out the Company's responsibilities for ensuring that all plant and machinery are maintained in a good state of repair and efficient working order consistent with the Health and Safety legislation.

Daily checks: Drivers should check tyres, lights and indicators at the start of every shift. They will need instruction or training on carrying out appropriate checks and reporting problems. Employers may find it helpful to give drivers a list of daily checks to sign off for their vehicles.

Regular preventive maintenance: Inspections for each item of plant and vehicle will be based on time or mileage. Each vehicle will have a handbook giving manufacturer's guidance on regular maintenance.

Planned maintenance will help to prevent failures during use. It should be thorough, regular and frequent enough to meet the manufacturer's guidelines. The routine maintenance will include:

- brakes;
- steering;
- tyres;
- oils and other fluids;
- mirrors and any fittings that allow the driver to see clearly (for example, CCTV cameras);
- windscreen washers and wipers;
- warning devices (for example, horns, reversing alarms or lights);
- pipes, pneumatic or hydraulic hoses, rams, outriggers, lifting systems or other moving parts or systems; and
- specific safety systems, for example, control interlocks to prevent the vehicle or its equipment from moving unintentionally, racking, securing points for ropes.

The maintenance will be undertaken by approved contractors.

Equipment Maintenance Procedure

Scope: This procedure relates to the maintenance of all equipment owned by the company to ensure that equipment is operating efficiently.

Responsibility:

1. A Maintenance log will be maintained for all equipment owned or operated by the organisation.
2. All equipment shall be maintained according to a scheduled service program in line with the manufacturers recommendations.
3. The scheduled service program shall detail any faults, next date of service and repairs performed.
4. All equipment operators must report all equipment faults to Site Manager as soon as they occur.
5. An equipment maintenance programme shall be developed for all new company equipment.
6. Monitoring equipment shall be recalibrated by a trained person as per the manufacturer's guidelines.

Staff Roles

Name	Role	Part of permit responsible for	Required training received? (see training matrix)

Training Matrix

This training matrix provides a tool for identifying the training needs associated for each job. The matrix is used for all new employees and for identifying training needs and development opportunities for current employees.

Training	Site Staff
Induction	x
H&S	x
Accident Investigation	x
Accidents and Emergency	x
Risk Assessment	x
Fire Safety	x
Spillage Procedure	x
Plant Safety	x
Plant Training	x
Roadside Safety	x
Manual Handling	x
Vehicle marshalling	x
First Aid at Work	x
Waste Identification and specific handling	x
Environmental Permitting	x

Training Records

Training record Employee Name	**Job Title**

Training Required	Date due	Date done	Passed as competent? yes/no	Reviewers Signature	Date for Refresher	Comments

Third Party/Contractor Site Briefing

Contractor Name	Company	Purpose of Visit

Site Safety Briefing provided by:

Date:

The briefing covers the following:

1. **Emergency procedures (contact names and numbers)**
2. **Site Health and Safety Rules**
3. **Environmental Permitting (Location of permit and documents)**
4. **Location of facilities and staff on site**
5. **Location of sensitive receptors (with reference to Plan EP/01)**

I acknowledge receipt of the above briefing:

Name: _____

Position: _____

Date: _____

Signature: _____

Incident Record Sheet

Date and time of the incident	
What happened, what was it about?	
Was anyone else aware of this – other witnesses? If so who?	
What caused it?	
What action did you take to fix the problem? Were external agencies involved?	
What have you done to make sure that it does not happen again?	
Was there any significant pollution – for example: oil entering a surface water drain. If so what?	
If there was then you must notify the Environment Agency on 0800 807060 ASAP. Have you done so?	Yes/No/not applicable Time: Date: E.A Incident number:
Please print your name and sign	

Non Conformance Reporting Sheet

Date and time non-conformance identified	
What happened, what was it about and what permit condition does it relate to?	
What caused it?	
What have you done to make sure that it does not happen again?	
Have you reviewed the EMS and rolled out any changes to operations and procedures? Include dates.	
Was there any significant pollution – for example: oil entering a surface water drain. If so what?	
If there was then you must notify the Environment Agency on 0800 807060 ASAP. Have you done so?	Yes/No/not applicable Time: Date: E.A. Incident number:
Please print your name and sign	

Complaint Reporting Sheet

Who made the complaint? Name:	
Address	
Phone No	
Date and time they made the complaint	
What happened, what was it about?	
Was anyone else aware of this – other neighbours or your staff? If so who?	
Assuming the complaint relates to your site, what was the problem, what went wrong? If you can't find the source of the problem you should contact a suitably qualified person to do so and record who they were and what the problem was.	
What have you done to make sure that it does not happen again?	
Was there any significant pollution –If so the Environment Agency must be informed.	
If there was then you must notify the Environment Agency on 0800 807060 ASAP. Have you done so?	Yes/No/not applicable At what time did you phone?
You must also write or send an email to confirm this to the local office (see your accident management plan for the address). Have you done so?	Yes/No/not applicable Time: Date: EA incident number:
Please print your name and sign:	