Lincoln Recycling Facility Environmental Permit Application

Dust and Emissions Management Plan

GBCTR Limited

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Basis of Report

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1.0 INTRODUCTION

A Great British Clean Tech Recycling Company Limited (GBCTR) has instructed SLR Consulting Limited (SLR) to prepare an application for an Environmental Permit for the proposed Lincoln Recycling Facility, located at Unit 16, Electric Avenue, Witham St Hughs, Lincoln LN6 9BJ.

The proposed facility will be regulated as a multi-activity installation under the Environmental Permitting (England and Wales) Regulations 2016 (as amended) (EPR).

Activities at the facility may result in the release of fugitive dust emissions, which have the potential to diminish amenity in the local area through deposition (dust soiling) and visible dust clouds.

Smaller dust particles also have the potential to increase local ambient concentrations of suspended particulate matter (PM10 and PM2.5) which may impact human health.

Therefore, it is a requirement to control activities at the facility in order to prevent or mitigate potential releases of dust. The DEMP provides a proactive approach to the effective management of dust during the operations at the facility.

This DEMP sets out the potential sources of dust at the Site, the measures in place to control dust generation and monitor releases, and the management and monitoring actions that will be taken in response to a dust event.

The DEMP is a ‘live document’ and in this respect the dust control measures and management procedures contained within it will be updated on a periodic basis. This DEMP will be kept in the Site office and be available to all employees. The DEMP will be implemented throughout the duration of the Site’s operation.

1.1 Site Setting

The site is centred on National Grid Reference (NGR) SK 8861 8294 within the Indurent Park Lincoln. The site location is illustrated on Drawing 001 Site Location Plan.

The Environmental Site Setting is illustrated on Drawing 003.

The site is located within a predominantly industrial area, with industrial facilities associated with Indurent Park Lincoln located to the north and west. Residential properties in Witham St Hughs are located to the east of the site.

A summary of the immediate land uses in the vicinity of the Site is provided in Table 1-1 below.

Table 1-1 Immediate Land Uses Surrounding the Site

Direction	Land-Use
North	Industrial premises
East	Open land and residential properties
South	Open land and the CEMEX Swinderby Quarry
West	Industrial premises and former RAF Swinderby site

The Site is not located within an Air Quality Management Area (AQMA).

1.2 Type of Dust Management Plan

The pre-application advice received from the Environment Agency (EA) confirms that a DEMP is necessary for the site because the EA believes that the activities are potentially dusty. However, in accordance with the EA's on-line guidance[1], as the activities are carried out inside a fully enclosed building with small access and egress points, with fast action doors that default closed and a suitable air extraction and filtration system, only a brief dust and emissions management plan is needed. The content of the plan must:

- identify receptors;
- demonstrate accountability of keeping the building operational; and
- have a section on responding to complaints.

1.3 Sensitive Receptors

EA guidance and templates for DEMPs states that all receptors close to the Site which may be impacted by dust and other emissions (such as Nitrogen Dioxide from combustion sources) should be identified within a 1km range of the Site boundary.

The Site has been assessed in relation to the surroundings and a list of sensitive receptors is identified in Table 1-2 below:

Table 1-2 Sensitive Receptors in Proximity to the Site

Receptor Number	Receptor Type	Receptor Name	Distance from Site (m)	Direction	Sensitive Receptor?
R1	Industrial Premises	Indurent Industrial Park	25	North, east, west	Medium sensitivity: workplaces are in enclosed buildings. Vehicle, pedestrian and cycling traffic, but in an industrial area so expectation of amenity is not high
R2	Road Network	Electric Avenue	25	East & West	Medium sensitivity: Vehicle, pedestrian and cycling traffic, but in an industrial area so expectation of amenity is not high
R3	Residential	Houses in Witham St Hughs	335	South-east	Medium sensitivity: trees provide buffer
R4	Educational	Witham St Hughs Academy	325	Northeast	Medium sensitivity: indoor and outdoor activity
R5	Recreational	Allotments	500	Northeast	Medium sensitivity: outdoor activity

The dust-sensitive receptors listed in Table 1-2 are shown on Figure 1 below.

[1] https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit#dust-mud-and-litter

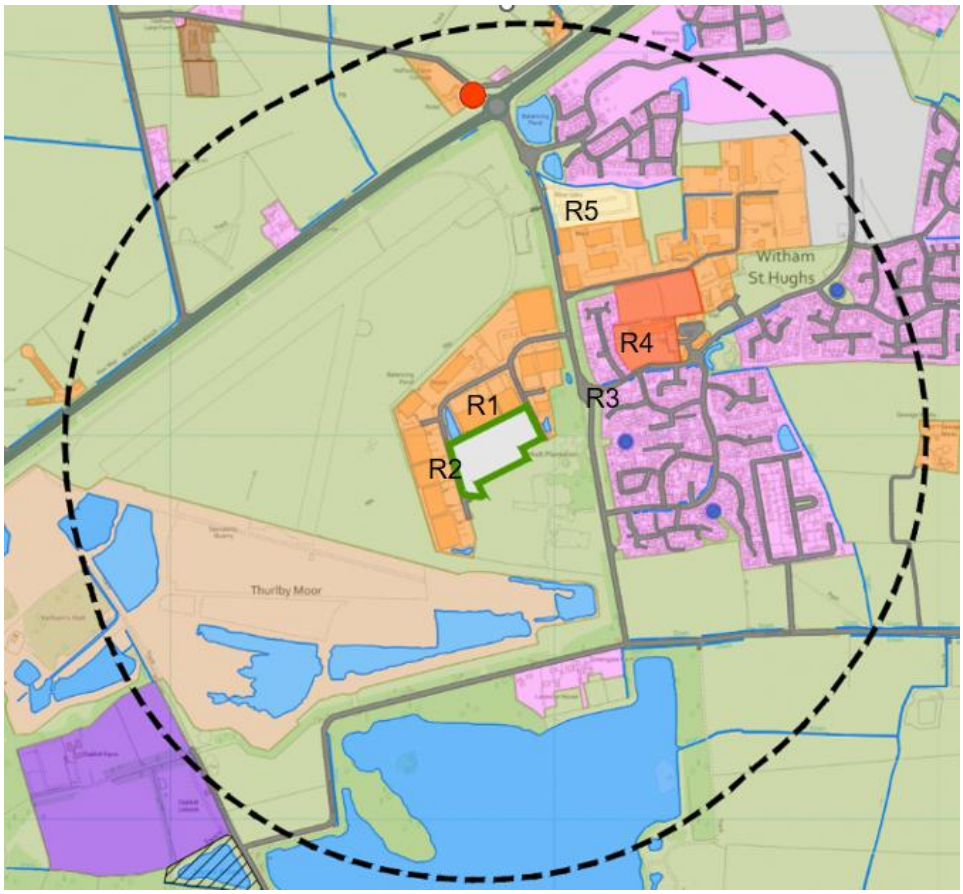


Figure 1 Sensitive Receptors within 1km of the Site

2.0 DESCRIPTION OF OPERATIONS

This section identifies the activities, potential dust source and PM emissions at the facility. The operational layout is illustrated in Drawing 002 Site Layout Plan.

2.1 Process Overview

The proposed facility will carry out a number of waste recycling activities to treat the following waste streams:

- End-of-life solar panels; and
- End-of-life batteries from solar farms and electric vehicles.

Some pre-treatment activities will be carried out externally to the building, but all mechanical treatment will take place within a fully enclosed building.

2.2 Treatment Activities

2.2.1 Treatment of Solar Panels

Up to 40,000 tonnes per annum of end-of-life solar panels will be processed at the facility consisting of the following steps:

- Temporary storage of end-of-life panels pending treatment;
- Cleaning of solar panels to remove soil and any loose debris;

- Manual and mechanical dismantling of the aluminium metal frames from the panels;
- Shredding of the aluminium metal frames;
- Shredding of the panels;
- Separation of the panel shredding outputs into plastic and metal fractions; and
- Temporary storage of the outputs from both shredding activities pending transfer for recovery at an appropriately regulated facility.

2.2.2 Treatment of Batteries

Up to 17,000 tonnes of end-of-life batteries will be processed at the facility consisting of the following steps:

- Temporary storage of the end-of-life batteries pending treatment;
- Discharging of the end-of-life batteries;
- Shredding of the batteries;
- Collection of the liquid electrolyte fraction and temporary storage pending transfer off-site for recovery at an appropriately regulated facility;
- Separation of the solid battery shredding outputs into plastic, metal and ‘black mass’ fractions; and
- Temporary storage of the solid fractions pending transfer off-site for recovery at an appropriately regulated facility.

Treatment of batteries will be carried out in a single line of approximately 2 tonnes per hour.

2.2.3 Waste Storage

Waste will be stored internally and externally to the building in designated areas, and in fully enclosed containers.

3.0 DUST AND PARTICULATE MANAGEMENT

3.1 Responsibility for Implementation of the DEMP

The Site Manager will be responsible for the DEMP and will ensure that it is fit for purpose. The DEMP will be reviewed annually or immediately in response to an incident.

The Site Manager is responsible for day-to-day operations and compliance with the Environmental Permit including:

- Procedures and measures for the management of dust at the site;
- Training of staff to implement procedures;
- Ensuring that the correct abatement equipment is deployed and maintained on-Site to control dust emissions;
- the enforcement of good Site practices, to prevent/minimise nuisance to surrounding sensitive receptors; and
- Taking the appropriate corrective action if dust nuisance is identified.

3.2 Control of Fugitive Dust / Particulate Emissions

Techniques for the control of dust emissions are detailed in section 6.2 of the BAT-OT submitted with the environmental permit application and are repeated below:

- The waste types to be treated are not dusty;
- All treatment of waste batteries and solar panels is undertaken within enclosed buildings;
- Shredding will take place in enclosed systems;
- Dust extraction and filtration systems will be is used to control any dusty emissions from the mechanical separation stage; and
- All waste incoming is in large form and all outgoing waste (following size reduction) will be stored in enclosed containers; there are no open stockpiles of waste at the site.

In addition, a number of operational measures will be in place:

- No dusty wastes will be received at the Site. Waste acceptance checks will be undertaken prior to acceptance of any waste on to the Site;
- Care will be taken during the unloading and loading of wastes into the feed points and from the bagging stations, for example, drop heights will be kept to a minimum;
- Traffic calming measures are implemented to enforce speed limits and reduce emissions of dust. Speed limits will be implemented for vehicles on Site. Site surfacing will be maintained and repaired to minimise the mobilisation of dust particles;
- The Site will be kept clean and tidy by way of a regularised housekeeping regime. Regular checks will be undertaken by the Plant Manager or designated individual of dust on site and at the Site boundary;
- In the event that dust is detected, investigations will be undertaken to determine the cause and appropriate remedial action;
- In the event that non-conforming wastes are delivered to the Site, they will be returned on the delivery vehicle; and
- The Plant Manager will be responsible for implementing risk management measures in accordance with this environment risk assessment.

Given the high degree of designed-in mitigation in the form of containment of potential sources of dust from the proposed operations, there are limited sources of dust exposed to the ambient atmosphere. It is therefore considered that the risk of fugitive dust emissions will be very low.

4.0 REPORTING AND COMPLAINTS RESPONSE

4.1 Complaints Procedure

GBCTR has in place a system of monitoring and inspection to check dust control measures are functioning effectively at the Site. It is considered that the risk of dust complaints is extremely low. However, if a dust complaint is received, it is important that complaints are properly and systematically dealt with. Complaints may be notified to the facility either during or after an event, directly by the complainant or indirectly through a regulator (such as the

Local Planning Authority; Environmental Health Department or Environment Agency) who was notified.

Complaint records would include the following (recorded in the Site logbook):

- Date, time, and name of complainant (if given);
- Nature of complaint;
- Locality of complaint; and
- A summary of the investigation and actions taken and the outcome.

All complaints would be recorded on a complaints tracker for the facility.

Investigations of complaints would include but not be limited to:

- Visit by facility personnel to location of complainant to verify issue (if the complaint is made ‘after’ rather than ‘during’ a dust event this may not be possible);
- Review of activities at time of incident to investigate potential sources;
- If a dust event is a recurring event undertake more frequent targeted on- Site and off-Site visual monitoring and record findings;
- Review of control measures and management actions at the time of the incident;
- Review of meteorological conditions at the time of the incident; and
- Reporting of findings to the complainant.

Records of all environmental complaints would be retained at the Site and made available for inspection by the EA at any given time.

The remedial actions taken in response if a complaint occurs might include:

- obtaining additional information on the nature and extent of the non-compliance;
- discussing and testing alternative solutions;
- modifying procedures and responsibilities;
- seeking approval for additional resources and training;
- contacting suppliers and contractors to seek alterations to the way they operate; and
- informing the Environment Agency (EA).

4.2 Engagement with the Community

The Site Manager (or nominated representative) will act as liaison with the regulator and local community for issues relating to dust nuisance.

The nominated representative will respond promptly to all complaints by undertaking an investigation into the dust event, including weather conditions, operations on Site and mitigation measures in place at the time of the complaint.

Complainants will be informed of the investigation.

Following the receipt of a complaint, the details of the complaint will be recorded in the Site complaints tracker.

Liaison with local residents and business can be undertaken through posts on the local council / community council’s websites as appropriate.

4.3 Management Responsibilities

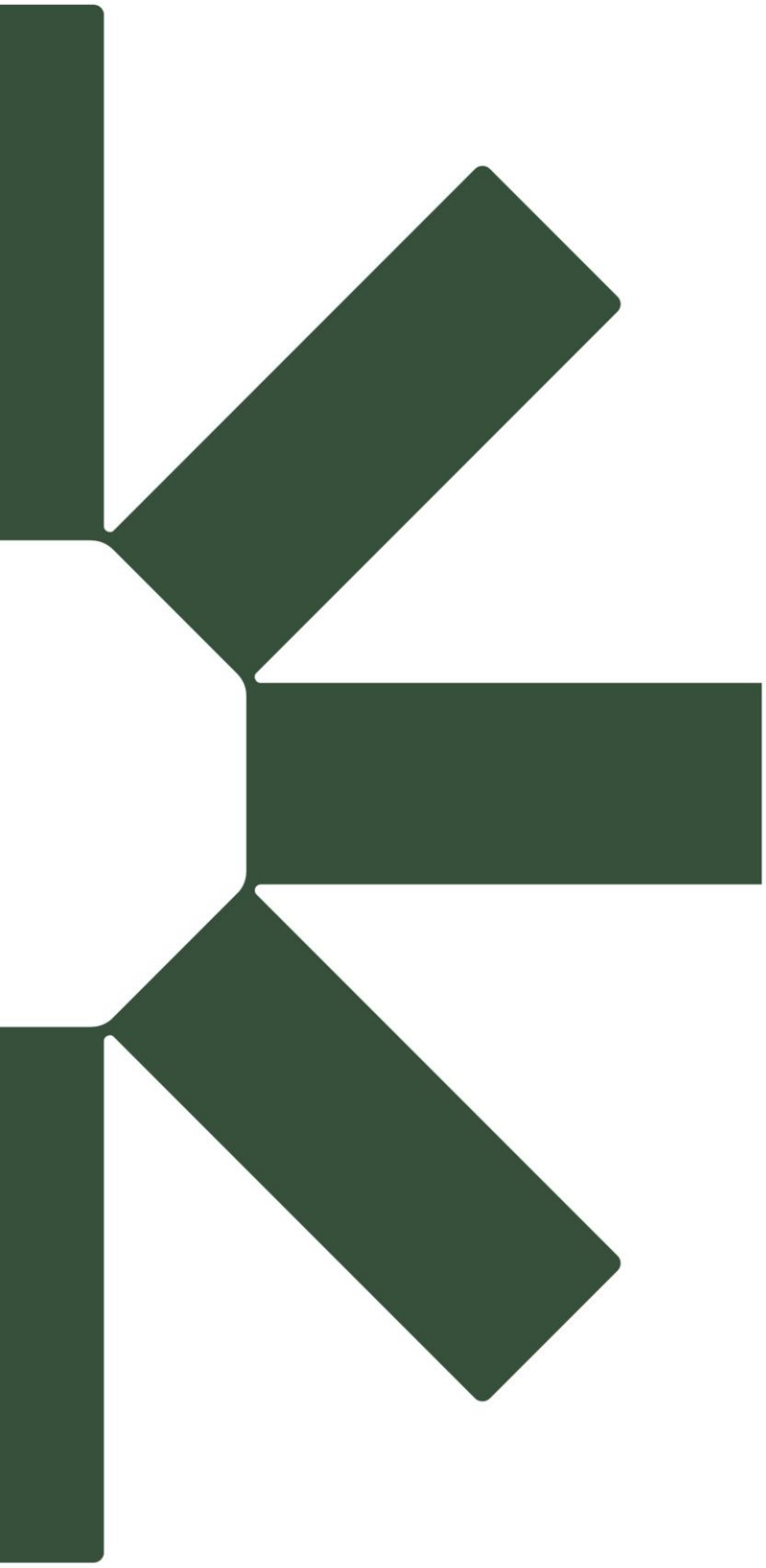
There will be a trained supervisor present at the facility during operational hours, responsible for dealing with complaints (i.e. receipt, recording and investigation).

Contact details will be available at all times at the facility entrance, with details (including a phone number / email address) provided for both operational hours and out-of-hour periods.

5.0 DEMP UPDATE AND REVIEW

This DEMP is a controlled document, and forms part of the Environmental Management System (EMS). The DEMP will be reviewed on an annual basis. However, the DEMP is intended to be a 'live' document which serves as a reference during daily operations, and as such will be updated on a more frequent basis should the following occur:

- Significant changes are made to the plant or operational practices;
- The regulator requests that the DEMP is updated; or
- Complaints are received, which on subsequent investigation result in the identification of further control measures or remedial action, in addition to those set out within this DEMP.



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