GLJ Recycling Ltd
Permit application supporting documents

10 – Emissions and Monitoring

22 August 2019

Issue and Revision Record

Revision	Date	Originator	Approver	Description
1	22/08/2019	M.tuckey	G Davies	Issued to client for review

Information class: Standard

Contents

1 Environmental monitoring

Under the Industrial Emissions Directive, all environmental impacts associated with the scheduled activity must be managed and mitigated in accordance with Best Available Techniques. When considering BAT for this application, reference has been made to the documents "establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council"

The recommendations in the guidance have been considered in the remainder of this section and accepted or discounted with justification as appropriate.

1.1 Air emissions monitoring

The guidance recommended that BAT should include operators undertaking regular air emission and stack emission monitoring.

1.1.1 Point source emissions

Point source emissions at the proposed installation shall be limited to the emission points A1, as illustrated on the Site Layout Plan in the Site Plans and Maps report (part of which is reproduced below in Figure 2), accompanying this application. The emission is from the shredder stack emission point.
A review of manufacturer specifications identifies particulates as the key hazard associated with stack emissions (Illustrated in Figure 1 below) from the shredder and these are mitigated using a cyclone bag filtration system. Although there is a manufacturer guarantee of emissions being below 10 mg/m3 Experience with similar equipment has indicated that negligible particulate emissions are generated from shredder stacks that are properly abated.
It is envisaged that long-term particulate sampling of stack emissions will be carried out using a grid measurement system in accordance with BS EN 15259.

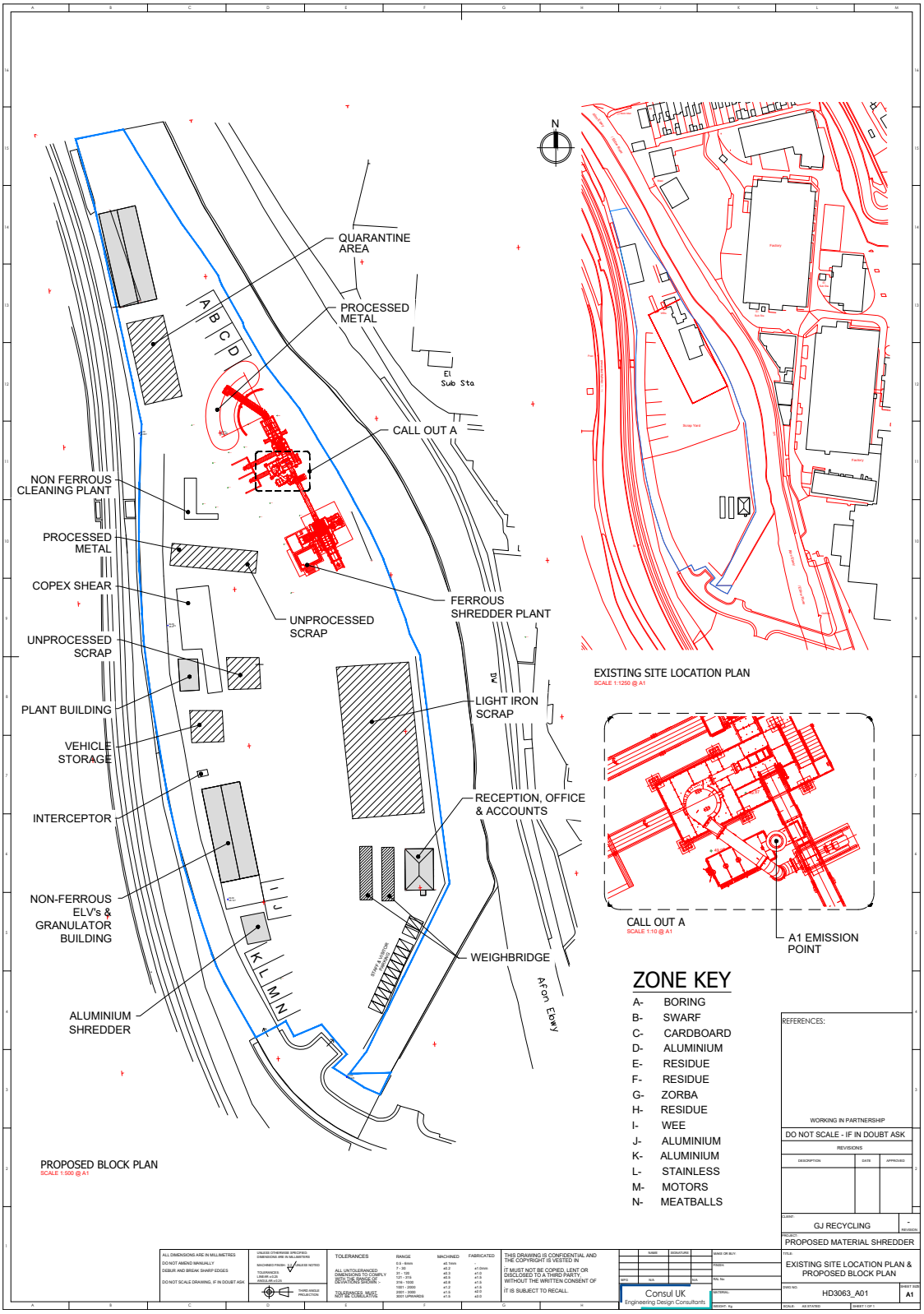
Figure 1: Danielli 1822 shredder

The associated exhaust stack will be fitted with bag cyclone filters and will be provided with fixed access for safe sampling via pre-installed access ports that have been demonstrated to provide suitable flow stability on other plants within the UK.
The new shredder installation is to be housed within a multi-storey, sound barrier. The site will also house conveyors, screens, magnets and eddy current separators in order to maximise the recovery of metal.
It is proposed that for this Danielli plant, periodic monitoring be undertaken annually during periods of typical operation (i.e. not during start-up or shutdown) by MCERTS-certified monitoring specialists to determine:

- Total particulates in mg/m^3
- Total particulates in g/hr
- Estimated annual stack emission based on operating hours.

Prior to the first monitoring round the appropriate monitoring location and access requirements shall be agreed with the Environment Agency.

Figure 2: Location of air emission points



1.1.2 Fugitive emissions

The Company monitors for airborne dust and light waste in accordance with the Amenity Management Plans submitted with this application and the proposals for ambient air monitoring detailed in section 1.1.1.

1.2 Water emissions monitoring

There is no direct discharge to a river or stream from the installation.
Water from the installation's concrete surfacing and scrap metal processing areas discharge via an oil-water separator into Storage tanks was re-use.

As no waste surface water leaves site and any oils captured in the interceptors are periodically removed by a licenced contractor, No additional monitoring is proposed.
It is not anticipated that the installation of a larger shredder will have an adverse effect on the water drainage system. However, the increased area of concrete associated with the development of the site will result in increased flow. The drainage and storage system have already been upgraded to easily cope with this and the extra water collected will be utilised in the larger shredder process.

1.3 Resource efficiency monitoring

Energy usage within the installation is monitored. This includes:

- Energy generated on-site (via calculation)
- Grid energy imported (via metering)
- Vehicle fuel utilisation (diesel consumed).

An annual review of energy consumption will be carried out in accordance with the Company's environmental management system. This will be reported to the Environment Agency as required by the permit.
There are no activities on site that generate energy.

1.4 Justification for resource use

As a waste recycling facility, GLJ Recycling Ltd aims to minimise the resources required in order to maximise the value of waste metal recovered at the site.
The Danielli plant will be entirely grid-powered, as the associated motors rely on a 2.5MW supply.
Water used on site is metered from the local water supplier, Welsh Water, and so its use is minimised to that required in order to comply with other permit conditions (e.g. dust suppression). Recycling surface water drainage are currently in progress, though the need to ensure any oil-contaminated run-off is safely controlled has restricted this so far.