GLJ Recycling Ltd
Permit application supporting documents

9 – Best Available Techniques

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

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Contents

1 Best Available Techniques

1.1 BAT reference documentation

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 EUROPEAN COMMISSION,

This Decision is addressed to the Member States. Done at Brussels, 10 August 2018.

(notified under document C(2018) 5070)

the British Metal Recyclers' Association (BMRA) document, *BREF Style Report – Metal Fragmentising Operations – Industrial Emissions Directive (September 2018)* and the Environment Agency sector guidance S5.06.

The process of fragmentising metal-rich wastes is considered to be BAT within the metal recycling sector, due to its high metal recovery rates and the consequent reduction in the need to landfill a valuable resource.

1.2 Management systems

The BMRA considers that an ISO14001 (or EMAS-registered) Environmental Management System (EMS) constitutes BAT.
GLJ Recycling Ltd operates an EMS that is structured in accordance with the ISO14001:2015 standard. The company achieved this certification in May 2019.
The BMRA also considers that an ISO9001 Quality Management System (QMS) constitutes BAT. The company achieved certification in May 2019.
An ISO9001 QMS follows fundamentally the same model as the site's EMS while focusing on quality rather than environmental aspects. Therefore, we do not consider the current possession of such a system offers any additional environmental benefits relevant to this application.
In addition, ISO450001 for the provision of metal management servicing and recycling activities was accredited in 2014 being successfully upgraded in August 2019.

1.3 Activity detail

The BMRA recommends that operators maintain a comprehensive list and description of each activity undertaken by the installation. The Technical Summary accompanying this application fulfils this requirement and will be maintained in the event of any changes to the process. This document will be reviewed annually to ensure it remains current.

1.4 Housekeeping

The BMRA recommends installations maintain good housekeeping procedures to prevent or reduce emissions.
All storage areas are detailed in the Site Layout Plan within these application-supporting documents and working areas of the installation subject to routine, usually daily, cleansing activities by site staff. During daily checks, site management ensure that all wastes and ancillary items are correctly stored and properly labelled.

1.5 Improving knowledge of waste input

All wastes accepted for fragmentising at the facility are initially inspected when they are driven onto the site weighbridge. Further checks are carried out at the time they are tipped into the metal reception area.
Before lifting metal from stockpiles into the fragmentiser, the 360° grab driver also carries out a visual inspection to further ensure that the material is suitable for the shredder infeed.
Waste containing too much unsuitable material is not put through the shredder; the operator deducts penalty fees from waste producers who supply contaminated waste to cover the cost of managing these wastes separately.
The site tightly controls the acceptance of gas cylinders, drinks kegs etc. Such materials are accepted free from customers and sent back to the relevant takeback scheme. GLJ Recycling Ltd. maintains relationships with industry takeback schemes such as Kegwatch.
All customers are clearly informed, via signage, that penalties will be levied for any such wastes hidden inside the incoming waste stream. If such materials are found in any load tipped at the site, the customer is penalised accordingly and the cylinder/keg etc. removed from the feedstock.
Any metal received on site that may have contained hazardous residues will be screened upon arrival. Having had pre-acceptance discussions with the waste producer, any requirements for cleansing will have been stipulated in advance and checks will be carried out, upon the metal's arrival, that proper cleansing had been carried out and, where appropriate, necessary cleansing certificates should accompany the waste.
Currently, the only baled waste accepted for metal recycling is packaging (i.e. drinks cans) as the current Bonfigioli shredder is too small to accept baled ELVs. In the event baled ELVs are accepted in the future, pre-acceptance procedures will be developed for this waste stream. Such a procedure will include checks on the site producing the waste to ensure that proper depollution is being carried out, and a requirement for copies of Certificates of Depollution to be provided alongside vehicles accepted in this form.
Where waste appears to be non-conforming or suspicious, it will be placed into a quarantine area for storage and full inspection prior to entry to the waste processing areas. The quarantine area is located immediately to the north of the weighbridge. Non-conforming waste, and where possible its source, is recorded in the site diary.

1.6 Management of Process Generated Residues

The volume of shredder residues stored on site at any one time is minimised within designated stockpile areas, close to the end of the process line. By reducing internal travel distances, the need to handle this light material is minimised.
During windy conditions, when there is an increased risk of light waste becoming airborne and causing nuisance, the Yard Manager is authorised to stop fluff-handling activities.

Rubber skirting is installed at the end of the line to minimise uncontrolled emission of light fluff when these residues are discharged into the output bay. All waste conveyors are covered and Concrete retaining barriers are also installed in key locations to minimise wind-blow.
GLJ Recycling Ltd engages an authorised contractor to remove shredder residues for further recovery at a third-party facility, and carries out any necessary waste sampling and testing as required by the receiver of this waste.
Non-ferrous metal outputs from the shredder are stored in bins adjacent to the relevant picking lines. There is additional storage of non-ferrous zorba within a bay, which is situated upon the site's sealed concrete surface.
The site's environmental management system includes procedures controlling how materials are handled in such a way so as to minimise the risk of emissions from the site.
Conveyors within the shredder installation are covered where a risk of uncontrolled emission exists (e.g. dirt lines) with discharge points fitted with rubber skirts.
All tanks and other liquid containers are kept within bunded areas or on appropriate drip trays, with sealed drainage and spill kits provided to minimise the risk of pollutants entering the site's drainage system. An oil-water separator is also fitted at the point where drainage from the site enters the downstream drainage network.
All staff involved in handling such liquids are suitably trained and this is documented within the company's training records.
A preventative maintenance regime is in place, with daily and weekly checks of key equipment carried out with appropriate maintenance carried out in accordance with manufacturer recommendations.
Any waste parts that arise during shredder maintenance are sold on for refurbishment, reuse or recycling.

1.7 Process Efficiency

Process efficiency is monitored through routine site management to ensure that residual waste from the incoming metal feedstock is minimised. Maximising recovery of metal through the process is key to the business's commercial objectives and, therefore, failures that reduce process efficiency are rectified as soon as it is feasible to do so.

An Incident and Emergency Plan forms part of the EMS. A fire prevention plan, to be agreed with the Environment Agency, forms part of this permit application.

A site diary is used to record unusual process events that may have impacted upon process efficiency

Noise and vibration arises from point sources within the site, and these are mitigated using techniques including regular maintenance, containment and acoustic barriers.

A Full Noise Impact assessment has been carried out by Hunter Acoustics Ltd on the 12th July 2019 (Document 5217/NIA1_Rev2)

Hunter Acoustics were commissioned to assess the noise impact of the existing and proposed new operation on nearby noise sensitive properties.

This report details results of an ambient background noise survey, including existing activities, and prediction of the overall noise impact when the new item of plant is implemented. Reference is made to current planning guidance.

The report also details to the noise reducing elements that will be incorporated into the new Shredder plant.

In the report it was concluded that overall levels from the new shredder system are indicated to give a significant improvement (7dB) over the existing permitted plant.

1.8 Utilities and Raw Material Management

1.8.1 Energy

The Company recognises that reducing resource use during the recycling process is good for both the environment and for the business. The site's EMS contains procedures for minimising the use of energy and water during the process. The proposed installation will In significantly reduce reliance on off-grid diesel generation. The new installation being moved to only mains electricity with main drive being a state of the art energy efficient design. This has improved the energy efficiency of the site whilst also reducing local emissions. Annual energy reviews are carried out and recorded within the EMS which ensure that energy consumption per unit of production is monitored by Company management and action is taken then annual objective and target setting to reduce per unit consumption.

1.8.2 Water use

Water use within the site is limited to the shredding process, dust suppression and wash-down. The site's sealed drainage system stores run-off in a series of underground interceptors and storage tanks.

Within the fragmentiser plant, water application is controlled by manual means, that ensure the appropriate amount of water is applied to achieve the objective of minimising emissions. This is undertaken whilst avoiding the generation of a wet product that would be more difficult to process.

During the planned upgrade to the larger Danielli shredder, water management and recirculation is to be considered during the design phase to ensure that per unit water consumption can be minimised. A computer-controlled system will be used (Figure 1), ensuring water is only fed into the shredder when required. This will reduce the overall use of water per tonnes of material processed.

Mains water accepted at the site is subject to metering. Due to the limited number of processes it has not been considered appropriate to meter separate parts of the site to date.

All foul water at the site is discharged to septic tank with timely emptying by registered carrier. There are no discharges to surface water from the site.

Surface water is stored, recovered and re used on site to re circulate into shredder system and using run-off water for dust suppression during dry periods is carried out, subject to the Company having confidence that there is no risk of unsuitable water (for example, water contaminated with oil) being spread across site surfaces.

The discharge of surface water runoff from waste handling areas is likely to increase the drainage/collection system has recently been upgraded to reflect this. Document 7 Site Plans and Maps Figure 4, Page 8. Figure 2, Upgrade pictures.

Wastewater from process areas is captured with the sealed drainage system, where it passes through oil-water separators. There have been no failures to comply with any consent or permit conditions connected to the discharge of site wastewater, and there is not considered to be a foreseeable risk of this situation changing as a result of any changes to on-site processes.

Figure 1 – Water Injection System

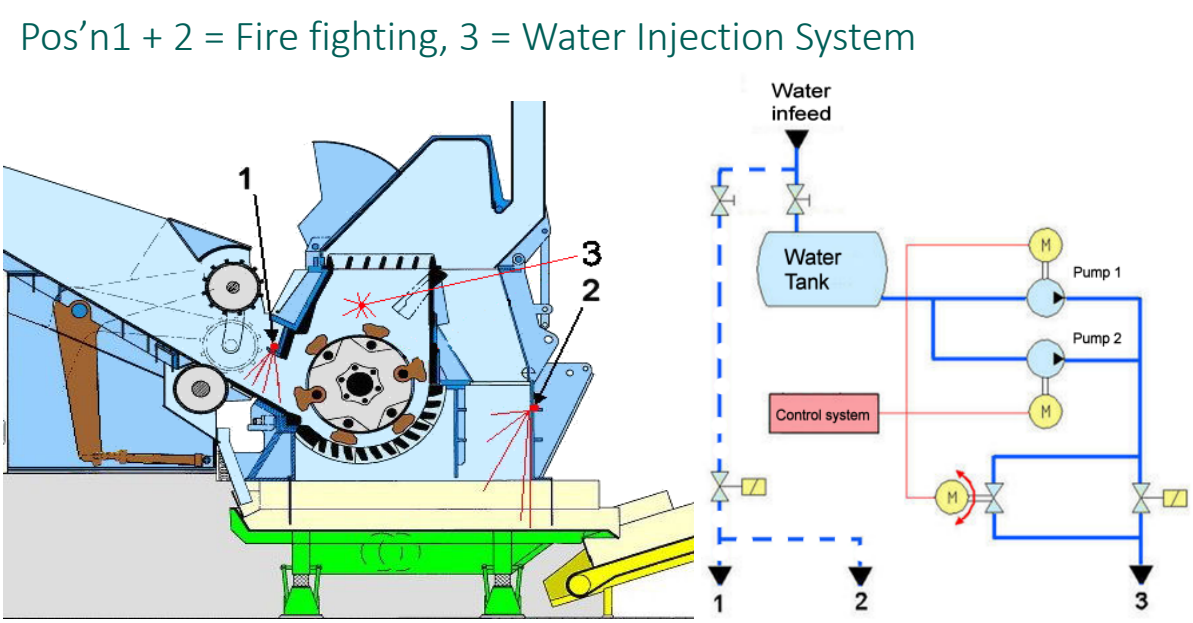

Figure 2 Upgraded Drainage System

1.9 Training

All the management system procedures are produced by the Company with copies distributed to each site. These procedures are stored on site in folders in order to provide a quick reference for Site Managers and staff.

Site managers relay procedures to their staff. Managers brief staff on those parts of a procedure that affect their role, or as identified by the EMS Training Matrix. For example, crane operators do not need to know about document control but do need to know about waste handling and inspection procedures on-site.

Toolbox talks are also devised to deal with environmental issues such as nuisance noise and dust, environmental awareness and spillage response.

All Risk Assessments and Safe Systems of Work are produced by the Company's Environment, Health & Safety Manager and are freely available on the company's internal intranet system. These assessments and procedures are then communicated to staff through toolbox talks and during new employees' induction programmes. Once training has been delivered, the relevant activities are monitored by the responsible managers to ensure adherence to the specified procedures.

All training and communication regarding procedures is recorded by site management, either through training logs or in the site diary. This would involve recording when toolbox talks have taken place so that compliance can be shown.

The following procedure sets out how communication of management system procedures is conducted.

1. Management system procedure is written by Environment, Health and Safety Manager or the board of directors.
2. Procedure is sent to all relevant supervisory staff
3. Supervisory staff deliver toolbox talk on the new procedure
4. Once delivered, the site manager/supervisor makes a written record of who has received the talk and training logs are updated
5. Each participant signs to acknowledge that they have received the relevant talk
6. Copies of the signature sheets are to be retained on site with a copy forwarded to the Environment, Health & Safety Manager.

Technically competent management at the site is provided by the person(s) named in this application, who hold the required qualifications with WAMITAB as agreed with the Environment Agency. A further employee is currently undergoing WAMITAB qualification.

1.10 Ground Contamination

Operational areas that are used for the storage and management of scrap metal and shredder residues are provided with an engineered concrete surface that drains to a series of interceptors prior to site discharge to storage tanks. Hazardous liquids are stored within appropriate secondary containment.
Internal site checks ensure that damaged surfacing is identified and repaired within appropriate timescales.

1.11 Decommissioning

Prior to any decommissioning of plant or equipment associated with the installation, the Company will prepare a Decommissioning Plan to ensure that potential environmental hazards are identified and appropriate mitigation put in place. Any waste associated with the decommissioned equipment will be removed from site to an appropriate third-party waste management facility.

The Environment Agency will be pre-notified of any intended decommissioning that falls within the scope of relevant permit conditions and will have the opportunity to approve any relevant Decommissioning Plan is so desired.

The existing Site Condition Report will also be updated to reflect any areas that have been subject to decommissioning activities.