# IMPORTANT NOTE: *Recyclus Group are currently in the process of implementing an integrated management system which will be assessed by a UKAS accredited Certification Body for ISO 9001 and ISO 14001:2015*

# Introduction

This procedure set out how Recyclus Group Ltd (trading as Halo Battery Recycling (HBR) have determined the management of Environmental and Safety Risk which have been identified at their planned permitted installation St Georges Work, Tipton. This procedure also demonstrates how the company will monitor performance and ensure compliance with the requirements of the permit.

## Permit Review

HBR will review their permit and operations with the Regulator in accordance with Permit Review timescales but will voluntarily review their permits and activities every year.

## Upgrading timescales

* HBR will always achieve standard “good-practice” requirements within 6 months of the issue/review of a permit or within a timescale allowed by the Regulator.
* HBR will always achieve capital-intensive improvements within 1 year of Permit issue/review or within a timescale allowed by the Regulator.

**In essence, HBR will not acquire business or undertake any work or activity of any nature without consultation or agreement of the Regulator, and not undertake work or an activity that it cannot fund fully.**

**A schedule of proposed environmental, safety or quality improvements or projects shall be maintained by HBR for review and discussion with the Regulators, where necessary, prior to implementation.**

# Waste Acceptance

## Pre-acceptance and Acceptance procedures to assess waste

### Please also refer to Pre-Acceptance of Waste (Flow Chart)

HBR use an electronic system, Quick consign which records the following information:

* Nature of the process producing the waste, including maximum and minimum parameter variations or variations to the state and physical characteristics of the waste
* Composition of the waste (chemicals present and individual concentrations)

HBR will ensure that where the waste being collected is **not a known battery waste**

* a technically competent company representative has visited the waste holder/producer of the materials to be accepted at the installation as part of our contract undertaking with the client. This visit will facilitate the raising of, and verification of the pre-acceptance control form from the client and give HBR the opportunity to work with the waste producer or holder to prepare the waste for its acceptance in the correct manner, so that subsequent receipt by HBR is cordially agreed between the parties.
* An assessment of the waste will be taken at the waste producer’s or holder’s site (normally if the waste is a recognizable whole article, e.g., a whole battery or a computer then physical inspection is adequate as the information concerning the waste is the same information as the product information in its market use).

### Wastes will not be accepted at the installation without a clear method or defined treatment and recycling/disposal route and associated cost(s).

HBR use Quick Consign which is a waste tracking system that begins at the pre-acceptance stage, and every enquiry and or order is issued with a unique reference number. Wastes then subsequently accepted will have a unique reference number per waste consignment Pre-acceptance agreements prior to this system being implemented have been saved to the applicable Customer Record in Quick Consign and future Pre-Acceptance Agreements are created directly in Quick Consign these are referred to as **Control Forms** within the system.

## Waste Sampling

The sampling and inspection plan for waste batteries accepted at the installation shall follow the norms in best practice adopted within the UK at all other battery recycling facilities and shall be aligned with the requirements to satisfy the Waste battery and accumulator regulations.

Typically, such a sampling and inspection program is routine sampling and inspection, and subsequent sorting to categorise the batteries in Automotive, Industrial and Portable battery category and then sort them into chemistry by those containing Lead, Cadmium, and other types of battery.

As batteries are whole articles in their waste form, they can be sampled and inspected by their branding and labelling.

## Load arrival

Please refer to Materials Receipt & Dispatch Procedure

On arrival at the installation all loads will be weighed

Conditions of Load acceptance at the installation is subject to:

* Enough storage capacity available
* Site is manned appropriately with technical and operational staff
* Correct documentation checked and approved, and any discrepancies resolved before the waste is accepted at the HBR installation
* Conformance of labelling and packaging requirements for the waste

To ensure compliance with these aspects, all wastes must be booked into the installation at least 1 full working day in advance.

## Load inspection

Details of the load inspection, and/or waste inspection requirements will be identified on the pre-acceptance documentation, and may involve some or all the following steps:

## All waste materials

Visual inspection – Visual confirmation checks will be undertaken before offloading where safety is not compromised. A visual Inspection must in any event be carried out immediately upon offloading at the installation so that every container or article quantity is confirmed against accompanying paperwork.

Visual checks shall include, for example:

* Packages/articles are clearly labelled
* Containers or pallets that are damaged, corroded or unlabelled will be put into a quarantine area and dealt with appropriately.

Following inspection, the waste will then be unloaded into a dedicated sampling/reception area where the waste consignment’s unique reference number is applied to each container. Each pallet or container will also be labelled with its primary hazard code.

Where containers or wastes are sorted and repacked, the earliest date of arrival of the wastes will be transposed from the original container onto the new container.

All waste receipts are subject to pre-acceptance criteria and procedures being completed.

Wastes received without such procedural intervention are subject to Non-Conformance and Quarantine procedure pending resolution prior to acceptance.

HBR have clear and unambiguous criteria for the rejection of wastes which forms part of the Nonconformance Procedure which includes notification to the customer/waste producer and the Regulator.

HBR’s waste acceptance and inspection, testing and records systems are detailed in their electronic integrated Health, Safety, Environmental and Quality Management System.

# Waste storage

## General

Offloading and quarantine areas have an impervious surface with self-contained drainage, to prevent any spillage escaping off-site

We recognise that our waste storage areas are very visible aspects of our facilities and can contribute significantly to pollution risks in the event of an emergency such as a fire or flood.

As a result, this installation will operate a strict stock holding policy allowing for the accumulation and storage of very specified limited quantities of hazardous and non-hazardous wastes.

Main storage areas will be within the building and will be located away from sensitive perimeters, for example, the security-protected boundary of the installation to prevent vandalism/arson.

The installation storage arrangements will be designed to eliminate or minimise the double handling of wastes within the installation and shall be clearly marked and signed with respect to the quantity and hazardous characteristics of the wastes stored within.

Our procedures and policies will clearly state the total maximum storage capacity of the site with details of the method used to calculate the volumes held against this maximum and this information shall be clearly displayed and available and updated as and when a waste consignment moves in to or out of the installation.

The stated maximum capacity of storage areas will not be exceeded.

Our Storage area infrastructure will be designed and maintained to ensure that all contaminated run-off is contained, that incompatible wastes (or drainage from incompatible wastes) cannot come into contact with each other, and that fire cannot spread between any storage / treatment areas via any pathway (including drainage systems, materials of construction etc…)

Procedures and records will be in place for the regular inspection and maintenance of storage areas. Inspections will include:

* Signs of damage or deterioration
* Leakages and spillages
* Other process and Infrastructure faults or failures
* Conditions of containers and pallets
* Details of remedial action taken (date detected and date rectified)

At all times the design and operation of the facilities storage areas will provide full and unrestricted access to forklift, and pedestrian access

### HBR have documented guidance of safe and secure packing and storage methods which is used as training and illustration for employees and customers and contractors

Safety and emergency arrangements are covered in the HBR safety and emergency procedures but specifically these procedures will deal with:

* Spillages of wastes and reporting of spills to the Regulator
* Control of activities that may cause fire risk, i.e., grinding, welding, smoking, parking of normal road vehicles except while unloading, charging of the batteries of forklift trucks, etc.…

# Storage Time-limits & Turnover

Storage within a waste reception area is not greater than 3 working days.

Following receipt, wastes will either be sorted or treated or removed off-site as soon as an economic load quantity is achieved but, in any circumstance, the total storage time will not exceed the specified permit limits for the waste types being stored.

## Storage of drummed waste and other wastes in containers (i.e., movable containers)

Rules and conditions implemented by the installation are as follows:

* Storage will be under cover
* Non decontaminated containers or drums will be stored under cover when empty (or nominally empty)
* Covered areas will have adequate provision for ventilation by means of wall or roof vents or construction of the area.
* Shall be stored in such a manner that leaks and spillages could not escape over bunds/edge of the sealed drainage area.
* No accumulations of waste, which may in turn lead to a deterioration in the container resulting in spillage or, in extreme cases, the deformation of the container to such an extent that it cannot be moved.
* Segregation of wastes to meet the requirements of HSG71 and will be supported by risk assessment

## Transfer from bulk storage

The site has 3 x 20,000 Litre bulk storage containers which are connected to the battery processing plant. These tanks will either contain a mixture of waste processing water and sulphuric acid or sodium Sulphate dependant on if the plant has been run with the De-Sulphurisation Process or not.

This waste will be collected by an approved hazardous waste bulk waste contractor and transferred directly from the tanks into the collecting bulk tanker. The hoses connecting from the storage tanks from the collecting tanker the storage tanks to will remain in the processing facility during the pump out procedure which is fully bunded.

Records of these collections are maintained in accordance with the Hazardous Waste Regulations. Suitability of the waste contractor is assessed via the Integrated Management System processes for the management of waste.

### Non-Hazardous Waste

The installation generates other non-hazardous wastes which are separated into mixed recycling, metal, and wood waste streams. These wastes are stored in skips and are regularly collected by the waste contractors who are approved by the company and managed in accordance with the process for the management of waste within the Integrated Management System.

# Emissions control

## Emissions to air

The company have not identified any emissions to air from the process which could result in air pollution.

## Point source emissions to surface water and sewer

|  |  |
| --- | --- |
| Emission to | Unit Process or Activity |
|  | |
| Sewer | Rainwater collection |
| Cleaning / Car Park drainage |

**HBR will have no point source emissions to groundwater at the installation.**

## Fugitive emissions to air

Examples of this facilities’ sources of fugitive emissions are:

* storage areas and loading and unloading of containers
* transferring/bulking up of material from one container to another
* poor building containment
* spillages and accidental loss of containment from failed plant and equipment
* container/drum storage

At the installation we will identify and quantify any significant fugitive emissions to air estimating the proportion of total emissions that are attributable to fugitive releases for each substance.

Where there are opportunities for reductions, the installation will update its inventory of fugitive emissions, and this will be reflected in the permit subject to discussion and consultation with the Regulator.

The installation will ensure the following general techniques are employed for the activities or operational processes adopted at this installation:

## Dust

* Covering of skips containing hazardous materials
* Avoidance of outdoor or uncovered stockpiles (where possible)
* Where dust creation is unavoidable, use of sprays, binders, stockpile management techniques, windbreaks and so on
* Regular housekeeping
* Enclosed containers or sealed bags used for fine materials

### VOCs

Materials or processes giving rise to VOCs are not expected on site, and not accepted at the site.

## Fugitive emissions to surface water, sewer, and groundwater

HBR will not employ or utilize any subsurface structures, tanks or vessels except for interceptor sumps and pits.

### Surfaces:

Surfaces for containment or drainage facilities will be designed and/or constructed as appropriate for the operational areas, taking into consideration collection capacities, surface thicknesses, strength/reinforcement, falls, materials of construction, permeability, resistance to chemical attack, and inspection and maintenance procedures.

The installation surfaces and containment units will have an inspection and maintenance programme for impervious surfaces and containment facilities.

Unless the risk is negligible, this installation will have improvement plans in place where operational areas have not been equipped with the following:

* + an impervious surface
  + spill containment
  + sealed construction joints
  + connection to a sealed drainage system

The HBR installation storage tanks or containers containing liquids whose spillage could be harmful to the environment will be bunded - Bunds at the installation will:

* be impermeable and resistant to the stored materials.
* have no outlet (that is, no drains or taps) and will drain to a blind collection point.
* have pipework routed within bunded areas with no penetration of contained surfaces.
* be designed to catch leaks from tanks or fittings.
* have a capacity greater than 110 percent of the largest tank or 25 percent of the total tank/vessel capacity combined, whichever is the larger.
* be subject to regular visual inspection and any contents removed under manual control after checking for contamination.

### Odour

The HBR installation requirements for odour control are not necessary under normal working conditions as the wastes handled are of an inorganic form and non-odorous.

HBR will not permit odour generating activities to take place in the open, (or will not permit potentially odorous materials to be stored outside).

# Management and Management Systems

## Operations and maintenance

Effective operational and maintenance systems are in place for all aspects of the process whose failure could impact on safety or the environment.

The installation will therefore have:

* An electronic Management system which aims to meet the requirements of ISO 9001:2015 and ISO 14001:2015 which plans maintenance requirements and notifies users where actions are required.
* A defined process for identifying, reviewing, and prioritizing items of plant for which a preventive maintenance regime is in place
* procedures for monitoring emissions or impacts
* a preventive maintenance programme covering all plant, whose failure could lead to impact on safety or the environment

The maintenance system includes auditing of performance against requirements arising from the above and reporting the result of audits to senior management, business owners and the regulators or other interested parties.

## Competence and training

Training systems, covering the following items, for all relevant staff covering:

* Awareness of the regulatory implications of the Permit for the activity and their work activities.
* Awareness of all potential safety & environmental effects from operation under normal and abnormal circumstances
* awareness of the need to report deviation from the Permit
* prevention of accidental emissions and action to be taken when accidents, incidents or accidental emissions occur
* The skills and competencies necessary for key positions will be documented and records of training needs and training received for these positions maintained.
* The key positions will include contractors and those purchasing equipment and materials.
* The potential safety & environmental risks posed by the work of contractors will be assessed and instructions provided to contractors about protecting their/others safety and protecting the environment while working on site.

Where industry standards or codes of practice for training exist (e.g., WAMITAB) they will be fully complied with.

## Accidents/incidents/non-conformance

The electronic management system records all incidents of accident, incident and non-conformance including:

* Identifies the likelihood and consequence of accidents
* identifies actions to prevent accidents and mitigate any consequences
* There is a process for reporting, investigating, communicating actual or potential non-compliance with operating procedures or emission limits.
* There is a process for investigating, communicating, and reporting safety failures and environmental complaints, and implementation of appropriate actions.
* There is a process for investigating incidents, accidents and near misses including identifying suitable preventive and corrective action and following up on these corrective and preventive actions.

## Organisation

As a minimum requirement the installation has the following organizational arrangements in place for its business and its facilities:

A Safety and environmental policy and programme which:

* Includes a commitment to continual improvement and prevention of harm or pollution.
* Includes a commitment to comply with relevant legislation and other requirements to which the organisation subscribes; and
* identifies, sets, monitors, and reviews safety & environmental objectives and key performance indicators independently of the Permit.

HBR also has a management system that incorporate safety & environmental considerations in the following areas:

* the control of process and engineering changes within the installation or business scope.
* design, construction and review of new facilities and other capital projects (including provision for their decommissioning).
* capital approval; and
* purchasing policy.

The installation, systems employed, and its business processes and activities will be audited, at least annually, to check that all activities are being carried out in conformity with all statutory and other requirements, and critical activities or processes will also be audited independently.

HBR management team with review its safety and environmental performance, objectives and targets, and future planned improvements at least once annually.

# Raw materials

## Raw materials selection

HBR maintain a list of raw materials and their properties and will have procedures for the regular review of new developments in raw materials and for the implementation of any suitable ones with an improved environmental profile and complete any longer-term studies needed into less polluting options and should make any material substitutions identified.

Waste minimisation audit (including minimising the use of raw materials) will form part of the annual internal audit schedule to ensure a systematic approach to the reduction of waste at source, by understanding and changing processes and activities to prevent and reduce waste.

### Water use

HBR do not currently use water in the operational process other than for domestic purposes. Water consumption is monitored as part of our Environmental Aspects and Impacts.

# Waste handling

## Waste recovery or disposal

HBR have implemented measures to avoid or reduce any impact of waste on the environment.

Waste production will be avoided wherever possible and any waste that is produced is recovered, unless it is technically or economically impractical to do so.

### Contaminated containers

All containers, drums and IBC’s used are designed, manufactured and marked to enable reconditioning / refurbishment, and as such they will be cleaned and reconditioned to enable re-use where technically and economically possible.

Containers that cannot be re-used where there is no reconditioning market, and which have been cleaned will be released into the secondary materials market.

# Energy

HBR monitor energy consumption as part of our Environmental Aspects and Impacts this information being available in table and graph form normalized with the operational throughput in tonnage which will identify any trends or spikes in consumption.

HBR facilities will also provide associated environmental emissions.

# Basic energy requirements

Operating, maintenance and housekeeping measures are in place in the following areas for the installation and are relevant as follows:

* Operation of motors and drives
* Compressed gas systems (leaks, procedures for use)
* Hot-water systems
* Lubrication to avoid high-friction losses
* other maintenance relevant to the activities within the installation

**Energy management techniques** will be in place for the monitoring of energy consumption and targeting of areas for reductions.

# Accidents

The Integrated Management System has a process for managing (potential) accidents as follows:

### Hazard Identification

Identification of the hazards to safety and the environment of all our activities

This will include, but not be limited to, the following:

* Arrangements for the receipt, and checking of incoming wastes, including rejection and quarantine
* Arrangements for the storage, segregation, and separation of differing waste types
* Procedures for the internal transfer, including "bulking-up" of waste materials
* Transfer of substances
* Emissions from plant or equipment (e.g., leaks, over-pressure, blocked drains);
* Failure of containment
* Wrong connections made in drains or other systems.
* Incompatible substances allowed to come into contact.
* Operator error.
* Vandalism / Arson.

### Assessment of the risks.

Once hazards have been identified, the process of assessing the risks addresses six basic questions:

* How likely is the event to occur (source/frequency)?
* What substances are released and how much of each (risk evaluation of the event)?
* Where do the released substances end up (emission prediction-what are the pathways and receptors)?
* What are the consequences (consequence assessment–what are the effects on the receptors)?
* What are the overall risks (determination of overall risk and its significance to the environment)?
* What can prevent or reduce the risk (risk management–measures to prevent accidents and/ or reduce their environmental consequences)?

The detail and type of assessment will depend on the characteristics at this installation, and its location and is based on these main factors being considered:

* The scale and nature of the accident hazard presented by the installation and the activities
* The risks to areas of population and the environment (receptors)
* The nature of the installation and complexity of the activities and the relative difficulty in determining and justifying the adequacy of the risk-control techniques

### Identification of the techniques necessary to reduce the risks.

The installation has the following systems and/or protocols in place:

* Site plans showing the precise location of wastes having specific hazard characteristics (eg corrosive) with clear identification of the perimeters of the various designated storage areas and their maximum storage capacity.
* Procedures for checking and handling raw materials and wastes to ensure compatibility with other substances with which they may accidentally come into contact.
* Storage arrangements for raw materials, products and wastes will be designed and operated to minimise risks to the environment.
* Automatic process controls backed-up by manual supervision to minimize the frequency of emergency situations and to maintain control during emergency situations.
* Physical protection will be in place where appropriate (e.g. Barriers to prevent damage to equipment from the movement of vehicles).
* Appropriate secondary containment (e.g. bunds, building containment).
* Security systems to prevent unauthorized access will be provided.
* System for the logging and recording of all accidents, incidents, and near misses, abnormal events, changes to procedures and significant findings of maintenance inspections.
* Processes for responding to and learning from accidents, incidents, near misses, etc…
* Roles and responsibilities of personnel involved in accident/incident management will be formally specified along with clear guidance on how each accident scenario might best be managed.

Spillage prevention controls are in place during the transfer of substances to prevent spill incidents

# Noise

The installation monitors noise level and has a noise specialist to carry out testing as required. The installation has been designated as hearing protection zone inside but the noise level outside of the building is low and does not exceed 50dB.

The installation does not operate at night. HBR monitors noise as part of our integrated management system.

## Monitoring and reporting of emissions to air

Emissions to air will be monitored periodically in accordance with the EA Schedules. Daily visual monitoring to air for smoke, dust, litter, plumes, and daily odour monitoring, with more extensive monitoring if nuisance is occurring or appears likely

## Monitoring and reporting of waste emissions

Non identified

## Monitoring of emissions to land

Operatives will report any concerns of potential land emissions

## Monitoring of emissions to groundwater

Groundwater monitoring will take place where:

* There are any subsurface structures carrying or holding waste or other harmful substances
* There is uncertainty about surfaces on operational areas and drainage systems, especially on older sites

# Closure

Operations during the life of our Permit will not lead to any deterioration of the site. Should any instances arise which have, or might have, impacted on the state of the site, then HBR will record them along with any further investigation or ameliorating work carried out. This will ensure that we have a coherent record of the state of the site throughout the period of the IPPC Permit.

Any changes to this record will be submitted to the Regulator.

HBR will always take **c**are at the design stage to minimise risks during decommissioning. For existing installations, where potential problems are identified, a programme of improvements would typically be put in place to a timescale agreed with the Regulator.

Our designs and planning will ensure that:

* Underground tanks and pipework are avoided
* Provision for the draining and clean-out of vessels and pipework prior to dismantling
* Insulation provided can be readily dismantled without dust or hazard
* Materials used are recyclable

A site closure plan will be implemented and maintained to demonstrate that, in its current state, the installation/installation can be decommissioned to avoid any pollution risk and return the site of operation to a satisfactory state. The plan will be kept updated as material changes occur.

Our closure plan will include:

* The removal or the flushing out of pipelines and vessels and complete emptying of any potentially harmful contents
* The removal of asbestos or other potentially harmful materials unless agreed that it is reasonable to leave such liabilities to future owners
* Methods of dismantling buildings and other structures
* Testing of the soil to ascertain the degree of any pollution caused by the activities and the need for any remediation to return the site to a satisfactory state as defined by the initial site report

For existing activities, HBR will complete any detailed studies, and submit the site closure plan as an improvement condition to a timescale to be agreed with the Regulator

## Installation issues

HBR will consider all possibilities for minimising environmental impact to the environment, by operating together with other cooperative Permit holders.

Possibilities include:

* + Communication procedures between the various Permit-holders; those needed to ensure that the risk of environmental incidents is minimised.
  + Benefiting from the economies of scale to justify the installation of Plant (such as combined heat & power)
  + The waste from one activity being a possible feedstock for another.
  + The treated effluent from one activity being of adequate quality to be the raw water feed for another activity.
  + The combining of effluent to justify a combined or upgraded effluent treatment plant.
  + The avoidance of accidents from one activity that may have a detrimental knock-on effect on the neighbouring activity.
  + Land contamination from one activity affecting another – or the possibility that one Operator owns the land on which the other is situated.