Environmental Permit Variation Application

Operating Techniques and Environmental Management System

Prepared for: Lincoln Storm Limited

Environmental Permit Ref: EPR/KB3002CW

CONTENTS

1.0 Introduction

This Operating Techniques (OT) and Environmental Management System (EMS) has been prepared in accordance with Environment Agency (EA) guidance[1]. The OTEMS sets out best practice for operating the site based on legislation and best available techniques in the industry. The Operator is Lincoln Storm Limited (Lincoln Storm) and this OT and EMS relates to the Environmental Permit (EP) variation application for Lincoln Storm's Facility at Worle Quarry, Kewstoke Road, Weston-Super-Mare, under the Environmental Permitting (England and Wales) Regulations 2016 (as amended).

The document will be reviewed on an annual basis, or as a result of but not limited to any of the following circumstances, and updated where necessary:

- A change to an operational process;
- A significant substantiated complaint;
- A significant incident on site;
- A change to any legislation or guidance documents applicable to the waste recycling facility; or
- Issuance of a varied environmental permit by the EA.

This OTEMS document is supplemented by the following documents (with accompanying plans and drawings) submitted in the 2023 EP variation application:

- **Non-Technical Summary**, which provides a clear and full description of all the activities at the site. This includes details of how the processes operate, their scope, location and waste types.
- **Best Available Techniques (BAT) Assessment**, providing a complete assessment of the BATs for the site's activities.
- **Environmental Risk Assessment**, describing the environmental risks associated with the activities and the mitigations in place for each of these, including details and maps showing sensitive receptors.
- **The Fire Prevention Plan**. The fire prevention measures in this guidance have been designed to meet these 3 objectives:
    - minimise the likelihood of a fire happening;
    - aim for a fire to be extinguished within 4 hours; and
    - minimise the spread of fire within the site and to neighbouring sites.
- **The Baseline Site Condition Report** for the area covered by the current permit and for the areas for which the extension of the permitted area is being applied for.
- **Evidence of technical competency** confirming the details of the technical management of the facility.
- **The Site plan** for the current permitted area and activities and for the extended area.
- **Sensitive Receptors plans 1 km. 2 km and 10 km radius from the site.**
- **The BS4142 Noise Impact Assessment and Noise and Vibration Management Plan**.

[1] EA Guidance Develop a management system: environmental permits, August 2021

1.1 Environmental Permit (EP)

Table 1-1
Permitted activities

Permitted Activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity and WFD Annex I and II operations**	**Limits of specified activity and waste types (codes)**
AR1 – Treatment of hazardous wastes from Li-ion battery **shredding process**	S5.3 A(1)(a)(ii) Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico- chemical treatment	Treatment of more than 10 tonnes of hazardous wastes a day for the purpose of recovery. **Shredding** for onward recovery of hazardous materials generated by drying and separating/'sorting' the constituent materials from Lithium-ion batteries R4 Recycling/reclamation of metals and metal compounds.	Treatment operations shall be limited to: ▪ Treatment within an integrated plant. Consisting only of drying in a rotary drier, mechanical sorting, and separation: sieving of hazardous waste into different components for recovery. ▪ Treatment for recovery shall be no more than 40 tonnes per day. ▪ Treatment consisting only of shredding, drying and granulation and separation of permitted wastes into different components for recovery. ▪ Treatment shall only take place within a building only when the shredding activity is within water for charged ('wet' materials) or with air extraction for uncharged or discharged ('dry') materials to prevent risk of fire and explosions. ▪ All pre shredding activities shall be carried out at all times using water to prevent any risk of fires or explosions. ▪ Specific lithium-Ion battery fire suppression technology (including lithium-ion extinguishers and fire blankets) will be used in all areas. ▪ All treatment activities shall be carried out at all times within DSEAR requirements. ▪ All activity will take place within the buildings on impermeable surfaces with sealed drainage as shown **in Site Plan appendices SP2: Site Layout Plan and SP9: Drainage System.** Subject to any other requirements of this permit wastes shall be stored for no longer than 6 months prior to recovery. Waste types are as specified in the **Table 4.2 below**. Input Material examples of waste types include: 16 06 05, 19 10 05*, 19 10 06, 20 01 33*, 20 01 34. Outputs of the process: Storm Black (non-ferrous metal powder), Copper 19 12 03, Aluminum 19 12 03, Polymer (PPPE) 19 12 12, Heavy Fraction 19 12 02

AR2 – Treatment of hazardous wastes from Li-ion battery **drying process**	S5.3 A(1)(a)(ii) Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico- chemical treatment	Treatment of more than 10 tonnes of hazardous wastes a day for the purpose of recovery. **Drying to remove moisture from shredded lithium ion battery materials** for onward recovery of hazardous materials generated by separating the constituent materials from Lithium-ion batteries R4 Recycling/reclamation of metals and metal compounds.	Treatment operations shall be limited to: ▪ Treatment within an integrated plant. Consisting only of drying in a rotary drier, mechanical sorting, and separation: sieving of hazardous waste into different components for recovery. ▪ Treatment for recovery shall be no more than 40 tonnes per day. ▪ Treatment consisting only of shredding, drying and granulation and separation of permitted wastes into different components for recovery. ▪ Treatment shall only take place within a building only when the shredding activity is within water for charged ('wet' materials) or with air extraction for uncharged or discharged ('dry') materials to prevent risk of fire and explosions. ▪ All pre shredding activities shall be carried out at all times using water to prevent any risk of fires or explosions. ▪ Specific lithium-Ion battery fire suppression technology (including lithium-ion extinguishers and fire blankets) will be used in all areas. ▪ All treatment activities shall be carried out at all times within DSEAR requirements. ▪ All activity will take place within the buildings on impermeable surfaces with sealed drainage as shown **in Site Plan appendices SP2: Site Layout Plan and SP9: Drainage System.** Subject to any other requirements of this permit wastes shall be stored for no longer than 6 months prior to recovery. Waste types are as specified in the **Table 4.2 below**. Input Material examples of waste types include: 16 06 05, 19 10 05*, 19 10 06, 20 01 33*, 20 01 34. Outputs of the process: Storm Black (non-ferrous metal powder), Copper 19 12 03, Aluminum 19 12 03, Polymer (PPPE) 19 12 12, Heavy Fraction 19 12 02

AR3 – Treatment of hazardous wastes from Li-ion battery **separation ('sorting') process**	S5.3 A(1)(a)(ii) Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico- chemical treatment	Treatment of more than 10 tonnes of hazardous wastes a day for the purpose of recovery. **Separating materials** for onward recovery of hazardous materials the constituent materials from Lithium-ion batteries R4 Recycling/reclamation of metals and metal compounds.	Treatment operations shall be limited to: ▪ Treatment within an integrated plant. Consisting only of drying in a rotary drier, mechanical sorting, and separation: sieving of hazardous waste into different components for recovery. ▪ Treatment for recovery shall be no more than 40 tonnes per day. ▪ Treatment consisting only of shredding, drying and granulation and separation of permitted wastes into different components for recovery. ▪ Treatment shall only take place within a building only when the shredding activity is within water for charged ('wet' materials) or with air extraction for uncharged or discharged ('dry') materials to prevent risk of fire and explosions. ▪ All pre shredding activities shall be carried out at all times using water to prevent any risk of fires or explosions. ▪ Specific lithium-Ion battery fire suppression technology (including lithium-ion extinguishers and fire blankets) will be used in all areas. ▪ All treatment activities shall be carried out at all times within DSEAR requirements. ▪ All activity will take place within the buildings on impermeable surfaces with sealed drainage as shown **in Site Plan appendices SP2: Site Layout Plan and SP9: Drainage System.** Subject to any other requirements of this permit wastes shall be stored for no longer than 6 months prior to recovery. Waste types are as specified in the **Table 4.2 below**. Input Material examples of waste types include: 16 06 05, 19 10 05*, 19 10 06, 20 01 33*, 20 01 34. Outputs of the process: Storm Black (non-ferrous metal powder), Copper 19 12 03, Aluminum 19 12 03, Polymer (PPPE) 19 12 12, Heavy Fraction 19 12 02

AR4– Hazardous waste repackaging	S5.3 A(1)(a)(iv) Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving repackaging	Treatment of more than 10 tonnes of hazardous wastes a day for the purpose of recovery. R4: Recycling/reclamation of metals and metal compounds.	Li based batteries, 16 06 05 will be handled as if they were hazardous in anticipation of reclassification of this waste type. Li based batteries from electric vehicles shall be stored separately from other batteries. Li based batteries shall be stored to prevent them from: ▪ coming into contact with any liquids ▪ being damaged ▪ being exposed to high temperatures No waste shall be stored for longer than 6 months. Waste types as specified as hazardous waste in the Table of Wastes. From receipt and storage of hazardous waste prior to despatch off site. Treatment consisting of repackaging of hazardous waste (Batteries only). ▪ All treatment and storage must take place within the buildings on impermeable surface with sealed drainage as shown on **Site Plan appendices SP2: Site Layout Plan and SP9: Drainage System.** All batteries shall be stored in appropriate containers within a building on an impermeable surfaces with a sealed drainage system. Li based batteries from electric vehicles shall be stored separately from other batteries. Li based batteries shall be stored to prevent them from: ▪ coming into contact with any liquids ▪ being damaged ▪ being exposed to high temperatures Repackaging of waste shall not change either the maximum storage times for waste on site or the amount that can be stored. No waste shall be stored for longer than 6 months. Waste types as specified as hazardous waste in the **Table 4.2 below**. In the event 19 10 05* is received it will be stored separately and subject to the above handling.

AR5 – Hazardous waste storage (Batteries)	S5.6 A(1)(a) Temporary storage of hazardous waste in a facility with a total capacity exceeding 50 tonnes pending any of the activities listed in Section 5.1, 5.2 and 5.3	Temporary storage of more than 50 tonnes of hazardous waste pending disposal or recovery. D15: Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where it is produced). R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage pending collection, on the site where it is produced).	Storage of hazardous waste pending transfer for treatment off site if required (whole batteries or shredded material). No waste shall be stored for longer than 6 months. Storage must take place within the pre-processing storage building on impermeable surface with sealed drainage as shown on **Site Plan appendices SP2: Site Layout Plan and SP9: Drainage System.** All batteries shall be stored within a building on an impermeable surfaces with a sealed drainage system. Li based batteries from electric vehicles shall be stored separately from other batteries. Li based batteries shall be stored to prevent them from: ▪ coming into contact with any liquids ▪ being damaged ▪ being exposed to high temperatures Waste types restricted to the hazardous wastes listed in the **Table 4.2 below**.

	Directly Associated Activity		
AR – 6 Pre-treatment storage	Storage of Lithium Batteries prior to on site treatment	R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage pending collection, on the site where it is produced)	From receipt of non-hazardous lithium batteries to storage prior to onsite treatment. Lithium batteries shall be stored within storage buildings on impermeable surfaces with sealed drainage as shown on **Site Plan appendices SP2: Site Layout Plan and SP9: Drainage System.** Li based batteries from electric vehicles shall be stored separately from other batteries. Li based batteries shall be stored to prevent them from: • coming into contact with any liquids • being damaged • being exposed to high temperatures Subject to any other requirements of this permit wastes shall be stored for no longer than 6 months prior to recovery. Waste types are limited to those specified in the **Table 4.2 below**.
AR – 7 Power supply	Medium Combustion Plant with appropriate abatement fitted	Power supply	Up to 5 MCP
AR- 8 Raw materials	Raw materials handling and storage	Handling and storage of raw materials, including fuel and chemicals.	Receipt and storage of any raw materials directly associated with the permitted activities on site. All liquid raw materials shall be stored in sealed containers/tanks within bunded areas or within plant with storage with integral bunds. No more than 1300 litres diesel to be on site at any one time.
AR – 9 Post-treatment storage	Storage of residual waste produced as part of the on-site treatment of Lithium Batteries.	Handling and storage of residual waste from the Lithium battery shredding and treatment sorting activity.	From the production of the residual waste to the storage of such waste prior to the removal off site for treatment or disposal elsewhere. Storage of all residual wastes must be in-line with the most suitable BAT requirements. Storage of produced Storm Black (self-assessed) will be handled and stored in accordance with all input and output material. Shown on **Site Plan appendices SP2: Site Layout Plan and SP9: Drainage System.** No waste shall be stored for longer than 6 months.
AR10 – sealed drainage	Drainage	Sealed drainage system	No surface water or process water to escape site. 100,000 Litre tank on site as sump. Contaminated water to be tankered away.
AR11- Non-hazardous waste transfer station (Batteries and antifreeze only)		Storage of non-hazardous waste before transfer off site. R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage pending collection, on the site where it is produced).	From receipt and temporary storage of non-hazardous wastes (batteries only) before transfer off site for recovery. Storage of all wastes must be in-line with the most suitable BAT requirements. Storage of batteries must take place within buildings on impermeable surface with sealed drainage as shown **Site Plan appendices SP2: Site Layout Plan and SP9: Drainage System.** No waste shall be stored for longer than 6 months. Waste types and quantity restricted to the wastes listed in the **Table 4.2 below**.

1.2 Site Location

The site is located within the disused Worle Quarry in the area of Kewstoke to the north of Weston-Super-Mare. The National Grid Reference (NGR) for the site is ST 35142 63205 and the site location is illustrated on Drawing 04 Sources, Pathways and Receptors.

The site is located in a mixed-use area. The closest residential receptors lie within Worle approximately 20m to the north with further properties to the east, south, and west. Areas of woodland border the site above the quarry to the south, east and west. The Worlebury golf course lies 40m to the west. The main access to the site is via Lower Kewstoke Road which is located adjacent to the site's northern EP boundary.

An area of Ancient Woodland called Worle Wood lies 195m to the north west of the site.

The EP boundary and site layout is shown in the accompanying site plan. The location of the site is shown in the accompanying material on sensitive receptors and location.

The land uses surrounding the site are shown in Table 1-2 below.

Table 1-2
Surrounding Land Uses

Boundary	Description
North	Lower Kewstoke Road, and residential properties within Kewstoke, Old Manor Inn, agricultural land, Manor Farm Stables.
East	Industrial/commercial premises, areas of woodland, residential properties, and a playing field. Beyond this lies an area of open ground called Lynch Farm Park and allotment gardens.
South	Industrial/commercial premises, areas of woodland and vegetation and Worlebury Hill Road. Beyond this lies residential properties, Worle Village Primary School, Saint Martin's Church, and commercial/Industrial premises.
West	Open space, Bridleway, and public footpath, followed by residential properties, and the Worle Tower Observatory. Beyond this lies Worlebury Golf Course, including the Club House, Worlebury Hill Road, and residential properties such as Hill Cottage.

1.3 Report Structure

This report describes the operating techniques and management system that will be implemented at the facility to ensure compliance with the conditions of the environmental permit and general good practice. The report has been drafted to satisfy the requirements of EA Guidance and is divided into the following Sections.

- **Section 1** Introduction
- **Section 2** Management
- **Section 3** Accident Prevention and Management Plan
- **Section 4** Operations and Activities
- **Section 5** Waste Pre-Acceptance, Acceptance and Tracking
- **Section 6** Emissions and Monitoring
- **Section 7** Best Available Techniques
- **Section 8** Information

1.4 Site Specific Operating Procedures

Lincoln Storm has a number of Site-Specific Operating Procedures (SOPs) that have been included as **Appendix 01 document**. These procedures complement this overarching document and should be read in conjunction with the relevant sections. The procedures are as follows:

- **Sampling and Inspection Plan (including Weighbridge Procedure)(SSOP Annex 01)**;
- **Description of Documentation Systems (SSOP Annex 02)**;
- Fire on Site Procedure (**Fire Prevention Plan (SSOP Annex 03)**);
- **Treatment and Recycling Operations Procedures (SSOP Annex 04)** ; and

- Noise and Vibration Procedures (**Noise Impact and Vibration Management Plan (SSOP Annex 05)**)

1.5 Document Revision History

Any changes to the OT EMS will be labelled in chronological order and the date of the change recorded. All records of the changes will be listed in the revision history in Table 1-3 below.

Table 1-3 Revision History

Version	Reason for Revision	Date of Revision	Signature of authoriser
1.0	First Version of new EMS Document Finalised and Released	November 2022	
2.0	Final Version of new OTEMS to be submitted for the EP variation	July 2023	

2.0 Management

This bespoke OTEMS is implemented on site by Lincoln Storm which ensures that:

- The risks that the activities pose to the environment are identified;
- The measures that are required to minimise the risks are identified;
- The activities are managed in accordance with the management system;
- Performance against the management system is audited at regular intervals; and
- The EP is complied with.

Lincoln Storm is committed to continual improvement, to minimising the impact of the site activities on the environment and to complying with relevant legislation and other requirements to which the company subscribes.

This document outlines the operating techniques at the site and demonstrates conformance with the requirements of relevant and published EA Guidance.

2.1 Management Structure and Responsibilities

The Site Manager (overseen by the Technically Competent Manager (TCM)) is responsible for day-to-day operations, compliance with the OTEMS and the EP. The EP and subsequent variations are included as **Appendix 02 Current and Previous Permits** to this OTEMS. The Production and Quality Manager (PQM) and the Senior Engineer (SE) also report to the TCM and are closely involved in all site matters and for first-line risk management at the site.

Appendix 02 Current and Previous Permits includes the following documents;

- Original EP issued in December 2011;
- Notice of variation with introductory note, dated July 2014, which varied the EP boundary to undertake depollution of ELV, add hazardous waste codes, and increase the site boundary; and
- Notice of transfer and EA initiated variation with introductory note, dated November 2022, which approved the transfer of the EP from Mr Nelson Penfold to Lincoln Storm Limited.

Whenever the site is open to receive or despatch wastes, or to carry out any of the waste management operations, it is supervised by at least one member of staff who is suitably trained and fully conversant with the requirements of the environmental permit regarding:

- Waste acceptance and control procedures;
- Operational controls;
- Maintenance;
- Record-keeping;
- Emergency action plans; and
- Notifications to the EA.

2.2 Technical Competence and Training

The site is managed by sufficient staff, competent to operate the site. Lincoln Storm's training procedure, record sheet and matrix are included as **Appendix 03 Training**.

A fully trained member of staff is on site at all times during waste acceptance hours, in order to provide supervision for waste acceptance. This staff member is fully conversant with the waste acceptance procedure, EP and contents of this OTEMS.

Lincoln Storm's OT and EMS and training procedures ensure the following:

- All staff have clearly defined roles and responsibilities;
- Records are maintained of the skills required for each post;
- Records are maintained of the training and relevant qualifications undertaken by staff to meet the requirement of each post; and
- Operations are governed by standard operating procedures and instructions.

Operations at the site will be under the overall control of a technically competent manager (TCM) who holds the relevant Certificate of Technical Competence (COTC) under the Waste Management Industry Training and Advisory Board (WAMITAB) scheme Delivered by the Chartered institute of Waste Management (CIWM). The WAMITAB certificates held by the technically competent person at the site are included as **Appendix 04 Certificates.**

An assessment of staff training needs is carried out to identify the posts for which specific environmental awareness training is needed, and to determine the scope and level of such training. The assessment of training needs is reviewed on an annual basis with records retained.

- The training programme ensures that all staff are aware of the following:
    - Regulatory implications of the environmental permit for the site and their specific work activity;
    - All potential environmental effects from operations under normal and abnormal circumstances;
    - Incident management;
    - The need to report deviations from the EP; and
    - Prevention of accidental emissions and the action to be taken should accidental emissions occur.
- Weighbridge operatives receive thorough training on waste identification, acceptance procedures and classification. This training is conducted at the start of employment, in response to any non-conformances, incidents or significant changes in operations, and annually; and

- All members of the management team including those responsible for overseeing site activities receive thorough training with regards to the conditions of the EP and their resultant duties. Management must also become conversant with and annually refresh their knowledge of this OTEMS.
- Hard copies of this OTEMS are available in the site office for all staff members to view as needed. The table below shows the training cycle for the site:

All new site staff and contractors (and existing site staff and contractors when the plan is introduced on site)	To be trained on all site procedures
Existing site staff and contractors	To be trained on policies and procedures every 6 months (on the nearest practicable date to the 1st of the month)
Site Manager and Health, Safety and Compliance Coordinator to identify areas for refresher or new training	Every 3 months based on review of issues (or as soon as practicable after new requirements, new plant, etc.)
Site TCM and Site Manager	Annual review each year, or earlier if in a response to an incident or change in operational procedures

2.3 Site Security

The site has a number of security measures in place.

The site benefits from a continuous presence of staff during operational hours, between 6am to 11pm Monday to Friday.

Security on site includes:

- 1.8m high perimeter fencing surrounding the site;
- Access gate controlled by Lincoln Storm staff and locked outside of operational hours;
- The site is enclosed by the sheer quarry face;
- Access to site via keypad or proximity card with each staff member having appropriate access rights;
- CCTV system covering full extent of the site; and
- Presence of a security guard outside of operational hours or on-call staff resident on site (rotationally rostered over alternate weekends).

All visitors and contractors are required to sign in and are escorted by a member of staff.

The site's security infrastructure is inspected at the commencement of every working day. Any defects or damage which compromise the integrity of the enclosure will be made secure by temporary repair by the end of the working day. Permanent repairs will be made within a maximum of five working days.

All inspections, any defects, damage or repairs are recorded in the Daily Monitoring Checklist included as **Appendix 05 – Daily Monitoring Checklist**.

2.4 Display of Environmental Permit

A copy of the EP, and subsequent variations, are kept available in the Site Office for reference by all staff and contractors whose work may have an impact on the environment. They are also included as Appendix 01 of this OTEMS.

2.5 Permit Surrender

The site was originally permitted in 2011 under an EP (Ref: EPR/BB3139RA). A Site Condition Report (SCR) was prepared by SLR in March 2014 in support of the EP variation application submitted in 2014.

The current EP variation application seeks to extend the EP boundary, and add listed activities to the EP. Therefore a **Baseline Site Condition Report (BSCR) (MA4)** has been prepared which includes the new area of land. The updated **Baseline Site Condition Report (BSCR)** sets out the conditions of the site at the time this variation application is submitted and will continue to be updated during the operational life of the site as appropriate.

To assist in permit surrender, records will be maintained to demonstrate how the land beneath the site has always been protected between the date of EP issue and the end of operations, referenced from the **Baseline Site Condition Report (BSCR)**.

Records to be maintained will include:

- Maintenance of surfacing;
- Maintenance of drainage system; and
- Actions taken to clean up incidents and spillages.

2.6 Managing Documentation and Records

Controls are in place to ensure that all documents are issued, revised and maintained in a consistent fashion.

The documents that are included within this scope of the controls are as follows:

- Policies;
- Responsibilities;
- Targets;
- Maintenance records;
- Procedures;
- Monitoring records;
- Results of audits;
- Results of reviews;
- Complaints and incident records; and
- Training records.

Records are made and kept up to date on a daily basis to reflect deliveries, on-site treatment and dispatches.

All records relating to waste acceptance are recorded digitally via Lincoln Storm's Tracking System and will be maintained and kept readily available on site and kept for a minimum of 2 years after the waste has been removed off site, or longer as required for any specific waste types.

2.7 Record keeping and the management cycle

The Site Manager maintains the site diary and completes the site diary on a daily basis at the end of each day, and the daily checklist.

The site diary checklist records the following checks: Date, Weather conditions, Wind direction, Wind speed, Condition of site perimeter/boundary, Fuel Tanks and Generators, Fire prevention measures implemented, Site noticeboard in good repair, all waste stored on site is compliant, non-compliant waste on site is in quarantine, Waste volumes on site compliant, Waste quantities on site compliant, Hazardous waste is stored appropriately, All waste is protected from adverse weather, Condition of impermeable surfaces, Condition of hard standing, Condition of site drainage systems, Stock temperature recordings carried out, Litter not outside of site boundary, Mud not escaping onto public highway, Dust levels at acceptable levels, Odours on site at acceptable levels, Rock Fall from Quarry Wall, Waste is fully secure (no spillage on bags), Waste batch records (tracking) up to date, Noise levels at acceptable levels, Site free from pests/vermin, Site infrastructure in good repair, TCM attendance, Storage areas free from ingress of rain water, Site equipment/plant in good repair, Compliance with duty of care documentation, Spill kits in place, concreted bung in place (soakaway's permanent seal intact), No signs of contaminated run off from wastes, operating hours start and end, which staff have been on site.

The site manager will also record: General site activities, maintenance undertaken, breakdowns, emergencies, complaints, environmental problems, and non-compliance details.

Alongside completion of the site diary, the Site Manager updates the Stock Level List which records, by tent the contents and capacity including:

- Description of items
- EWC
- Quantity
- Container type (boxes, bags, cages)
- Gross Weight
- Other notes

At the start of each day the Site Manager has a video call with the Health, Safety and Compliance Coordinator to review the site diary and stock level list for the day ahead to add any actions or address any concerns. They will discuss the incoming and outgoing loads and any risks or issues (including near misses and incidents of non-compliance or non-conformance) that may need to be escalated, and progress on required actions (eg CAR or other regulatory requirements), and also any waste approaching its designated maximum storage time.

The Site Manager will meet and/or speak to the TCM daily with a check-in typically at the end of the working day. The TCM will speak to the PQM and SE on a daily basis, and the PQM, SE, Site Manager and Health, Safety and Compliance Coordinator will meet weekly. Logs of meeting actions are kept by the Health, Safety and Compliance Coordinator. Review of this OTEMS (including the Accident Prevention and Management Plan) and other site documents is a standing item at all meetings.

2.8 Non-Lincoln Storm Staff working on the site

The risk of non-conformance and non-compliance with site procedures required under the OTEMS is managed by requiring all contractors and/or their employers to:

- Be subject to Permission to Work procedures
- Undergo induction training.

- Sign the permission to work form that they have understood and will comply with required site procedures.

All contractors must satisfy and evidence the permission to work requirements for employers' and public liability insurance.

2.9 Reporting Non-Compliance and Taking Corrective Action

Appropriate corrective action will be taken in response to problems identified at the site. Non-compliances detected on site will be reported, investigated and rectified and failures and weaknesses will be prevented. Staff maintain awareness of non-compliances in the following areas:

- Actual or potential non-compliance with conditions of the environmental permit;
- System failure discovered at internal or external audit;
- Suppliers or subcontractors breaking the agreed operating rules;
- Incidents, accidents, and emergencies;
- Malfunction, breakdown or failure of plant;
- Other operational system failure; and
- Complaints.

The action taken in response to the non-conformance may include:

- Obtaining additional information on the nature and extent of the non-conformance;
- Discussing and testing alternative solutions;
- Modifying procedures and responsibilities;
- Seeking approval for additional resources and training; and
- Contacting suppliers and contractors (as applicable).

2.10 Staff handbook

The Staff handbook is incorporated in all staff contracts and sets requirements and policies for conduct and behaviour, including health and safety, no-smoking, drug and alcohol and other areas.

2.11 Insurance

The site is covered by insurance for:

- Employers' liability;
- Public Liability; and
- Material Damage.

The Site Manager and PQM are responsible for ensuring that all conditions of these policies are adhered to.

2.12 Complaints

The complaints procedure and record form are included as **Appendix 06 -Complaints procedure**.

2.13 Auditing and Legal Compliance

There will be a formalised internal and external auditing procedure to ensure the facility is audited at defined intervals and that the progress of corrective and preventative action is monitored.

2.14 Monitoring, Measuring and Reviewing Environmental Performance

The formalised management structure reviews environmental performance, and ensure any necessary improvements and/or corrective actions are taken. This includes energy efficiency, water usage, emission performance, recycling rates and tracking of any incidents (e.g. spills).

2.15 Operational Control, Preventative Maintenance and Calibration

Lincoln Storm ensures effective control of site operations, the use of approved suppliers and contract services, the maintenance of operational equipment, and the calibration of any monitoring equipment.

Lincoln Storm acknowledges that poor maintenance can be the cause of environmental incidents. As the potential of failure of plant and infrastructure (e.g. hard-standing, seals and bunds, shredder, conveyors etc.) at the site could lead to fugitive emissions to the environment, Lincoln Storm carry out a programme of Planned Preventative Maintenance (PPM). All items of plant and equipment are regularly inspected and maintained in accordance with the manufacturer's specifications.

Section 3.8.3 of this OTEMS provides a summary of the PPM undertaken on site, with more information provided in **Appendix 7**.

2.16 Design and Construction Quality Assurance

All relevant elements of the site have been designed in accordance with recognised standards, methodologies and practices including in respect of:

- Material selection;
- Handling, storage and installation;
- Conformance and performance testing; inspection and validation.

3.0 Accident Prevention and Management Plan

Lincoln Storm recognises the importance of the prevention of accidents that may have environmental consequences and that it is crucial to limit those consequences. Lincoln Storm have developed a system to identify, assess and minimise the environmental risks and hazards of accidents and their consequences which forms the Accident Prevention and Management Plan.

The Accident Prevention and Management Plan is implemented and maintained at the facility to ensure that the site and staff are fully prepared for any such incidents. The Accident Prevention and Management Plan will be reviewed at least every four years or as soon as practicable after an incident, , or in the event of a permit variation or change in operational process with changes made accordingly to minimise the risk of occurrence.

The following section has been prepared in accordance with EPR Guidance EPR 5.06[2], EA Accident Prevention[3] and Management Plan guidance and the Waste Treatment BREF[4].

The following Accident Prevention and Management Plan describes the techniques that will be implemented to minimise the risks posed to the environment. Activities affecting the health and safety (H&S) of operatives, contractors and visitors will be separately managed in compliance with H&S regulation and company H&S Policy.

3.1 Hazard Identification and Contingency Plan

The following potential hazards have been identified:

- Unauthorised waste;
- Fire;
- Loss of containment - spillage and leakage;
- Security and vandalism;
- Flooding;
- Breakdowns; and
- Enforced shutdowns.

The following sections summarise the measures necessary to minimise the potential causes and consequences of these hazards (Table 3.1 Hazards, Pathways and Risk Management) to operationalise the Accident Prevention and Management Plan. This and the Accident Prevention and Management Plan, of which it forms a part, are standing items for review at all site management meetings and are reviewed whenever an accident or near-miss is recorded.

[2] Environment Agency & Environment and Heritage Service. Sector Guidance Note S5.06: recovery and disposal of hazardous and non-hazardous waste dated 2013.
[3] GOV.UK Develop a management system: environmental permits. Accessed at https://www.gov.uk/guidance/develop-a-management-system-environmental-permits. Accessed on 7 November 2022.
[4] Official Journal of the European Union. Establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council. Dated 10 August 2018.

Table 3-1 Hazards, Pathways and Risk Management					
Hazard	**Pathway**	**Risk management**	**Probability of exposure**	**Consequence**	**What is the overall risk**
What has the potential to cause harm?	**How can the hazard get to the receptor?**	**What measures will you take to reduce the risk? – Who is responsible for what?**	**How likely is this contact?**	**What is the harm that can be caused?**	**What is the risk that still remains? The balance of probability and consequence**
Unauthorised waste	Air, Land	Upon delivery at the site the waste is subject to strict waste acceptance procedures to identify, reject and/or segregate potentially non-conforming waste. This minimises the likelihood of unauthorised waste being accepted on site. All incoming loads are booked in advance with the logistics manager who records the source, category and chemistry of the load to be delivered to site. Only waste authorised by the EP is accepted at the site. All waste carriers entering the site are required to report to the weighbridge where the paperwork is checked and verified. If any paperwork is missing, the logistics manager is informed immediately. All incoming loads are visually inspected by site operatives for quality and discrepancies and to check that the material conforms with the EWC code and description of the material on the Waste Transfer Note (WTN) or equivalent document. Any discrepancies are immediately reported to the site manager. In the event that unauthorised waste is delivered to the site, it is immediately segregated, put in the quarantine area and marked with a yellow sign. The site manager will notify the customer of non-conforming material within 24 hours of receipt, and where the material is not permitted, arrangements will be made to return the material to the customer at the customer's expense. The Site Manager is responsible for implementing risk management measures.	Low	Nuisance, harm to human health	Not significant

<table>
<tr><th colspan="6">Table 3-1 Hazards, Pathways and Risk Management</th></tr>
<tr><td>Fire</td><td>Air (smoke), Ground (spillages and firewater)</td><td>Lincoln Storm follows the management techniques detailed in its FPP. A copy of the FPP is available on site.

The FPP follows EA guidance for FPPs[5], and details the mitigation and management methods to prevent a fire of combustible materials stored on site. The information contained within the FPP aims to meet the 3 main objectives of the EA's FPP Guidance:

• Minimise the likelihood of a fire happening;
• Aim for a fire to be extinguished within 4 hours; and
• Minimise the spread of a fire within the site and to neighbouring sites.</td><td>Medium</td><td>Nuisance (smoke and fumes) and harm to human health.

Water contamination (runoff)</td><td>Not significant – due to the mitigation and management methods outlined in the FPP.</td></tr>
<tr><td>Spillage and Leakage</td><td>Runoff and percolation through ground</td><td>All waste storage take place on impermeable surfacing with a sealed drainage system (the site is bunded with sealed concrete curbing and all storage areas are bunded, with interceptors which have seal/plug to the soakaway. The system uses the deep interceptors, a 100,000 litre storage tank and 150m of additional drainage to control and segregate runoff from the conventional rainwater run-off from the site.

The table below details the location and storage arrangement of all potentially contaminating liquids on site.

<table><tr><th>Type</th><th>Storage Location</th><th>Storage Features</th></tr><tr><td>Diesel Oil for Road Vehicle (DERV)</td><td>See FPP Appendix 01: Site Plan (drawing 020.1_09_003)</td><td>1300L LLDPE Bunded Diesel Tank. Tank is double skinned (ie internally bunded) and capable of containing at least 110% of the volume of the tank (assuming 2000L in this storage tank and 2000 in the 6 diesel generators).</td></tr><tr><td>Maintenance Fluids/

Hydraulic Oil/

Engine Oil</td><td>See FPP Appendix 01: Site Plan (drawing 020.1_09_003)</td><td>4 x 25 litre drums stored within lockable unit away from the permitted area.</td></tr></table>
Storage Vessels: Tanks used for the storage of fuel and maintenance oil, are constructed so that any leaks/spillages will be contained. Tanks are internally</td><td>Low</td><td>Contamination of land, groundwater and surface water</td><td>Not significant</td></tr>
</table>

[5] Fire Prevention Plans: Environmental Permits, January 2021.

Table 3-1 Hazards, Pathways and Risk Management					
		bunded and/or surrounded by a leakage containment bund capable of containing at least 110% of the volume of the largest tank within the bund or 25% of the total tank volume within the bund, whichever is the greater. Storage tanks are constructed to the appropriate British Standard. Inspection: Tanks are inspected visually on a daily basis by site staff to ensure the continued integrity of the tanks and identify the requirement for any remedial action. Lubricants: 4 x 25 litre drums of maintenance oils are stored in a separate building at the site entrance also used as the workshop/tool storage. Spill kits: Materials suitable for absorbing and containing minor spillages are maintained on site. Monitoring techniques: Site staff undertake daily monitoring for evidence of spillage and leakage. Minor spillages: Will be cleaned up immediately using sand or proprietary absorbent to clean up liquids and placed in alternative containers. Major spillage: In the event of a major spillage, immediate action will be taken to contain the spillage and prevent liquid from entering surface water drains. The spillage will be cleared immediately and placed in containers for off site disposal and the EA will be notified. The Spill Procedure is provided at **Appendix 10.**			
Security and Vandalism	Air (smoke), Ground (spillages and firewater) if vandalism leads to fire or spillage	The site has a number of security measures in place. The site benefits from a continuous presence of staff during operational hours, between 7am to 7pm Monday to Friday. Security on site includes: • 1.8m high perimeter fencing surrounding the site; • Access gate controlled by Lincoln Storm staff and locked outside of operational hours;	Low	Nuisance and harm to human health. Contamination of land and surface water.	Not significant due to the security measures in place

Table 3-1 Hazards, Pathways and Risk Management					
		• The site is enclosed by the sheer quarry face; Access to quarry edge has been completely fenced and CCTV installed and monitored to prevent vandalism and danger to the public from falling. • Access to site via keypad with each staff member having appropriate access rights; • Monitored CCTV system covering full extent of the site; and • Presence of a security guard outside of operational hours or on-call resident member of staff on site (rotationally rostered over alternate weekends). • There is a lockable cabinet in the maintenance storage unit (building at the approach entrance at the North of the site containing paints, gas cylinders, oils and lubricants). All visitors and contractors are required to sign in and are escorted by a member of staff. All security measures on site are inspected at the commencement of every working day by site operatives to ensure their continued integrity. Any defects or damages which compromise the integrity of the enclosure will be made secure by temporary repair by the end of the working day. Permanent repairs will be made within a maximum of 5 days. In the event of a breach of security at the site, the cause is investigated and appropriate mitigation measures implemented, such as reposition of CCTV cameras, repair of security measures, and/or additional deterrents. This is recorded in the site diary. Records maintained include inspections and maintenance of perimeter fencing and gates, doors and locks, breaches of security, investigations and actions taken.			

Table 3-1 Hazards, Pathways and Risk Management					
Flooding	Overland	There are no surface water features within the site boundary. The site lies within a Flood Zone 1, defined as "Land having a less than 1 in 1,000 annual probability of river or sea flooding". Therefore, the likelihood of flooding is low. Nonetheless, the site manager ensures the site is signed up to receive flood warnings from the EA to safeguard the site. A flood evacuation procedure will be prepared and implemented on site if the risk rises above low. In the event that a flood occurs, the site will be evacuated. Following a flood incident, the Site Manager is responsible for carrying out an investigation to determine that the site can be brought back into operational safely and for carrying out any necessary prior remedial action. The Site Manager is responsible for implementing risk management measures.	Low	Inundation of site with flood water	Not significant – due to the site being located in an area where flooding is unlikely to occur.
Breakdowns – including mobile and fixed plant and machinery.	Land, surface water and groundwater	In the event of plant and mobile plant breakdowns on site, the treatment of waste will be stopped and stockpiled accordingly within limits stated with the FPP. The relevant maintenance company will be called and asked to attend site as soon as possible. If required other appropriately authorised sites would be identified and waste diverted to them. Lincoln Storm operates a Plant Preventative Maintenance programme for all plant and machinery on site, in accordance with manufacturers' instructions, which will prevent the breakdown of machinery and plant on site. See also Appendix 7. The Site Manager is responsible for implementing risk management measures.	Low	Contamination of land, local surface and groundwater	Not significant – due to management measures implemented on site for PPM, as detailed in this OTEMS.
Enforced shutdowns	Land, surface water and groundwater	If the site experiences a period of an enforced shutdown, waste will not be accepted on site and will be diverted to an appropriate alternative permitted facility.	Low – unlikely for the site to experience enforced shutdown	Contamination of land, surface water and groundwater	Not significant given contingency arrangements

Table 3-1 Hazards, Pathways and Risk Management					
		All waste already stored on site, will be checked on a daily basis to ensure that there is no risk for the potential pollution of the environment. Any processed waste, if possible, will be removed/transferred off site. The Site Manager is responsible for implementing risk management measures.			

3.2 Emergency Contact Details

In the event of an emergency or accident, the Table 3-2 below provides the relevant details:

Table 3-2 Emergency Contact Details (24/7)

Position	Name	Contact Number
Technically Competent Manager	Ricky O'Brien	07568597316
Director	Scott Mackenzie	07903638935
Site Manager	Steve Nash	07712340384
Production and Quality Manager	Ray Wiggan	07792907127
Health & Safety Coordinator	Delia Lamb	07876717077

3.3 Contingency Plans and Procedures

The site has a **Site shutdown contingency plan (SDLS8)** to ensure that the following is achieved:

- Compliance with all EP conditions and operating procedures during maintenance or shutdown at the site;
- No exceedance of limits in the EP and that appropriate measures for storing and handling waste continue to be applied; and
- Cessation of waste acceptance unless there is a clearly defined method of recovery and enough permitted capacity on site.

3.4 Facility Decommissioning

The site will require a simple decommissioning consisting of the mechanical and electrical removal of all plant and equipment. There will be no subsurface tanks or pipework to remove.

The **site decommissioning plan (SDLS9)** ensures that:

- If the site is to be dismantled all equipment, buildings etc. will be disposed of having full regard to the waste hierarchy.
- Buildings and pipe work will be checked and any infrastructure likely to contain asbestos material will be inspected and removed only using suitably authorised contractors.
- The dismantling and re-use of the majority of the equipment through sale to interested third parties the remainder to be scrapped; and
- The scrapping of the majority of the equipment probably through a single contractor with only a small proportion salvaged for re-use at some point in the overall process.

3.5 Sequence of Decommissioning

Final use, after the final consignment of waste has been despatched from the site, electrical systems will be isolated and locked off leaving only lighting and what circuits are considered necessary for on-going inspection

and maintenance in place. All systems will be double checked and labelled to ensure there are no unmarked live systems on the site.

The drainage system and water supply will remain intact.

Dismantling - In line with the waste hierarchy efforts will be made to seek a buyer for all the plant and equipment, forklift trucks etc. Either as a whole or in suitable lots.

Scrapping - If no suitable parties are found to purchase the plant it will be scrapped, again either as a whole or in suitable lots.

After plant has been removed - The whole internal area will be subject to a thorough inspection testing remaining electrical circuits labelling testing.

Deep cleaning the building, floors and removing all residues off-site to a suitably permitted facility, as described in the **site decommissioning plan (SDLS9)**.

4.0 Operations and Activities

The site accepts up to 125,000 tonnes per annum (tpa) of waste batteries, and a maximum of 1000 tonnes of waste is stored on site at any one time. The maximum quantity of waste received per day is 100 tonnes.

Permitted activities on site consist: of discharging; aqueous shredding (and/or dry shredding); drying to separate moisture from material; and separation of input materials into metals, powders and polymers for recovery.

Under normal working conditions, all wastes are stored for a maximum of 14 days, but this may increase to between 30 days and 8 weeks if there are issues with transportation, but for not more than 6 months before other storage or transfer arrangements are made.

The site is operational from Monday to Friday between 7am and 7pm.

4.1 Permitted Activities

The permitted activities are set out in Table 1.1 in Section 1 of this document.

4.2 Waste Storage Plan: Waste Types and Storage

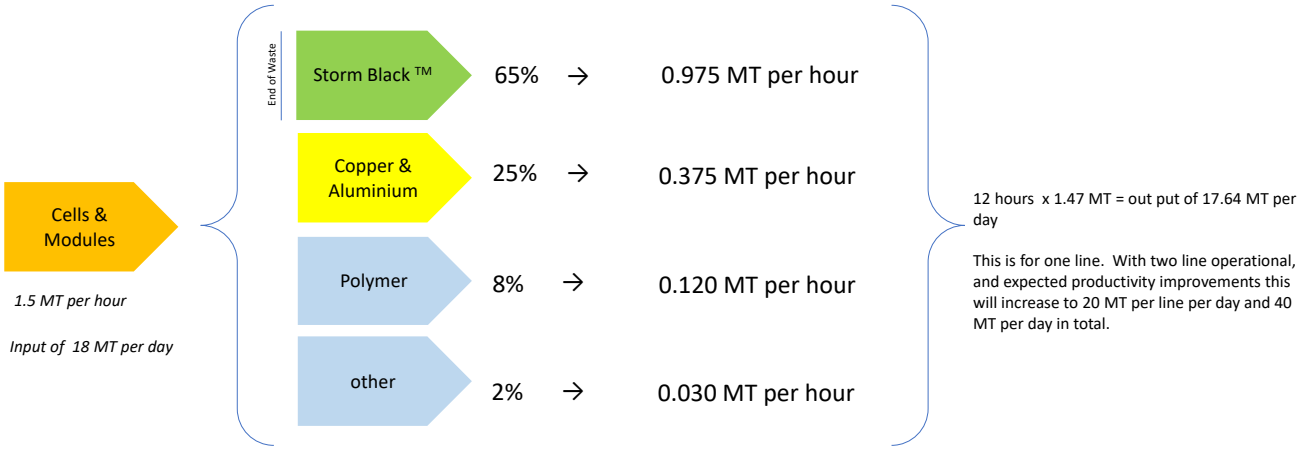
The site accepts and treats the following chemistry batteries:

- Lithium-ion battery packs/modules/cells for processing on site; and
- Materials from lithium-ion battery manufacturing for processing at site.
- Some materials, e.g. electric vehicle batteries, may be received for onward transport under TFS.

The site is currently permitted to accept a maximum annual throughput of 125,000 tonnes per annum (tpa).

In the operations for which the permit variation is sought volumes of throughput and stock are based on the inputs and outputs of the process. The production flow is shown in the diagram below.

Waste Storage Plan: inputs and outputs



The site will start with one line and, as shown in the plans, move to two lines, increasing the throughput. On this basis, volumes and weights received, processed and despatched are planned as follows:

	C & M 2.4 MT (3 High)	Storm Black ™ 2.0 MT (1 high)	Polymer 0.45 MT (3 high)	Al & Cu 1.50 MT (2 high)	**Total MT in each tent**
Tent 1	-	-	17.1 MT	30 MT	**47.1 MT**
Tent 2	60.0 MT	-	-	-	**60 MT**
Tent 3	-	200 MT	6.75 MT	22.5 MT	**229.25 MT**
Tent 4	98.4 MT	-	-	-	-
Tent 5	60.0 MT	-	-	-	-
Total material held on site	218.4 MT	200 MT	23.85 MT	52.5 MT	**494.75 MT**
One line only in operation					
Weeks of production (storage period)	*2.275*	*3.33*	*2.385*	*2.02*	***~ 2***
Annual throughput	*5,678 MT*	*3,120 MT*	*620 MT*	*1,365 MT*	***10,783***
Daily arrival	*21 MT*	-	-	-	*21 MT*
Daily departure	-	*12 MT*	*2.4 MT*	*5.25 MT*	*19.65* [1]
Two lines in operation					
Weeks of production (storage period)	*1.136*	*1*	*1.193*	*1.01*	*~ 1*
Annual throughput	*11,350 MT*	*6,240 MT*	*1,240 MT*	*2,730 MT*	*21,560*
Daily arrival	*42 MT*	-	-	-	*42 MT*
Daily departure	-	*24 MT*	*4.8MT*	*10.50 MT*	*39.30 MT* [1]

[1] *In practice containers will arrive and depart less frequently than every day, but the average can be expected to be one 20 MT container each day, in and out with one line operational and two 20 MT containers in and out when two lines are operational.*

Permit variation is for 1000 MT to be held on site at any time, given space for additional material to be held

Permit variation is for 30,000 MT annual throughput given targeted production efficiencies

Permit variation is for 100 MT daily processing given targeted production efficiencies

Waste batteries are stored on impermeable surfaces, within the kerbed and sealed areas under weatherproof coverings and in suitable, segregated containers. Lithium-ion batteries are stored in response to the following constraints:

- how much area (square metres) a pallet or bag can occupy;
- how high bags and pallets can be stacked;
- how close bags and boxes can be placed given the need to access each on individually; and
- the need for 2 metres of space for forklifts to manoeuvre to get to boxes and bags.

All storage areas are fit for purpose and benefit from a sealed drainage system and impermeable surfacing. The areas are inspected on a daily basis. In the event of faults being identified, temporary repairs will be made immediately, and permanent repairs will be fitted within 5 working days. The site has 5 covered storage areas

with one of two configurations, as shown on the site plan in Appendix 00 and in **Appendix 11: Waste Storage Plans**. There are two quarantine areas are located within the permit boundary. As shown on the site plan this area has an impermeable surface and is sealed/bunded. The quarantine areas are capable of holding >50% (1.8x) of the volume of the largest stockpile on site.

Each tent has an L-seal[6] and the base around the base of the tent wall to prevent water ingress. To prevent water entering through the tents' doorways, outside operational hours or when moderate or more intense rainfall occurs, sandbags are placed across the tent doorways to create a full seal against water ingress. Sandbags, combined with plastic sheeting, have been identified as more absorbent and flexible than plastic based alternatives.

Checks are made throughout the day by the Site Manager or another trained member of staff in all storage areas, to monitor temperature, humidity and for any ingress of water.

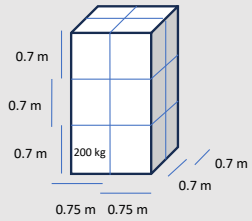
Within the tents, material is either stored in the manufacturers packaging (boxes, drums (plastic or metal) or crates) or (if loose) sealed UN specification bags (to meet DGA requirements). Bags, drums and boxes are labelled and boxes at ground level are raised on pallets. Although pile height maximum is four metres, boxes, drums and bags are typically stacked only two high. Boxes and drums are moved by forklift on pallets and bags are lifted by the handles they incorporate for this purpose. Drums (containing portable lithium ion batteries) are 220 litre in volume, with four drums per pallet (combined weight of c. 800 kg). Storage configurations depend on the material, as illustrated below.

[6] A L-seal or L-shaped seal is a type of waterproofing technique used in building construction. It involves creating an L-shaped fold in a membrane material, such as plastic sheeting, to form a seal at the junction of two surfaces. This creates a barrier that prevents water from seeping into the junction.
In the context of the Worle storage tents, the L-seal is used at the base of the tent walls where they meet the ground. A piece of plastic sheeting is folded up the base of the wall and along the ground to form an L-shape. This L-shaped membrane then creates a seal that keeps water from seeping in between the tent wall and ground, helping to waterproof the base of the tent. The L-seal works by interrupting the water flow path. Water runs down the tent wall but then hits the horizontal part of the L-seal membrane and is diverted to the sides, away from the sealed junction.
An L-seal is a simple but effective waterproofing technique.

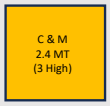
Storage Key

The diagrams below show the dimensions and weights of materials stored at the facility. It is assumed that a space of 2 metres is required for a forklift to have access to each palette.

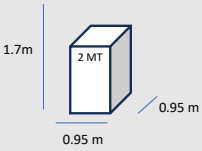
Cells and modules (including ESS packs)



2.4 MT

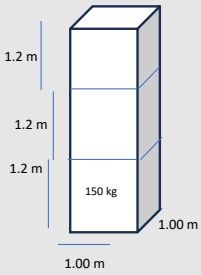


Storm Black ™



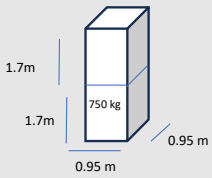
2.0 MT

Polymer



0.45 MT

Aluminium and copper

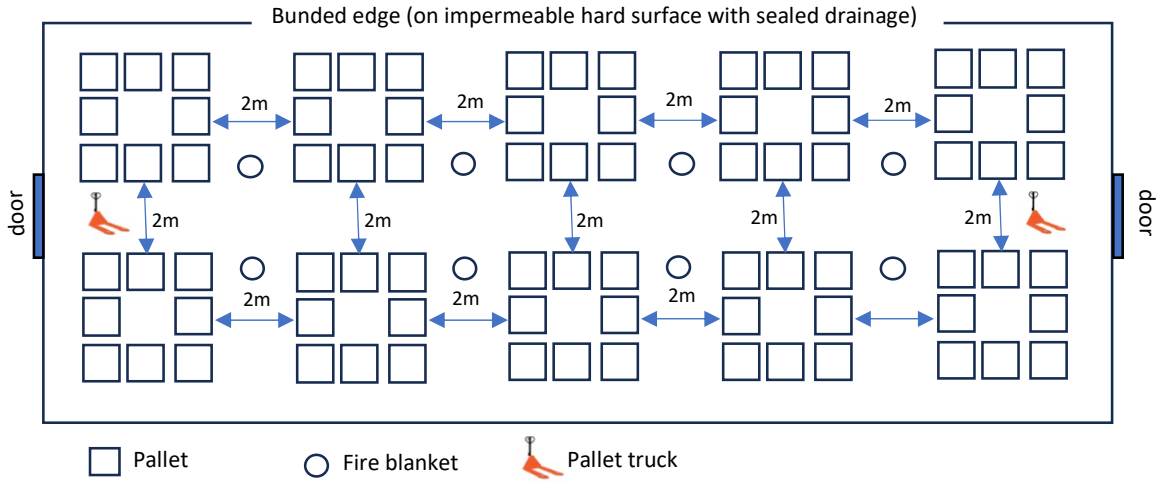


1.5 MT

Table 4.1
Waste Table - Table of Waste Stored and Pile Sizes

Material and fraction size	Max Volume	Size of pile or container	Storage location	Max time on site	Combustible Y/N
Cells and modules, including dry cells (16 06 05) Large solid waste	500 MT 218.4 MT in operational plan	Tent 2: 151.2 m^3 Tent 4: 236.25 m^3 Tent 5: 151.2 m^3	Tents 2, 4 and 5	30 days 7 to 14 operational plan	Y
Aluminium and copper granules (19 12 03) 0.8mm-2mm	60 MT 52.5 MT in operational plan	Tent 1: 61.37 m^3 Tent 3: 46.03 m^3	Tent 1 and 3	30 days 7 to 14 operational plan	Y
Storm Black Product (post-end of waste) (sub<0.2mm)	300 MT 200 MT in operational plan	Tent 3: 153.43 m^3	Tent 3	30 days 7 to 14 operational plan	Y
Polymer (PP/PE) (19 12 12) 2mm to 3mm	30 MT 23.85 MT in operational plan	Tent 1: 136.80 m^3 Tent 3: 54 m^3	Tent 1 and 3	30 days 7 to 14 operational plan	Y
Shredded LIBs (19 10 05* or 19 10 06) 30mm to 40mm	200 MT -	-	New tent if received	30 days 7 to 14 operational plan	Y
Separated foil fraction (anode/cathode)	50 MT -	-	New tent if received	30 days 7 to 14 operational plan	Y
EV Packs (16 06 05) Large solid waste	35 MT -	-	New Tent if received	30 days 7 to 14 operational plan	Y

All storage areas are fit for purpose and benefit from a drainage system and impermeable surfacing. The areas are inspected on a daily basis. In the event of faults being identified, temporary repairs will be made immediately, and permanent repairs will be fitted within 5 working days. The approach taken to storage is set out in **Appendix 11, Waste Storage** and conceptually in the diagram below.



The waste list is shown in Table 4-2 below.

Table 4-2
Waste List

European Waste code	Description
06	WASTES FROM INORGANIC CHEMICAL PROCESSES
06 03	Wastes from the MFSU of salts and their solutions and metallic oxides
06 03 15*	Metallic oxides containing heavy metals
06 03 16	Metallic oxides other than those mentioned in 06 03 15
06 03 99	Wastes not otherwise specified
06 04	Metal-containing wastes other than those mentioned in 06 03
06 04 05*	Wastes containing other heavy metals
06 04 99	Wastes not otherwise specified
06 13	Wastes from inorganic chemical processes not otherwise specified
06 13 99	Wastes not otherwise specified
11	WASTES FROM CHEMICAL SURFACE TREATMENTS AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY
11 01	Waste from chemical surface treatments and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphating, alkaline de-greasing, anodising)
11 01 98*	Other wastes containing dangerous substances
11 01 99	Wastes not otherwise specified
12	WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS
12 01	Wastes from shaping and physical and mechanical surface treatment of metals and plastics
12 01 03	Non-ferrous metal filings and turnings
12 01 04	Non-ferrous metal dust and particles
12 01 99	Wastes not otherwise specified

16	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 01	End-of-life vehicles
16 01 21*	Hazardous components other than those mentioned in 16 01 07 to 16 01 11 and 16 01 13 and 16 01 14
16 01 22	Components not otherwise specified
16 01 99	Wastes not otherwise specified
16 03	Off-specification batches and unused products
16 03 03*	Inorganic wastes containing hazardous substances
16 03 04	Inorganic wastes other than those mentioned in 16 03 03
16 06	Batteries and accumulators
16 06 05	Other batteries and accumulators
16 06 06*	Separately collected electrolyte from batteries and accumulators
16 09	Oxidising substances
16 09 04*	Oxidising substances not otherwise specified
16 10	Aqueous liquid wastes destined for off-site treatment
16 10 01*	Aqueous liquid wastes containing hazardous substances
16 10 02	Aqueous liquid wastes other than those mentioned in 16 10 01
19 01	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE
19 01	Wastes from incineration or pyrolysis of waste
19 01 12	Bottom ash and slag other than those mentioned in 19 01 11
19 01 17*	Pyrolysis wastes containing hazardous substances
19 01 18	Pyrolysis wastes other than those mentioned in 19 01 17
19 01 99	Wastes not otherwise specified
19 02	Wastes from physico/chemical treatment of waste (including dechromatation, decyanidation, neutralisation)
19 02 03	Premixed wastes composed only on non-hazardous substances
19 02 04*	Premised wastes composed of at least one hazardous substance
19 02 11*	Other wastes containing hazardous substances
19 02 99	Wastes not otherwise specified
19 10	Wastes from shredding of metal-containing wastes 19 10 01 iron and steel waste
19 10 02	Non-ferrous waste
19 10 03*	Fluff-light fraction and dust containing hazardous substances
19 10 05*	Other fractions containing hazardous substances
19 10 06	Other fractions other than those mentioned in 19 10 05
19 12	Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 02	Ferrous metal
19 12 03	Non-ferrous metal
19 12 11*	Other wastes (including mixtures of materials) from mechanical treatment of waste containing hazardous substances
19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11

20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	Separately collected fractions (except 15 01)
20 01 33*	Batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators containing these batteries
20 01 34	Batteries and accumulators other than those mentioned in 20 01 33
20 01 40	Metals
20 01 99	Other fractions not otherwise specified

4.3 Site Operations

Claimed Confidential

Waste battery treatment on site consists of aqueous shredding, drying and dry shredding and preparation of input materials into metals, powders and polymers for recovery. The stages of the continuous process are:

- **Aqueous shredding:** for the reduction in size of the batteries and to neutralise the electrical charge (Dry shredding for uncharged or discharged materials**)**;
- **Drying** in a specialist rotary dryer to separate out the moisture from the material; and
- **Separation**: where the different input materials are: separated into metals, powder (Storm Black) and PP/PE polymer; and gravity assisted separation of aluminium and copper granules (see Annex 8).

The process is described below, in addition to process flow diagrams for each stage of the recovery process (Figures 1, 2 and 3). More detail is provided in **Appendix 01: SSOP 4**.

4.4 Aqueous Shredding

Claimed Confidential

The aqueous shredding process will reduce the size of the material and neutralise the charge in the material. The throughput is 5 MT per hour but we will only be running 1.5MT per hour as this is in line with the throughput of the last stage (Dry Shredding/Separation).

Feed into the shredding process will be recognised as:

- Other Batteries and accumulators – 16 06 05.

The materials are fed into the aqueous shredder where they are shredded and the electric charge is neutralised. The water in the shredder is filtered and purified in the closed loop system whereby no water needs to be drained.

After the shredder, the material is fed onto a cascading dewatering feed conveyor. The excess water is captured and fed back into the aqueous shredder.

The material is then fed into the rotary dryer for the next stage of the process.

The output fractions are:

- Shredded 16 06 05

No waste is produced by the aqueous shredding process.

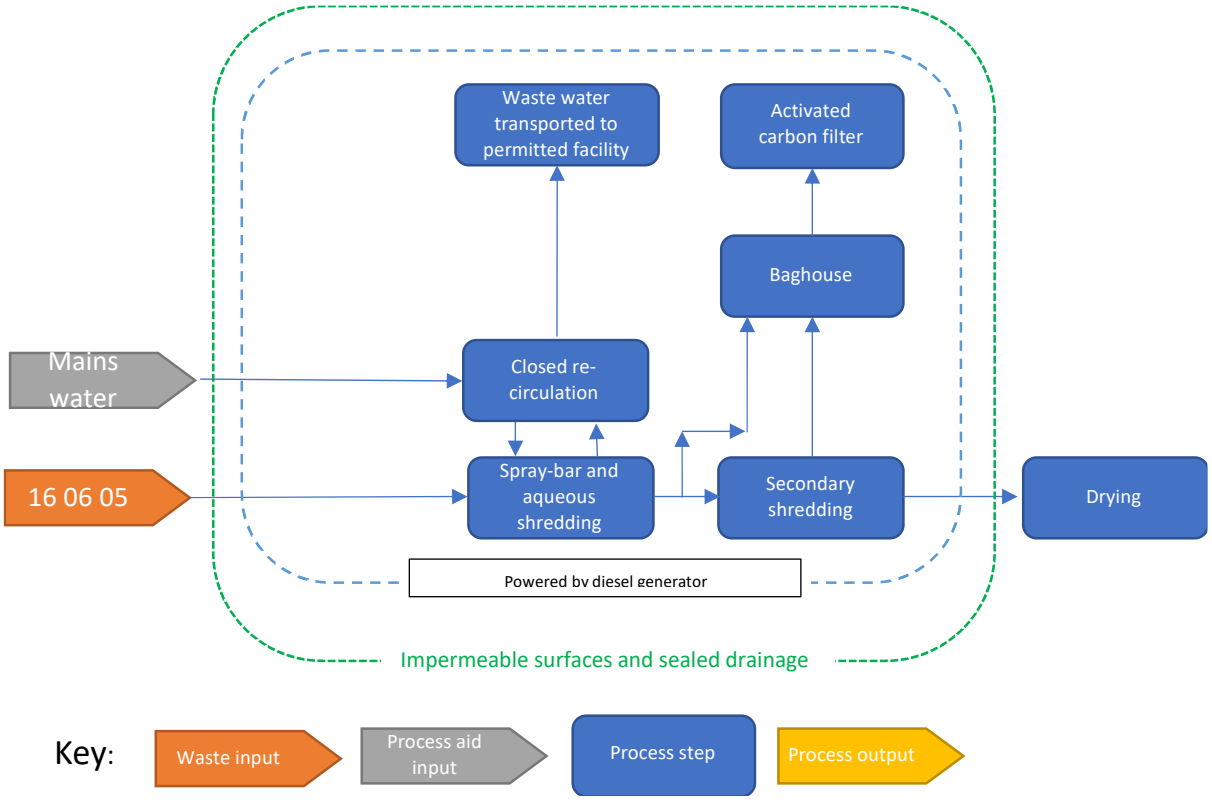
Prior to shredding steel handles and ends of battery packs may be removed. This is classified as 19 12 02.

The process is illustrated below in Figure 1.

For dry materials, these are shredded under an extraction system and fed directly into the separation line.

Claimed Confidential

Figure 1: Aqueous shredding process



4.5 Rotary Dryer

The drying process reduces moisture content in the material to less than 1%. The throughput is 3MT per hour, but we will only be running 1.5MT per hour as this is in line with the throughput of the last stage (Dry Shredding/Separation).

Feed into the drying process will be recognised as:

- Non-ferrous shredded fraction from 16 06 05

Materials are fed into the infeed hopper where they are transported via conveyor into the Rotary Kiln Dryer. Material is heated to 150^{o}C with the temperature reducing to 130^{o}C and then to 110^{o}C.

Any potential dust during the process is entirely captured by bag house filters and the steam from the drying passes through active carbon filtration.

The output fractions are:

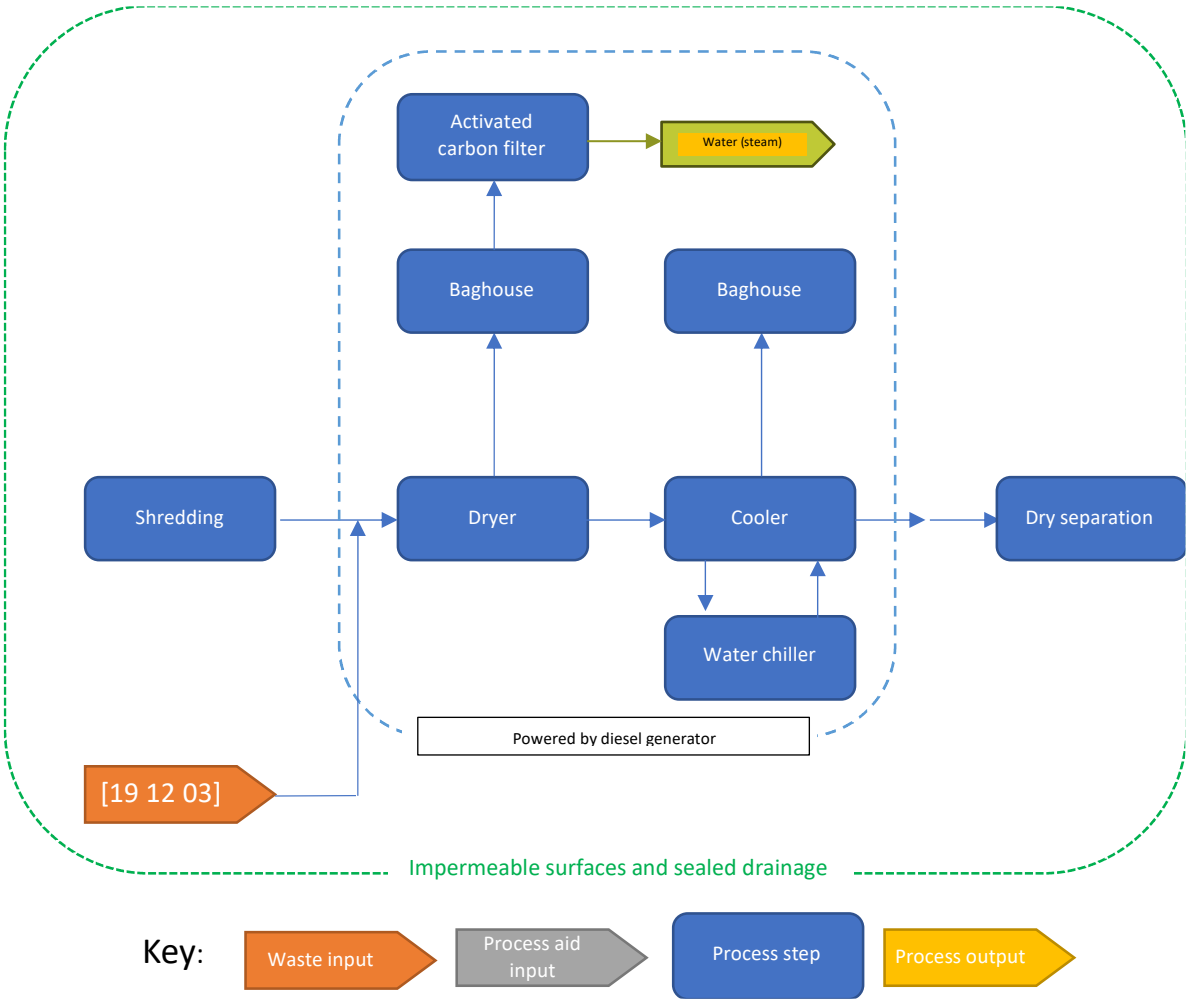
- Dry shredded 16 06 05

No waste is produced by the drying process.

The resultant ‘dry’ material will be fed into the dry separation process where different materials are separated.

The process is illustrated below in Figure 2.

Figure 2: Rotary Dryer



4.6 Dry Separation Process

During the dry separation process, different input materials are separated. The final fractions are metals, powders, and polymers.

Feed into this process will be recognised as:

- Dry shredded 16 06 05 fraction The material is fed into the pre-shredder where material is reduced in size in preparation for the next shredding step. All dusts are collected as Storm Black powder (Product) by the dust filters.

In the main shredder, materials are separated from one another and again all dusts are collected as Storm Black powder by the dust filter.

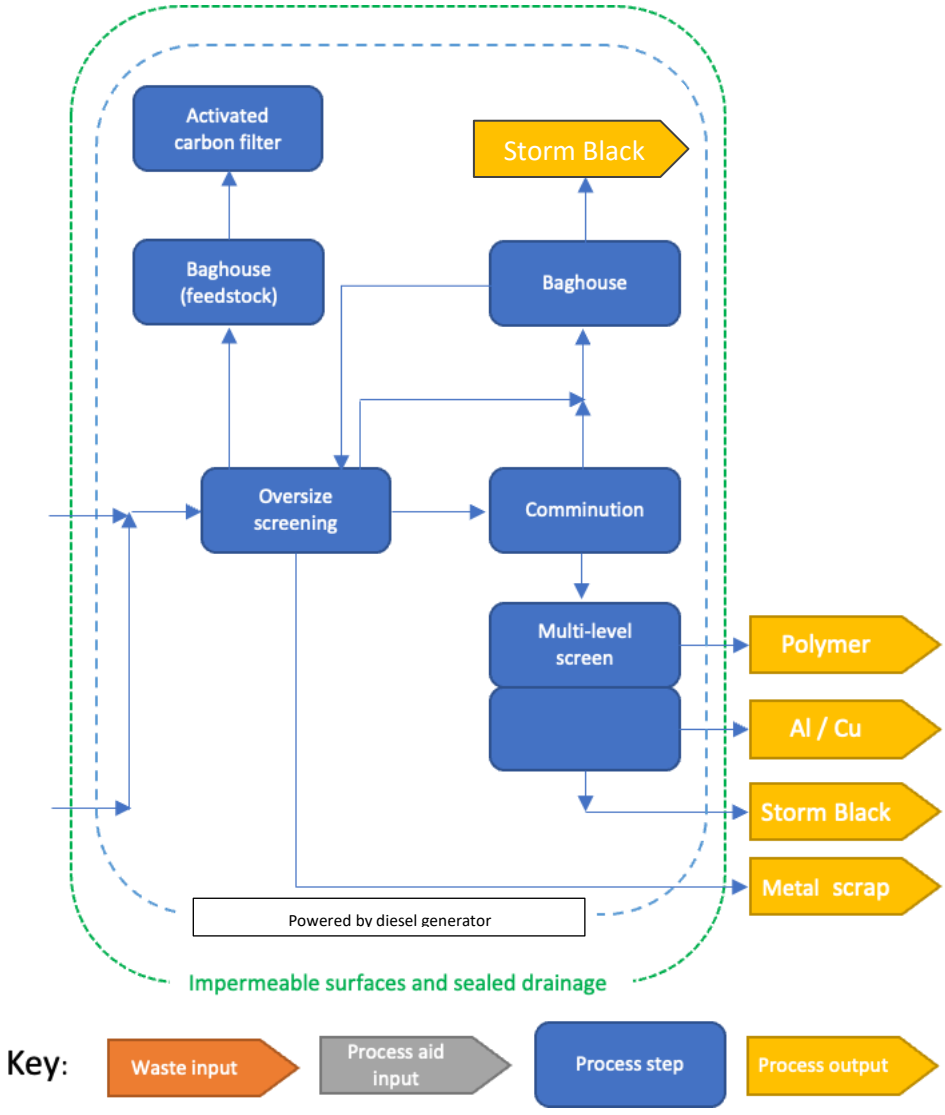
Following the main shredder, the loose materials are separated into different fractions. All materials are collected into each fraction into bulk bags to be transported to our customers facilities.

The output materials are:

- Non-ferrous metal powder (including filter dust) – which is transported to refining facilities to create new input materials for battery manufacturing; - Product "Storm Black"
- Copper – 19 12 03 which is transported to refining facilities to create new copper products;
- Aluminium – 19 12 03 which is transported to refining facilities to create new aluminium products;
- Polymers (PVDF) – 19 12 12 which is transported to plastic products manufacturer.
- A small amount of heavy fractions – 19 12 02.

No waste is produced by the process.

Figure 3: Dry separation process



4.7 Hours of Operation

The site operates from 7am to 7pm weekdays (Monday to Friday) with no operations taking place on weekends or bank holidays.

4.8 Site Infrastructure and Equipment

4.8.1 Site Identification Board

A site identification board which is easily readable from outside the entrance during hours of daylight, is displayed at the main site entrance.

The identification board is inspected at least once per week.

In the event of damage or defect that significantly affects the legibility of the board, it will be repaired or replaced within five working days, or to a timescale agreed with the EA. Any defects and repairs will be recorded in the site diary.

The board displays the following information:

- Site name and address;
- Permit holder;
- Permit number (s);
- Emergency contact name and telephone number;
- EA national telephone numbers; and
- Days and hours site is open to receive waste.

4.8.2 Plant and Equipment (fixed)

The following fixed plant is held on site:

- 2 x dry processing lines;
- 2 x aqueous shredders;
- 1 x pre-shredder;
- 3 x finishing shredders;
- 1 x drying plant;
- Water circulation system;
- Gravity separation table; and
- Tanks systems with plate press and briquette press.

4.8.3 Plant and Equipment (drainage and sealing)

The site's drainage and sealing arrangements are shown in the site plan at **Appendix 00**. These arrangements comprise:

- A surround (other than where the fall line does not require it) of sealed (bunded) concrete blocks which ensures any surface water runs into the drainage system.
- Aco drains leading to the sub-surface drains, which, in turn flow into two large concrete bottomed interceptors. These interceptors receive run off from all drains in the quarry.
- The final interceptor is fitted with a pump. The pump is activated by a float and when the float rises to the specified level (below the pipe leading to the – now sealed – soakaway) the pump activates.
- The pump pushes water through pipes to a 100,000 litre tank. The tank is emptied (by tanker) when it approaches 50,000 litres.

Further information on drainage and sealing is provided in the **Fire Prevention Plan (SSOP Annex 03).**

4.8.3 Plant and Equipment (mobile)

The following items of mobile plant will be held on site:

- 5 x mobile generators;
- 5 x forklift trucks;
- 2 x loading trucks; and
- 1 x battery handler apparatus.

Additional plant and equipment including, but not limited to, water bowser, spray equipment and road sweeper are made available as required.

All items of plant and equipment used on site are maintained in accordance with manufacturer's recommendations.

Mobile plant that is not being used, is kept a minimum distance of 6 meters away from combustible materials. Mobile plant must be fully isolated at the end of every working day. Outside operational hours, mobile plant is kept in the locked maintenance unit at the North entrance to the site approach road.

4.8.5 Plant Maintenance

The site's maintenance procedure, checklist, and record is included in the accompanying appendices.

All maintenance audits and monitoring will be carried out in accordance with the manufacturer's specifications, which are kept in the site office or available online.

Lincoln Storm takes a proactive approach involving a planned preventative maintenance program for the site, see **appendix 07**.

Site operatives are aware of their particular responsibilities for maintenance checking. The Site Manager ensures that all site operatives are aware of any amendments and additions to the checklist.

The table below summarises the preventative maintenance schedule.

Equipment	Weekly	Monthly	Quarterly	Annually
Pre-shredder and shredder	Inspect blades	Lubricate bearings Check belts for wear	Replace blades	Inspect motor Inspect electrical system
Rotary drier	Inspect seals and filters/extraction Check belt tension	Lubricate bearings Check belts for wear	Inspect drive Inspect drum	Inspect motor Inspect electrical system
Dry separation line	Inspect seals and filters/extraction Inspect mill and screens Check belt tension	Lubricate bearings Check belts for wear	Replace tools	Inspect motor Inspect electrical system
Conveyors	Inspect belts/rollers Check belt tension	Lubricate bearings Check belts for wear	Inspect structure	Inspect motor Inspect electrical system
Forklift trucks	Check fluids Inspect brakes/lights	Inspect tires Inspect forks	Replace fluids	Inspect engine Inspect electrical system
Gravity separation Table	Inspect seals and filters/extraction Inspect deck surface Check belt tension	Lubricate bearings Check belts for wear	Inspect frame	Inspect motor Inspect electrical system

Outputs of all plant are checked at the end of each day and a survey of each piece of equipment is performed daily.

When a maintenance issue is dealt with, a maintenance record form is completed for each separate piece of equipment or infrastructure. The record form will include the following information to be recorded:

- The item requiring maintenance;
- The frequency of the required maintenance;
- Completed date and who carried out by; and
- Any particular comments.

The record forms will be kept in the site office to ensure there is access for all site operatives to the records.

In the event that plant replacement is required, Lincoln Storm will choose new plant with the lowest emission standard available at the time of purchase.

The following control measures will be in place to reduce emissions as much as possible during operations:

- Use of low sulphur fuel;
- Mobile plant to be switched off when not in use to avoid idling and therefore unnecessary emissions; and
- Planned, preventative maintenance schedule to be rigidly followed to avoid the operation of poor performing or inefficient plant.

5.0 Duty of Care: Waste Pre-Acceptance, Acceptance & Tracking

Lincoln Storm's waste pre-acceptance, acceptance and tracking policies and procedures ensure that it is fulfilling its Duty of Care responsibilities. Although the fact that loads are pre-booked, and few in type the complexity of items in the lithium-ion battery supply chain (eg charged versus uncharged versus discharged) requires rigorous procedures carried out by trained operatives able to distinguish between different types.

5.1 Duty of Care: Waste Pre-Acceptance

As detailed in the site's Sampling and Inspection Plan included in the appendices (SSOP Annex 01: Sampling and Inspection Plan (including weighbridge procedure)), all incoming waste loads are booked in advance, through the logistics manager who arranges for the load to be collected from the customer and the date and time of delivery to the site. The logistics manager is responsible for undertaking the waste pre-acceptance procedures.

The waste pre-acceptance procedures follow a risk-based approach considering:

- The source and nature of the waste;
- Potential risks to process safety, occupational safety and the environment (for example from odour and other emissions); and
- Knowledge about the previous waste holder(s).

The objective of the waste pre-acceptance procedure is to evaluate customer information at the enquiry stage to determine whether the waste could be accepted at the site.

The waste producer/holder will be required to send the necessary waste characterisation/WM3 Assessment information to Lincoln Storm in advance of delivery of waste materials to the site.

This information enables Lincoln Storm to determine whether the waste stream can be accepted at the site.

No waste will be accepted at the site unless the necessary characterisation information has been received in advance and approved for receipt.

The waste producer/holder must provide the following waste characterisation information for each new waste stream proposed for recovery at the site. The description must include the following:

- Waste source and origin;
- The process producing the waste (including a description of the process and characteristics of the waste types used to comprise the batch of material);
- The waste treatment applied;
- The appearance of the waste (including smell, colour, consistency and physical form); and
- Analysis and determination of waste code in accordance with WM3.

5.2 Duty of Care: Waste Acceptance

The site operates from 7am to 7pm weekdays (Monday to Friday) with no operations taking place on weekends or bank holidays. Waste Acceptance is detailed in the site's Sampling and Inspection Plan included in the appendices.

5.3 Duty of Care: Waste Transfer Notes / Hazardous Consignment Notes

All waste carriers entering the site are required to report to the weighbridge. Each vehicle arriving on site, or transferring off site must be accompanied by a completed waste transfer note which contains the following information:

- Quantity (in weight or volume);

- EWC waste code/s;
- The origin of the waste (i.e. location it was sent from);
- The identity of the producer of the waste (i.e. company name);
- The date the waste arrives on site; and
- The date the waste was first produced (and if the waste is potentially odorous).

If the vehicle is rejected, or waste is quarantined from the delivery, details are included on the waste transfer note.

5.4 Duty of Care: Load Inspection and Waste Control

All waste brought to site is inspected in accordance with the following procedure:

- All waste carriers entering the site must report to the weighbridge where the paperwork is checked and verified (waste transfer/ consignment note, loading list, ADR licence, and DGN if applicable). If any paperwork is missing the logistics manager/TCM will be informed immediately;
- The delivery vehicle driver is asked to park on the weighbridge and a first weight is obtained. The vehicle is then unloaded and then the driver is asked to park on the weighbridge for a second time to obtain a second weight. The site manager records the incoming weight (weigh bridge ticket) in the load documentation in Lincoln Storm's Tracking System;
- The load list and paperwork are checked against the received waste. The number of pallets are counted against the load list and the weight and description of goods is verified against the load list;
- The incoming load and packages are visually inspected for quality, damage and any discrepancies by opening the drum/box/bag to check that the material conforms with the EWC code and description of the material on the waste transfer documents. Any discrepancies will be reported to the Site Manager/TCM. Lithium-ion batteries will be checked by site staff to ensure they meet the ADR packaging requirement. If they do not they are accepted and repacked on site according to ADR;
- Wastes are only accepted if the description in the accompanying documentation is in accordance with the EP and that onsite inspection confirms waste is consistent with the description provided;
- Any non-conforming waste is immediately put in the quarantine area and marked with a yellow sign;
- A record is kept on Lincoln Storm's Tracking System of all deliveries and refusals. The waste producer and the EA will be notified of any non-conformance.

Records of non-compliant waste received at the site will include details on:

- The quantity;
- Characteristics;
- Origin;
- Delivery date and time; and
- The identity of the producer and carrier.

The site's booking system will ensure that wastes are not accepted unless the site is adequately resourced to receive the waste.

Any rejected loads will be reported to the EA.

5.5 Duty of Care: Quarantine Procedure

The quarantine and rejection procedures ensure that all non-conforming waste is removed from the site and that the waste producer and carrier are informed so that appropriate action can be taken to prevent recurrence.

Non-conforming waste will be identified by Site Operatives at the weighbridge, or the operational area by visual means.

If unauthorised waste is identified, it is moved to the designated quarantine area and marked with a yellow sign. The Site Manager will notify the customer of non-conforming material within 24 hours of receipt, and where the material is not permitted, arrangements will be made to return the material to the customer at the customer's expense.

5.6 Duty of Care: Means of Measurement (Tracking)

The site's tracking system is described in the Description of Documentation systems included in the appendix 00 to this document (SSOP Annex 02: Description of Documentation Systems). The quantity of waste accepted and despatched from the facility is measured at the weighbridge.

Weighbridge operators record the following details within Lincoln Storm's Tracking System:

- Vehicle registration number;
- Name of haulage company;
- Name of driver;
- Waste Carrier's registration number;
- Waste producer;
- Description;
- Weight; and
- Waste collection point.

Wastes are characterised, as required under the Duty of Care requirements, prior to acceptance of the delivery. On inspection, deliveries which do not have the required information, will have to produce the correct information, or will be refused entry to the site. All deliveries and removals from the site are recorded in Lincoln Storm's Tracking System, and records will be kept accessible for inspection by management and the EA.

6.0 Emissions and Monitoring

The site has been constructed and will be operated so that there are no polluting point source emissions to air, surface water, groundwater or land, apart from uncontaminated surface water run off which is captured within the site's drainage system.

Table 6-1
Emission points

Emission Point ID	Description	Emission
1	Diesel Generator	See **Appendix 08 Emissions**
2	Diesel Generator	
3	Diesel Generator	
4	Rotary Dryer	
5	Diesel Generator	
6	Diesel Generator	

The **Daily Monitoring Checklist is included as Appendix 05**. Emission monitoring is conducted at least annual with an independent organisation conducting 'stack tests' on all emissions points. All emission testing must be conducted in accordance with British Standard 15259 and TGN M1.

The site is operated to prevent fugitive emissions to surface water and groundwater. Waste acceptance and storage areas of the site are impermeably surfaced, with site water pumped to a 100,000 litre tank, from which it is tankered offsite. Site drainage is illustrated on the accompanying **Site Plan Appendix (SP9: Drainage System) and reproduced in Appendix 00.**

6.1 Drainage and Engineered Containment of the site

All waste acceptance and storage areas of the site benefit from impermeable surfacing, with sealed concrete curbing around the site perimeter, sealed/bunded storage areas, interceptors and a storage tank for excess water/spillage. The exit from the interceptors to the soakaway and groundwater is blocked with a seal/bung with the pipe fixed in concrete to prevent water pressure deformation.

The site's drainage system is illustrated on **Site Plan Appendix (SP9: Drainage System) and reproduced in Appendix 00**. It is described in more detail at Section 4.8.3 above.

All waste storage takes place on impermeable surfacing under cover. Site surfacing is inspected daily for defects to ensure the continued integrity of the surface. Any required repairs will be given a temporary solution immediately, and a permanent repair will be fitted within 5 working days.

Site surfacing is maintained as required to ensure surfacing is fit for purpose. The surface is maintained such that the working surface will:

- Remain even;
- Not be subject to settlement of differential settlement;
- Not be subject to rutting by vehicles even when wet; and
- Have sufficient durability to allow cleaning, for example, by scraping.

All operational areas, quarantine and fuel storage areas are inspected to ensure the integrity and fitness for purpose of their construction is maintained at all times.

6.2 Containment Bunding for chemicals and fuels

Chemicals or fuel used on site are stored in an appropriate tank that has an internal bund with the capacity to store 110% of the tank capacity. Bunds will be:

- Impermeable and resistant to the stored materials;
- Have no outlet;
- Be designed to catch leaks from tanks or fittings;
- Have a capacity greater than 110% of the largest tank or 25% of the total tankage (whichever is greater);
- Have pipework routed within bunded areas with no penetration of contained surface;
- Have tanker connection points within the bund; and
- Be subject to regular visual inspection.

Storage areas are as show in the site plan at **Appendix 00**, with chemicals, paints and oils stored in the maintenance unit.

6.3 Sewer

The site does not hold a discharge consent to sewer and there is no discharge to sewer from waste operations at the facility.

6.4 Odour

Due to the nature of the waste types accepted, it is not anticipated that odour will pose a risk on site.

However, to prevent the potential release of odour from the acceptance, treatment and storage of waste batteries (although biodegradable/putrescible waste will not be accepted), the following site management methods are adhered to:

- Strict waste pre-acceptance, and acceptance procedures ensure that only permitted wastes are accepted at the site;
- Waste is treated and removed from the site within a maximum of 8 weeks;
- All waste processing takes place within enclosed buildings which prevents the release of odour emissions;
- The site benefits from good housekeeping and operational areas, site haul roads and drainage channels are cleaned regularly to minimise odour generation;
- Incoming wastes are subject to visual inspection and verification by site personnel who will be aware of the permitted wastes that can be accepted at the facility;
- Any waste which is found to be excessively malodorous is immediately placed in the quarantine area and marked with a red sign. The Site Manager will notify the customer within 24 hours of receipt and arrangements will be made to return the material to the customer at the customer's expense.

6.5 Dust Management

In order to minimise the emissions of dust from the site, the following measures are implemented:

- Speed limits (10 mph) are implemented for vehicles using the site. Clear signage and training are implemented to enforce this;
- All vehicles delivering waste to the site are sheeted to minimise emissions of dust;
- Site access and haul roads and operational areas are maintained and repaired to minimise emissions of dust due to uneven and poor surfacing;

- All staff are trained to ensure dust emissions are minimised and mitigation measures are implemented. All drivers delivering waste to site are informed of dust minimising measures as well as correct signage throughout the site;
- All roads and operational areas are swept where necessary to reduce dust emissions with a road sweeper used on haul roads as required;
- All waste processing (e.g. shredding) takes place within enclosed buildings and have state of the art and strict dust extraction equipment to prevent the release of dust emissions from processing;
- Daily, visual inspection at all areas of the site and site boundary are carried out by site personnel;
- In the event that significant visual dust is observed at the boundaries of the operational areas; action will be taken to suppress the dust; and
- A record of the inspection findings and remedial action taken will be made in the Site Diary.

The Site Manager is responsible for implementing the Dust Emission Management Plan (DEMP)(SDLS4).

The R4 Aluminium and Copper separation process uses a closed extraction system to collect any dust from the gravity separation process.

6.6 Noise

Operations are only carried out during operational hours and within the confines of the site. All equipment is maintained and operated in accordance with manufacturer's guidance and is maintained in good working order. Vehicles delivering waste are fit for purpose and in good working order.

The site is operated so as to minimise noise emissions from the site. Measures that are taken at the site include:

- Speed limits (10 mph) are implemented for vehicles using the site. Clear signage and training are implemented to enforce this;
- The site operational areas are maintained and kept in a good state of repair;
- The regular maintenance of roads to prevent the development of potholes significantly reduce noise generated, particularly by empty vehicles exiting the site;
- Site plant is selected and operated to minimise noise with silencing equipment fitted where appropriate;
- Engines are fitted with silencers where appropriate;
- All plant is switched off when not in use;
- All site personnel are trained in the need to minimise site noise, and are responsible for monitoring and reporting excessive noise when carrying out their everyday roles;
- Auditory inspections are carried out continuously by site operatives during operational hours and in response to complaints;
- If noise issues are identified, site operatives will identify the source and a suitable mitigation measure that will reduce the noise emission levels will be identified and implemented.

Any complaint received will be logged in the site diary. The Site Manager will investigate the complaint and will take action to identify the source of the noise and implement remedial measures where appropriate. The **Noise Impact and Management Plan** explains the assessment and mitigations which have been put in place.

6.7 Pests

Due to the nature of the wastes proposed to be accepted at the site, it is unlikely that pests pose a risk at the facility.

The facility is inspected by both site management and operatives for infestations of pests, vermin and insects on a routine basis. In the event that specific waste is found to be responsible for attracting scavengers, pests or infestation, this waste will be removed from the site as soon as practicable.

A specialist pest control contractor will be deployed if required.

6.8 Litter

Due to the nature of the wastes to be accepted on-site, it is unlikely that the release of litter will pose a serious risk.

The boundary of the site and its environs are regularly checked, and any windblown litter collected and disposed of appropriately.

It is the responsibility of the site staff to constantly monitor the site for any signs of escaping materials either from within the site or from vehicles delivering or removing materials to and from the site.

Inspections are carried out on a daily basis and a record maintained within the site diary.

6.9 Mud and Debris

The access road for the facility is accessed from Lower Kewstoke Road. Within the site, the following measures are taken in order to prevent the deposition or tracking of mud and debris from the site onto public areas or highways:

- Waste acceptance, storage, treatment and processing areas of the site benefit from impermeable surfacing which reduces the likelihood of mud tracking into vehicles;
- The site benefits from good housekeeping and all areas of the site are cleaned on a daily basis;
- Incoming vehicles containing wastes are enclosed or sheeted;
- All vehicles leaving the site are visually inspected by site operatives to ensure they are clear of loose waste and that any material being exported from the site is secure. Vehicles are cleaned as necessary;
- Daily visual site inspections by site operatives will identify any problems with mud and debris. Should problems occur they will be cleaned up as soon as practicable;
- Site roads are maintained free of significant quantities of mud and debris; and
- Where necessary road cleaning equipment is deployed.

In the event that mud, debris or waste arising from the site is deposited onto public areas outside the site, the following remedial measures will be implemented:

- The affected public areas outside the site will be cleaned;
- Traffic will be isolated from sources of mud and debris within the site to prevent further tracking, and measures will be taken to clear any such sources as soon as practicable; and
- Provision will be made for road sweepers on the site access roads to stop any mud being carried onto public roads, and bowsers made available to damp down areas during dry periods to ensure that dust is not a problem.

7.0 Best Available Techniques (BAT)

The proposed variation is to allow the site to store hazardous waste at a capacity greater than 50 tonnes per day and recover hazardous waste at a capacity approximately 40 tonnes per day. These activities are subject to the requirements of the IED, and as such, the activities must be operated in accordance with BAT to prevent and minimise pollution of the environment. This is the event that any of the material is considered to be hazardous.

Indicative BAT for these activities in set out in the revised Waste Treatment Bref (the Bref).

The **Best Available Techniques Assessment (BAT) (MA2)** submitted with this variation assesses the techniques proposed for the site against the relevant BAT conclusions (BATc[7]) within the Bref, which include the following:

- General requirements (BAT 1 – BAT 24); and
- Physico-chemical treatment of solid and/or pasty waste (BAT 40 – 44 only).

The **BAT assessment (MA2)** that accompanies this OT EMS document provides a description of the techniques proposed at the site and how these meet the requirements of each of the BAT conclusions listed above.

[7] Official Journal of the European Union. Establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council. Dated 10 August 2018.

8.0 Information

All relevant notifications and submissions to the EA regarding the site will be made in writing and will quote the permit reference number and the name of the permit holder.

Records will be maintained for at least 4 years (non-hazardous) and 5 years (hazardous), however in the case of off-site environmental effects, and matters which affect the condition of land and groundwater the records shall be kept until permit surrender. Duty of Care records will be kept for a minimum of 4 years.

8.1 Reporting and Notifications

8.1.1 Changes in Technically Competent Persons

The EA will be informed in writing of any changes in the technically competent management of the site and the name of any incoming person, together with evidence that such person has the required technical competence.

8.1.2 Waste Types and Quantities

A summary report of waste types and quantities accepted and removed from the site each quarter, will be submitted to the EA within 1 month of the quarter end unless otherwise required by the permit conditions.

8.2.2 Relevant Convictions

The EA will be notified of the following events:

- Lincoln Storm being convicted of any relevant offence; and
- Any appeal against a conviction for a relevant offence and the results of such an appeal.

8.2.3 Notification of Change of Operator's or Holder's Details

The EA will be notified of the following:

- Any change in the operator's trading name, registered name or registered office address; and
- Any steps taken with a view to the company going into administration, entering into a company voluntary arrangement or being wound up.

8.2.4 Adverse Effects

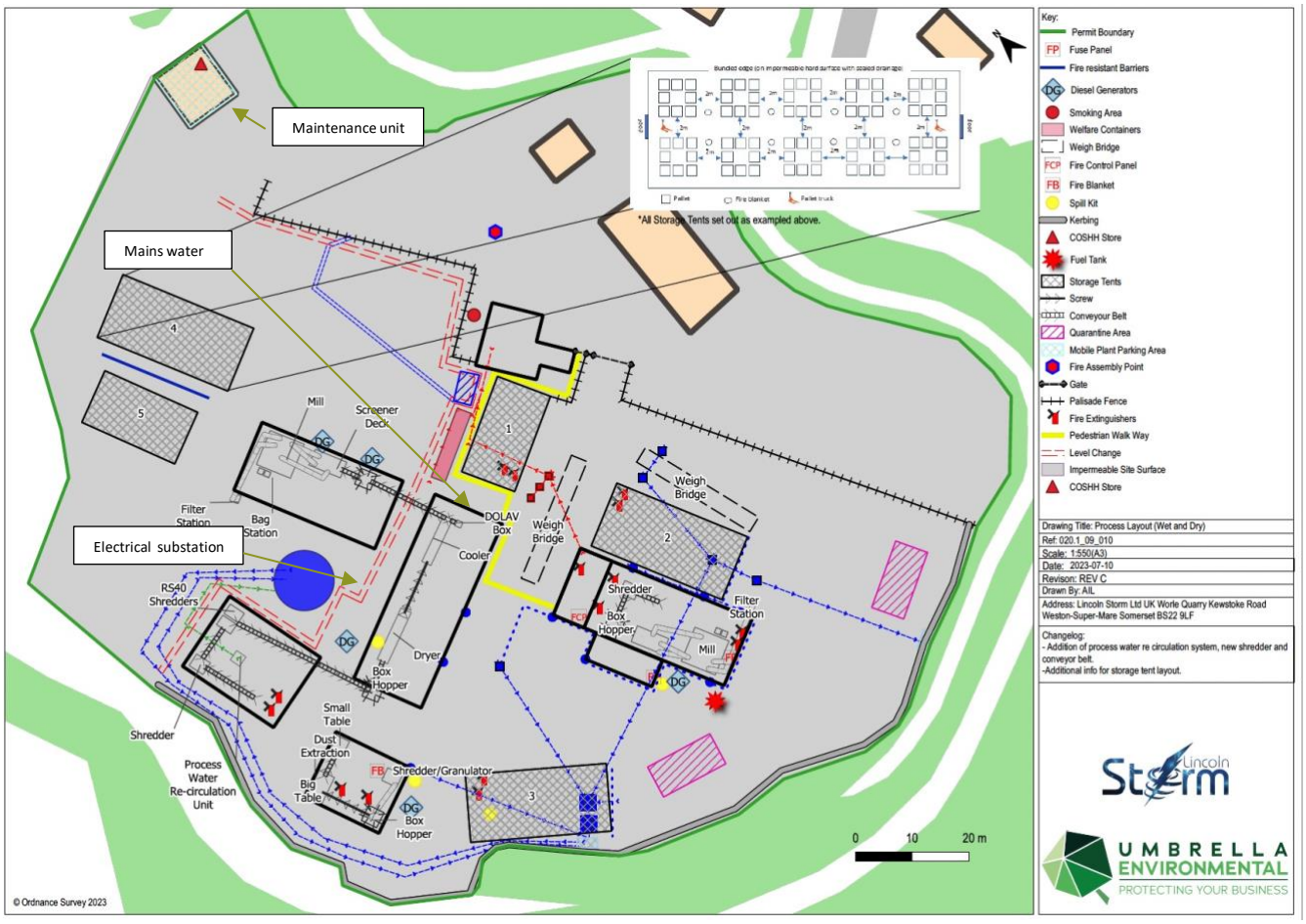
The EA will be notified without delay following the detection of the following (if it is causing or may cause significant pollution):

- Any malfunction, breakdown or failure of equipment or techniques;
- Any accident;
- Fugitive emissions which have caused, are causing or may cause significant pollution; and
- Any significant adverse environmental and health effect.

9.0 OTEMS Appendix 00: Site plans and sensitive receptors

9.1 Main plan

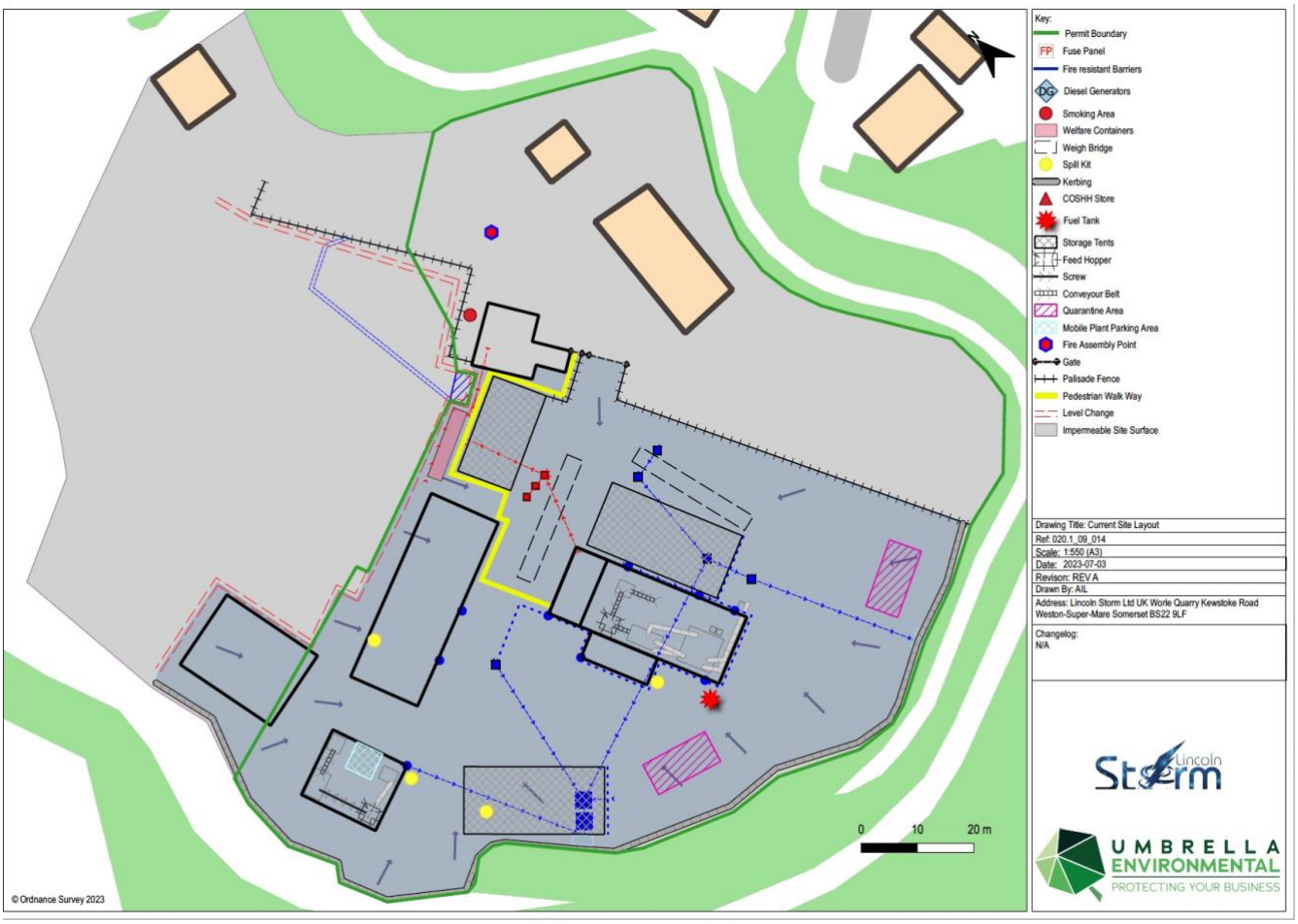
Claimed Confidential



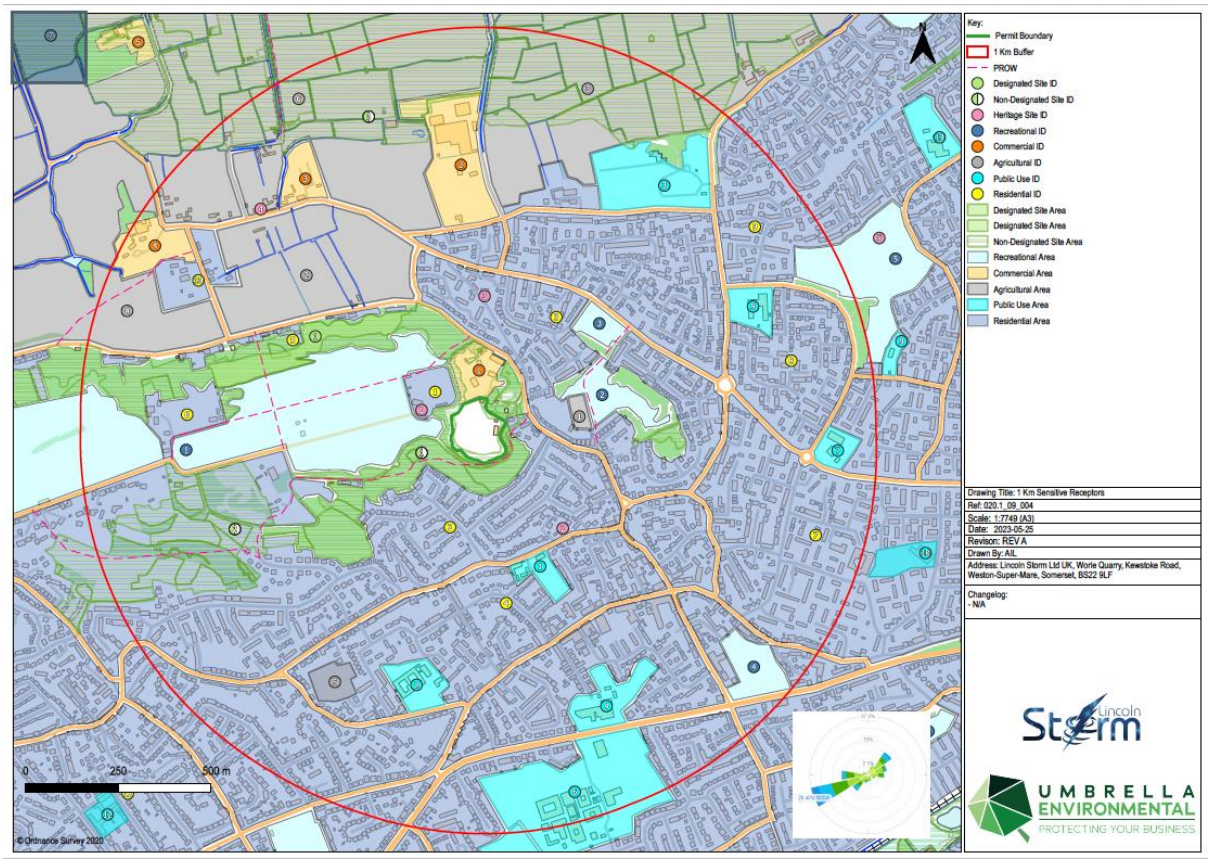
Notes to Site Plan: (1) The site treats all waste received and held as if it is hazardous. All storage and processing areas are configured accordingly; (2) gas cylinders are stored offsite in the maintenance unit at the North of the quarry; (3) Maintenance oils are stored at offsite (in maintenance unit); (4) Personal Protective Equipment (PPE) and (5) fire hose are stored in the office building (see where '*fuse panel*' on legend is located); (6) fire vehicle access is through the main west gate of the site and/or the North East entrance. The nearest fire hydrant is on Kewstoke Road (and has been successfully accessed).

9.1 Drainage Fall lines

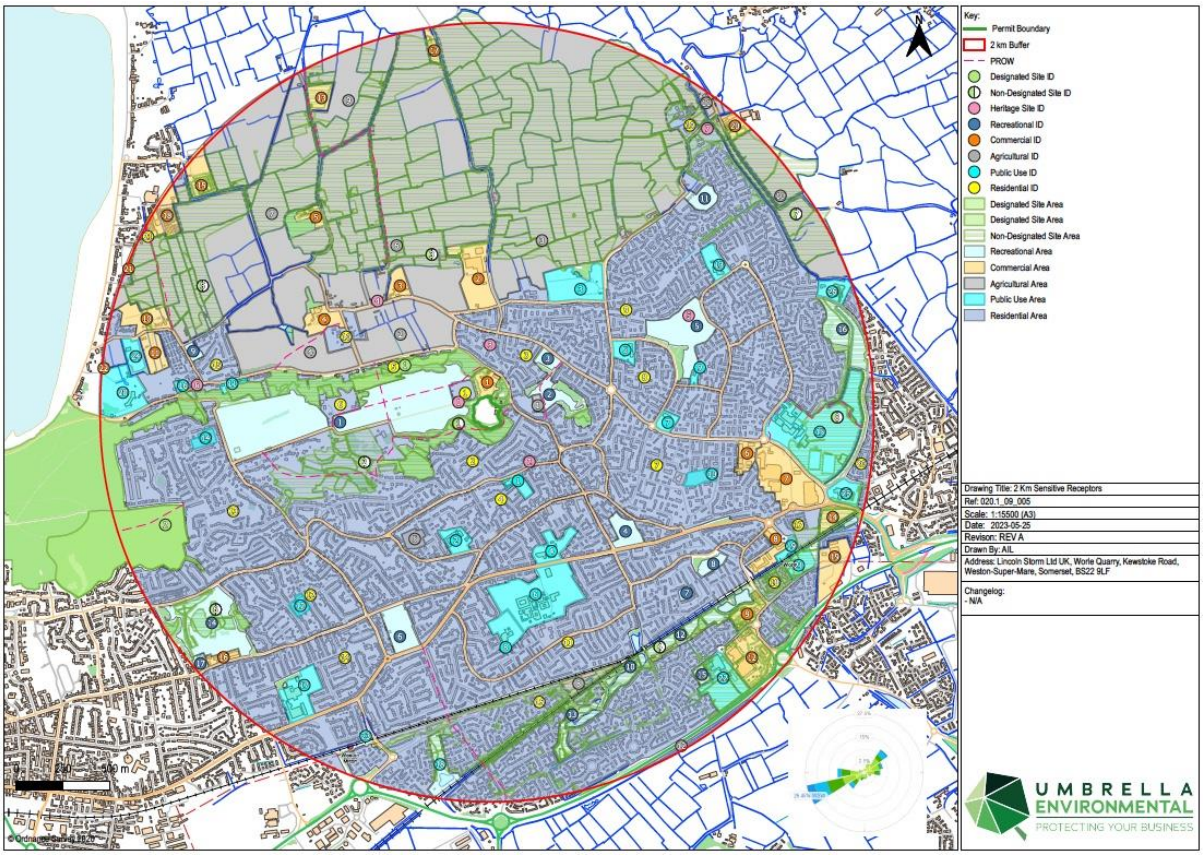
Claimed Confidential



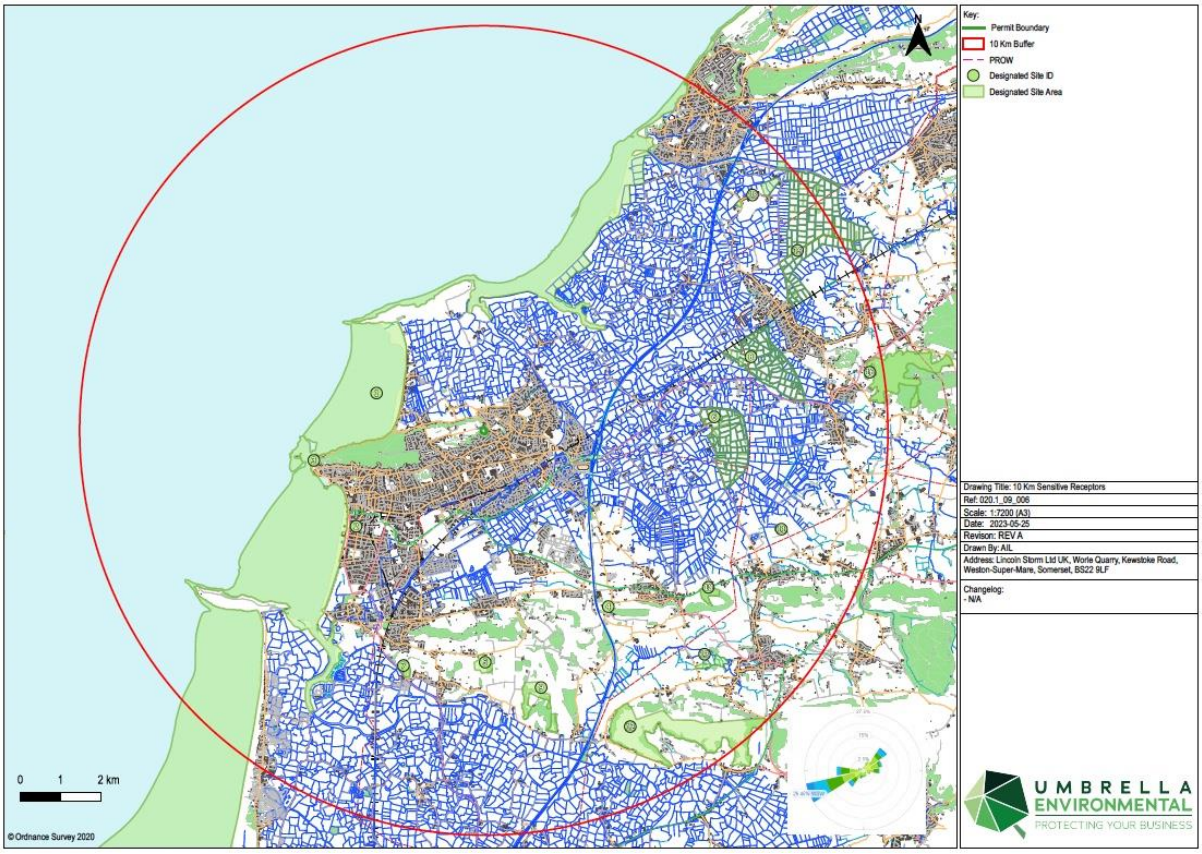
9.2 1 km sensitive receptor map



9.3 2km sensitive receptor map



9.4 10 km sensitive receptor map



10.0 OTEMS Appendix 01: Site Specific Operational Procedures (SSOP):

- SSOP Annex 01: Sampling and Inspection Plan (including weighbridge procedure)
- SSOP Annex 02: Description of Documentation Systems
- SSOP Annex 03: Fire Prevention Plan (FPP) ***(provided as separate document)***
- SSOP Annex 04: Treatment and Recycling Operations and Procedures
- SSOP Annex 05: Noise Impact and Vibration Management Plan ***(provided as separate document)***

10.1 SSOP Annex 01: Sampling and Inspection Plan (including weighbridge procedure)

Source of Lithium-Ion Battery Material

The site will receive batteries on a business-to-business basis from the UK, Europe and the USA.

All batteries will be received from other recycling sites, battery manufacturers, or original equipment manufacturers.

If the batteries are collected from the UK then they are considered to be of UK origin. The associated waste transfer notes will be stored on Lincoln Storm's tracking system.

Recycling/recovery documents will contain proof of any treatment, recycling or export of portable waste batteries.

They will detail if the batteries have been received from a waste producer or licenced waste trader, who the waste producer or licensed waste trade is and if the batteries are of UK origin or if they have been imported.

Recycling/recovery documents are only issued once in the whole recycling and treatment chain.

Recycling/recovery documents will be used to ensure that batteries are stored by type and separated and clearly labelled.

Lincoln Storm do not claim evidence on batteries. Imported batteries are not separated from batteries originating in the UK except as required to meet any ABTO and/or ABE requirements.

Inspection of incoming loads

The site can accept the following chemistry of batteries:

- Lithium-ion battery packs/modules/cells for re-packaging and onward shipping to End Recycler

All incoming loads are booked in advance, and the logistics manager arranges for the load to be collected from the customer and the date and time of the delivery to site. The logistics manager also records the source, category and chemistry of the load to be delivered.

All waste entering the site must report to the weighbridge. The paperwork is checked and verified (waste transfer note, loading list, ADR license, and DGN if applicable). If any paperwork is missing, the logistics manager will be informed immediately.

The delivery vehicle driver is asked to park on the weighbridge and a first weight is obtained. The vehicle is then unloaded and then the driver is asked to park on the weighbridge for a second time to obtain a second weight. The site manager records the incoming weight (weigh bridge ticket) in the load documentation in Lincoln Storm's Tracking system.

The load list and paperwork are checked against the received waste. The pallets are counted and number and the weight and description of goods is verified against the load list. If the weights match the weighbridge ticket and the weight on the incoming load list then the forklift driver will sign the incoming load list and hand over the

documentation to the site manager who transfers the weights on the loading list onto the storage system and scans the documents into Lincolns Storm's tracking system.
After weighing, the incoming load and packages are visually inspected for quality and discrepancies by opening the drum/box/bag to check that the material conforms with the EWC code and description of the material on the Way Bill. Any discrepancies will be reported to the site manager.

Lithium-ion batteries will be checked by site staff to ensure they meet the ADR packing requirement. If they do not, they are accepted and repacked on site according to ADR. All site staff are trained to recognise if anything is unsafe.

All non-conforming material is immediately put in the quarantine area (and marked with a yellow sign). The site manager will notify the customer of non- conforming material within 24 of hours of receipt, and where the material is not permitted, arrangements will be made to return the material to the customer at the customer's expense.

Sorting and weighing

The site will only accept pre-sorted material where evidence has already been issued. Therefore, a designated area to separate sorted batteries from unsorted batteries is not required and double counting will be avoided.
When a delivery arrives on site, the driver is asked to park on the weighbridge to obtain a first weight. The vehicle is then unloaded and the driver is asked to park on the weighbridge again to obtain a second weight.

The weight of the batteries including any packaging is therefore equal to the first weight minus the second weight. To obtain the weight of the batteries, packaging is identified by sight and count. For example, a plastic pallet is 12kg, a bulk bag is 2kg and a wooden pallet is 23kg. The packaging weight is then deducted, and the net weight (of the batteries) is recorded on the weigh bridge ticket.

Once a delivery is received, the batteries are visually checked for quality and discrepancies. After weighing the drum/box/bag is opened to check that the material conforms with the EWC code and description on the way bill. Any discrepancies are immediately reported to the site manager. Site operatives are trained in house to identify batteries types.

All non-conforming materials or unidentifiable batteries are immediately placed in quarantine and marked with a yellow sign. The site manager notifies the customer within 24 hours of receipt of the material and arrangements are made to return the material to the customer at the customer's expense.

Handling mixed/contaminated loads

The site will only accept pre-sorted material, where evidence has already been issued. It is unlikely that mixed/contaminated loads will be received as customers have to book deliveries with the logistics manager who will inform the customer of the source, category and chemistry of batteries which can be accepted.
If mixed/contaminated loads are received, they will immediately be placed in quarantine (and marked with a yellow sign) and the site manager will notify the customer within 24 hours to arrange return of the material to the customer at the customer's expense.

Evidence

Lincoln Storm will only accept batteries which have already had evidence issued and therefore, do not intend to raise evidence on portable batteries. This will also prevent evidence being issued on ineligible loads of batteries.

Back-back loads

In some cases, loads of battery material (typically 16 06 05, eg modules or whole batteries) will arrive and will be reloaded with the required documents for transfer under a Trans Frontier Shipment Certificate(s) to a permitted site in a non-UK location. Handling procedures for loads leaving the site will follow the weighbridge procedure with the completion of required ADR, TFS, Annex 7 and Waste Transfer Note documents as required (see **Annex SSOP Annex 2** below).

Documents for operatives

The weighbridge procedure is a critical part of the process and is reproduced below.

STANDARD OPERATING PROCEDURES : WEIGHBRIDGE PROCESS		Jan '23

	CURRENT PROCESS
STEP 1	Direct vehicle onto Weighbridge No.1, ensuring it is positioned correctly.
STEP 2	Note the vehicle registration number for input later (see Step 5)
STEP 3	Check that the appropriate documentation (e.g.DGN; Annex VII/WTN) has accompanied the load and that it has been completed correctly. (Driver should be able to provide this)
STEP 4	Turn on Weighbridge software: a) Select "Data". b) Select "Weighing"- (Weighbridge No.1 should be highlighted in RED) c) Select GREEN + sign from top menu bar
STEP 5	Enter the vehicle registration number (where highlighted in GREEN) a) Press "Customer" button and choose customer from list - double click to select. b) Press "Haulier" button and choose haulier from list -double click to select. c) Press "Product" button and choose product from list -double click to select. d) Press "Source" button and choose source from list - double click to select. e) Press "Destination" button and select Lincoln Storm Ltd. f) Press the 'Weigh' button.

STEP 6	Once weight captured, light turns green automatically on Weighbridge No1, vehicle can move to the loading /unloading area.
STEP 7	When loading/unloading complete, direct vehicle onto Weighbridge No2.
STEP 8	Using Weighbridge software: Select “Pending” from bottom tab on screen.
STEP 9	1.Choose vehicle from list by registration number - double click to select. *Weighbridge No. 2 should be highlighted in RED. 2.Check vehicle registration is the same as recorded at step 5 above.
STEP 10	Press “Weigh” for 2nd weight - 2 Weighbridge tickets should be printed* * Light will turn green but driver must wait for paperwork to be completed and issued before leaving.
STEP 11	Sign, stamp and date all paperwork as required.
STEP 12	Driver to sign and date paperwork at appropriate sections.
STEP 13	Provide the driver with a copy of the paperwork (inc Weighbridge ticket) and retain a copy for our records in the appropriate files.
STEP14	DRIVER DIRECTED TO SAFE EXIT FROM THE FACILITY!
	PPE REQUIRED FOR THIS PROCESS: • Hard Hat/Bump Cap • Safety Boots • Hi-Vis Vest

10.2 SSOP Annex 02: Description of Documentation Systems

Input records

All documents relating to in coming transports are recorded in Lincoln Storm's Tracking System. The documents include the Way Bill, Loading List, Annex VII/Annex XI (if it's import/export and non-hazardous/hazardous waste), proforma invoices etc.

The site only accepts pre-sorted material, where evidence has already been issued, and therefore records including information on category, chemistry and tonnages are recorded. The evidence note will detail information on any previous treatment, if the batteries have been received from a waste producer/trader/broker or another battery site, who the waste producer is and if the batteries are of UK origin or if they have been imported.

All incoming loads must be pre-booked with the logistics manager who will record information on the source, category and chemistry of the load.

When a load is received at the site the incoming weight (weigh bridge ticket) is added into the load documentation in Lincoln Storm's tracking system. The weight is also recorded into the storage system for the site. The site manager is responsible for this. All incoming wastes are visually inspected and if the weight matches the weighbridge ticket and weight on the incoming load list, then the forklift driver will sign the incoming load list and hand the documentation to the site manager who will transfer the weights on the loading list into the storage system and scan the documents into Lincoln Storm's tracking system.

All records will be retained on Lincoln Storm's system for a minimum of 4 years and will be made available to the EA upon request.

All batteries which arrive at the site are pre-sorted and have already had evidence issued. If the batteries have been received from an ABTO this will be indicated on the evidence note. This information will be recorded on Lincoln Storm's tracking system by the site manager which will ensure that double counting is avoided.

Evidence notes will indicate whether the batteries are of UK origin or if they have been imported. The site manager will record this information on Lincoln Storm's tracking system to make it clear which loads are imported.

Status: not a battery collector

For the avoidance of doubt, Lincoln Storm is not acting as a battery collector.

On site treatment

The site manager will be responsible for using Lincoln Storm's Tracking system to record all onsite treatment of batteries. The site only accepts pre-sorted material where evidence has already been issued, therefore sorting is not undertaken on site.

Output records

For every outgoing load the site manager adds a weighbridge ticket into the load documentation in Lincoln Storm's Tracking System. The weighbridge ticket is produced once the container has been fully loaded and the outgoing weight is recorded on the site's storage system which creates a record that the batteries have left the site. All single pallets/containers are weighted individually and the weights are put into the load list. If the weights match the weighbridge ticket, the forklift driver signs the outgoing load list and hands over the documentation to the site manager who transfers the weights on the loading list into the storage system and scans the

documents into Lincoln Storm's tracking system. The following photos are to be recorded on the out going loads and saved in Lincoln Storms tracking system:

- Reg no,
- container number,
- serial number on arrival for DGN,
- container damages,
- empty container with inside container number visible,
- one quarter loaded,
- half loaded,
- three quarters loaded,
- fully loaded with doors open with inside container number visible,
- fully loaded with right door closed,
- fully loaded with both doors closed and seal on the door,
- close up of the door seal,
- container stickers showing class 9 and orange UN3480.

For the Bill of Loading (BOL), the Vessel Transport draft copy is received within 3-5 working days after loading from shipping agent.

The final BOL is received within 1 week from the shipping agent and saved in Lincoln Storm's tracking system.

Where loads are required to be accompanied by Annex VII waste documentation, an Annex VII Contract must be in place between Lincoln Storm and the receiving party (recycler), prior to the shipment being sent. When the recycler has received the load, the recycler signs the Annex VII document and sends a copy to Lincoln Storm. When the recycler has recycled the load, the recycler signs the Annex VII document and sends a copy to Lincoln Storm.

Hazardous waste battery materials must only be shipped once there is a Transfrontier Shipment (TFS) Agreement in place. When the recycler has received the load, the recycler signs the Annex VII document and sends a copy to Lincoln Storm. When the recycler has recycled the load, the recycler signs the Annex VII document and sends a copy to Lincoln Storm.

Lincoln Storm operates a full recovery system within the group and each load has a certificate of recycling issued once it's been processed through Lincoln Storm's equipment. The recovery rate is >98% which is above the minimum requirements.

Evidence

Lincoln Storm do not have contracts/agreements in place with battery compliance schemes and only accept batteries which have been pre-sorted with evidence already issued.

10.3 SSOP Annex 03: Fire Prevention Plan (FPP)

The Fire Prevention Plan is provided as a separate accompanying document.

Claimed Confidential

10.4 SSOP Annex 4 Treatment and Recycling Operations and Procedures[8]

The Worle Facility receives charged ('wet') and uncharged/discharged ('dry') lithium-ion battery materials, typically in the form of whole batteries, cells and modules. Both wet and dry materials go through the same separation process to produce Storm Black and its by-products of aluminium, copper, polymer and a small amount of metal fraction. All aluminium and copper, which emerge from the separation process as mixed aluminium and copper granules, is separated out using gravity separation into the two metals. The 'wet' process has two additional stages: the shredding in water in a closed circulation system (so that shredding can occur without risk of ignition) and the extraction of the moisture from the resulting intermediate shredded material in a rotary dryer. The location of these processes is shown on the plan below, with arrows showing the direction of flow of material through each stage of the process. These numbered arrows are referred to in the descriptions below, expanding on the material set out in Section 4 of the OTEMS.

Wet processing zone

This zone takes **charged** batteries, cells and modules and shreds, dries and separates in a continuous integrated process to produce the Storm Black product.

Dry processing zone

This zone takes **uncharged and discharged** batteries, cells and modules and shreds, dries and separates in a continuous integrated process to produce the Storm Black product.

Al/Cu separation zone

This zone takes mixed **aluminium and copper** output of the Storm Black production process and separates these out into bags of the two separate metals.

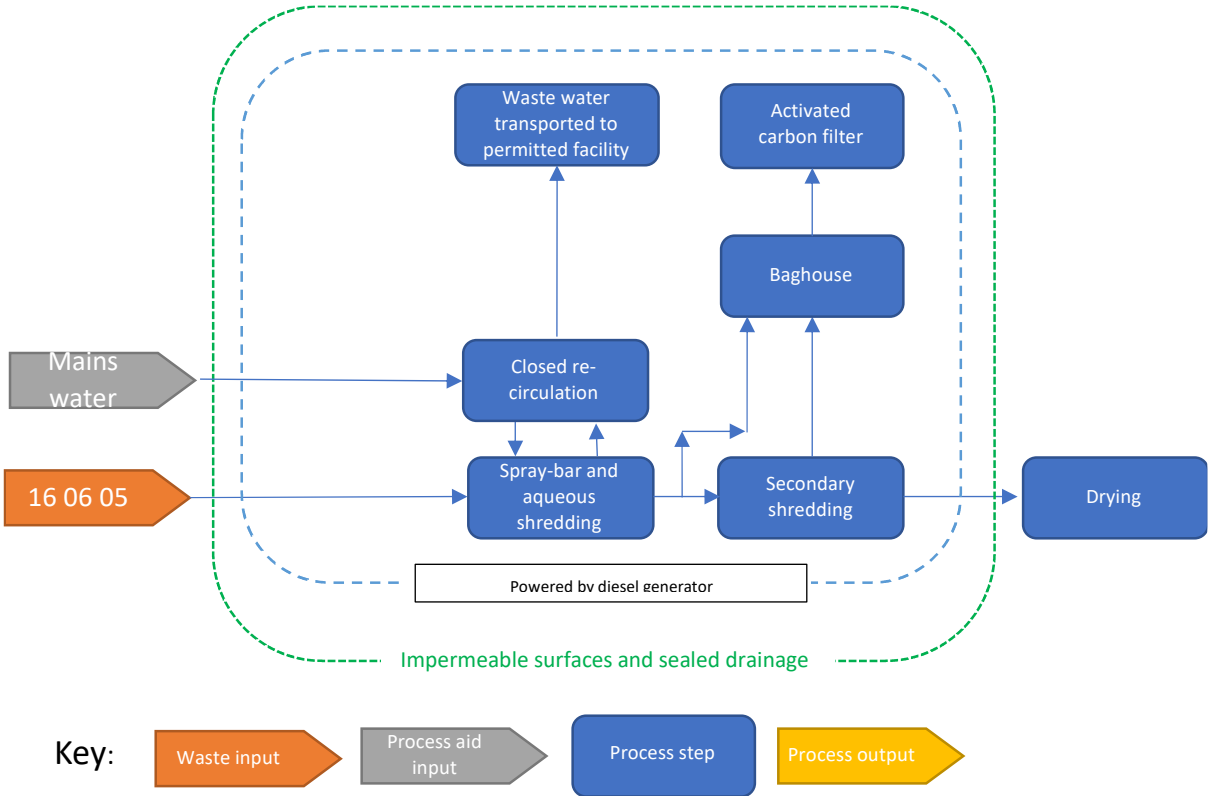
[8] Step-by-step procedures for each process for use by operators (eg start up and shut down) are available.

Claimed Confidential

Shredding stage (wet processing only)

The first stage of the process (arrows 1) involves the pre-shredding of the lithium-ion battery material, in a closed recirculation water system, which eliminates the risk of ignition in the materials being shredded. Any fumes and particles through active carbon filters so that there are no point source emissions. After this first shredding stage, secondary shredding takes place (arrow 2) before the material is conveyed (arrow 3) to the drying process to remove excess moisture before dry separation takes place. The Shredding process is illustrated in Figure 10.1 below. The Shredding through put is not more than 5 MT per hour, and typically only 2MT to 3MT per hour.

Figure 10.1 Shredding



Claimed Confidential

Drying stage (wet processing only)

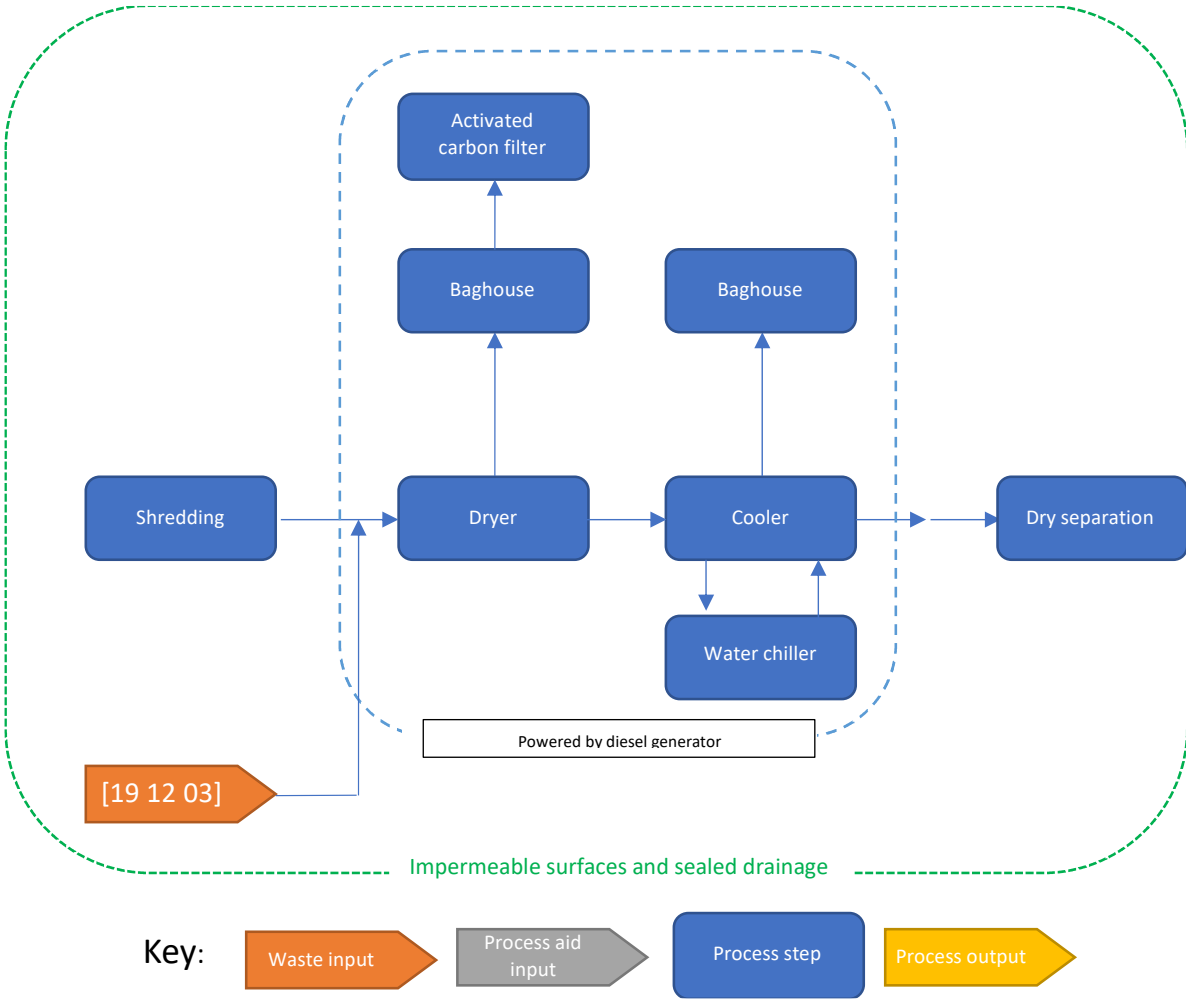
The drying process reduces moisture content in the material to less than 2%. The throughput is 3MT per hour.

The intermediate material process is received from the shredding process (arrow 3). Materials are fed into the infeed hopper where they are transported via conveyor into the Rotary Dryer. Material is heated and then cooled as it moves through the chambers (arrow 4). During the drying process there is removal of water (and any fumes and particles through active carbon filters so that there are no point source emissions).

The resultant 'dry' material is fed into the dry separation process (arrow 5) where different materials are separated.

The process is illustrated below in Figure 10.2 Drying process to remove moisture

Figure 10.2 Drying process to remove moisture



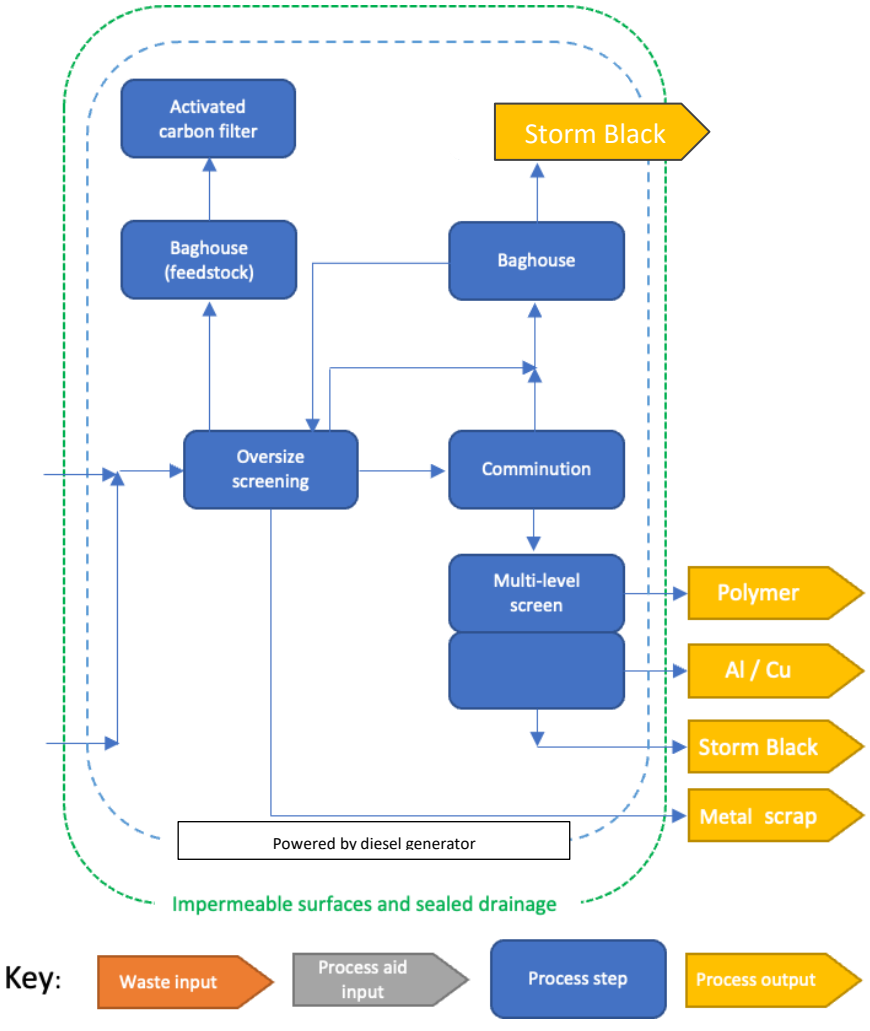
Dry separation process (wet and dry processing)

During the dry separation process, input materials are separated. The final fractions are metals, powders, and polymers. The feedstock from the drying process is fed (arrow 6) onto a conveyor (under extraction to ensure particles from the feedstock do not escape). The feedstock is milled (arrow 7) into small granules and particles ('comminution'). The granules and particles are then separated into different fractions through a sieving process. All materials are collected into each fraction into bulk bags to be transported to refining facilities. Particles of product extracted by the filter system (which is Storm Black) are collected in sealed bags to be sold as product. The output materials are:

- The Storm Black product (a black mass product used to make cathode precursor material).
- Copper – 19 12 03 which is transported to refining facilities to create new copper products;
- Aluminium – 19 12 03 which is transported to refining facilities to create new aluminium products;
- Polymers (PVDF) – 19 12 04 which is transported to an energy recovery facility.
- A small amount of metal scrap (<2%) – 19 12 02.

In the limited case where anode rather than cathode material is processed, graphite will be an output and would be classified as 19 10 06. No other waste is produced by the process. The copper and aluminium fractions are mixed granules which are separated again into separate bags of copper and aluminium using a gravity separation table. The process for dry materials integrates shredding with a conveyance of dry material to the shredder (arrow 1) and then direct conveyance of shredded intermediate material (arrow 2) to the dry separation line. The process is illustrated in Figure 10.3 Dry separation line.

Figure 10.3 Dry separation line



10.5 SSOP Annex 5: Noise Impact and Vibration Management Plan

The Noise Impact and Vibration Management Plan is provided as a separate accompanying document.

11.0 OTEMS Appendix 02: Current and Previous Permits

The current and previous permits are provided below.

Notice of variation with introductory note

Environmental Permitting (England & Wales) Regulations 2010

Mr. Nelson Penfold

Penfold's Waste Recycling Facility
Worle Quarry
Kewstoke Road
Weston-Super-Mare
BS22 9LF

Variation application number

EPR/BB3139RA/V002

Permit number

EPR/BB3139RA

Penfold's Waste Recycling Facility
Permit number EPR/BB3139RA

Introductory note

This introductory note does not form a part of the notice

The following notice gives notice of the variation of an environmental permit.

This is a variation made at the request of the operator to add End of Life Vehicle (ELV) depollution activities to the permit, this includes the depollution of aircraft engines.

The list of acceptable waste codes has been updated to reflect ELV wastes and the site boundary has also been extended. There is no increase to the annual through put of the facility.

The ability to accept the hazardous waste and to under take treatment and storage of ELV (including aircraft engines) is dependant on pre operational conditions being met relating to the sites infrastructure, these must be met to the satisfaction of the Environment Agency prior to these operations commencing.

The schedules specify the changes made to the original permit.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	**Date**	**Comments**
Permit Determined EPR/BB3139RA	02/12/2011	Permit issued for transfer station taking non-biodegradable wastes
Variation Application EPR/BB3139RA/V002	Duly made 14/03/2014	Application to vary permit to undertake depollution of ELV, add hazardous waste codes and increase site boundary.
Additional information received	30/06/2014	Drainage plan, updated waste codes and details of infrastructure
Variation determined EPR/BB3139RA	25/07/2014	Varied permit issued.

End of introductory note

Penfold's Waste Recycling Facility
Permit number EPR/BB3139RA

Introductory note

This introductory note does not form a part of the notice

The following notice gives notice of the variation of an environmental permit.

This is a variation made at the request of the operator to add End of Life Vehicle (ELV) depollution activities to the permit, this includes the depollution of aircraft engines.

The list of acceptable waste codes has been updated to reflect ELV wastes and the site boundary has also been extended. There is no increase to the annual through put of the facility.

The ability to accept the hazardous waste and to under take treatment and storage of ELV (including aircraft engines) is dependant on pre operational conditions being met relating to the sites infrastructure, these must be met to the satisfaction of the Environment Agency prior to these operations commencing.

The schedules specify the changes made to the original permit.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	**Date**	**Comments**
Permit Determined EPR/BB3139RA	02/12/2011	Permit issued for transfer station taking non-biodegradable wastes
Variation Application EPR/BB3139RA/V002	Duly made 14/03/2014	Application to vary permit to undertake depollution of ELV, add hazardous waste codes and increase site boundary.
Additional information received	30/06/2014	Drainage plan, updated waste codes and details of infrastructure
Variation determined EPR/BB3139RA	25/07/2014	Varied permit issued.

End of introductory note

Notice of variation

Environmental Permitting (England and Wales) Regulations 2010

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2010 varies

Permit number
EPR/BB3139RA

issued to:
Mr. Nelson Penfold ("the operator")

of

Penfold Trade and Co.
Worle Quarry
Kewstoke Road
Weston-Super-Mare
BS22 9LF

to operate a regulated facility at

Penfold's Waste Recycling Facility
Worle Quarry
Kewstoke Road
Weston-Super-Mare
BS22 9LF

to the extent set out in the schedules.

The notice shall take effect from 25/07/2014

Name	Date
Alan Whitley	**25/07/2014**

Authorised on behalf of the Environment Agency

Schedule 1 – conditions to be deleted

None

Schedule 2 – conditions to be amended

The following conditions are amended as a result of the application made by the operator:

Table S1.1 Activities	
Description of activities	Limits of activities
R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced) **R3**: Recycling/reclamation of organic substances which are not used as solvents **R4**: Recycling/reclamation of metals and metal compounds **R5**: Recycling/reclamation of other inorganic compounds	Treatment of End-of-life vehicles (ELV) including aircraft engines shall consist of depollution, sorting, separating, grading, baling, shearing, compacting, crushing or cutting of waste into different components. Uncontaminated plastic, glass and ferrous and non- ferrous metal wastes arising from the treatment of ELV (including aircraft engines) shall be stored on areas with either sealed drainage or drainage via interceptor and must either be hard standing or have an impermeable surface. Hazardous waste shall be stored on impermeable surface with sealed drainage. There shall be no treatment of hazardous waste other than depollution of ELVs (including aircraft engines). Except for ELVs (including aircraft engines) awaiting depollution and dismantling the maximum quantity of hazardous waste that can be stored at the site shall not exceed 50 tonnes at any one time. ELV and air craft engine depollution treatment activities must be carried out inside a building with an impermeable surface and sealed drainage system. There shall be no acceptance of asbestos waste except where asbestos may be present within parts of ELVs or air craft engines. There shall be no treatment of asbestos waste. Asbestos waste shall be double bagged, stored within clearly identified, segregated and secure containers on an impermeable surface with sealed drainage system. Lead acid batteries (EWC 16 06 01*) shall be stored in containers with an impermeable, acid resistant base and a lid to prevent ingress of water. For non hazardous wastes, excluding ELV and air craft engines, treatment shall consist only of manual sorting, separation, screening, baling, shredding, crushing or compaction of waste into

	different components for recovery. No more than a total of 50 tonnes of waste vehicle tyres (EWC 16 01 03 and 19 12 04) shall be stored at the site at any one time.

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
How to comply with your environmental permit	All	N/A
Response to Schedule 5 Notice dated 07/05/2014	Email dated 30/05/14 with infrastructure and hazardous waste details. Drainage plan attached not approved by EA. EA Approved drainage plan with reference SCR2 and email with supporting details.	30/05/2014 30/06/2014

Table S2.1 Permitted Waste types and quantities	
Maximum quantities The total quantity of waste accepted at the site shall be less than 125,000 tonnes per annum	
Exclusions Wastes having any of the following characteristics shall not be accepted: • Consisting solely or mainly of dusts, powders or loose fibres • Wastes that are in the form which is either sludge or liquid	
1	**WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS**
01 01	**wastes from mineral excavation**
01 01 01	wastes from mineral metalliferous excavation
01 01 02	wastes from mineral non-metalliferous excavation
01 03	**wastes from physical and chemical processing of metalliferous minerals**
01 03 06	tailings other than those mentioned in 01 03 04 and 01 03 05
01 03 09	red mud from alumina production other than the wastes mentioned in 01 03 07
01 04	**wastes from physical and chemical processing of non-metalliferous minerals**
01 04 08	waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	waste sand and clays

01 04 11	wastes from potash and rock salt processing other than those mentioned in 01 04 07
01 04 12	tailings and other wastes from washing and cleaning of minerals other than those mentioned in 01 04 07 and 01 04 11
01 04 13	wastes from stone cutting and sawing other than those mentioned in 01 04 07
2	**WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING**
02 01	**wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing**
02 01 03	plant-tissue waste
02 01 04	waste plastics (except packaging)
02 01 07	wastes from forestry
02 01 10	waste metal
02 04	**wastes from sugar processing**
02 04 01	soil from cleaning and washing beet
02 04 02	off-specification calcium carbonate
3	**WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD**
03 01	**wastes from wood processing and the production of panels and furniture**
03 01 01	waste bark and cork
03 01 05	sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04
03 03	**wastes from pulp, paper and cardboard production and processing**
03 03 01	waste bark and wood
03 03 07	mechanically separated rejects from pulping of waste paper and cardboard
03 03 08	wastes from sorting of paper and cardboard destined for recycling
03 03 10	fibre rejects, fibre-, filler- and coating-sludges from mechanical separation
4	**WASTES FROM THE LEATHER, FUR AND TEXTILE INDUSTRIES**
04 01	**wastes from the leather and fur industry**
04 01 08	waste tanned leather (blue sheetings, shavings, cuttings, buffing dust) containing chromium
04 01 09	wastes from dressing and finishing
04 02	**wastes from the textile industry**
04 02 21	wastes from unprocessed textile fibres
04 02 22	wastes from processed textile fibres
6	**WASTES FROM INORGANIC CHEMICAL PROCESSES**
06 09	**wastes from the MSFU of phosphorous chemicals and phosphorous chemical processes**
06 09 02	phosphorous slag
06 09 04	calcium-based reaction wastes other than those mentioned in 06 09 03
06 11	**wastes from the manufacture of inorganic pigments and opacificiers**
06 11 01	calcium-based reaction wastes from titanium dioxide production
7	**WASTES FROM ORGANIC CHEMICAL PROCESSES**
07 02	**wastes from the MFSU of plastics, synthetic rubber and man-made fibres**
07 02 13	waste plastic
8	**WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS**

08 04	**wastes from MFSU of adhesives and sealants (including waterproofing products)**
08 04 10	waste adhesives and sealants other than those mentioned in 08 04 09
9	**WASTES FROM THE PHOTOGRAPHIC INDUSTRY**
09 01	**wastes from the photographic industry**
09 01 07	photographic film and paper containing silver or silver compounds
09 01 08	photographic film and paper free of silver or silver compounds
09 01 10	single-use cameras without batteries
09 01 12	single-use cameras containing batteries other than those mentioned in 09 01 11
10	**WASTES FROM THERMAL PROCESSES**
10 01	**wastes from power stations and other combustion plants (except 19)**
10 01 01	bottom ash, slag and boiler dust (excluding boiler dust mentioned in 10 01 04)
10 01 05	calcium-based reaction wastes from flue-gas desulphurisation in solid form
10 01 07	calcium-based reaction wastes from flue-gas desulphurisation in sludge form
10 01 15	bottom ash, slag and boiler dust from co-incineration other than those mentioned in 10 01 14
10 01 19	wastes from gas cleaning other than those mentioned in 10 01 05, 10 01 07 and 10 01 18
10 01 24	sands from fluidised beds
10 02	**wastes from the iron and steel industry**
10 02 01	wastes from the processing of slag
10 02 02	unprocessed slag
10 02 08	solid wastes from gas treatment other than those mentioned in 10 02 07
10 02 10	mill scales
10 02 14	sludges and filter cakes from gas treatment other than those mentioned in 10 02 13
10 02 15	other sludges and filter cakes
10 03	**wastes from aluminium thermal metallurgy**
10 03 02	anode scraps
10 03 05	waste alumina
10 03 16	skimmings other than those mentioned in 10 03 15
10 03 18	carbon-containing wastes from anode manufacture other than those mentioned in 10 03 17
10 03 24	solid wastes from gas treatment other than those mentioned in 10 03 23
10 03 26	sludges and filter cakes from gas treatment other than those mentioned in 10 03 25
10 03 28	wastes from cooling-water treatment other than those mentioned in 10 03 27
10 03 30	wastes from treatment of salt slags and black drosses other than those mentioned in 10 03 29
10 04	**wastes from lead thermal metallurgy**
10 04 10	wastes from cooling-water treatment other than those mentioned in 10 04 09
10 05	**wastes from zinc thermal metallurgy**
10 05 01	slags from primary and secondary production
10 05 09	wastes from cooling-water treatment other than those mentioned in 10 05 08
10 05 11	dross and skimmings other than those mentioned in 10 05 10
10 06	**wastes from copper thermal metallurgy**
10 06 01	slags from primary and secondary production

10 06 02	dross and skimmings from primary and secondary production
10 06 10	wastes from cooling-water treatment other than those mentioned in 10 06 09
10 07	**wastes from silver, gold and platinum thermal metallurgy**
10 07 01	slags from primary and secondary production
10 07 02	dross and skimmings from primary and secondary production
10 07 03	solid wastes from gas treatment
10 07 05	sludges and filter cakes from gas treatment
10 07 08	wastes from cooling-water treatment other than those mentioned in 10 07 07
10 08	**wastes from other non-ferrous thermal metallurgy**
10 08 09	other slags
10 08 11	dross and skimmings other than those mentioned in 10 08 10
10 08 13	carbon-containing wastes from anode manufacture other than those mentioned in 10 08 12
10 08 14	anode scrap
10 08 18	sludges and filter cakes from flue-gas treatment other than those mentioned in 10 08 17
10 08 20	wastes from cooling-water treatment other than those mentioned in 10 08 19
10 09	**wastes from casting of ferrous pieces**
10 09 03	furnace slag
10 09 06	casting cores and moulds which have not undergone pouring other than those mentioned in 10 09 05
10 09 08	casting cores and moulds which have undergone pouring other than those mentioned in 10 09 07
10 09 14	waste binders other than those mentioned in 10 09 13
10 09 16	waste crack-indicating agent other than those mentioned in 10 09 15
10 10	**wastes from casting of non-ferrous pieces**
10 10 03	furnace slag
10 10 06	casting cores and moulds which have not undergone pouring, other than those mentioned in 10 10 05
10 10 08	casting cores and moulds which have undergone pouring, other than those mentioned in 10 10 07
10 10 14	waste binders other than those mentioned in 10 10 13
10 10 16	waste crack-indicating agent other than those mentioned in 10 10 15
10 11	**wastes from manufacture of glass and glass products**
10 11 03	waste glass-based fibrous materials
10 11 10	waste preparation mixture before thermal processing, other than those mentioned in 10 11 09
10 11 12	waste glass other than those mentioned in 10 11 11
10 11 16	solid wastes from flue-gas treatment other than those mentioned in 10 11 15
10 11 18	sludges and filter cakes from flue-gas treatment other than those mentioned in 10 11 17
10 12	**wastes from manufacture of ceramic goods, bricks, tiles and construction products**
10 12 01	waste preparation mixture before thermal processing
10 12 05	sludges and filter cakes from gas treatment
10 12 06	discarded moulds
10 12 08	waste ceramics, bricks, tiles and construction products (after thermal processing)
10 12 10	solid wastes from gas treatment other than those mentioned in 10 12 09
10 12 12	wastes from glazing other than those mentioned in 10 12 11

10 13	**wastes from manufacture of cement, lime and plaster and articles and products made from them**
10 13 01	waste preparation mixture before thermal processing
10 13 04	wastes from calcination and hydration of lime
10 13 07	sludges and filter cakes from gas treatment
10 13 10	wastes from asbestos-cement manufacture other than those mentioned in 10 13 09
10 13 11	wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10
10 13 13	solid wastes from gas treatment other than those mentioned in 10 13 12
10 13 14	waste concrete and concrete sludge
11	**WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY**
11 01	**wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphatising, alkaline degreasing, anodising)**
11 01 10	sludges and filter cakes other than those mentioned in 11 01 09
11 01 14	degreasing wastes other than those mentioned in 11 01 13
11 02	**wastes from non-ferrous hydrometallurgical processes**
11 02 03	wastes from the production of anodes for aqueous electrolytical processes
11 02 06	wastes from copper hydrometallurgical processes other than those mentioned in 11 02 05
11 05	**wastes from hot galvanising processes**
11 05 01	hard zinc
11 05 02	zinc ash
12	**WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS**
12 01	**wastes from shaping and physical and mechanical surface treatment of metals and plastics**
12 01 01	ferrous metal filings and turnings
12 01 02	ferrous metal dust and particles
12 01 03	non-ferrous metal filings and turnings
12 01 04	non-ferrous metal dust and particles
12 01 05	plastics shavings and turnings
12 01 13	welding wastes
12 01 17	waste blasting material other than those mentioned in 12 01 16
12 01 21	spent grinding bodies and grinding materials other than those mentioned in 12 01 20
15	**WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED**
15 01	**packaging (including separately collected municipal packaging waste)**
15 01 01	paper and cardboard packaging
15 01 02	plastic packaging
15 01 03	wooden packaging
15 01 04	metallic packaging
15 01 05	composite packaging
15 01 06	mixed packaging
15 01 07	glass packaging
15 01 09	textile packaging
15 02	**absorbents, filter materials, wiping cloths and protective clothing**

15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
16	**WASTES NOT OTHERWISE SPECIFIED IN THE LIST**
16 01	**end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)**
16 01 03	end-of-life tyres
16 01 04*	end-of-life vehicles (including air craft engines not subject to ELV directive)
16 01 06	end-of-life vehicles, containing neither liquids nor other hazardous components (including air craft engines not subject to ELV directive)
16 01 07*	oil filters
16 01 12	brake pads other than those mentioned in 16 01 11
16 01 15	antifreeze fluids other than those mentioned in 16 01 14
16 01 17	ferrous metal
16 01 18	non-ferrous metal
16 01 19	plastic
16 01 20	glass
16 01 21*	hazardous components other than those mentioned in 16 01 07 to 16 01 11 and 16 01 13 and 16 01 14
16 01 22	components not otherwise specified
16 02	**wastes from electrical and electronic equipment**
16 02 14	discarded equipment other than those mentioned in 16 02 09 to 16 02 13
16 02 16	components removed from discarded equipment other than those mentioned in 16 02 15
16 03	**off-specification batches and unused products**
16 03 04	inorganic wastes other than those mentioned in 16 03 03
16 03 06	organic wastes other than those mentioned in 16 03 05
16 06	**batteries and accumulators**
16 06 01*	lead batteries
16 06 02*	Ni-Cd batteries
16 06 04	alkaline batteries (except 16 06 03)
16 06 05	other batteries and accumulators
16 08	**spent catalysts**
16 08 01	spent catalysts containing gold, silver, rhenium, rhodium, palladium, iridium or platinum (except 16 08 07)
16 08 03	spent catalysts containing transition metals or transition metal compounds not otherwise specified
16 08 04	spent fluid catalytic cracking catalysts (except 16 08 07)
16 11	**waste linings and refractories**
16 11 02	carbon-based linings and refractories from metallurgical processes others than those mentioned in 16 11 01
16 11 04	other linings and refractories from metallurgical processes other than those mentioned in 16 11 03
16 11 06	linings and refractories from non-metallurgical processes others than those mentioned in 16 11 05
17	**CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)**
17 01	**concrete, bricks, tiles and ceramics**
17 01 01	concrete
17 01 02	bricks

17 01 03	tiles and ceramics
17 01 07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
17 02	**wood, glass and plastic**
17 02 01	wood
17 02 02	glass
17 02 03	plastic
17 03	**bituminous mixtures, coal tar and tarred products**
17 03 02	bituminous mixtures other than those mentioned in 17 03 01
17 04	**metals (including their alloys)**
17 04 01	copper, bronze, brass
17 04 02	aluminium
17 04 03	lead
17 04 04	zinc
17 04 05	iron and steel
17 04 06	tin
17 04 07	mixed metals
17 04 11	cables other than those mentioned in 17 04 10
17 05	**soil (including excavated soil from contaminated sites), stones and dredging spoil**
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 08	track ballast other than those mentioned in 17 05 07
17 06	**insulation materials and asbestos-containing construction materials**
17 06 04	insulation materials other than those mentioned in 17 06 01 and 17 06 03
17 08	**gypsum-based construction material**
17 08 02	gypsum-based construction materials other than those mentioned in 17 08 01
17 09	**other construction and demolition wastes**
17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
19	**WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE**
19 01	**wastes from incineration or pyrolysis of waste**
19 01 02	ferrous materials removed from bottom ash
19 01 12	bottom ash and slag other than those mentioned in 19 01 11
19 01 18	pyrolysis wastes other than those mentioned in 19 01 17
19 01 19	sands from fluidised beds
19 02	**wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)**
19 02 03	premixed wastes composed only of non-hazardous wastes
19 02 10	combustible wastes other than those mentioned in 19 02 08 and 19 02 09
19 04	**vitrified waste and wastes from vitrification**
19 04 01	vitrified waste
19 10	**wastes from shredding of metal-containing wastes**
19 10 01	iron and steel waste
19 10 02	non-ferrous waste

19 10 04	fluff-light fraction and dust other than those mentioned in 19 10 03
19 10 06	other fractions other than those mentioned in 19 10 05
19 12	**wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified**
19 12 01	paper and cardboard
19 12 02	ferrous metal
19 12 03	non-ferrous metal
19 12 04	plastic and rubber
19 12 05	glass
19 12 07	wood other than that mentioned in 19 12 06
19 12 08	textiles
19 12 09	minerals (for example sand, stones)
19 12 10	combustible waste (refuse derived fuel)
19 13	**wastes from soil and groundwater remediation**
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01
20	**MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS**
20 01	**separately collected fractions (except 15 01)**
20 01 01	paper and cardboard
20 01 02	glass
20 01 10	clothes
20 01 11	textiles
20 01 34	batteries and accumulators other than those mentioned in 20 01 33
20 01 36	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35
20 01 38	wood other than that mentioned in 20 01 37
20 01 39	plastics
20 01 40	metals
20 01 41	wastes from chimney sweeping
20 02	**garden and park wastes (including cemetery waste)**
20 02 02	soil and stones
20 03	**other municipal wastes**
20 03 07	bulky waste

Schedule 3 – conditions to be added

The following conditions as a result of the application made by the operator:

2.5. Pre-operational conditions

2.5.1 The activities in this notice shall not begin until the measures specified in table S1.3 have been completed to the written satisfaction of the Environment Agency.

Table S1.3 Pre-operational measures

Reference	Pre-operational measures
1	There shall be no storage or treatment of End-of-life vehicles (ELV) including air craft engines until the site has impermeable surfacing and sealed drainage installed for the areas where hazardous waste will be stored and where depollution of ELVs and aircraft engines will occur.
2	Site infrastructure including the impermeable surface and sealed drainage system must be inspected and deemed as satisfactory by the Environment Agency in writing before ELVs and air craft engines can be stored or treated under this notice.
3	ELV (including aircraft engines) activities shall not commence until an environmental management system (otherwise known as an operating techniques document) has been supplied by the operator and approved in writing by the Environment Agency.

2.4 Technical requirements

2.4.8 The storage (including temporary storage) and treatment of waste motor vehicles shall meet the requirements of article 6(1) of the End-of-Life Vehicles Directive.

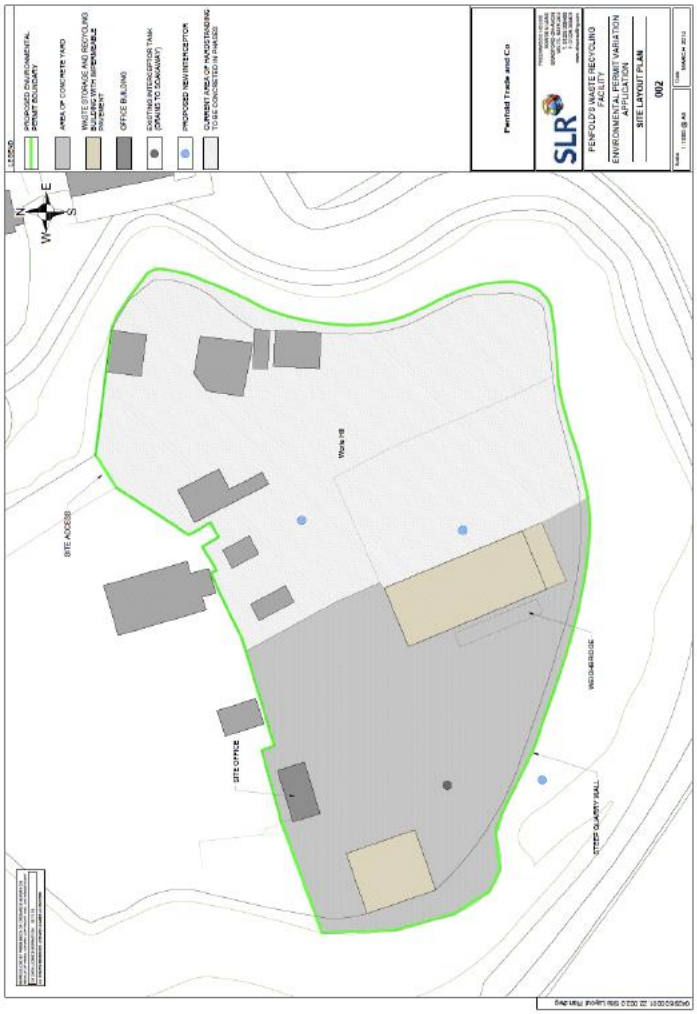
2.4.9 Hazardous waste shall not be mixed, either with a different category of hazardous waste or with other waste, substances or materials, unless it is authorised by schedule 1 table S1.1 and appropriate measures are taken.

3.2 Emissions of substances not controlled by emission limits

3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

Schedule 4 – amended plan

Amended plan attached



Notice of transfer and Environment Agency initiated variation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Lincoln Storm Ltd

Penfold's Waste Recycling Facility
Worle Quarry
Kewstoke Road
Weston-Super-Mare
BS22 9LF

Transfer application number

EPR/KB3002CW/T001

Permit number

EPR/KB3002CW

Penfold's Waste Recycling Facility
Permit number EPR/KB3002CW

Introductory note

This introductory note does not form a part of the notice.

The following notice gives notice of the transfer of an environmental permit to a new operator (the transferee) and notice of an Environment Agency initiated variation of the environmental permit carried out at the time of transfer.

Any changes made as a result of the transfer are set out in the schedules.

This permit authorises the storage of combustible waste and so we have varied it to include a standard condition that requires operators to take all appropriate measures to prevent fires on site and minimise the risk of pollution from them and, if required by us, to submit for approval a fire prevention plan that once approved must be implemented.

The changes made to the original permit as a result of the Environment Agency initiated variation are set out in schedule 3.

We consider that in reaching our decision to transfer and vary the permit we have taken into account all relevant considerations and legal requirements. We are satisfied that the permit will ensure that a high level of protection is provided for the environment and human health and that the activities will not give rise to any significant pollution of the environment or harm to human health.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	**Date**	**Comments**
Permit Determined EPR/BB3139RA	02/12/2011	Permit issued for transfer station taking non-biodegradable wastes.
Variation determined EPR/BB3139RA	25/07/2014	Permit varied to add depollution of end-of-life vehicles, add hazardous waste codes and increase site boundary.
Application EPR/KB3002CW/T001 (full transfer of permit EPR/BB3139RA)	Duly made 03/05/2022	Application to transfer the permit in full to Lincoln Storm Ltd.
Transfer and Environment Agency variation determined EPR/KB3002CW	02/11/2022	Full transfer and Environment Agency initiated variation of permit complete.

End of introductory note

Notice of transfer and Environment Agency initiated variation

The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 21 of the Environmental Permitting (England and Wales) Regulations 2016 transfers and under regulation 20 varies at its own initiative

Permit number

EPR/BB3139RA

to

Lincoln Storm Ltd

whose registered office is

3 Whittaker Close
Congleton
CW12 1LW

company registration number 13780413

to operate a regulated facility at

Penfold's Waste Recycling Facility
Worle Quarry
Kewstoke Road
Weston-Super-Mare
BS22 9LF

from Mr. Nelson Penfold

The notice shall take effect from 02/11/2022

The number of the new permit granted to Lincoln Storm Ltd is EPR/KB3002CW

Name	Date
Eleanor Blackeby	02/11/2022

Authorised on behalf of the Environment Agency

Schedule 1 – conditions to be deleted

None.

Schedule 2 – conditions to be amended

None.

Schedule 3 – conditions to be added

The following conditions are added following an Environment Agency initiated variation.

3.5 Fire prevention

3.5.1 The operator shall take all appropriate measures to prevent fires on site and minimise the risk of pollution from them including, but not limited to, those specified in any approved fire prevention plan.

3.5.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to a risk of fire, submit to the Environment Agency for approval within the period specified, a fire prevention plan which prevents fires and minimises the risk of pollution from fires;

(b) implement the fire prevention plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

12.0 OTEMS Appendix 03: Site Training Procedure

Site Training Procedure

PRINCIPLE

The purpose of this standard operating procedure is to ensure that all employees are trained sufficiently on site.

SCOPE

This procedure describes how training is implemented at Lincoln Storm's Worle Facility.

RESPONSIBILITY

All site operatives are responsible for carrying out this procedure as detailed below. Any changes required are the responsibility of the Site Manager, or designated person, to update and re-issue the amended procedure.

The Site Manager will have the overall day to day responsibility of ensuring that this procedure is upheld for all activities on site.

Training

The site is managed by sufficient numbers of employees competent to operate the site in compliance with the Environmental Permit. All employees have clearly defined roles and responsibilities.

Training is provided:

- When a new employee/site operative begins work on site;
- When new controls and equipment are introduced on site, thereby changing the site's operating procedures;
- When the waste plant process on site is amended or altered;
- If an audit identifies a particular training need;
- If any significant details change in the Site-Specific Operating Procedures (SSOP) document or Operating Techniques and Environmental Management System (OTEMS); and
- To ensure that all site operatives are aware of the possible consequences of any movement away from these procedures.

Site Operative Training

The Site Manager is responsible for ensuring that all site operatives receive the correct level of training and any new site operatives receive an initial induction. All new site operatives are provided with clear instructions regarding their individual tasks and requirements.

In particular, emphases on ensuring all site operatives are aware of the following aspects and environmental considerations are undertaken:

- The conditions set out in the Environmental Permit, such as permitted waste codes (EWC) and activities;
- The roles and responsibilities of all site operatives to ensure that all aspects of the SSOPs and EMS are complied with; and
- That by working in conjunction with the SSOPs, all environmental aspects and impacts will be controlled.

Training is undertaken as required to ensure that site operatives are familiar with their responsibilities and the conditions of the Environmental Permit. Training is also provided to ensure that site operatives are fully aware of how to maintain optimal plant performance.

A training record is kept in the site office for all site operatives. The following appendices to this procedure illustrate the way in which training is recorded:

A: Staff Responsibilities

- Records the name and position within the company;
- What part of the permit they take responsibility for;
- Any other legislative responsibilities they may have; and
- The training received to ensure that the site operative is technically competent.

B: Training Record

- The topic covered;
- The date carried out and who by;
- Details of attendees; and
- Confirmation of understanding.

C: Training Requirements

- Type of employee on site;
- List of topics where training is available; and
- A record of which employees require which training.

D: Training Matrix

- The name of employee within the company;
- A list of all the training courses offered by the company; and
- A record of who has attended each training course.

The training requirements of existing and new site operatives are reviewed annually. Training at Lincoln Storm is an ongoing process, to comply with relevant legislation and the conditions of the Environment Permit. Training is also provided to develop the potential and ability of each individual.

All operations at the site are under the control of a technically competent person who holds the relevant Certificate of Technical Competence (COTC) under the Waste Management Industry Training and Advisory Board (WAMITAB) scheme.

The technically competent persons on site are illustrated on the relevant WAMITAB certificates.

Health and Safety requirements are not covered by this OTEMS, however all site operatives attend Health and Safety courses to cover the requirements.

Any contractors enrolled on site receive a suitable induction for Health and Safety and environmental risks.

All training records are kept in the site office.

Health and safety

All site operatives shall work with due regards to all relevant Health and Safety Regulations currently in existence relevant to operations on site.

NOTIFICATION AND DISTRIBUTION LISTS

Once approved this document shall be published and will be effective from date of approval. Where appropriate, paper copies of this document shall be distributed as Controlled copies.

The appropriate QA Administrator (QAA) shall be responsible for updating a distribution list for each paper copy issued. The QAA is also responsible for the retention of a file copy for Business Continuity.

Electronic notification to named users shall be recorded in the Audit History Report when a document is published/becomes approved or effective.

CIRCULATION LIST

Location	Document Type
Site Office	Paper copy
Head Office	Paper copy

13.0 OTEMS Appendix 04: Certificates

These are the certificates for the Technically Competent Manager (TCM) currently Mr Ricky O'Brien, who will be be succeeded by Mr Scott Mackenzie when the latter has completed his hazardous materials competence qualifications in August. Mr Mackenzie is the current TCM at the site. Mt Steven Nash, the current site manager is in the process of obtaining his WAMITAB qualification.

wamitab

Operator Competence Certificate

Title:

Physical and Chemical Treatment of Hazardous Waste

This Certificate is awarded to

Ricky Nathan O'Brien

Verification date: 19/12/2018
Authorised:

Learner ID: 30879
Certificate No.: 5137525
Date of Issue: 19/12/2018

WAMITAB Chief Executive Officer

CIWM Executive Director

The Chartered Institution of Wastes Management

This certificate is jointly awarded by WAMITAB and the Chartered Institution of Wastes Management (CIWM) and provides evidence to meet the Operator Competence requirements of the Environmental Permitting (EP) Regulations, which came into force on 6 April 2008.

00122530

wamitab

Qualification Title:

WAMITAB Level 4 High Risk Operator Competence for Managing Physical and Chemical Treatment of Hazardous Waste

Qualification Accreditation Number:

601/8502/8

This Certificate is awarded to

Ricky Nathan O'Brien

Verification date: 19/12/2018
Authorised:

Learner ID: 30879
Certificate No.: 5137525
Date of Issue: 19/12/2018

Chris James
WAMITAB Chief Executive Officer

Regulated by Ofqual

Corff dyfarnu cydnabyddedig Cymwysterau Cymru Qualifications Wales Recognised awarding body

Regulation

The qualifications regulators logos on this certificate indicate that the qualification is accredited only for England, Wales and Northern Ireland. Qualifications Wales regulates this qualification where it is awarded to learners assessed wholly or mainly in Wales.

00122528

wamitab

Credit certificate
This certificate determines credit awarded to:

Ricky Nathan O'Brien

Units gained:

		Credit Value	Credit Level
A/508/0756	Maintain health and safety in the waste resource management industry	4	L4
F/508/0757	Manage the environmental impact of work activities	3	L4
F/508/0760	Manage the movement, sorting and storage of waste	5	L4
R/508/0861	Control work activities on a waste management facility	6	L4
K/508/0882	Identify and implement improvements to waste management operations	3	L4
M/508/0883	Control maintenance and other engineering operations	5	L4
T/508/0884	Procedural Compliance	4	L4
A/508/0885	Manage and maintain systems for responding to emergencies	3	L4
F/508/0886	Manage the reception of hazardous waste	7	L4
M/508/0978	Manage transfer and disposal from hazardous waste treatment and recovery operations	9	L4
H/508/0993	Manage site operations for the treatment of hazardous waste	9	L4
Y/508/0974	Manage an inspection visit at your site from regulatory bodies	6	L4

Verification date: 19/12/2018
Authorised:

Learner ID: 30879
Certificate No.: 5137525
Date of Issue: 19/12/2018

Chris James
WAMITAB Chief Executive Officer

Regulated by Ofqual

Corff dyfarnu cydnabyddedig Cymwysterau Cymru Qualifications Wales Recognised awarding body

The qualifications regulators logos on this certificate indicate that the qualification is accredited only for England, Wales and Northern Ireland. Qualifications Wales regulates this qualification where it is awarded to learners assessed wholly or mainly in Wales.

00122529

CIWM

Continuing Competence Certificate

This certificate confirms that

Ricky O'Brien

Has met the relevant requirements of the Continuing Competence scheme for the following award(s) which will remain current for two years from 13/01/2023

TSH	Transfer - Hazardous Waste
TMH	Treatment - Hazardous Waste
ELV	End-of-Life Vehicles

Expiry Date: 13/01/2025

Verification date: 22/12/2022
Authorised:

Learner ID: 30879
Certificate No.: 5215087
Date of Issue: 13/01/2023

Professional Services Director

CIWM Chief Executive Officer

The Chartered Institution of Wastes Management

Scan code on reverse to authenticate that this is a genuine paper

WAMITAB

Waste Management Industry
Training and Advisory Board

Qualification Title:

WAMITAB Level 3 Award in Waste and Resource Management - Physical Processing (QCF) - 3VWRMa

Qualification Accreditation Number:

603/0043/X

This Certificate is awarded to

Scott Mackenzie

Awarded: 17/12/2012 **Serial No:** 23482/3VWRMa/1

Authorised

Ray Burberry
Qualifications Manager, WAMITAB

00026145

WAMITAB

Waste Management Industry
Training and Advisory Board

Credit certificate
This certificate determines credit awarded to:

Scott Mackenzie

Units gained:

		Credit Value	Credit Level
A/502/3361	Environmental Impact of Waste and Resources Management	1	3
F/502/3362	Waste and Resources Management Industry Regulatory Policy and Legislation	2	3
J/502/3363	Permitting Requirements and Compliance in the Waste and Resources Management Industry	3	3
L/502/3634	Health and Safety in the Waste and Resources Management Industry	3	3
R/502/3365	Technical aspects of Managing Wastes and Resources	3	3
T/502/3366	Physical Processing within the Waste and Resources Management Industry	3	3

Awarded: 17/12/2012 **Serial No:** 23482/3VWRMa/1

Authorised

Ray Burberry
Qualifications Manager, WAMITAB

Ofqual

The qualifications regulators logos on this certificate indicate that the qualification is accredited only for England, Wales and Northern Ireland.

00026145

WAMITAB

Waste Management Industry
Training and Advisory Board

Certificate No. DOC3487

Operator Competence Certificate

Qualification Title:
Waste and Resource Management - Physical Processing - 3VWRMa

This Certificate is awarded to

Scott Mackenzie

Awarded: 17/12/2012

Authorised

WAMITAB Chief Executive Officer

CIWM Chief Executive Officer

This certificate is jointly awarded by WAMITAB and the Chartered Institution of Wastes Management (CIWM) and provides evidence to meet the Operator Competence requirements of the Environmental Permitting (EP) Regulations, which came into force on 6 April 2008.

00026141

CIWM | CIWM (WAMITAB) Qualifications

IMPORTANT NOTICE – PLEASE RETAIN FOR YOUR RECORDS

Score Report

CIWM (WAMITAB) Continuing Competence Test
Name: Scott J Mackenzie
Date of test: 05-Jul-2023
Registration ID: 454026687

Continuing Competency Test Results

Activity	Number of Correct Answers	Score	Overall Grade
Treatment Hazardous Waste	20 out of 30	67%	Fail
Treatment Non-Hazardous Waste	24 out of 30	80%	Pass
Transfer Non-Hazardous Waste	25 out of 30	83%	Pass

A breakdown of your results is shown below.

Generic Knowledge Test (GKT) Marks

Section Title	Number of Correct Answers
Generic Health & Safety	5 out of 6
Generic Legislation	5 out of 6
Generic Environmental Protection	4 out of 6

Activity Specific Test (AST) Marks

Section Title	Number of Correct Answers
Treatment Hazardous Waste	8 out of 12
Treatment Non-Hazardous Waste	10 out of 12
Transfer Non-Hazardous Waste	11 out of 12

14.0 OTEMS Appendix 05: Daily Monitoring Checklist

This document is to be used alongside the site diary (see **FPP appendices**)

Daily Monitoring Checklist for Lincoln Storm Limited Worle Facility

Date of Inspection:

Inspection Carried out by:

Inspection Areas		Compliant		Comments
		Yes	No	
1	Technically Competent Manager on site – attendance hours on site, any compliance issues dealt with, any issues that need to be dealt with (please detail in the comments section).			
2	Access Road – is the area clear of mud and litter? Is there suitable access to the site for all vehicles?			
3	Internal Roads – are roads clear of mud and litter?			
4	Site Gate/Barrier – is the gate in good condition and suitable for use? Is the site			
5	Perimeter Fencing – any deterioration noted, or any repairs required?			
6	Weighbridge – clear and suitable for use? Calibration records up to date?			
7	Fire Extinguishers – are all fire extinguishers in place?			
8	Litter/General Site Tidiness – are there any litter/waste spillages in the yard area? Has any litter escaped the site boundary?			
9	Storage bays and stockpiles – is all waste contained within each dedicated bay or			

	stockpile, are there any spillages?			
10	Meteorological Conditions – ensure record of wind speed and direction is kept.			
11	Weighbridge Office – is the weighbridge office sufficiently staffed? Is the OT and EMS and Environmental Permit available to all site operatives/visitors?			
12	Vermin/Birds – are there any signs of birds, rats etc. (droppings, visible vermin/seagulls/pigeons etc.)			
13	Noise – is there excessive noise associated with operations on site? Is the level of noise at the site boundary/entrance acceptable?			
14	Dust – are there any signs of dust within and outside the site boundary?			
15	Odour – is there any particularly odorous waste stored on site, if so – sniff test undertaken to ensure odour levels are controlled, if particularly odorous – discuss with the Site Manager and refer to Section 6.5 of OT and EMS.			
16	Surfacing and Drainage System – are all drains clear of debris and in good working order? Is all surfacing in good condition?			
17	Lighting – is the site lit sufficiently?			
18	Maintenance Schedule – is the schedule up to date? Is all plant fit for purpose?			
19	Fuel storage/waste oil storage – is the fuel storage area bundling in good working order/fit for purpose, check for any leaks or spills.			
20	Condition of welfare facilities – general good			

	housekeeping checks – clean, tidy, health and safety (trip hazards etc.)			
21	Visitors on site – if there are any visitors, have they signed into the visitor's book, wearing the appropriate Personal Protective Equipment (PPE) (boots, high visibility jacket, hard hat and goggles as appropriate) and accompanied by a site operative?			
22	Complaints – any complaints received that need to be recorded?			
23	Conditions of CCTV & Alarm – ensure the equipment is in good working order and fit for purpose.			
24	Breakdowns – any vehicle or plant breakdowns?			
25	Pollution Incident – have there been any pollution incidents identified – in terms of dust, spillages, odour etc.			
26	Site Board – is the board in good working order and can be read?			
27	Conation of Tanks & Gulley's – are all tanks in good working order, bunds empty, no spillages?			
28	First Aid Stocks – are all first aid boxes filled with appropriate contents? If not, make a record and discuss with the Site Manager.			
29	Workstation conditions – clean and tidy? Safe to work in? Operators wearing appropriate PPE?			

30	Electrical Risks			
31	Trip Hazards – are all areas of the site clean and tidy, no trip hazards in areas where pedestrians walk?			
	ADDITIONAL NOTES			

15.0 OTEMS Appendix 06: (a) Complaints Procedure and (b) Record Form

Complaints Procedure

PRINCIPLE

This section outlines the general procedure for receiving a complaint at Lincoln Storm's Worle Facility. The purpose of this procedure is to ensure that any site operative working on site is aware of the procedures for the correct recording of a complaint.

SCOPE

This procedure covers how to record and respond to a complaint.

RESPONSIBILITY

All site operatives are responsible for carrying out the procedure as detailed below. Any changes required are the responsibility of the Site Manager or designated person to update and re-issue the amended procedure.

Complaints record

Any complaints received from the local public or any local receptor are to be recorded on the Complaints Record form. The complaint is also to be recorded in the site diary.

All site operatives are required to follow the steps set out below if a complaint is received at the site;

1. Record details of the complainant (including; name, address and a telephone number) if provided.
2. Make a record of the date and time the complaint was made.
3. What happened, what was the complaint actually about?
4. Was anyone else on site or other stakeholders aware of the issue and if so, who?
5. Once confirmation is made that the complaint issue relates to the site, investigate the source of the problem. Contact the Site Manager
6. Record how the site has implemented methods to ensure the issue will not cause complaint in the future.
7. Make a record of any signs of pollution. If the complaint (such as emissions to groundwater or a local watercourse) is significant, the Environment Agency will need to be contacted on 0800 807060 as soon as possible. The severity of the incident shall be determined by the Site Manager.
8. The Site Manager shall send an email to the local Environment Agency office.
9. All Complaint Record forms shall be signed and dated.

Any actions taken in response to the complaint are to be recorded on the Complaints Record form and the site diary.

On site visits, if the local Environment Agency Site Officer requests to see the site diary, all complaints should be shown.

The complaints received are to be reviewed at future site audits to ensure these complaints will be avoided in the future.

Health and safety

All site operatives shall work with due regard to all relevant Health and Safety Regulations currently in existence relevant to operations on site.

NOTIFICATION AND DISTRIBUTION LISTS

Once approved this document shall be published and will be effective from date of approval. Where appropriate, paper copies of this document shall be distributed as Controlled copies.

Electronic notification to named users shall be recorded in the Audit History Report when a document is published/becomes approved or effective.

LINCOLN STORM LIMITED

COMPLAINTS FORM

	REPORT No.
Message/Letter recieved by:	Date Received:
Passed to:	Time:

1) COMPLAINANT

Name: .....

Address: .....

.....

Post Code.....

Telephone:.....

2) NATURE OF COMPLAINT

Description:

Date of incident:.....

3) INVESTIGATION AND ACTION TAKEN

Complaintant contact: IN WRITING/TELEPHONE/FAX/E-MAIL/IN PERSON

SIGNATURE:

NAME:

DATE:

16.0 OTEMS Appendix 07: (a) Maintenance procedure (b) checklist (c) record

Maintenance Procedure

PRINCIPLE

This section outlines the maintenance program currently implemented on site.

SCOPE

This procedure covers the maintenance programme and recording system that all Lincoln Storm's Worle Facility operatives must adhere to at all times.

RESPONSIBILITY

All site operatives are responsible for carrying out the procedure as detailed below in Section 4. Any changes required are the responsibility of the Site Manager or designated person to update and re-issue the amended procedure.

Maintenance checklists

All maintenance audits and monitoring shall be carried out in accordance with the Manufacturer's specifications, which are kept in the site office or available online.

This procedure details a proactive approach to a planned preventative maintenance program for the site to follow. The Maintenance Checklist included as Appendix 4A to this procedure allows all site operatives to actively take part in the site's maintenance schedule.

The Checklist shall be completed and maintained by the Site Manager, with the following information compiled:

- The item that requires maintenance;
- How often maintenance needs to be carried out;
- A record of any particular maintenance instructions; and
- Who on site is responsible for each maintenance check.

The Checklist shall ensure that all site operatives are aware of their particular responsibilities for maintenance checking. The Site Manager shall ensure that all site operatives are aware of any amendments and additions to the checklist.

When a maintenance issue is dealt with, the Maintenance Record form shall be completed for each separate piece of equipment or infrastructure. This record form is included.

This record form includes the following information to be recorded:

- The item required for maintenance;
- The frequency of the required maintenance for instance; daily, weekly or monthly;
- Completed date and who carried out by; and
- Any particular comments.

The record forms shall be kept in the site office to ensure there is access for all site operatives to the records.

Health and safety

All site operatives will work with due regard to all Health and Safety Regulations relevant to operations on site.

NOTIFICATION AND DISTRIBUTION LISTS

Once approved this document shall be published and will be effective from date of approval. Where appropriate, paper copies of this document shall be distributed as Controlled copies.

Electronic notification to named users shall be recorded in the Audit History Report when a document is published/becomes approved or effective.

Maintenance checklist template

Use as many forms as required, photocopy this blank form before first use to ensure you have easily accessible copies for the future.

Item requiring maintenance	How often? (tick the appropriate box)						Where are maintenance instructions?	Who is responsible?
	Day	Week	Month	Year	250 HRS 250	5 00 HRS		
Small Tools	X						Daily Before use	User
Machines	X					X	Inspect Daily Service 500H	User Manager

Current completed checklist

Maintenance checklist

Use as many forms as required, photocopy this blank form before first use to ensure you have easily accessible copies for the future.

Item requiring maintenance	How often? (tick the appropriate box)						Where are maintenance instructions?	Who is responsible?
	Day	Week	Month	Year	250 HRS 250	5 00 HRS		
RS40 Shredder. No. 1								
RS40 Shredder. No. 2								
Granulator								
Vacuum Handler								
Gravity Separator. 1	X							SE
Gravity Separator. 2	X							SE
Extractor. No. 1	X							SE
Extractor. No. 2								
Extractor. No. 3								
Extractor. No. 4								

Extractor. No. 5								
Container Ramp. (Blue)			X					SE
Container Ramp. (Yellow)			X					SE
Forklift Truck. No. 1	X							SE
Forklift Truck. No. 2	X							SE
Forklift Truck. No. 3	X							
Forklift Truck. No. 4	X							
Forklift Truck. No. 5	X							
Dryer Line								
Generator. No. 1								
Generator. No. 2								
Generator. No. 3								
SRT Line								
Conveyor. No. 1								

Conveyor. No. 2								
Conveyor. No. 3								
Conveyor. No. 4								
Auger			X					SE
Interceptors								
Wastewater Storage Tank.								
Vacuum Cleaner SV1 430 MBS			X					SE
Vacuum Cleaner SV1 430-A45R-Z22-110			X					SE

Maintenance record template

Item:		Due:
Completed on	Completed by	Comments

17.0 OTEMS Appendix 08: Aluminium/Copper Granule Separation

The activity is powered with mains electricity (no generators to be used).

No emissions arise from this activity (there is a closed dust extraction system.

PPE must be worn.

Input Material will only 19 12 03 (mixed copper and aluminium granules), a production by product of the dry separation process.

Outputs of the process:

- Copper 19 12 03
- Aluminum 19 12 03

17.1 Description of process

Mixed aluminium and copper granules are loaded into the hopper, before passing through to the first table, then the second table, before exiting as separated pure copper and aluminium granules. The process layout is as shown below.

A gravity table-based separator uses the differences in specific gravity, particle size, and shape to separate mixed granules of copper and aluminum. Set up of the gravity table separator to separate mixed granules of copper and aluminum into separate bags, requires the following:

1. Ensure that the gravity table separator is clean and free of debris. This will prevent contamination or interference with the separation process.
2. Load the mixed granules of copper and aluminum onto the feed hopper. The feed hopper is the starting point for the granules to enter the separator.
3. Adjust the feed rate. Control the amount of material being fed onto the separator table using the feed rate controller. The optimal feed rate will depend on the specific separator model, granule size, and separation efficiency desired. Check the manufacturer's recommendations for guidance.
4. Adjust the air flow. The gravity table separator uses air flow to separate lighter particles from heavier ones. Adjust the air flow settings according to the manufacturer's instructions to achieve the desired separation efficiency.

5. Start the gravity table separator. Turn on the separator and allow it to run for a few minutes to stabilize the air flow and deck vibrations.
6. Observe the separation process. As the mixed granules move across the vibrating deck, the copper particles should separate from the aluminum particles due to their differing specific gravities. Copper particles, being denser, will tend to move towards one side of the table, while the lighter aluminum particles will move towards the opposite side.
7. Adjust the deck inclination. If necessary, adjust the angle of the deck to improve the separation efficiency. Increasing the angle will result in a more aggressive separation, while decreasing the angle will provide a gentler separation. The optimal angle will depend on the specific gravity difference between the copper and aluminum granules and the desired purity levels.
8. Collect the separated granules. As the copper and aluminum granules are separated, they will be discharged from the table into separate collection chutes or bags. Periodically check these bags to ensure they are not overfilled and replace them as needed.
9. Monitor the separation efficiency and make adjustments as needed. Continuously observe the separation process and make adjustments to the feed rate, air flow, and deck inclination as needed to maintain optimal separation efficiency.
10. Stop the gravity table separator and clean it. Once the separation process is complete, turn off the separator, and clean the vibrating deck, air flow system, and collection chutes according to the manufacturer's instructions.

Remember that the efficiency of a gravity table separator can vary depending on factors like the size and shape of the granules, as well as the specific gravity difference between copper and aluminum. It may take some trial and error to fine-tune the settings for optimal separation

17.2 Optimising its operation

Operators should be aware of the following issues can affect the separation efficiency of a gravity table separator. These include:

1. Improper setup: If the gravity table separator is not set up correctly, it can lead to poor separation efficiency. Ensure that the separator is placed on a stable, level surface, and follow the manufacturer's instructions for proper setup and configuration.
2. Feed rate: The rate at which the granules are fed onto the table can significantly impact separation efficiency. If the feed rate is too high, the table may become overloaded, leading to ineffective separation. If it's too low, the process will be slow and inefficient. Adjust the feed rate according to the manufacturer's recommendations and observe the separation process to ensure optimal efficiency.
3. Particle size and shape: The efficiency of a gravity table separator can be affected by the size and shape of the particles being separated. If the particles are irregularly shaped or have a wide range of sizes, the separation process can be less efficient. Consider screening the granules to achieve a more uniform size and shape before separation.
4. Air flow: The air flow used in the separation process can significantly impact the efficiency of the gravity table separator. If the air flow is too low, lighter particles may not be effectively separated from heavier ones. If it's too high, it can cause excessive turbulence and hinder the separation process. Adjust the air flow settings according to the manufacturer's instructions and observe the separation process to ensure optimal efficiency.

5. Deck inclination: The angle of the deck can affect the separation efficiency. If the angle is too steep, the separation process may be too aggressive, causing lighter particles to be carried over with the heavier ones. If the angle is too shallow, the separation process may be too gentle, resulting in poor separation. Adjust the deck inclination as needed to achieve optimal separation efficiency.
6. Contamination: The presence of debris or contaminants on the table or in the feed material can negatively impact the separation process. Ensure that the separator and feed material are clean and free of debris before starting the separation process.
7. Moisture content: The moisture content of the granules can affect the separation efficiency of a gravity table separator. Excessive moisture can cause the granules to stick together and hinder the separation process. Ensure that the feed material is dry or has a consistent moisture content before starting the separation process.
8. Wear and tear: Over time, the components of a gravity table separator can wear out or become damaged, leading to reduced separation efficiency. Regularly inspect and maintain your separator according to the manufacturer's instructions to ensure optimal performance.

By addressing these common issues and maintaining your gravity table separator properly, you can ensure that it operates at peak efficiency and effectively separates mixed granules of copper and aluminum.

17.3 Maintenance issues

To keep the gravity table separator functioning optimally, it is essential to perform regular maintenance tasks, including:

1. Cleaning: Regular cleaning of the gravity table separator is crucial to ensure optimal performance. Clean the vibrating deck, air flow system, feed hopper, and collection chutes according to the manufacturer's instructions. Remove any debris or dust buildup that could hinder the separation process.
2. Inspecting the vibrating deck: Check the vibrating deck for any signs of wear or damage, such as cracks or loose components. Replace or repair any worn or damaged parts to ensure the deck functions properly.
3. Checking the air flow system: Inspect the air flow system, including the air blower, filters, and ducts, for any signs of damage or blockage. Clean or replace air filters as needed and ensure that the air ducts are clear of debris.
4. Inspecting the feed hopper and feed rate controller: Check the feed hopper for any signs of wear or damage and ensure that the feed rate controller is functioning correctly. Clean the hopper and repair or replace any damaged components as needed.
5. Lubricating moving parts: Regularly lubricate the moving parts of the gravity table separator, such as the drive mechanism, bearings, and any other components specified by the manufacturer. Use the recommended lubricant and follow the manufacturer's guidelines for proper lubrication intervals.
6. Checking and adjusting the deck inclination: Periodically inspect the deck inclination and make any necessary adjustments to maintain optimal separation efficiency. Consult the manufacturer's instructions for guidance on the correct deck inclination for your specific application.
7. Inspecting electrical components: Check all electrical components, such as motors, switches, and wiring, for any signs of wear or damage. Repair or replace any damaged components to ensure the safe and efficient operation of the gravity table separator.

8. Inspecting safety features: Regularly inspect all safety features, such as guards, emergency stop switches, and warning labels, to ensure they are in good condition and functioning correctly. Replace any damaged or missing safety features as needed.
9. Keeping records: Maintain a log of all maintenance tasks performed, including dates and any parts replaced or repaired. This will help you keep track of your gravity table separator's maintenance history and plan for future maintenance tasks.

By performing these common maintenance tasks regularly and following the manufacturer's recommendations for maintenance intervals, you can ensure that your gravity table separator continues to operate efficiently and effectively for years to come.

17.4 Safety priorities for the procedure

Safety is crucial when operating machinery like a gravity table separator. Operators must be aware of the following:

1. Emergency stop switches: These switches are designed to immediately shut down the gravity table separator when activated. They are typically located on the control panel or in easily accessible locations around the separator. Familiarize yourself with the locations of these switches and ensure they are functioning correctly.

2. Guards and barriers: Guards and barriers are in place to protect operators from moving parts, pinch points, and other hazards. Make sure all guards are in place and secure before operating the gravity table separator.

3. Warning labels and signs: Warning labels and signs provide important safety information about potential hazards and proper operation procedures. Read and follow all warning labels and signs on the gravity table separator.

4. Lockout/tagout procedures: Lockout/tagout procedures are designed to protect workers during maintenance or repairs by ensuring that the gravity table separator cannot be accidentally started. Always follow proper lockout/tagout procedures when working on the separator.

5. *Personal protective equipment (PPE)*: Operators may need to wear PPE safety glasses, gloves, and hearing protection. Ensure that all required PPE is worn during operation and maintenance tasks.

6. *Proper training*: Operators should be well-trained in the safe operation and maintenance of the gravity table separator. Ensuring that everyone who works with the separator is properly trained can help prevent accidents and injuries.

7. Electrical safety: Electrical components, such as motors, switches, and wiring, should be regularly inspected for signs of wear or damage. Always follow proper electrical safety procedures when working with or around electrical components.

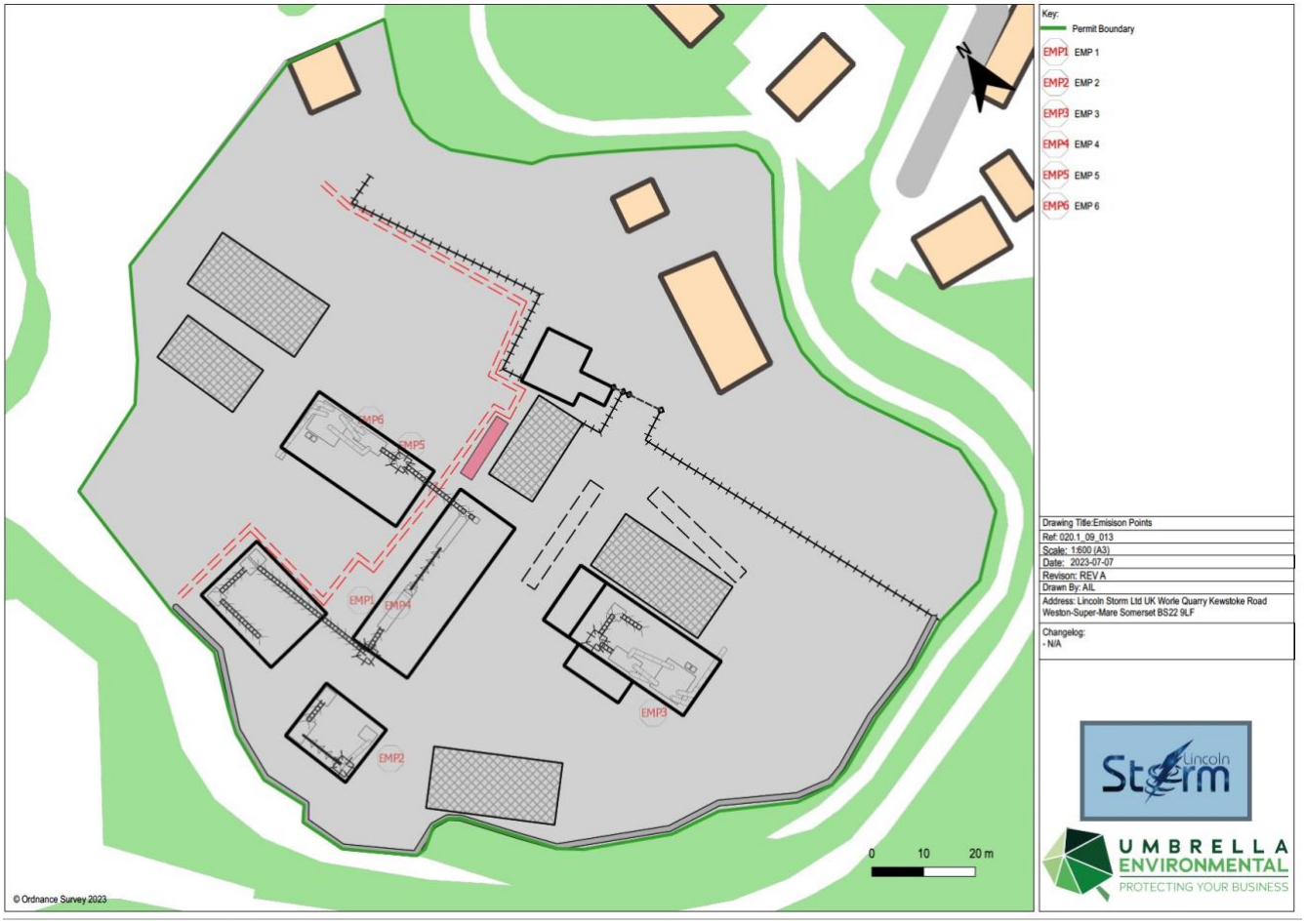
8. Grounding: Ensure that the gravity table separator is properly grounded to prevent electrical shock hazards. Consult the manufacturer's instructions for proper grounding procedures.

9. Housekeeping: Maintain a clean and organized work area around the gravity table separator. Keeping the area free from debris, dust, and other hazards can help prevent accidents and improve overall safety.

By being aware of these safety features and following proper safety procedures, you can help ensure the safe operation and maintenance of your gravity table separator. Always consult the manufacturer's instructions for specific safety information related to your particular model.

18.0 OTEMS Appendix 09: Emissions to Air

The following site plan shows the six emission points. Emission details are provided in Form 2.5 with this variation. The diesel generators on site are AKSA generators (1 x 1015, 1 x AD410(EU), 3 x AD630EU). Emissions include NOx, THC, CO and PM. The dryer emission point produces steam (H_2O) generating 561,000 kg of steam for an annual running of 3,120 hours a year. **See also MA13 Emissions Analysis.**



19.0 OTEMS Appendix 10: Spill Procedure

OBJECTIVE

The objective of this procedure is to ensure the facility cleans spillages as soon as practicably possible and to prepare staff to act in a safe and efficient manner to implement the procedures in the event of an incident that occurs.

Main Objectives:

- To ensure the facility, neighbours and the environment are protected if an incident occurs;
- Spillages are stopped and cleaned up as soon as practicable; and
- To dispose of spill kits appropriately.

Scope

This procedure must be followed by nominated staff members of Lincoln Storm Limited.

Responsibility

The Technically Competent Manager (TCM), Site Manager and nominated staff members.

Spillage Procedure

In the event of a spillage the following steps should be taken:

- Notify the site manager and/or TCM, who will decide whether to notify the EA. The EA should be notified if it is more than a minor spillage (i.e. one that cannot be cleaned up immediately in full leaving no residue). All spillages must be recorded in the site diary on the day they occur.

- Assess the risk, Before you take action, make sure the scene is safe to proceed. Determine the source of the spill, the product(s) involved and protect yourself from any hazards that may be present.

- Protect, Choose the proper PPE and equipment to safely respond (see below at 'Health and Safety').

- Stop, Prevent any further material spilling if safe to do so, e.g. stand oil drum or IBC up, close valves etc. on any tanks.
- Spill containment, Use spill kits' absorbent socks (Booms), pads to contain the spill to the immediate area. Prevent spilled product from entering waterways, storm drains, sewers, floor drains, etc.

- Recover spilled material, Use absorbent products (pads & booms) found in your spill kit to recover all free liquids and thoroughly clean the area.

- Collect and package absorbents, Gather used absorbents and other contaminated materials and place into temporary disposal bags. Secure with cable tie and store safely until disposal.

Disposal of used absorbents, contaminated material and other waste products must be stored and disposed of in accordance to local regulations. Place into hazardous waste storage container. If you are unsure where this is located, please ask the Site Manager, the TCM, or your manager

After the spillage incident

Replace or restock spill kits, Immediately replace or restock used spill kit components to ensure preparedness should another spill occur.

Health & Safety

As a minimum, when following the steps to prepare the site for an emergency situation all operators must wear PPE as follows: Gloves and wrist protection sleeves specified within EN388:2016 to at least the following specification: Abrasion resistance 4; Blade cut resistance 5; Tear resistance 4; Puncture resistance 3; Safety boots including steel midsole; and safety glasses to EN166.

Training

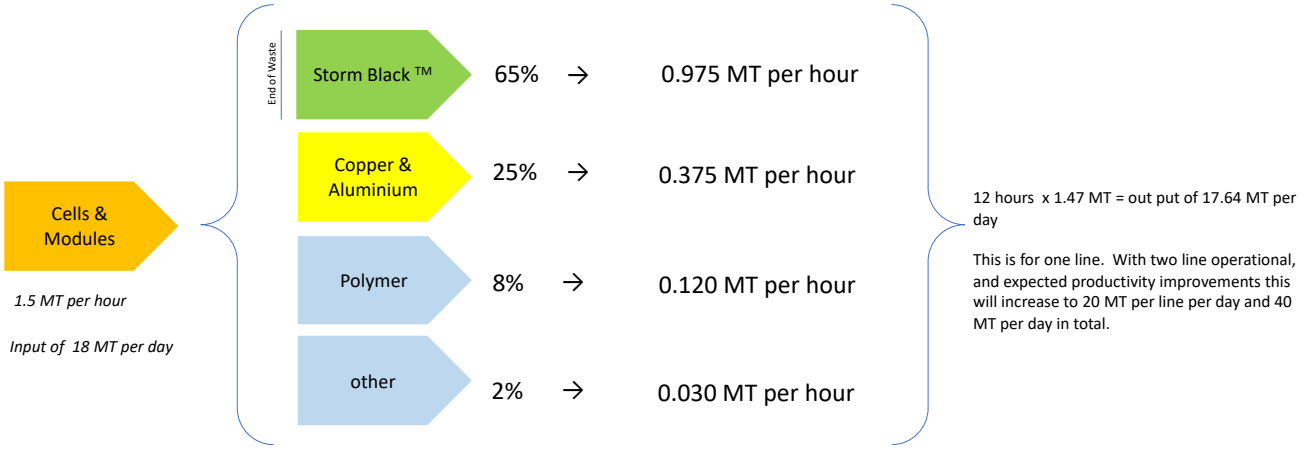
All relevant staff will be trained in Spillage Procedure. This will ensure the correct steps are followed during an incident.

Training is provided during the site induction for new staff which covers the key topics of this document.

20.0 OTEMS Appendix 11: Waste Storage Plans

The storage plan supports the following material flow:

Waste Storage Plan: inputs and outputs



From this, the following model is derived for planning waste receipt, storage and despatch:

	C & M 2.4 MT (3 High)	Storm Black ™ 2.0 MT (1 high)	Polymer 0.45 MT (3 high)	Al & Cu 1.50 MT (2 high)	**Total MT in each tent**
Tent 1	-	-	17.1 MT	30 MT	**47.1 MT**
Tent 2	60.0 MT	-	-	-	**60 MT**
Tent 3	-	200 MT	6.75 MT	22.5 MT	**229.25 MT**
Tent 4	98.4 MT	-	-	-	-
Tent 5	60.0 MT	-	-	-	-
Total material held on site	218.4 MT	200 MT	23.85 MT	52.5 MT	**494.75 MT**
One line only in operation					
Weeks of production (storage period)	*2.275*	*3.33*	*2.385*	*2.02*	***~ 2***
Annual throughput	*5,678 MT*	*3,120 MT*	*620 MT*	*1,365 MT*	***10,783***
Daily arrival	*21 MT*	-	-	-	*21 MT*
Daily departure	-	*12 MT*	*2.4 MT*	*5.25 MT*	*19.65* [1]
Two lines in operation					
Weeks of production (storage period)	*1.136*	*1*	*1.193*	*1.01*	*~ 1*
Annual throughput	*11,350 MT*	*6,240 MT*	*1,240 MT*	*2,730 MT*	*21,560*
Daily arrival	*42 MT*	-	-	-	*42 MT*
Daily departure	-	*24 MT*	*4.8MT*	*10.50 MT*	*39.30 MT* [1]

Permit variation is for 1000 MT to be held on site at any time, given space for additional material to be held

Permit variation is for 30,000 MT annual throughput given targeted production efficiencies

Permit variation is for 100 MT daily processing given targeted production efficiencies

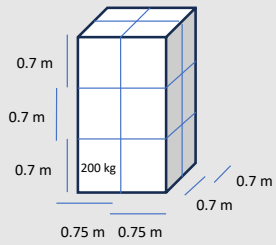
[1] *In practice containers will arrive and depart less frequently than every day, but the average can be expected to be one 20 MT container each day, in and out with one line operational and two 20 MT containers in and out when two lines are operational.*

The following pages show the layout (including location identification codes) for the material shown in the table above, for each storage area. An additional tent will be added to this to store Electric Vehicle batteries (EV) which are received for onward shipping to the United States.

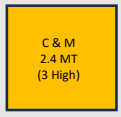
Storage Key

The diagrams below show the dimensions and weights of materials stored at the facility. It is assumed that a space of 2 metres is required for a forklift to have access to each palette.

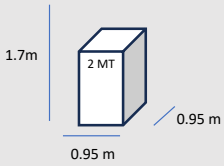
Cells and modules (including ESS packs)



2.4 MT

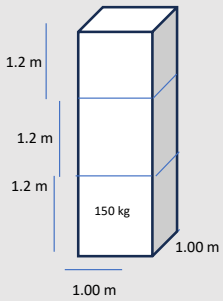


Storm Black ™

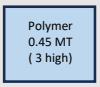


2.0 MT

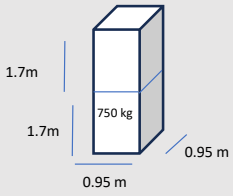
Polymer



0.45 MT



Aluminium and copper

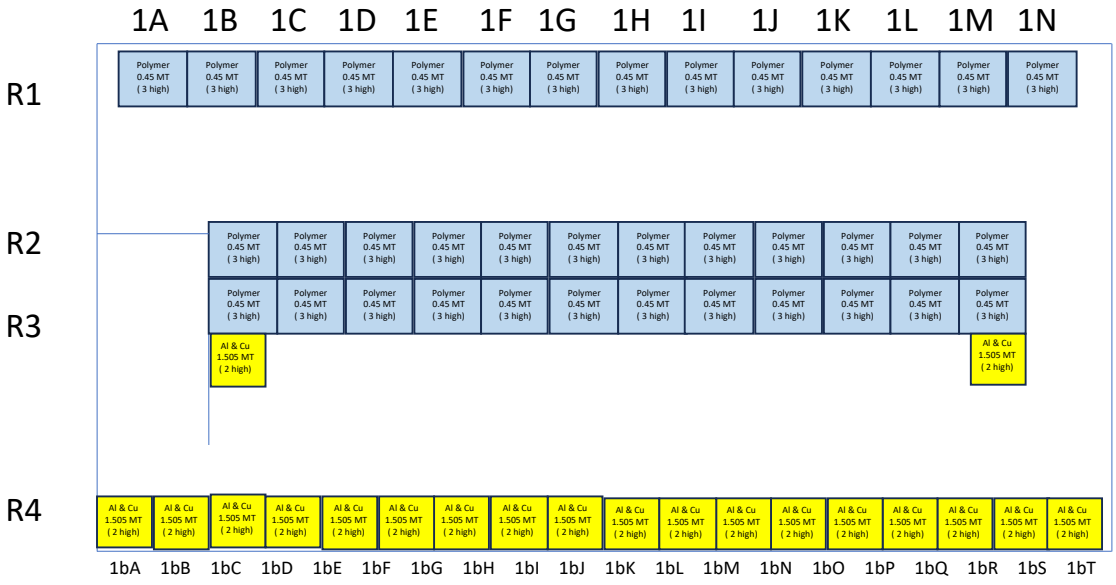


1.5 MT

Tent 1

= 1 m

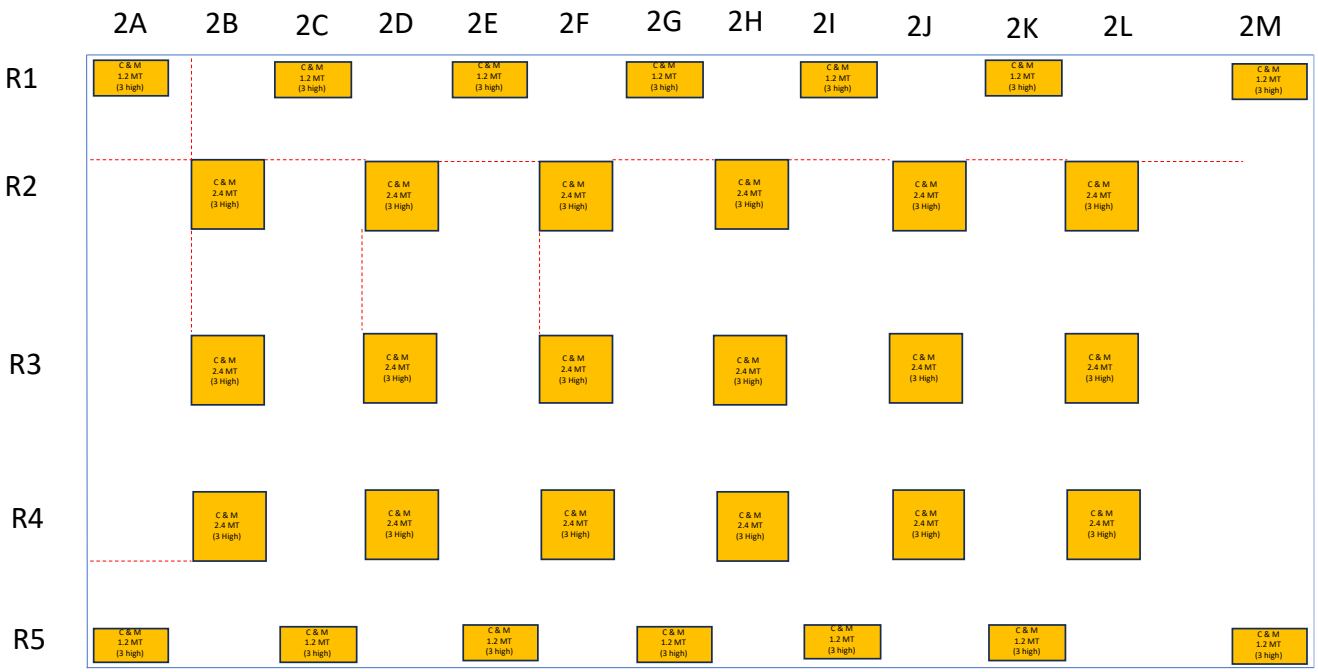
Holding 47.1 MT of Storm Black ™, Polymer and Aluminium and Copper



Tent 2

Holding 60 MT of Cells and Modules

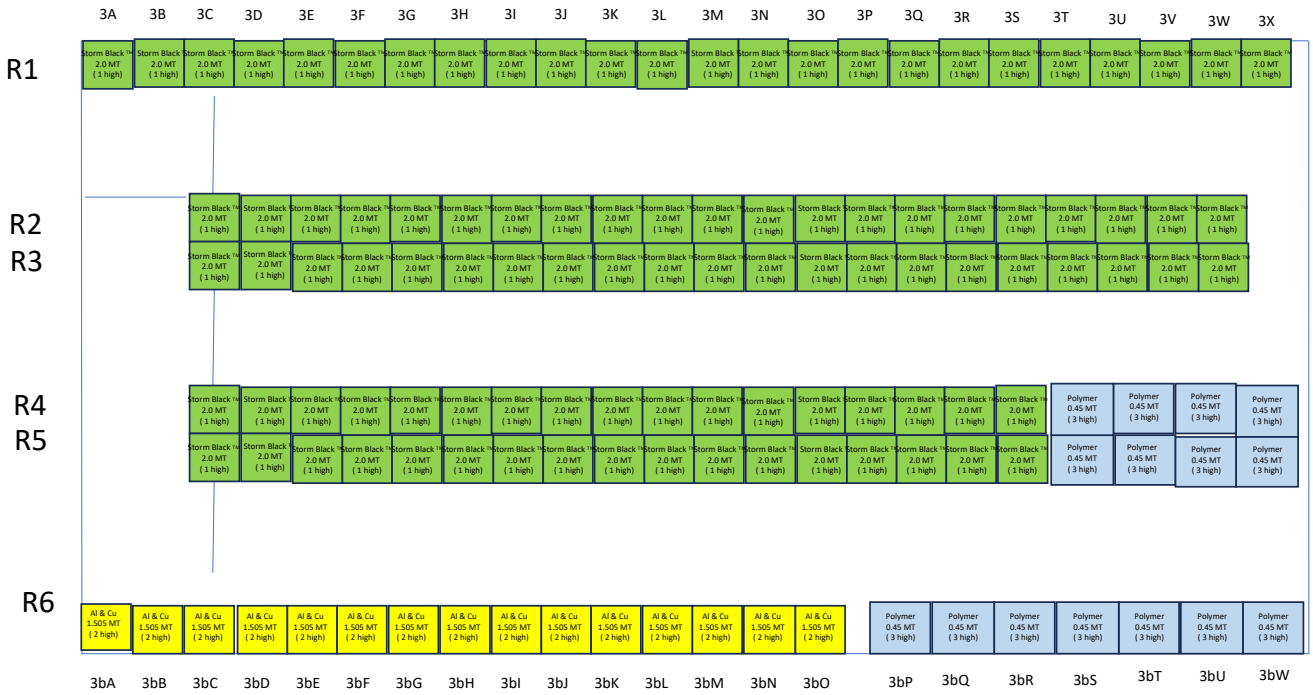
= 1 m



Tent 3

Holding 229.25 MT of Storm Black ™, Polymer and Aluminium and Copper

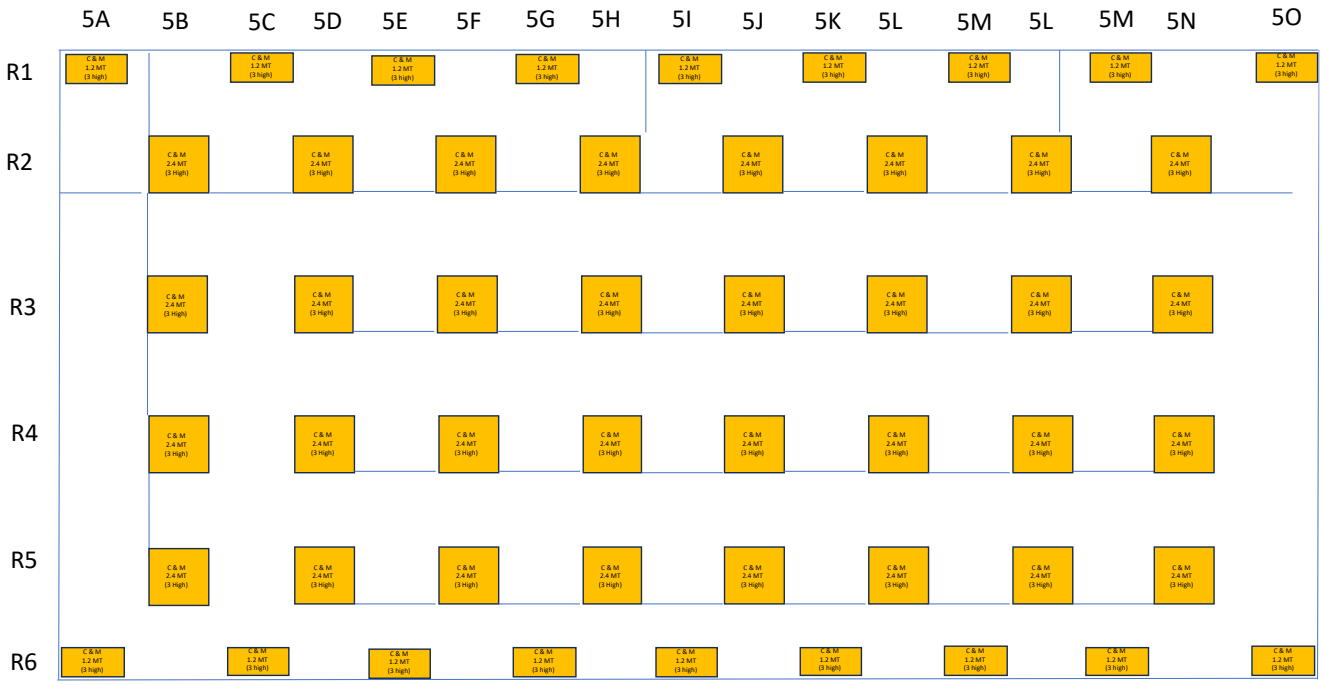
= 1 m



Tent 4

Holding 98.4 MT of Cells and Modules

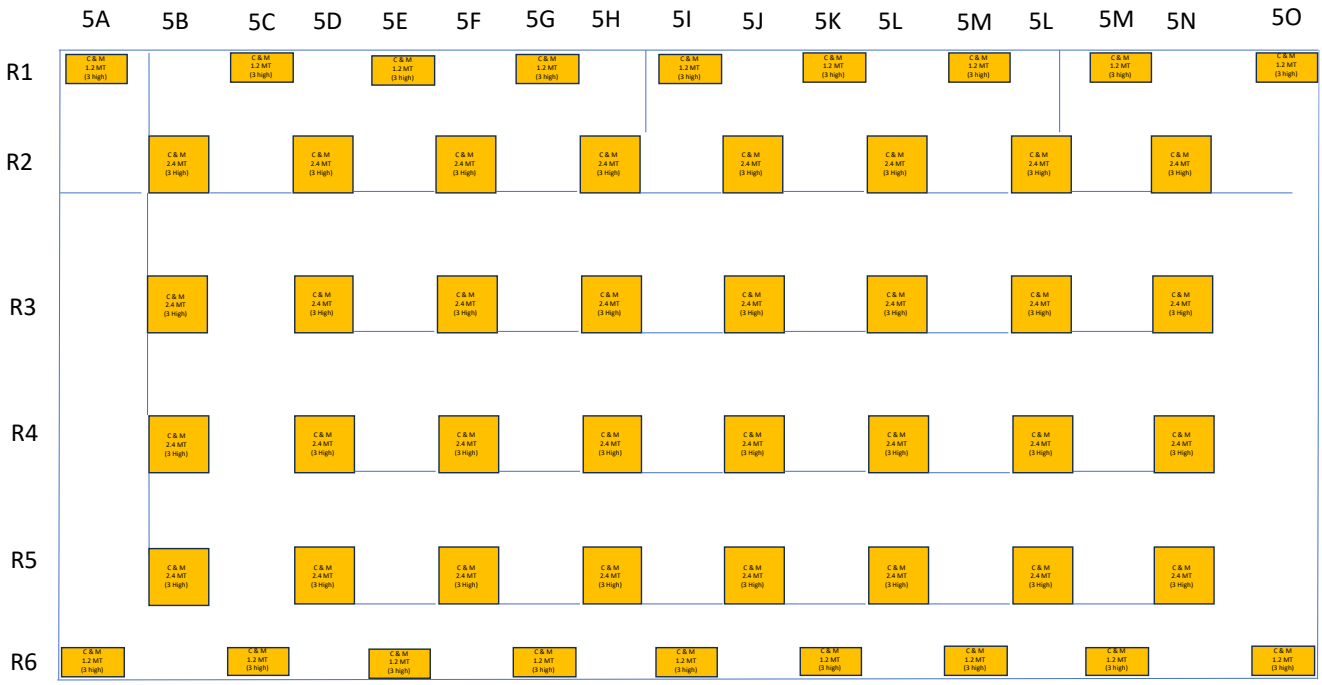
= 1 m



Tent 4

Holding 98.4 MT of Cells and Modules

= 1 m



Tent 5 is configured as Tent 3