Hypromag

ENVIRONMENTAL POLICY STATEMENT

Our core business is the treatment of hazardous and non-hazardous wastes to remove rare earth metals. This involves segregating, treating and the disposing of materials for recycling purposes. It is our aim to improve the local and global environment in which we operate, and to prevent pollution of the environment.

We are committed to compliance with all relevant legislation, regulations and other industry codes. As an integral part of this commitment, we will ensure that all emissions to water, land and air are within regulatory constraints and to strive to minimise the effect we have upon the environment through our commitment to continual improvement.

It is our policy to promote environmental awareness throughout the Company and to ensure that operatives receive appropriate training relating to environmental issues.

Clients & suppliers of Hypromag will be made aware of the Company's Environmental Policy.

It is an integral element of our policy to ensure open and clear communication of our objectives and achievements to all interested parties.

We have a commitment to monitoring our performance with regard to environmental issues, and the subsequent performance improvements. Regular objectives will be set and reviewed by Company's management.

Signed……Nick Mann.

INTRODUCTION

This manual and associated Procedures represents the formal Environmental Management System (EMS) for Hypromag Ltd.

This system has been documented to achieve and demonstrate sound environmental performance by controlling the impacts of the company's activities on the environment consistent with our policy. The EMS supports compliance with the Environmental Permit to be operated at the site.

Company Profile

Hypromag Ltd is a registered waste company. The business operates from Energy Way, Birmingham B25 8DW and operates predominantly as a metal & WEEE recycler).

Site operating hours are as follows:

- Monday to Friday: 0900 to 18.00;
- Saturday: 0900 to 18.00; and
- Sunday / Bank Holidays: Closed.

Scope of System

The scope of our environmental management system covers "The recycling of metals and WEEE to extract rare earth metals."

The purpose of this manual is to define the EMS, which will ensure that the company activities are conducted in a manner which will minimise adverse environmental impacts and enhance our role in environmental stewardship.

The procedures that implement the EMS apply, where appropriate, to the company activities at Hypromag Ltd and are operated under the same common management system.

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HyProMag Ltd Proposed Process at Tyseley Energy Park.

HyProMag Ltd (in conjunction with the University of Birmingham) are planning to install a magnet production facility at the Tyseley Energy Park. Part of the process has been patented by the University of Birmingham and brings an indigenous source of critical rare earth material to the UK. The process involves capturing end of life magnets in various applications and components and then making new magnets from the resulting captured material. Currently these magnets are almost exclusively lost in processes not designed to capture them – they end up as slag in melting furnaces recycling steel or as waste to landfill.

The patented process, exclusively licensed by HyProMag, uses hydrogen in an enclosed vessel which reacts with rare earth magnets and turns them into a powder. This powder can then be captured, refined and made into new magnets or supplied into other parts of the manufacturing supply chain. The magnets being reacted within the vessel can be pre separated but can also be embedded within end of life components. To capture magnets from waste streams HyProMag and the University of Bi[Redacted]l Re[Redacted] Tyseley Energy Park, where magnets can be liberated from components before the components themselves are returned back to their previous waste processing route.

Equipment at Tyseley Energy Park will potentially be coming online in late 2023 and would have a capacity of 100 tonnes. The actual quantity of rare earth magnet during 2024 is likely to be below 50% of that quantity. The magnets are often around 20% of the overall component weight so the total material throughput for the plant in 2024 is estimated as 250 t. The process utilises Hydrogen and Nitrogen, plus mechanical processes. The final magnet is sintered at around 1000 degrees. There are considerations to made around hydrogen usage and the nature of the material as a powder, however the equipment being purchased to process the material is designed with all of these considerations in mind.

The focus of HyProMag is to recycle end of life magnets. This could be to supply a magnet manufactured from the recycled material but it could also be to supply other processes that are able to recycle the liberated magnets using other parts of the manufacturing process, such as remelting or to separate the rare earths from the alloy. The process flow is simplified on the next page.

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Site Layout & Drainage

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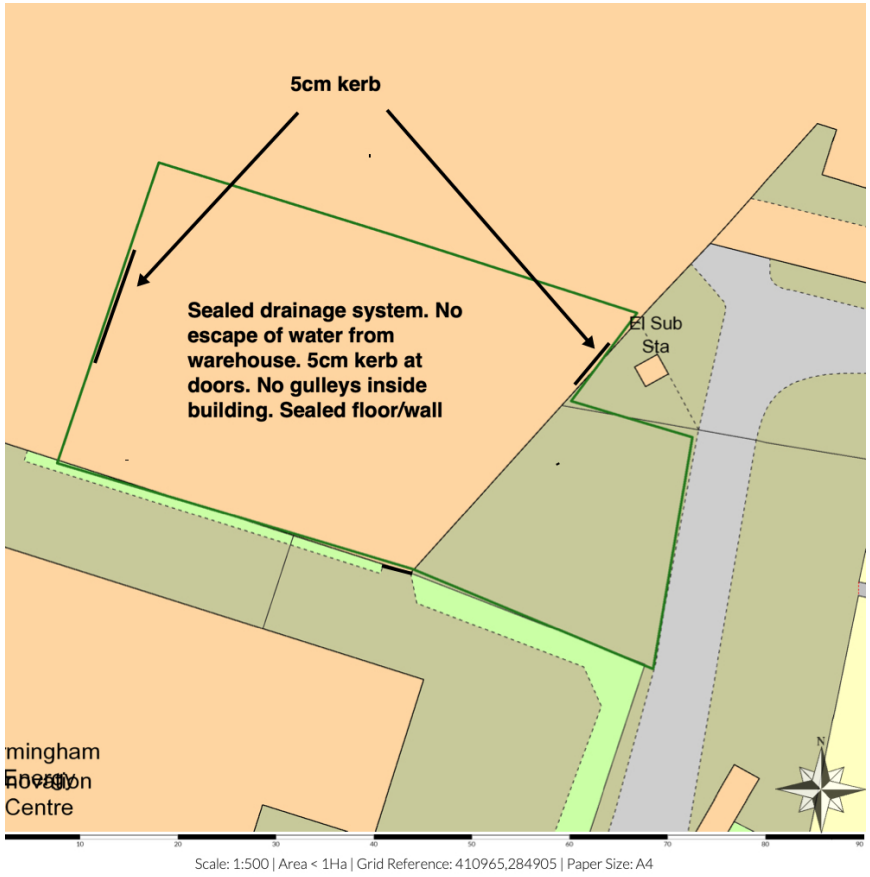

Environmental Risks and Effects

The company has identified and documented it's Environmental aspects and Impacts below to identify the environmental aspects of the activities and determine those which have, or may have, a significant impact on the environment. Where necessary operational controls have been implemented to minimise any potential impact on the environment.

Legal and Other Requirements

The key legislation and other requirements which establish the main environmental control over the company's activities are defined within the Register of Environmental Legislation. Where appropriate, operational controls have been implemented to ensure compliance with relevant legislation.

Environmental Improvement Programme

Objectives and Targets, with defined responsibilities for their monitoring, achievement and timescales have been documented:

Environmental Objectives will be established on an annual basis taking into account:

- The Environmental Policy;
- The significant environmental aspects based on the Risk Assessment;
- Results of the Audits;
- Legislative and other requirements; and
- Views of relevant stakeholders.

Operation & Maintenance

Operations and activities associated with environmental aspects are controlled by operational procedures referenced in this manual.

Accidents and Incidents

The Company has established and maintains a procedure for incident and accidents in section 1.7 of this manual.

Non-conformance, Incidents and Complaints

The Company has established and maintains a procedure for recording Non-conformance, incidents and Complaints in section 1.8 of this manual.

Environmental Risk Assessment

The risk assessment below constitutes the typical risks present at Hypromag Ltd and identifies generic risks which are deemed to be applicable to the business activities of the company.

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Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk?
Noise from delivery and unloading of scrap metal and other materials	Adjacent businesses on or close to energy way	Air - Activities on site are potentially audible at other properties.	Ensure activity undertaken in accordance with operating procedures. Activity location benefits from being close to other businesses and away from residential dwellings. Record and act on complaints. Limit hours of noisy works to 08:30-17:00	Medium	Annoyance or nuisance to the other business users especially during warm summer months.	**Medium**
Mounting and removal of wastes on / off the vehicles	Adjacent businesses on industrial site	Air - Activities on site are potentially audible at other properties particularly gardens (no nearby residents) if any in the vicinity	Ensure activity undertaken in accordance with operating procedure Activity location benefits from being in an industrial area with not many residential properties nearby.	Medium	Annoyance or nuisance to Adjacent businesses on industrial site especially during warm summer months.	Low
Spillages of liquids or contaminated rainwater runoff from metals storage or leaking from tanks or storage vessels	Groundwater	Indirect run-off through the soil layer, through current unmade ground.	Bunded, impermeable base in building and yard. Ensure regular inspections of impermeable surface and repair of damaged areas. Ensure regular integrity testing of storage vessels and drains. Regular inspections of bunds and tanks and waste storage areas.	Low	Contamination of groundwater	**Medium**
Firewater control	Groundwater	Indirect run-off through the soil layer, through cracks in impermeable surface or leaks from minor	Firewater run off can possibly enter the groundwater via the same routes as rainwater. Rubber mats and bungs to prevent pollution of the	Low/medium	Potential contamination of groundwater	**Medium**

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Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk?
		spills and metals run-off	surface water system via S/W gullies although site is sealed.			
Leak from oil storage drums tanks containment failure of bunds and impermeable surface	Groundwater	Through cracks in impermeable surface then indirect run-off through the soil layer.	Ensure maintenance checks of the bunds/firebays and over-ground storage tanks/drums are undertaken in accordance with the maintenance programme and checks are recorded. Ensure the inspections of the impermeable surface are undertaken in accordance with a maintenance programme. Ensure appropriate staff are fully trained in the operational and spills procedures	Low	Contamination of groundwater	Low
Spillage of waste oil, lubricant from metals	Groundwater	Through cracks in impermeable surface then indirect run-off through the soil layer	Ensure maintenance checks of the bunded area are undertaken in accordance with the maintenance programme and checks are recorded. Ensure the inspections of the impermeable surface are undertaken in accordance with the maintenance	Low	Contamination of groundwater	Low

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Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk?
			programme. Ensure appropriate staff are fully trained in the operational and spills procedures Limit time of waste in storage bays			
Arson or vandalism causing the release of pollution material to air, water or land	Adjacent businesses on Energy Way	Air transport of smoke or spillages and contaminated firewater by direct run off from site.	Gates are closed and locked outside of office hours to block access further. Regular checks of the Perimeter fencing and gates The premises is secured by fencing/Walls. Only one entrance/ exit points to the site to/ from the public highway is in place, which is secured by means of lockable metal gates to be locked shut at any time the site is left unattended. .	Low	Harm to health respiratory irritation Pollution of water via off site surface water drainage or adjacent land. Vandalism to oil storage areas	Low
Flooding of site	Adjacent businesses	Flood waters	The site is not in a floodplain All storage vessels have secondary containment Ensure regular checking of and emptying of underground tank and sumps. Ensure onsite drains are kept clear	Medium	If waste is washed off the site it may contaminate neighbouring businesses	**Low**

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Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk?
Discharges to surface water from yard	Surface water and nearby drains	Overflow from main site into S/W gulleys in car park. Main warehouse is a sealed drainage system	In times of heavy rainfall, the S/W from the yard areas may flow into the S/W drains in the industrial park	Medium	Overflow or back up from the sump to nearest foul water or S/W gullies close to site	Medium
Interceptor blocked and sitewater backing up	Interceptor/sump is blind but if blocked could back up to surface water gullies	Overflow from main site to external S/W gullies	In times of heavy rainfall, the S/W from the yard areas may flow into the S/W drains in the Rd or overflow from the interceptor area may back up into the S/W gulley outside the premises. Yard areas and gulleys will be checked on a monthly maintenance regime	Medium	Overflow or back up from the Interceptor to foul water or S/W gullies off site	Medium

1.4 Legal Register

Legislation	Relevance	Applicable to which processes	Where held?	Person responsible for compliance
The Scrap metal Dealers Act 2013	Requires registration with the local authority as scrap metal dealer.	All scrap metal receipt, handling and dispatch	Copy held in site office	Owner
Environmental Permitting (Amendment) Regulations 2012	The site requires an environmental permit to operate. Environmental permitting is a risk-based regime for regulating business activities that could have an impact on the environment or human health.	Storage, handling and treatment of waste on the site	Copy held in site office	Owner
Environmental Protection Act 1990 (Part II & Part III)	Defines the legal framework for duty of care for waste, and statutory nuisance.	The transfer of waste from site and the impact of operations on neighbouring residents.	Copy held in site office	Owner
EC 307/2008	Establishes minimum requirements for training programmes of personnel recovering certain fluorinated greenhouse gases from air-conditioning	Removal of refrigerant (Flourinated Greenhouse gases HFC 134a) from air conditioning systems in WEEE	Copy held on site	Owner

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Legislation	Relevance	Applicable to which processes	Where held?	Person responsible for compliance
	systems in motor vehicles			
Provision and Use of Work Equipment Regulations 1998 (PUWER)	Establishes requirements for those owning and controlling equipment used at a work's premises	FLT	Copy held on site	Owner
Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)	Establishes requirements for companies operating and owning lifting equipment	Lifting of metal, scrap metal	Copy held on site	Owner
Health & Safety at Work Act 1974	Establishes requirements for risk assessment for those working in potentially hazardous conditions	Working close to machinery Operating machinery	Copy held on site	Owner
Waste Framework Directive 2008/98/EC	Lays down controls for the safe disposal and recovery of waste. Article 13 lays down the objective that waste is recovered or disposed of without endangering human	All site storage handling and treatment of waste on site.	Copy held in site office	Owner

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Legislation	Relevance	Applicable to which processes	Where held?	Person responsible for compliance
	health and without using processes or methods that could harm the environment.			
Control of Pollution (Oil Storage) (England) Regulations 2001	Applies where oils including (petrol, diesel, mineral oils) are stored on site in containers larger than 200 litres	Operation of equipment for materials handling on site	Copy held in site office	Owner
The Hazardous Waste Regulations 2005 (as amended)	Ensures that Hazardous waste is tracked from the point of productions to the final point of disposal or recovery	Depollution of vehicles. Storage and transfer of specific wastes from those operations	Copy held in site office	Owner
The List of Wastes Regulations 2005	Contains a harmonised list of hazardous and non-hazardous wastes	The operator needs to understand the properties of the wastes produced on site to ensure safe and secure storage and handling.	Copy held in site office	Owner
Waste (England & Wales) Regulations 2011	Duty of care requirement s and information required on a waste transfer note	Handling, storage and transfer of Waste	Copy held in site office	Owner

1.5 Site Objectives

Hypromag Ltd aims to operate in a way that minimises pollution to the local environment and does not pose a threat to any of our immediate neighbours by way of pollution, noise or disturbance. Further quantified objectives will be documented after the first year of operation of this EMS.

1.6 Operational Control

Hypromag Ltd has developed a number of operational control procedures by which it undertakes its operations. These are listed here

- Handling & storage of waste – EP1. This procedure deals with how wastes are handled and stored to minimise the risk of leaks and spillages. It details where and how wastes are stored and the containers used.
- Firewater management – EP2. This procedure deals with how firewater can be contained and safely disposed of after a fire incident. This procedure replicates the firewater management section of the FPP but is detailed as a separate procedure as the impermeable surface and kerbing is integral to this mitigation method and one of the foremost pollution prevention measures on site.
- Noise management – EP3. This procedure deals with how noise impacts are monitored and minimised. It details how boundary noise is monitored and checked for daily by audible inspection and how unloading is managed at low wind weather conditions.
- Spills and incidents – EP4. This procedure deals with how spills are responded to on site and how they are cleaned up and disposed of. It details where spill kits are located and how to clean up spills and remove of the waste safely. It takes regard of protecting nearby receptors and protecting the surface water system from contamination.
- Dealing with Floodwater –EP5. This procedure deals with how flood water is managed in the event of flooding and how contaminants on site are immobilised and controlled. The procedure details how to move potential contaminants off the floor in the event of a flood and how to secure storage vessels. The procedure also details post flood clean up.
- Site Vehicle and Machinery Maintenance – EP6. This procedure deals with how site vehicles and machinery are managed to ensure leaks and spillages do not occur. This is a maintenance regime for vehicles and machinery and how they are serviced regularly to prevent hydraulic hoses splitting etc.

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- Site Inspection & neighbourly relations – EP7. This procedure deals with how Hypromag Ltd manages neighbours and minimises impacts on surrounding receptors. It details who to contact in the event of an incident, who the nearest neighbours are and prevailing wind direction. It acts as a checklist for daily site inspections and boundary walks.
- Drain & Bund checks – EP8. The site management regime for checking bunds and drains to ensure their integrity. It provides a visual checklist to identify any potential failure in equipment that may lead to an incident due to failed containment.
- Site Plan – EP9. An outline of the site boundary.
- Sealed Drainage System - EP10. How the sealed drainage system is maintained and checked for integrity and how the drainage system and containment is maintained and cleaned as required. It provides for checks on the impermeable surface and kerbing.
- Waste Processing – EP11. How waste is booked in and checked for non- conforming loads. This procedure ensures that checks on incoming waste ensures that only permitted waste is allowed to enter the site and how non-conforming loads are dealt with.
- Accidents – EP12. How accidents are responded to and their effects mitigated. This procedure details who to contact in emergency services in the event of a larger incident, which local neighbours to contact and how to prevent the incident leading to a pollution event.
- Waste Storage EP13. How waste is stored and kept whilst on site. This details where waste is kept on site, piles sizes and how the stock rotation and pile sizes are managed to ensure compliance with the permit requirements.
- Waste Acceptance EP14. How waste is accepted and paperwork completed. This procedure provides detail for ensuring that all duty of care paperwork is completed and checked for incoming loads to ensure compliance with the DoC protocol.

1.7 Incidents and Accidents

The following table references other procedures and responsibilities in the event of an emergency situation

Reference to the appropriate procedure will give further guidance.

No	Activity	Responsibility	Documentation
1	The following plan and associated supporting documents should be adhered to in the event of any of the following environmental accidents or incidents: • Failure of storage tanks; • Leak from oil storage tanks containment failure of bunds and impermeable surface; • Spillages of waste oil, petrol and diesel during depollution, and loading and unloading; • Overfilling of vessels; • Waste battery acid leak from container and failure of impermeable surface; • Accidental fire causing release of smoke and fumes; • Arson or vandalism causing the release of pollution material to air, water or land; and • Flooding of site.	Owner and all members of staff	• Spillage Response procedure; • Fire Response Procedure; • Accident and Incident Management Plan; • Site Plan; • Flood response • Key Site and Emergency Contacts; • List of PPE; and • Accident and Incident Record.

1.8 Incidents and Complaints

No	Activity	Responsibility	Documentation
1	In the event of a complaint made to the site, the complaint record must be completed, and record kept	Owner	Complaint Record
2	Site Diary	Owner	Site Diary. A daily record of unusual or abnormal events will be kept in the form of a diary which will cover the whole site.

1.9 Training & Awareness

Currently one member of staff is considered technically competent. They are Mr Rob Arnold who holds WAMITAB registration. They must ensure their presence on the site exceeds 35% of the working week.

The identity of site technically competent management has been made known to all site staff.

Management will make a record of training received by site staff, to be kept for as long as the person is employed at the site

More than one operative will be trained/ available to the site, so that holiday, sickness or other absence can be covered, allowing metal recycling to continue in a manner that will not cause the site to become in breach of any licence or regulations condition relating to permitted activities. Training and Awareness of all requirements in the environmental permit and this EMS will be give to all staff within 6 months of grant of permit.

2.0 Management Review

Hypromag Ltd will review and audit the contents of this EMS at no longer than yearly intervals. The review will take into account changes to the business, legislation and best practice. The system will be updated as necessary to drive continuous environmental improvement.

3.0 Site Closure

A site closure plan will be produced if the site is to close.