Environmental Risk Assessment of

Application for a Bespoke Environmental Permit

HD White Yard, The Factory

Ford Airfield Industrial Estate

Yapton

BN18 0HY

Submitted on Behalf of:

Refined Metal Recycling Limited

Prepared & Submitted By:

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1.0 Introduction

This environmental risk assessment has been produced in compliance with Environment Agency Guidance : *Risk assessment for your environmental permit* (updated March 2021).

1.1 The Risk Assessment Triangle

1.1.1 For a pollution risk to exist there must be each of three elements present:

1. An emission source or hazard; plus
2. a means of transmission of that emission i.e. a pathway; and
3. a receptor that may be sensitive to the particular emission at the levels to which it may be emitted/released.

All three elements must be present for a risk of pollution to exist.

This Environmental Risk Assessment identifies potentially significant sources of hazards i.e. emissions associated with the acceptance, physical separation processes include: manual sorting, mechanical shearing (or de-canning) of catalytic convertors from the ceramic catalyst and separation into component parts with isolation of RCF matting.

1.2 Characterising the Possible Hazard

1.2.1 The application is for the following activity:

- sorting of intact catalytic convertors and processing of certain types using static equipment to separate the monolithic catalyst from the casing and the RDF matting.

1.2.2 The inputs and process will be controlled to the level that the whole waste operation remains below the threshold to qualify as an installation. In particular no more than 50 tonnes of hazardous waste will be stored onsite at any one time and/ or no more than 10 tonnes of hazardous waste will be processed per day.

1.3 Application Site Location/ Context

1.3.1 The Application Site is located within a covered area of the HD White Ltd permitted site at The Factory, Ford Airfield Industrial Estate, Yapton, BN18 OHY. It is entirely contained within the permitted site as shown in Appendix 1.

1.3.2 The host site is flanked on its northern boundary by an engineering company occupying a unit on the industrial estate, and on its eastern boundary by agricultural land. Its southern boundary is marked by Rollaston Road and then agricultural land and on its western boundary by industrial units that form part of the industrial estate. A list of possible receptors is included in Appendix 2.

2.0 Waste Codes Applied For

2.0.1 The waste codes to be included in the permit are as listed below.

EWC Codes	Waste
16 01 21*	Monolithic catalytic convertors
16 01 22	Catalytic convertors not containing RCF matting
16 08 01	
16 08 02*	Diesel particulate filters
16 08 03	Spent catalysts
16 08 07*	Spent catalysts contaminated with hazardous substances

2.0.2 All wastes will only be accepted intact and none in a dusty condition.

3.0 Operating Techniques

3.1 The site will be equipped with the following static equipment:

- 1x shear for cutting open (de-canning) catalytic converters (Appendix 2 for specification),
- 1x top and tail shear.
- 1x plasma cutter for removing the monolith catalyst block,
- 1x dust extraction system using HEPA filter to isolate and contain any RCF dust.

All equipment will be periodically inspected in accordance with manufacturers' guidelines to ensure it is available when required.

3.2 The principal process to be conducted is set out in the flowchart overleaf.

3.3 All processing will be conducted in accordance with the following standards:

- Environment Agency quick guide 'Catalytic Converters containing Refractory Ceramic Fibre' (draft 2016);
- Sector Guidance Note S5.06 - Guidance for the recovery and disposal of hazardous and non-hazardous waste; and
- Develop a management system: environmental permits.

As the principal activities only involve waste of low combustibility the Agency guidance relating to Fire Prevention Plans: environmental permits has been assessed to not be applicable to this application.

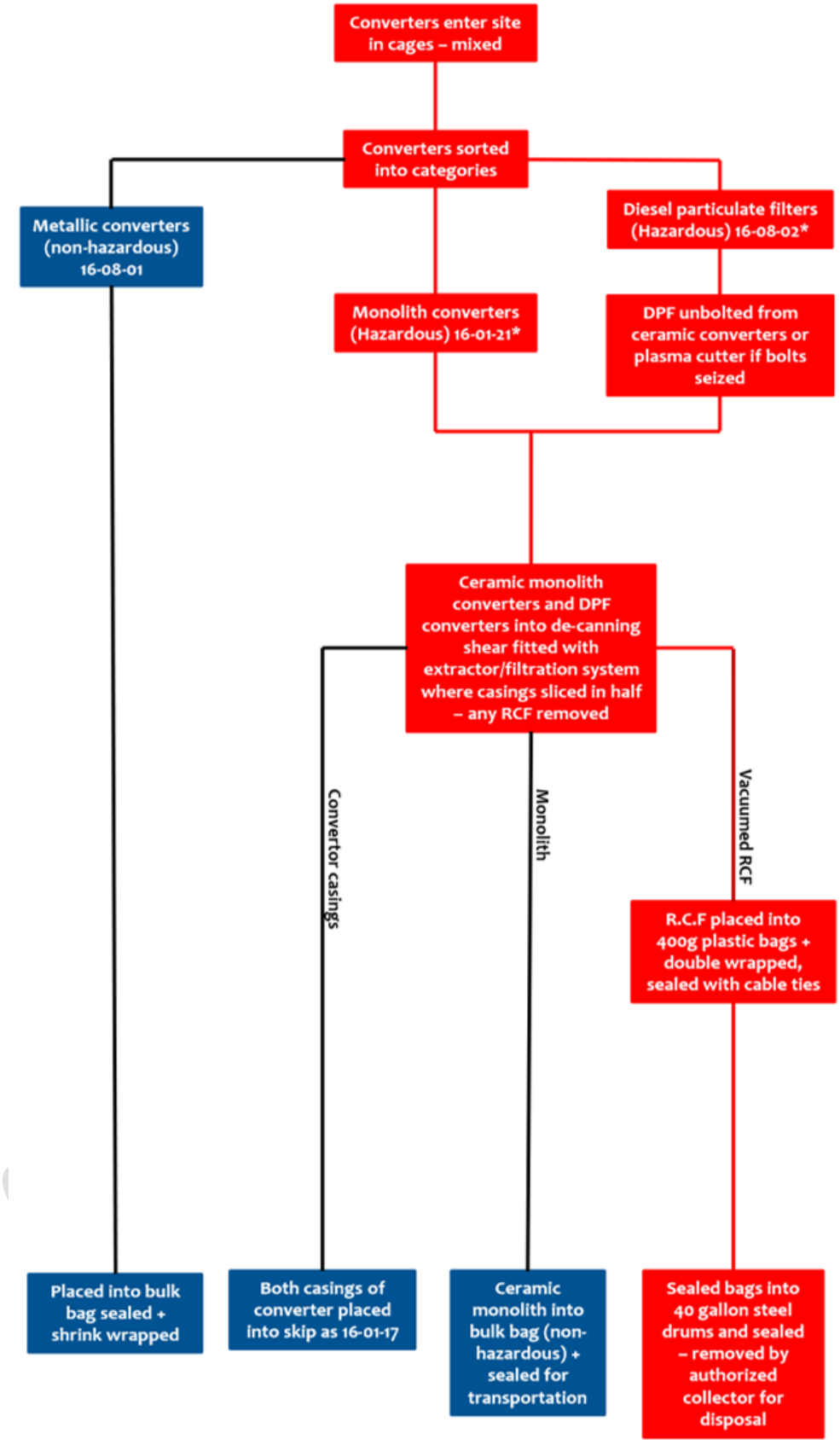


Figure 1: Catalytic Convertor Processing (red indicates hazardous)

4.0 Waste Quantities

4.1.1 The maximum quantity of the waste stored prior to processing will not exceed 10 tonnes at any one time of which no more than 10 tonnes will be hazardous. This will be stored on site for no more that 30 days prior to processing.

4.1.2 The annual throughput is not expected to exceed 750 tpa.

Waste Type		Containment/ storage	Max. volume/ tonnage stored at any one time	Treatment (onsite/offsite)	Comments/ notes
PROCESS INPUTS					
Catalytic converters	**Metallic** 16 01 22	250 converters to a cage, 125 converters to an IBC (Cage holds 250 converters)	1 tonne separated into bulk bag	Processed offsite.	Removed for storage prior to recycling.
	Ceramic 16 01 21* 16 08 07*		2 cages (500 converters total) pending processing	Processed onsite.	Processed ASAP to reduce risk of theft. Max. 2 bulk bags of ceramic catalyst stored pending offsite processing
	DPFs 16 01 21* 16 08 07*				
PROCESS OUTPUTS					
Ferrous (convertor casings)		20 yard skip	Skip will hold up to 11 tonnes converter shells	Split by shear	Moved to a skip on H.D. White on sale.
RCF		Double bagged in polythene, sealed with cable ties and placed in 40-gallon drum	24 x 40 gallon drums (4 drums per pallet x 6 pallets)	Processed offsite following extraction.	Removed by authorised collector for disposal as hazardous waste 16 01 21*.

5.0 Environmental Risk Assessment

The Environmental Risk Assessment concluded the following in relation to the aspects identified in the Agency guidance on Risk Assessments:

1. Discharge

The waste treatment activity will take place inside a building with a concrete floor involving waste that is solid and not degradable. Therefore the risk of discharge is **NEGLIGIBLE** and does not require any further mitigation**.**

2. Accidents

The activity is limited to a building involving manual use of equipment. The prospect of any accident giving rise to environmental impacts is **NEGLIGIBLE** and does not require any further mitigation.

3. Odour

The waste treatment activity will involve waste that is neither degradable or volatile and will take place inside a building. Therefore the risk of odour is **NEGLIGIBLE** and does not require any further mitigation**.**

4. Noise & Vibration

The waste treatment activity will only involve manual use of non-mechanical equipment, will be conducted within a building within a setting of a metal recycling site. Therefore that the potential risk of vibration and is **NEGLIGIBLE** and does not require any further mitigation**.**

5. Fugitive Emissions

Due to the perceived risk associated with the emission of dust from the proposed catalytic convertor processing activity involving RCF matting and a high consequence, measures to prevent or limit the emission of dust at source will be adopted as follows:

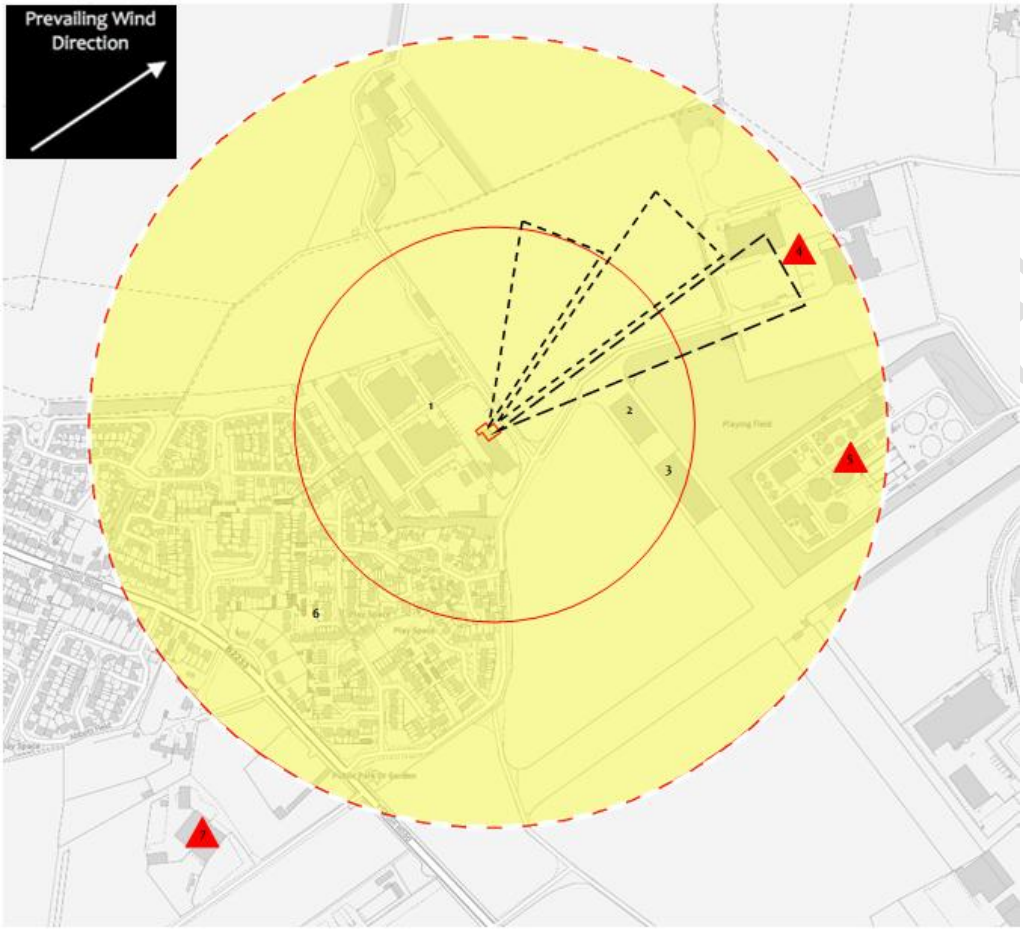
All air will be extracted at the point of processing by a Local Exhaust Ventilation (LEV) system. Dust for this collected air is abated using single stage HEPA bag filters. There is no external point source emission to air from the LEV system.

Therefore the risk associated with this has also been assessed to be **LOW with mitigation. The detailed risk assessment is set out in the Table overleaf.**

Risk Assessment Level: Low (L), Medium (M), High (H)										
Activity / Hazard (source)	**Potential Impact**	**Receptors**	**Pathway**	**Risk before controls (L, M, H)**	**Risk Management (Controls & Procedures)**	**Risk after controls (L, M, H)**	**Impact controlled by equipment?**	**Equipment included on maintenance check sheet?**	**Person using equipment received training?**	**Additional comments**
Dust Release	Nuisance	See Appendix 2	Air via wind	L	• Catalytic convertors must be intact to be accepted at the Site. This is ensured through waste acceptance procedures. • Waste delivered directly to contained covered storage area that prevent ingress of rain and surface water. • Waste treatment takes place inside enclosed building. • Dust/particulate extraction by LEV using HEPA filters In operation whenever processing of catalytic convertors that might contain RCF matting is being processed. • Process equipment cleaned between batches and HEPA filters changed and isolated using 2x 1000 gauge polythene bags. • RCF matting removed with care, double bagged using 2x 1000 gauge polythene bags and placed into sealed drums prior to despatch. • Bags containing RCF matting or dust will not be re-opened or compacted and will be handled at all times to ensure their integrity is maintained throughout.	VL	Yes	Yes	Yes	Designated TCM holds Level 4 High Risk Operator Competence for Managing Physical and Chemical Treatment of Hazardous Waste.

Appendix 1: Site Location

Appendix 2: Possible Receptor Locations within 500m of the site



Possible emission sources and prevailing wind blow.

Zone	Entry	Occupier	Use
<250m	1	Ford Airfield Industrial Estate	
		HD White	Scrap Metal Recycler
		John Booth Engineering	Contractor
		Besmoke	Manufacturer
		Fire Extinguisher Valve Co Ltd	Fire Equipment Supplier
		Arundel Brewery	Food & Drink
		Sunbelt Rentals Plant & Tools	Plant Rentals
		Roberts Transport	Haulage & Distribution
		Ebalta Distribution	Manufacturer
		Mopani Trading	Food & Drink
		CFood Catering (UK) Ltd	Food & Drink
		Dando Drilling International	Drilling equipment manufacturer
	2	Flying Fortress	Indoor Play Centre
	3	Arun Sports Arena	Indoor Sports Complex
<500m	4	Grundon Waste Management	Waste-Management
	5	Ford Wastewater Treatment Works	Wastewater Treatment
	6		Residential Area
>500m	7	TJ Waste & Recycling	Waste-Management

Appendix 2: Equipment Specification

Deltax LIMITED

The Cutting Edge

MINI SHEARS
DTX 400

Brief Description
Oil hydraulic heavy duty mini-shear with single or three phase electric motor. Bronze bearings throughout.

Features

- Four sided reversible serrated blades.
- Tank mounted motor.
- Four way fork-lift entry base.
- Tool kit included
- Supplied ready to work.
- Foot pedal control – single or automatic stroke.
- Compact with parts accessible for easy service.

Deltax reserves the right to alter the product specification in any way without giving prior notification.

Specification	Dimension	DTX 400
Overall	Length	1575mm (62")
	Width	760mm (30")
	Height	1499mm (59")
	Weight	925kg
Blade	Length	406mm (16")
	Opening	229mm (9")
Blade Table	Height	864mm (34")
Max Shear Force	Tonnes Force	106
Shear Capacity	Steel Round Bar 45 kg/mm	44 (1¾")
Oil	ISO 46	80ltr (18 Gall)
Horsepower	Single Phase	5HP (3.7kW)
	Three Phase	10HP (7.5kW)
Speed	Three Phase	12 - 60 cuts/min
	Single Phase	5 - 30 cuts/min