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Environmental Risk Assessment

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WEEE Recycling Experts

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Application Reference:
EPR/CP3046QE
Document Reference:
010.1_05_002
Issue Date:
26/10/2022

Document Control

Document Title	Reference	Client	Status
Environmental Risk Assessment	010.1_05_002	Vision Recycling U.K. Ltd	FINAL

Document History

Version	Issue date	Author	Checked	Description
D1	30/08/2022	AIL	AIL	Drafted for installation permit application. Submitted to client for review.
V1	26/10/2022	AIL	AIL	V1 approved by Vision Recycling U.K. Ltd for submission/.
V2	16/03/2023	AIL	AIL	Amendments to dust assessment and mitigation made at request of Environment Agency (EA).

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Drawings

Title	Reference
Permit Boundary	010.1_09_001
Site Plan	010.1_09_004
Sensitive Receptors 1 km Plan	010.1_09_005
Sensitive Receptors 2 km Plan	010.1_09_006
Sensitive Receptors 10 km Plan	010.1_09_007
Fire Water Containment Plan	010.1_09_003
FRS Route Plan	010.1_09_002

1 INTRODUCTION

This Best Available Technique Assessment (BAT) accompanies the application for a bespoke waste installation EPR/CP3046QE at Park House Farm, Lower Hordley, Ellsmere, Shropshire, SY12 9BL. The site location is shown on plan 010.1_09_001.

The site was historically a farm with the previous residence utilising the industrial units and associated buildings as a livery. The site is now to be used as a waste treatment facility to recover, recycle and reduce the disposal of WEEE waste to landfill through a process of reverse manufacturing.

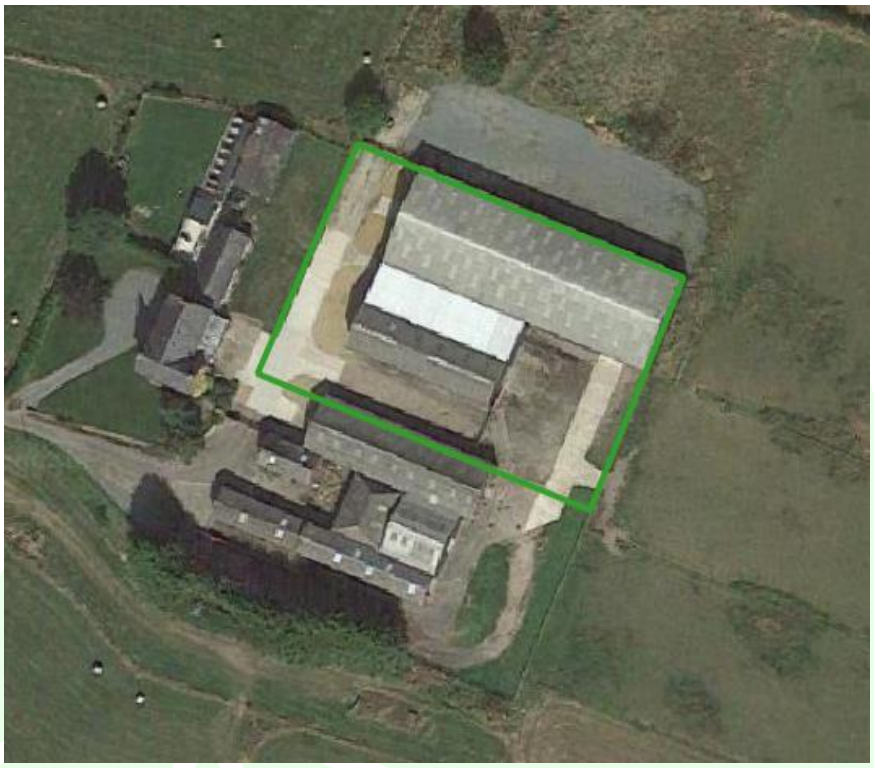
The only waste to be accepted on site is Waste Electrical and Electronic Equipment (WEEE) (televisions, batteries, etc.). The site receives waste via the main entrance located on the south eastern boundary. Waste will be brought in by approved local contractors (registered waste carriers), generally on articulated lorries. A 3.5 tonne box van is stored off-site and used on occasion.

The waste activities on site are based on Standard rules SR2015 No15 Waste electrical and electronic equipment authorised treatment facility (ATF) excluding ozone-depleting substances. Certain activities on site are above the limits of this permit and raises the regulatory level of the site. The site will operate to 30 tonnes of hazardous waste to be shredded in a 24 hour period, 100 tonne of hazardous waste stored at any one time of which only up to 10 tonnes will go for disposal.

The only waste to be accepted on site is Waste Electrical and Electronic Equipment (WEEE) (televisions, batteries, etc.

The site is approximately 2238 m^2 and is located at Park House Farm, Lower Hordley, Ellsmere, Shropshire, SY12 9BL.

Figure 1 Aerial View



1.1 Scope

This risk assessment is based on the source-pathway-receptor approach. All potential sources of pollution associated with the acceptance, treatment and storage of permitted inert and non-hazardous waste activities have been assessed against the principle receptor types identified within the site's vicinity.

The requirement for risk management measures is then dependent on a viable pathway being present between the source and the receptor. Where such a pathway exists, management measures are required to reduce risk.

1.2 Aims

This assessment aims to consider potential environmental hazards associated with the activity, to identify sensitive receptors which these may impact, and determine the influence management practice has on reducing risk.

2 SITE SETTING

2.1 Location

The National Grid Reference (NGR) is SJ 40170 28568, Eastings and Northings 340170 , 328568 and What Three Words these.tuxedos.loaning.

2.2 Humans and Property

The site is approximately 2238 m^2 and is located at Park House Farm, Lower Hordley, Ellsmere, Shropshire, SY12 9BL. The site is accessed via a farm road which joins Chapel Lane which joins Shrewsbury Rd/A528.

Bagley Marsh is located approx. 1 km to the south with Hordley 3 km to the north west the site is mainly surrounded by arable farm land accept for ABP Food Group located 401 m west.

2.3 European Designated Receptors

DESIGNATED SITES (European) SSSI, RAMSAR		
Lin Can Moss	7816	SSW
Fenemere	6902	SE
Ruewood Pastures	9294	E
Brownheath Moss	5911	ENE
Sweat Mere and Crose Mere	3293	ENE
White Mere	4175	NE
Cole Mere	5335	NE
Clarepool Moss and West Midlands Mosses (SAC)	6313	NE
Fenn's, Whixall, Bettisfield, Wem & Cadney Mosses	8694	NE
Fenn's, Whixall, Bettisfield, Wem & Cadney Mosses	9927	NE
Fernhill Pastures	8679	WNW

Closets designated site

The Meres and Mosses of the Clwyd-Shropshire-Cheshire-Staffordshire plain form a nationally and internationally important series of open water and peatland sites. These have developed in natural depressions in the glacial drift left by the ice sheets which covered this plain some 15,000 years ago. The majority lie in Cheshire and north Shropshire, with a small number of outlying sites in adjacent parts of Staffordshire and Clwyd.

2.4 Geology

Table 1 Geology

Artificial Ground/Made Ground	None.
Superficial and Drift Geology	Secondary Undifferentiated-Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been

	designated as both minor and non aquifer in different locations due to the variable characteristics of the rock type.
Bedrock and Solid Geology	Secondary B- Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers.

2.5 Hydrogeology

Groundwater vulnerability

Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer.

2.6 Hydrology

Various unnamed ponds and lakes surrounding site as close as 290 m. With the most notable surface water feature being the River Perry located 1352 m east of site.

2.7 Flood Risk

No flood risk from rivers, sea or surface water flooding.

2.8 Air Quality

Not in an Air Quality Management Zone (AQMA).

2.9 Nature of Risk Assessment

This document provides a broad and general assessment of the risk factors considered to be of significance for the site, and an evaluation of the impact from the principle risk factors to receptors within the site vicinity.

3 METHODOLOGY

3.1 Hazard Identification

The Environment Agency's 'H1 Software Tool Version 2.78 April 2017', has been used to undertake a series of risk assessments to reveal the potential impact of the sites waste activities of their releases upon the local environment.

3.2 Types of Waste Activity Hazards

Hazard		Sources	Risk	Further Assessment
Odour	• Odour from storage • Odour from processing • Odour from Transfer	1. Waste delivery 2. Storage 3. Treatment Process 4. Material dispatch	• Non Conforming wastes	• Table 8 Odour
Noise and Vibration	• Engine Noise (idling) • Noise from vehicle and plant movement. • Noise form reverse warnings • Noise form waste processing • Vibration from plant and vehicle movements	1. Waste delivery 2. Storage 3. Treatment Process 4. Material dispatch	• Processing and storage occurs inside a building.	• Table 9 Noise and Vibration
Fugitive Emissions	• Dust from waste processing • Dust from Stored Waste • Litter form waste storage and/or treatment • Litter from vehicle movements • Pest form waste storage • Runoff from site operations	1. Waste delivery 2. Storage area run-off pre and post treatment 3. Treatment Process 4. Material dispatch 5. Fire Water	• Dust and particulate matter liberated from external areas only during dry conditions. • Loss of material during unloading, treatment and dispatch of waste.	• Table 10 Fugitive Emissions
Accidents	• Leak from onsite oil storage • Transfer of substances • Plant of Equipment Failure • Fire in waste materials • Flooding • Vandalism	1. Waste delivery 2. Storage 3. Treatment Process 4. Material dispatch 5. Fire Water 6. Flood risk from Rivers, Sea or surface water. 7. Unauthorised access	• Loss of waste from vehicles • Spillages from processing equipment and vehicles transferring waste in to and out of site. • Damage to processing equipment and site infrastructure by vandals.	• Table 11 Accidents

			• Uncontrolled emissions of fire water and smoke.	
Sensitive Areas	• Damage to protected ecosystems	1. Waste delivery 2. Storage 3. Treatment Process 4. Material dispatch 5. Fire Water	• Sensitive receptors located around site impacted by normal operating activities and those during an incident.	• Table 8 Odour • Table 9 Noise and Vibration • Table 10 Fugitive Emissions • Table 11 Accidents

If a hazard has been identified by the H1 screening tool that is may have an environmental impact these have been identified had have been provided mitigation in Section 4 of this document.

3.3 Identify Receptors

Receptors are those sites/activities that are at risk form the hazards that a waste activity may have impact on and are defined as below:

- Protected sites and species
- Anywhere used to grow food or to farm animals or fish
- Drain and sewer systems
- Factories and other businesses
- Fields and allotments used to grow food
- Footpaths
- Groundwater, groundwater source protection zone
- Homes, or groups of homes (such as villages or housing developments
- Playing fields and playgrounds
- Private drinking water supplies
- Regionally important geological
- Schools, hospitals and other public buildings
- Water, for example ponds, streams, rivers, lakes or the sea –
- Conservation and habitats protected areas and areas of scientific interest

The receptors most likely to be impacted by the waste sites activities are listed below in Table 2 Key Receptors

Table 2 Key Receptors

TYPE OF RECEPTOR	ID #	DESCRIPTION	DISTANCE FROM BOUNDARY (M) APPROX	DIRECTION
		SITE		
HUMANS AND PROPERTY		Site Workers	On site	-
		Site Visitors	On site	-
		COMMERCIAL		
	1	ABP Food Group	401	W
	2	Commercial Farming Units	462	SSW
	3	Shade Oak Stud	1178	ESE
	4	Ferney Houg Commercial Farming Units	1459	ESE
	5	Bowers J R & R A	733	ENE
	6	Commercial Farming Unit	1876	E
	7	Commercial Farming Unit	1609	NE
	8	Kenwick Grange Farm Commercial Units	1553	NNE
	9	Alistair Duncan Machinery	409	WSW
	10	Commercial Farming Unit	1915	NW
	11	Dandyford	1450	NW
	12	Commercial Farming Unit	541	NW
	13	Solar panels	1915	SE
	14	Commercial Farming Unit	973	S
		RESIDENTIAL		
	1	Bagley Marsh properties	764	SSW
	2	Bagley	1026	S

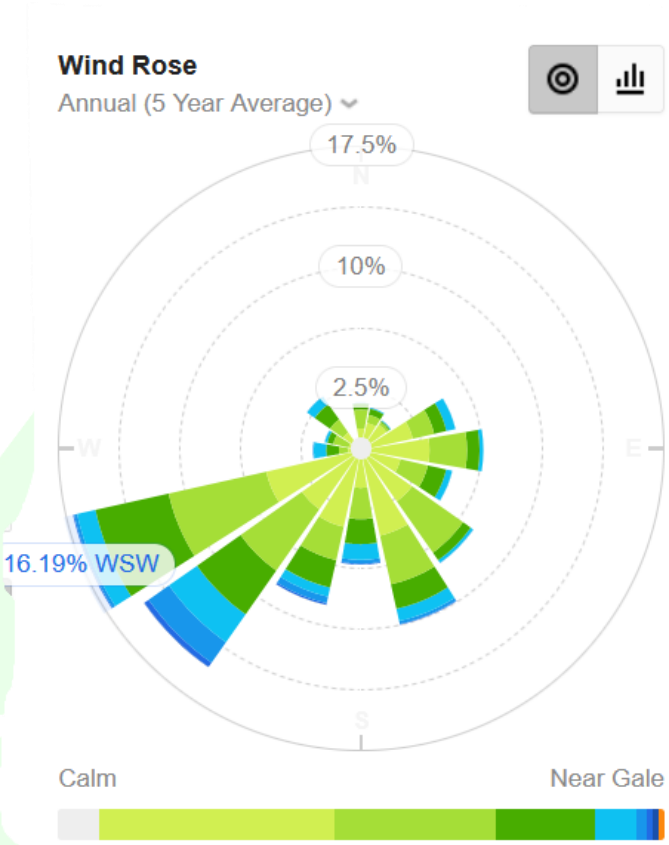
	3	Rakes House	1800	S
	4	Kenwick Wood	1632	NE
	5	Residential	1664	NE
	6	Reynolds Cottage	874	NNE
	7	Residential	1140	NNE
	8	Residential	1344	NNE
	9	Lower House	1222	N
	10	Outcast	1852	N
	11	Hordley Cottages	1812	NW
	12	Lower Hordley	763	NW
	13	Oak View Residential	588	W
	14	The Oaklands	528	SE
	15	Residential	990	SE
	16	Shade Oak Cottage	1506	SE
	17	Residential	1724	SE
	18	Park Cottage	208	SE
	19	Kenwick Oak	940	E
		PUBLIC USE		
		None	-	-
		PUBLIC RIGHTS OF WAY (PROW)		
	1	PROW 1	428	SW
	2	PROW 2	1235	SW
	3	PROW 3	1258	E, SE
	4	PROW 4	1720	NE
	5	PROW 5	1931	NE
		ROADS & RAILWAYS		
		Private Access Road	Adjacent	W
		Minor Roads	367-2000	N,E,S,W
		RECREATIONAL		
		None	-	-
		AGRICULTURAL		
	1	Arable Farm Land	0- 2000	N,E,S,W
		ALLOTMENTS		
		None	-	-
		ATMOSPHERE		
		Not in an AQMA	-	-
WATER		**SURFACE WATER**		
		River Perry	1352	E
		Unammed Ponds/Lakes	795-1221	SW
		Unammed Ponds/Lakes	290	NW
		Unammed Pond	1497	NW

		Unammed Pond	631	NE
		Unammed Ponds	532	ENE
		Unammed Ponds	1927	E
		Unammed Pond	1151	SE
		Unammed Pond	354	S
		Unammed Pond	1411	S
		Unammed Pond	1855	SE
		Unammed Pond	1273	SSW
		Various drainage ditches/tertiary water course	1240-2000	N,E,S,W
		Unammed river near Bagley	305	S
		GROUNDWATER		
		Bedrock Aquifer, secondary B	On site	-
		Superficial Aquifer, secondary B	On site	-
ENVIRONMENTALLY SENSITIVE		**DESIGNATED SITES (European) SSSI, RAMSAR**		
	1	Lin Can Moss	7816	SSW
	2	Fenemere	6902	SE
	3	Ruewood Pastures	9294	E
	4	Brownheath Moss	5911	ENE
	5	Sweat Mere and Crose Mere	3293	ENE
	6	White Mere	4175	NE
	7	Cole Mere	5335	NE
	8	Clarepool Moss and West Midlands Mosses (SAC)	6313	NE
	9	Fenn's, Whixall, Bettisfield, Wem & Cadney Mosses	8694	NE
	10	Fenn's, Whixall, Bettisfield, Wem & Cadney Mosses	9927	NE
	11	Fernhill Pastures	8679	WNW
		NON DESIGNATED SITES (but of impact to permitting)		
		None	-	-
HERITAGE LOATIONS		**LISTED BUILDINGS AND PARKS**		
	1	SHADE OAK FARMHOUSE	1262	SE

3.4 Wind Rose

Sensitive receptors have been identified up to 2 km and are shown on the sensitive receptors plan 010.1_09_005. A full list of receptors is shown above The sensitive receptors shown are in all directions of the site. The closest observing station where weather data is available is from Cockshutt WM SY12 0. 3.3 km east of the site (based on observations between 2017 – present). **Error! Reference source not found.**below shows the wind rose for C ockshut which indicates the prevailing wind is west south west.

Figure 2 Wind Rose



3.5 Pathways

Table 3 Potential Pathways

Hazard	Potential Receptors	Pathway
Odour	Humans/Property/ Sensitive Areas (Designated)	Atmosphere
Noise and Vibration		Atmosphere, Physical
Fugitive Emissions	Ground Water/Humans/Property/ Sensitive Areas (Designated)	Atmosphere, Physical
Fire, Spills and Contaminated surface water.		Atmosphere, Physical, Infiltration via the ground
Vermin, Birds, Insects	Humans/Property/ Sensitive Areas (Designated)	Atmosphere, Physical

3.6 Risk

Environmental Risk is the probability of an receptor being exposed to an environmental hazard and the impact of such exposure. The Primary risk is assessed with no mitigation in place such as managerial procedures and physical engineering.

To assess risk the probability and the consequence of exposure have to be assessed see below tables.

Table 4 Probability of Exposure

Probability of exposure
HIGH – exposure is probable: direct exposure likely with no / few barriers between hazard, source and receptor.
MEDIUM – exposure is fairly probable: feasible exposure possible, barriers to exposure less controllable.
LOW – exposure is unlikely: several barriers exist between hazards source and receptors to mitigate against exposure.
VERY LOW – exposure is very unlikely; effective, multiple barriers in place to mitigate against exposure.

Table 5 Consequence of Exposure

Consequences of Exposure
HIGH – the consequences are severe: sufficient evidence that short or long term exposure may result in serious damage.
MEDIUM – consequences are significant; sufficient evidence that exposure to hazard may result in damage that is not severe in nature and reversible once exposure ceases (e.g. irritant).
LOW – consequences are minor; damage not apparent though reversible adverse changes may occur.
VERY LOW – consequences are negligible; no evidence of adverse changes following exposure.

Application of the probability and consequences of an hazard gives a risk rating as shown by the matrix below in

Table 6 Risk Matrix

		Consequences			
		Very Low	Low	Medium	High
Likelihood	High	Low	Medium	High	High
	Medium	Low	Medium	Medium	High
	Low	Low	Low	Medium	Medium
	Very Low	Very Low	Low	Low	Low

3.7 Management of Risk

For all the hazards identified in section 3.2 above, managerial procedures and hard infrastructure engineering have been developed in accordance with relevant guidance documents[1][2][3][4]

Residual risk will remain and these are detailed in the activity risk tables.

[1] https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit#odour-management-plan
[2] Sector Guidance Note S5.06: Recovery and disposal of hazardous and non-hazardous waste
[3] H3 Noise Assessment and Control (Part 2)
[4] H1 Software Tool Version 2.78 April 2017'

Table 7 Activity Risks

Reference	Process
AR1	Waste receipt
AR2	Waste storage pending treatment or recovery/disposal
AR3	Waste treatment processes
AR4	Material dispatch for recovery/disposal

Table 8 Odour

Odour							
Identifying the harm and what could be harmed			**Assessing the risk**			**Managing the risk**	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
AR1 Reception (delivery of waste to the site) Vehicle Movements (waste delivery, movement of waste within the site and transfer of waste out of site) **AR2** Storage (Secure Storage) **AR3** Treatment processes (Treatment consisting	**Humans & Property** **Protected Nature Conservation Sites** **Atmosphere** *Inhalation of particles.* *Deposition of dust/particles on property and land.*	**Air**	**LOW**	**MEDIUM**	**MEDIUM**	• All vehicles delivering and collecting materials to/from the site are covered. • Daily maintenance and inspection of storage areas. • All vehicles, plant and machinery would be operated and maintained in accordance with manufacturer's specifications. • All plant based on the site would be equipped with upward facing exhausts. • Process equipment regularly cleaned to remove particulates. • Vehicle speeds are restricted to a maximum of 10 mph.	**LOW**

only of sorting, separation, screening, and shredding. **AR4** Material Dispatch (Recovery/disposal)						• 010.1_05_004 EMS provides managerial procedures to prevent odour.	

Table 9 Noise and Vibration

Noise and Vibration							
Identifying the harm and what could be harmed			**Assessing the risk**			**Managing the risk**	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
AR1 Reception (delivery of waste to the site) Vehicle Movements (waste delivery, movement of waste within the site and transfer of waste out of site) **AR2**	**Noise sensitive locations**[5] **Protected Nature Conservation Sites** .	**Air,** **Land**	**HIGH**	**MEDIUM**	**HIGH**	• Machinery is inspected and maintained regularly in line with manufacturer's recommendations. • Daytime operations only. • Rural location • See Noise and Vibration Management Plan 010.1_05_005. • 010.1_05_004 EMS provides managerial procedures to prevent noise and vibration	**MEDIUM**

[5] **Notes:** Noise–sensitive location defined in H3 *Horizontal Guidance for Noise Part 2 – Noise Assessment and Control* published by the Environment Agency as - *'Any dwelling, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity, which for its proper enjoyment requires the absence of noise at nuisance levels'.* Part 1 of H3 suggests that '*commercial premises may be* [noise sensitive]*, depending upon the activities undertaken there'.*

Storage (Secure Storage) **AR3** Treatment processes (Treatment consisting only of sorting, separation, screening, and shredding. **AR4** Material Dispatch (Recovery/disposal)							

Table 10 Fugitive Emissions

Litter and Debris							
Identifying the harm and what could be harmed			**Assessing the risk**			**Managing the risk**	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
AR1 Reception (delivery of waste to the site) Vehicle Movements (waste delivery, movement of waste within the site and transfer of waste out of site) **AR2** Storage (Secure Storage) **AR3** Treatment processes (Treatment consisting only of sorting, separation,	**Humans & Property** **Protected Nature Conservation Sites** *Litter Nuisance*	**Air;** **windblown, physical transport and deposition**	**LOW**	**LOW**	**LOW**	• All vehicles delivering and collecting materials to/from the site are covered. • Waste types accepted are pre sorted reducing risk of litter and debris • Type of waste is unlikely to produce litter. • Daily housekeeping of site surfaces to remove litter and debris and prevent spread. • Daily maintenance and inspection of storage areas. • Training provided to all relevant staff to collect loose litter and debris on a see it pick it up basis. • All waste activities occur inside see site plan 010.1_09_004.	**VERY LOW**

Litter and Debris							
Identifying the harm and what could be harmed			**Assessing the risk**			**Managing the risk**	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
screening, and shredding. **AR4** Material Dispatch (Recovery/disposal)						• 010.1_05_004 EMS provides managerial procedures to prevent litter and debris	

Dust							
Identifying the harm and what could be harmed			**Assessing the risk**			**Managing the risk**	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
AR1 Reception (delivery of waste to the site) Vehicle Movements	**Humans & Property** **Protected Nature**	**Air;** **windblown, physical transport and deposition**	**LOW**	**MEDIUM**	**MEDIUM**	• WEEE waste unlikely to be dusty or arrive in small fragments. • Waste streams not containing litter/light. Controlled by waste	**LOW**

Dust							
Identifying the harm and what could be harmed			**Assessing the risk**			**Managing the risk**	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
(waste delivery, movement of waste within the site and transfer of waste out of site) **AR2** Storage (Secure Storage) **AR3** Treatment processes (Treatment consisting only of sorting, separation, screening, and shredding. **AR4** Material Dispatch (Recovery/disposal)	**Conservation Sites** *Amenity Nuisance*					acceptance see EMS 010.1_05_004. • Site surface concrete provides stable work surface. • Regular housekeeping daily/weekly and ad- hoc as required to ensure site is clean and tidy. • Pick rubbish up on a 'see it, pick it up' basis • All waste transfers are overseen by a competent person • All waste is processed and stored internally. • During processing localised extraction is provided to remove dust and other particulates.	

Water							
Identifying the harm and what could be harmed			**Assessing the risk**			**Managing the risk**	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
AR1 Reception (delivery of waste to the site) Vehicle Movements (waste delivery, movement of waste within the site and transfer of waste out of site) **AR2** Storage (Secure Storage) **AR3** Treatment processes (Treatment consisting only of sorting, separation,	**Protected Nature Conservation Sites** **Surface Water** **Groundwater** *Contamination*	**Land, water, runoff**	**LOW**	**LOW**	**LOW**	• All waste transfers are overseen by a competent person. • Daily site inspections and good housekeeping procedures in place – recorded in site diary. • Spill kits on site and employees are trained in their use and disposal. • Fuel/oil storage is in accordance with the Oil Storage Regulations and provided with secondary containment. • No waste stored within 10 m of a water course • No waste stored within 50 m of any spring or borehole	**VERY LOW**

Water							
Identifying the harm and what could be harmed			**Assessing the risk**			**Managing the risk**	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
screening, and shredding. **AR4** Material Dispatch (Recovery/disposal)						• All waste stored internally undercover • Separate drainage system for roof water. • Waste stored on impermeable siter surface within a building. • 010.1_05_004 EMS provides managerial procedures to prevent ingress of rain water.	

Mud and Debris							
Identifying the harm and what could be harmed			**Assessing the risk**			**Managing the risk**	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
AR1 **Reception** (delivery of waste to the site) **Vehicle Movements** (waste delivery, movement of waste within the site and transfer of waste out of site) **AR4** **Material Dispatch (Recovery/disposal)**	**Humans & Property** *Amenity impact*	**Direct deposition**	**MEDIUM**	**MEDIUM**	**MEDIUM**	• Daily inspections by site staff and records kept. • Road sweeping as required. • Transport vehicles inspected when leaving site and cleaned as required. • Waste is not known to originate from locations that are muddy. • Waste is inherently non muddy. • 010.1_05_004 EMS provides managerial procedures to prevent mud and debris escaping.	**LOW**

Pest, Vermin, Scavengers

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
N/A - Given types of wastes accepted at site unlikely to give rise to significant pest issues.	**Humans & Property** **Protected Nature Conservation Sites**	**Air; Ground depending on vector**	**LOW**	**MEDIUM**	**LOW**	• Daily site inspections and good housekeeping procedures in place. • Permitted wastes unlikely to attract scavenging animals • Waste stored in a building • 010.1_05_004 EMS provides managerial procedures to prevent pest and vermin.	**VERY LOW**

Table 11 Accidents

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
TRANSFERRING SUBSTANCES							
AR1 Reception (delivery of waste to the site) Vehicle Movements (waste delivery, movement of waste within the site and transfer of waste out of site) **AR2** Storage (Secure Storage) **AR3** Treatment processes (Treatment consisting	**Humans & Property** **Protected Nature Conservation Sites** **Surface Water** **Groundwater** **Atmosphere** *Adverse impact*	**Land, air, water**	**LOW**	**LOW**	**MEDIUM**	• All vehicles delivering and collecting materials to/from the site are covered. • All waste that arrives is either containerised or on pallets • All waste transfers are overseen by a competent person. • Fuel/oil storage is in accordance with the Oil Storage Regulations and provided with secondary containment. All stored within secured perimeter. • Limited vehicle movements on site and 10 mph speed limit • Spill kits on site and employees are trained in their use and disposal.	**LOW**

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
only of sorting, separation, screening, and shredding. **AR4** Material Dispatch (Recovery/disposal)						• Deposit of waste occurs within a designated area. • 010.1_05_004 EMS provides managerial procedures to prevent accidents	

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
PLANT OR EQUIPMENT FAILURE							
AR1 Reception (delivery of waste to the site)	**Humans & Property** **Protected Nature**	**Land, air, water**	**LOW**	**LOW**	**MEDIUM**	• Limited vehicle movements within site reduces risk of accident. • Critical spares held on site	**LOW**

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
Vehicle Movements (waste delivery, movement of waste within the site and transfer of waste out of site) **AR2** Storage (Secure Storage) **AR3** Treatment processes (Treatment consisting only of sorting, separation, screening, and shredding. **AR4** Material Dispatch (Recovery/disposal)	**Conservation Sites** **Surface Water** **Groundwater** **Atmosphere** *Adverse impact*					• Planned maintenance program limits failure of key process components. • Daily inspections of plant, equipment and site infrastructure • 010.1_05_004 EMS provides managerial procedures to prevent plant or equipment failure.	

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
FLOODING							
N/A – the site is not identified as being at risk from flooding	-	-	-	-	-	-	-
VANDALISM							
Entire Process	**Humans & Property** **Protected Nature Conservation Sites** **Surface Water** **Groundwater** **Atmosphere** *Adverse impact*	**Land, air, water**	**LOW**	**MEDIUM**	**MEDIUM**	• Site is secured by fencing and gated. • CCTV • Site operators live in adjacent • All waste is stored and processed internally except one container see site plan 010.1_09_004 • 010.1_05_004 EMS provides managerial procedures to prevent vandalism.	**LOW**

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
FIRE							
AR1 Reception (delivery of waste to the site) Vehicle Movements (waste delivery, movement of waste within the site and transfer of waste out of site) **AR2** Storage (Secure Storage) **AR3** Treatment processes (Treatment consisting only of sorting, separation,	**Humans & Property** **Protected Nature Conservation Sites** **Atmosphere** *Loss of life and property, loss of habitat, destruction and loss of amenity*	**Spread through physical contact; fanned by winds**	**LOW**	**HIGH**	**MEDIUM**	• Fire Prevention Plan in operation, 010.1_05_011 • Waste storage areas will be separated with appropriate fire breaks or fire resistant barriers between combustible materials. • Incoming waste is source segregated. • CCTV. • Potential ignition sources will be removed from waste storage areas. • The operational section of the site is a no smoking area. All areas are subject to daily housekeeping.7 • 010.1_05_004 EMS provides managerial procedures to prevent fire.	**LOW**

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
screening, and shredding. **AR4** Material Dispatch (Recovery/disposal)							

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