Environmental Risk Assessment

Sutton Courtenay Materials Recycling Facility

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[1] Introduction

[1.1.1] Background

This report has been prepared by Ayesa (ByrneLooby Partners (UK) Limited) on behalf of FCC Environment (UK) Limited in support of a normal permit variation application for the Sutton Courtenay Materials Recycling Facility (MRF) Environmental Permit (EP) ref. EPR/NP3890VV.

Sutton Courtenay MRF ("the Site") is centred on National Grid Reference (NGR) SU 514 932 and is located at Appleford Sidings, Abingdon, Oxfordshire, OX14 4PW. The Site is operated by FCC Environment (UK) Limited (FCC), which is hereafter referred to as the Operator.

[1.1.2] Site Location and Environmental Setting

Sutton Courtenay MRF is located approximately 1km to the southwest of the village of Appleford and approximately 1.25km to the southeast of the village of Sutton Courtenay. The Site has been developed at the centre of a complex of former and active sand and gravel quarries and waste management sites (Figure 1). The MRF has however been constructed on a previously undeveloped area of grassland. Heidelberg Materials operate a quarrying and aggregates business within 10m of the MRF boundary to the east and north of the site (Figure 2). A composting facility is located immediately to the west.

The Site is relatively remote from residential receptors with the closest residential receptors being positioned some 800m north-west of the site on Warbler View (Figure 1).

Figure 1 - Site Location and Surrounding Landfills

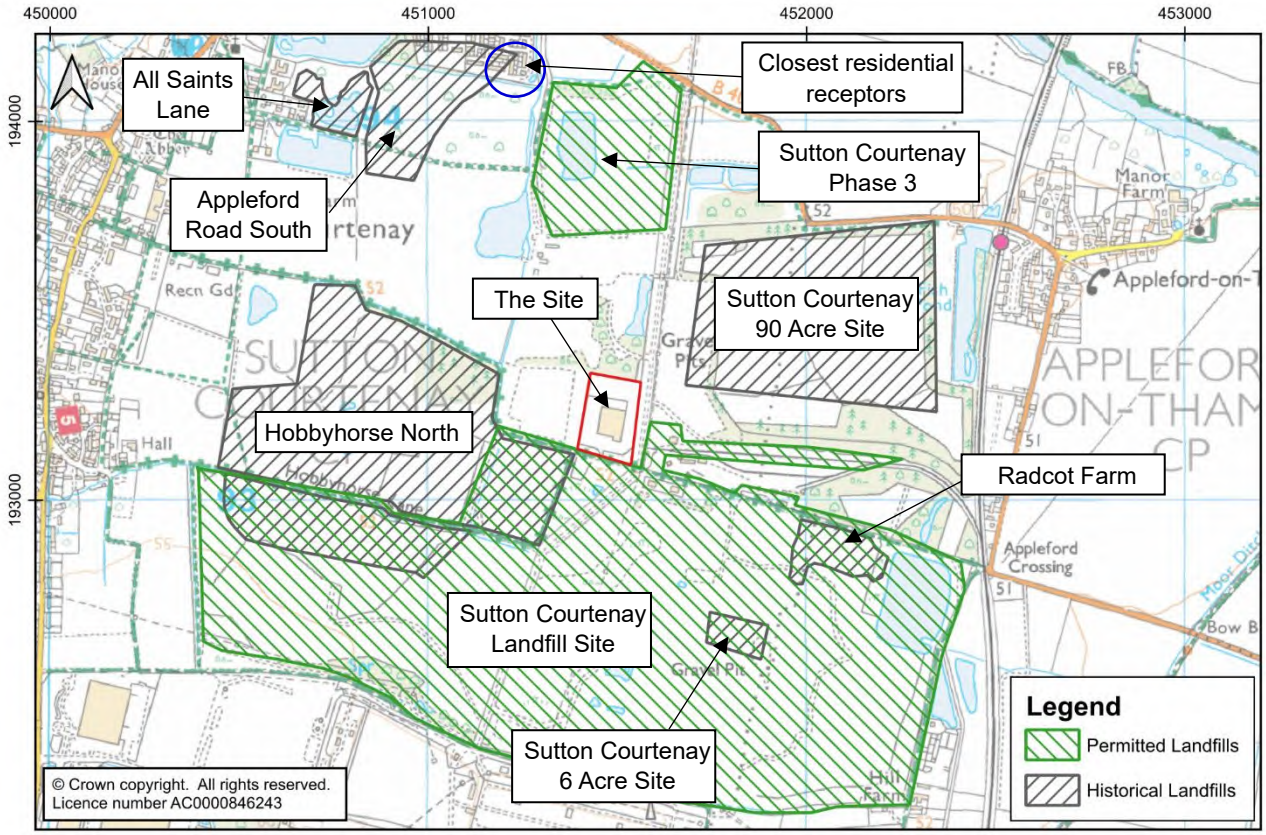
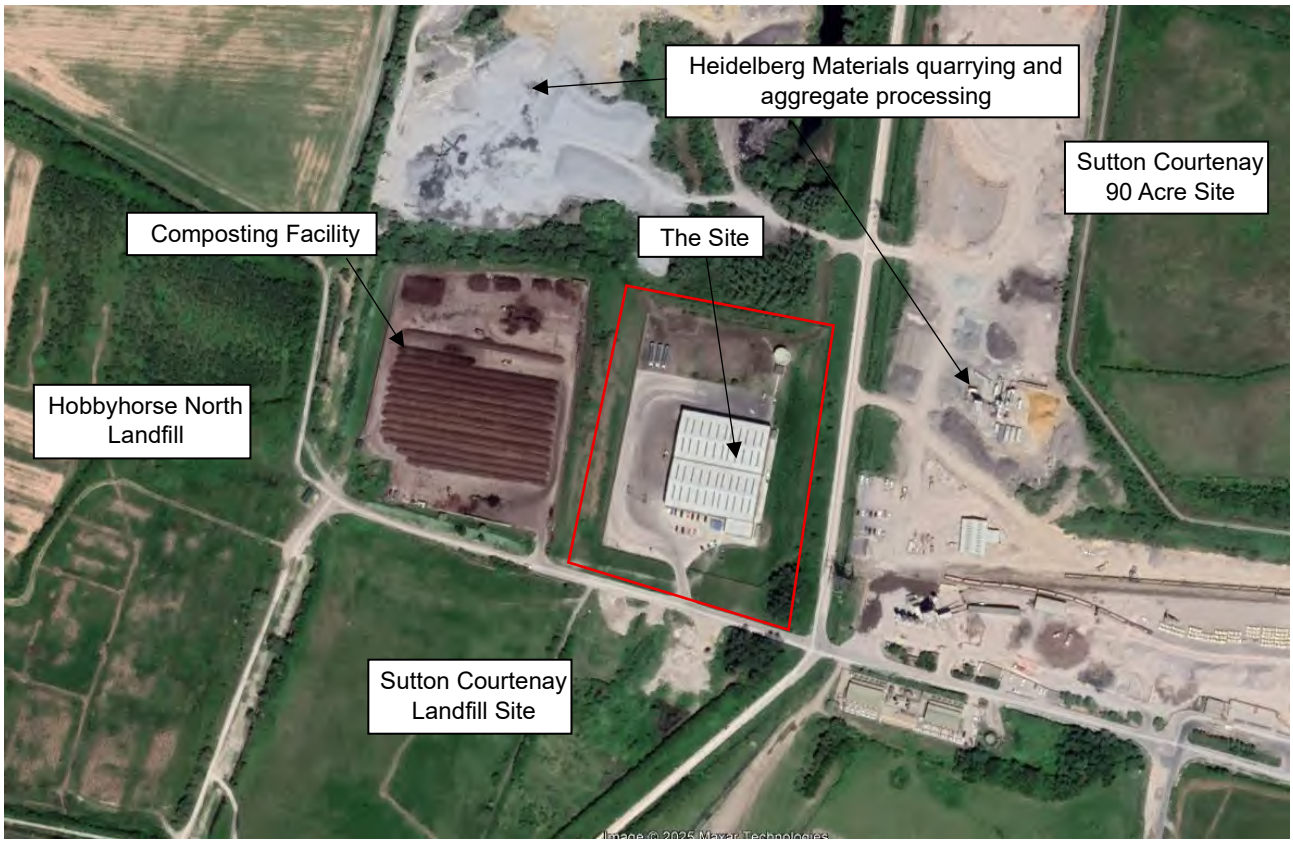


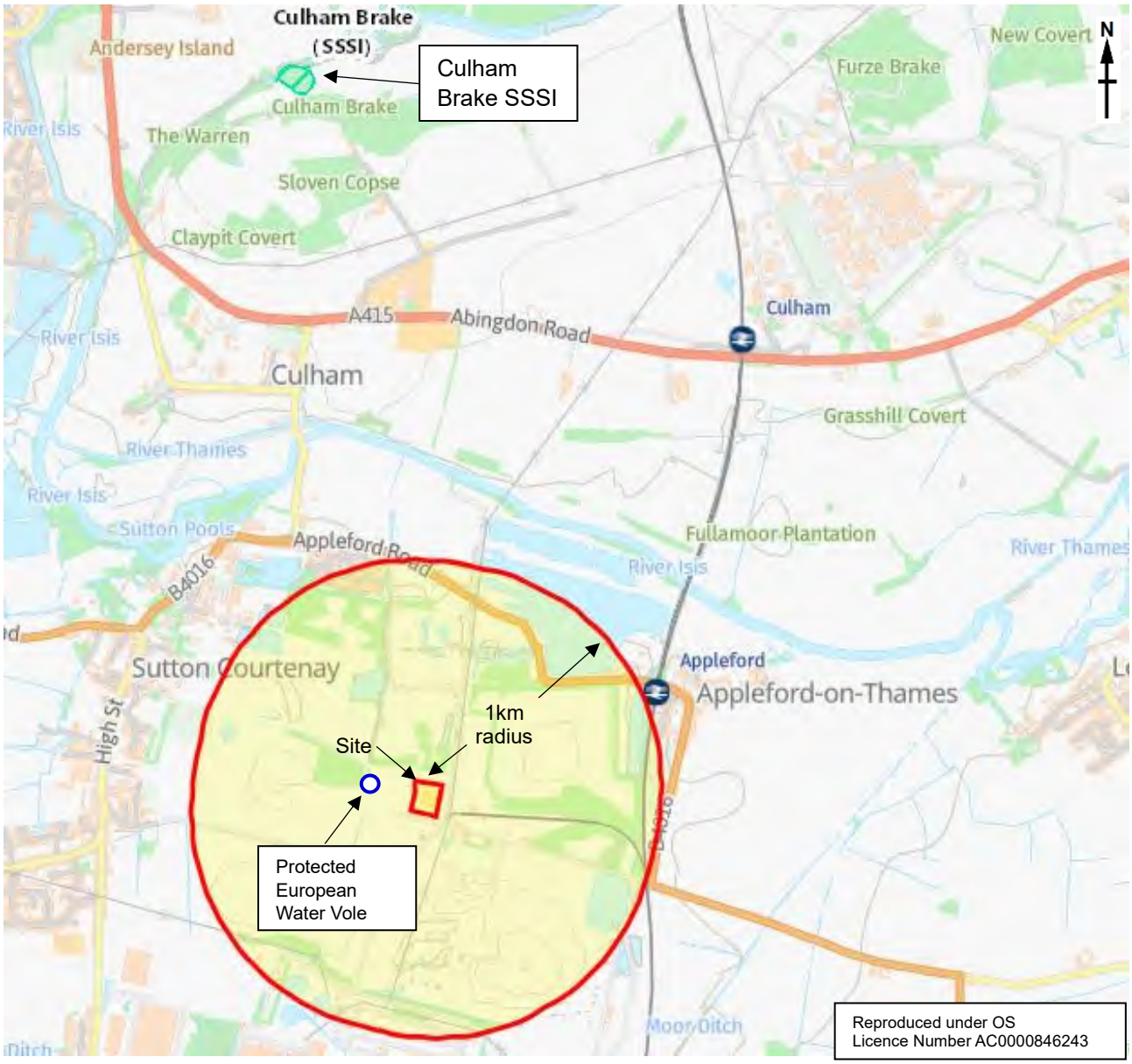
Figure 2 - Site Location and Surrounding Features



Sutton Courtenay MRF is not located within 1km of any designated sites. The closest designated site is the Culham Brake Site of Special Scientific Interest (SSSI) located ~3.1km to the north of the site (Figure 3).

As part of a pre-application basic conservation screening (reference EPR/NP3890VV/P001), the Environment Agency did identify a protected European water vole within a stream located approximately 255m to the east of the site (Figure 3) and to the west of the compositing facility.

Figure 3 – Statutory Protected Sites (Extract from DEFRA's Magic Maps)



[1.1.3] Permitting History

Sutton Courtenay MRF became operational in February 2013, with the EP issued to FCC Environment (UK) Ltd on 11th February 2013. The EP was varied for the first time in March 2014 (V002) for the inclusion of a new waste code. A second variation (V003) was issued two months later in May 2014 for the addition of a waste transfer station, clinical waste, a disposal activity and increasing site throughput. A third variation (V004) was determined in July 2017 to allow outside storage of baled Refuse Derived Fuel (RDF) and process segregated metals, alongside the addition of a recovery activity to permit the pre-treatment of more than 75 tonnes per day of non-hazardous wastes for incineration. The EP was most recently varied on 9th June 2022 (V005) to modernise the conditions as part of an Environment Agency 'Non-hazardous Waste Sector Review'.

The EP authorises the operation of a MRF and Waste Transfer Station (WTS) for the acceptance of non-hazardous household, commercial and industrial wastes for the production of RDF. It permits

the recovery, or a mix of recovery and disposal, of non-hazardous waste with a capacity exceeding 75 tonnes per day, involving the pre-treatment of waste destined for incineration or co-incineration.

The following directly associated activities (DAA) are also permitted:

- Storage of waste prior to pre-treatment (AR2);
- Raw material storage (AR3);
- Storage of baled RDF and separated metals and recyclables, prior to onward transfer to a suitable licensed facility off-site (AR4);
- Storage, transfer and treatment of non-hazardous waste only as a MRF and WTS (AR5); and
- Non-hazardous clinical waste storage and repackaging as a healthcare waste facility (AR6).

Persistent organic pollutant (POPs) waste and waste upholstered domestic seating (WUDS) is shredded and prepared for onward transfer to an Energy from Waste (EfW) facility.

The Site's Fire Prevention Plan (FPP)[1] and waste handling procedure[2] detail the waste sorting, storage, transfer, processing and treatment procedures for all waste types accepted at the site.

Although the EP allows for the storage of some processed wastes outside, this is not currently being carried out. All wastes are stored undercover within the MRF building. A sealed drainage system is in place at the site which drains to surface water. The drainage system can be isolated in the event of a spill or fire by a lockable penstock shut-off valve.

[1.1.4] Proposed Changes to the Permit

This application is seeking to amend Permit Table S2.2 (for waste activity AR5 – recycling and transfer of non-hazardous waste) to accept the additional waste types listed in Table 1 under the following controls.

- The treatment of waste electrical and electronic equipment (WEEE), hazardous wastes and batteries shall consist of manual sorting only.
- WEEE, discarded hazardous wastes and batteries will not be compacted or compressed.
- All wastes shall be clearly identified and segregated, stored on an impermeable surface with sealed drainage system and, stored under weatherproof covering to prevent the ingress and contamination of water.

A full list of waste types at the facility is provided as Appendix B.

No changes are proposed to the site's annual throughput which is currently limited to 160,000 tonnes per annum.

[1] FCC (2024) *Sutton Courtenay MRF/WTS Fire Prevention Plan*. Ref. IMS-FRM-046
[2] FCC (2024) *Waste Handling procedure version 8*. Ref. EMS-3.02.04-SCTS

Table 1 – List of additional waste types

16	**WASTES NOT OTHERWISE SPECIFIED IN THE LIST**
16 01	**end-of-life vehicles from different means of transport [including off-road machinery] and waste from dismantling of end-of-life vehicles and vehicle maintenance (except 13,14, 16 06 and 16 08)**
16 01 08*	components containing mercury
16 01 09*	components containing PCBs
16 02	**wastes from electrical and electronic equipment**
16 02 09*	transformers and capacitors containing PCBs
16 02 10*	discarded equipment containing or contaminated by PCBs other than those mentioned in 16 02 09
16 02 11*	discarded equipment containing chlorofluorocarbons, hydrochlorofluorocarbons and hydrofluorocarbons
16 02 12*	discarded equipment containing free asbestos
16 02 13*	discarded equipment containing hazardous components other than those mentioned in 16 02 09 to 16 02 13
16 02 14	discarded equipment other than those mentioned in 16 02 09 to 16 02 13
16 02 15*	hazardous components removed from discarded equipment
16 02 16*	components removed from discarded equipment other than those mentioned in 16 02 15
16 06	**Batteries and accumulators**
16 06 01*	lead batteries
16 06 02*	Ni-Cd batteries
16 06 03*	mercury-containing batteries
16 06 04	alkaline batteries (except 16 06 03)
16 06 05	other batteries and accumulators
16 06 06	separately collected electrolyte from batteries and accumulators
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 21*	Fluorescent tubes and other mercury-containing waste
20 01 23*	Discarded equipment containing chlorofluorocarbons
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 35*	Discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components
20 01 36	Discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35

[1.2] Environmental Risk Assessment

The Environment Agency requires a risk assessment to be carried out and accompanies applications for new, or variations of, bespoke permits. This risk assessment has therefore been undertaken to address this requirement and has been carried out in accordance with the Environment Agency's electronic guidance on 'Risk Assessments for your Environmental Permit[3] which was last updated on 3rd January 2025.

[3] https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit

The guidance identifies the following steps to be taken when presenting the risk assessment:

- risk/hazard identification;
- receptor identification;
- pathway Identification;
- assessment of the risks which are relevant to the site's activities; and
- consideration of methods for risk mitigation and management controls.

The guidance indicates that the following potential risks should be considered and, where applicable to the activity, assessed:

- any discharge *e.g.* trade effluent to groundwater or surface water;
- odour;
- noise and vibration;
- fugitive emissions including dust, mud and debris, litter, VOCs;
- pests; and
- accidents.

The guidance requires that receptors are considered with regard to their proximity to the site, the pathway, the probability of exposure, potential consequences, mitigating management measures and the overall residual risk.

The potentially sensitive receptors are detailed in Table 3 in Section [2.5] of this report and their position relative to the site is illustrated in Figure 5.

The risk assessment includes assessment of the hazards relevant to the site's activities as identified in the risk assessment tables within Section 3.

[2] Scope of Assessment

[2.1] Proposed Operations

The proposed variation is for the continuing operation of the site in accordance with the current EP with the changes listed in the sections above.

All waste activities will continue to be carried out upon an impermeable concrete surface with a drainage system that can be sealed by a penstock valve to collect and contain any run-off when necessary. Maintenance details for the surface water drainage system are provided in the site's Environmental Management System (EMS).

All waste shall be kept secure and stored within the MRF building.

All combustible wastes will continue to be segregated appropriately and removed from site within 3 months. The Site will continue to be managed in accordance with the site's Fire Prevention Plan.

The proposed new waste types will be stored as follows:

- Batteries will be stored in a dedicated battery box within the MRF building.
- Other electrical items will be stored within the MRF building *i.e.* under cover.
- All wastes shall be clearly identified and segregated.
- Hazardous wastes will be kept within clearly identified and segregated containers or demarcated areas. It shall not be mixed with a different category of hazardous waste or with other waste, substances or materials.
- WEEE shall not be compacted or compressed during storage, prior to manual sorting and onward transport for further treatment.

Storage arrangements for the proposed new waste types are set out in Table 2 below. Further details relating to waste management are provided within the site's EMS.

Table 2 – Storage and handling arrangements for new waste types

Waste type	Proposed storage and handling arrangements
Dismantled end-of-life vehicle components containing hazardous substances mercury and PCBs (16 01 08* and 16 01 09*)	All components to be stored within a dedicated 40-yard skip, within the MRF building and separated from non-hazardous wastes.
Waste electrical and electronic equipment from municipal sources (16 02 09*, 16 02 10*, 16 02 11*, 16 02 12*, 16 02 13*, 16 02 14, 16 02 15, 16 02 16, 20 01 35* and 20 01 36)	WEEE and small electricals will be stored within a 40-yard skip within the MRF building. Hazardous and non-hazardous WEEE will be clearly identified and stored separately.
Discarded equipment containing asbestos (as EWC code 16 02 12*)	Discarded/fly-tipped WEEE and small electricals will be stored within the MRF building. Asbestos wastes shall not be removed from its primary packaging (bags or wrapping). Asbestos waste will be double bagged and securely wrapped, stored in a lockable container and will not be transferred between containers.
Household and discarded components containing CFCs, HCFCs and HFCs (20 01 23*)	All household items including fridges and freezers containing CFCs, HCFCs and HFCs will be stored upright within a segregated storage area within the MRF building.
Fluorescent tubing and other mercury-containing waste and components (16 01 08* and 20 01 21*)	Waste to be stored within a dedicated sealed, rigid container to reduce potential for breakages. Containers will be stored carefully and securely to prevent tipping or crushing. The wastes will be segregated from non-hazardous wastes.
Batteries and accumulators (16 06 01*, 16 06 02*, 16 06 03*, 16 06 04, 16 06 05, 16 06 06, 20 01 33* and 20 01 34)	Batteries will be stored in a dedicated battery container and care taken to avoid spillages of acids (stored upright). The battery container will be leak-proof, weatherproof and include an acid-resistant base. Lithium-ion batteries will be stored separately.

[2.2] Potential Hazards

[2.2.1] Environmental Accidents

The Environment Agency's risk assessment guidance requires the consideration of potential accidents. This should assess potential accident-related hazards associated with the proposed activity, which are not considered under other parts of the risk assessment. The scenarios this may include are identified below:

- Vandalism/arson
- Fire
- Flooding

A Fire Prevention Plan (FPP) is in place at the site and has been updated to include the additional waste types. The FPP forms part of the site's EMS.

All combustible waste streams are stored separately in a combination of bays, containers and separate bins.

The site is not located within a flood risk zone and the risk of flooding is considered very low from surface water[4] (flash flooding) and rivers. The site is not located near to the sea. Flooding from groundwater and reservoirs is considered 'unlikely' in the area. A drainage system is in place at the site to manage risks associated with surface water run-off.

Environmental accidents are considered further within Table 5 below.

[2.2.2] Odour

The site is authorised to accept a mixture of household, commercial and industrial wastes. The proposed additional waste types do not include biodegradable waste which have the potential to be odorous. The risk of odour has therefore not been considered further within this risk assessment.

Odour will continue to be managed in accordance with the site's EMS Odour Monitoring and Control Plan (ref. EMS-3-13.10-SCTS).

[2.2.3] Dust, Mud and Litter

The site is prohibited from accepting dusty and powdery wastes. Dust and mud are not expected to arise from the proposed additional waste types which comprise electrical and electronic equipment and batteries. All waste activities will continue to be carried out on an impermeable hardstanding within the MRF building, which will be inspected in accordance with the site's EMS Management and Monitoring Plans reference EMS-3-13.09-SCTS and EMS-3-13.12-SCTS.

The risk of dust, mud and litter is not anticipated to increase due to the acceptance of the proposed new waste types and therefore has not been considered further within this risk assessment.

[4] https://check-long-term-flood-risk.service.gov.uk/postcode

[2.2.4] Noise and Vibration

The site is operational and the proposed changes to the permit will introduce new waste types. The site is authorised as a materials recycling facility and transfer station and operations are carried out in accordance with the EMS. Handling of the additional proposed wastes will comprise of only manual sorting and separation into different components, with no treatment proposed. The extant Permit includes conditions relating to the use of heavy machinery.

The proposals are not expected to have a significant impact on noise or vibration. There will be no change in the annual throughput at the site. Nevertheless, noise and vibration following the proposed changes have been considered further in Table 6.

Noise and vibration will continue to be managed in accordance with the Operator's Noise and Vibration Management Plan (ref. EMS-3-13.14-SCTS) which forms part of the site's EMS.

[2.2.5] Pests and Vermin

The proposed additional waste types are not expected to attract pests and vermin due to their nature (non-food source and non-putrescible wastes). Pests and vermin are therefore not considered further.

Pests and vermin will continue to be managed in accordance with the site's EMS Control Plan (ref. EMS-3-13.13-SCTS).

[2.2.6] Contaminated Water

All wastes will be managed on an impermeable hardstanding within the MRF building with a sealed drainage system and shut-off valve fitted to contain surface water on site in the event of a spillage. Procedures are in place for preventing and managing leaks and spillages on site.

All proposed additional waste types are to be stored within the MRF building to limit the potential for leachate generation.

The risk of contaminated waters is considered further in Table 7.

[2.2.7] Volatile Organic Compounds (VOCs)

The proposed additional waste types are not considered to present a significant risk of releasing VOCs.

Wastes containing CFCs or similar compounds will not be degassed on site, and CFCs will remain in their original containers and stored upright. No volatilisation of VOCs under this variation are expected to be released. The risk of contaminated waters is considered further in Table 8.

[2.3] Hazards and Pathways

The potential hazards have been discussed and identified in the sections above. The hazard pathways for the potential hazards are predominantly above ground (*i.e.* via the atmosphere) and are influenced by climatic factors such as wind speed and direction. When considering the potential

receptors, the closest and the most sensitive (if different from the closest) have been considered in each direction from the hazard, accounting for the nature of the pathway.

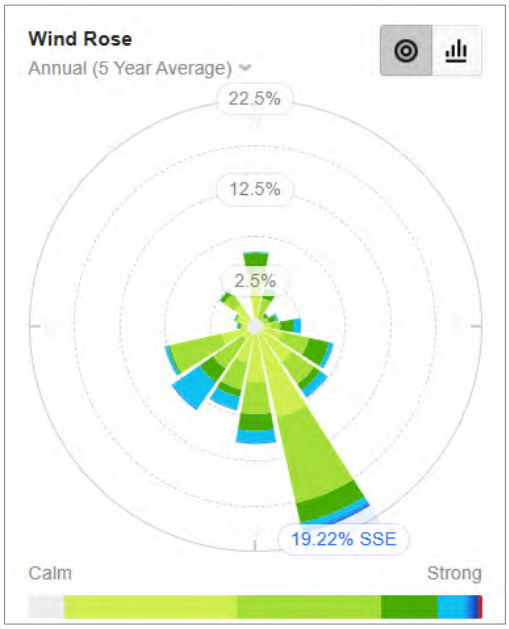
The pathway is determined by the location of the receptor relative to the site, the distance from the site boundary (m) and the frequency (likelihood) the prevailing wind will blow in the direction of the receptor as determined by wind rose data. Other locational factors such as topography, boundary vegetation and other natural barriers or surface structures which may influence the pathway are also considered.

[2.4] Wind Data

Wind statistics including speed and direction data have been obtained for RAF Benson weather station[5], the nearest Meteorological Office Station to the site, located ~ 12.7km to the southeast.

The data is presented in Figure 4 below. The average wind speed for the 2020 to 2025 period is 6.3mph and the prevailing wind direction is from the south-south-east.

Figure 4 – Wind Rose (2020 – 2025)



[2.5] Potential Receptors

A review of the potentially sensitive receptors has been completed and these are listed in Table 3 below. Their position relative to the site is illustrated on Figure 5.

The potentially sensitive receptors within a 1km radius of the site have been considered with regards to their type (*i.e.* residential, commercial, agricultural etc.), distance from the site boundary, direction from the site and the location of the receptor relative to the prevailing wind direction as identified by the wind rose presented in Figure 4.

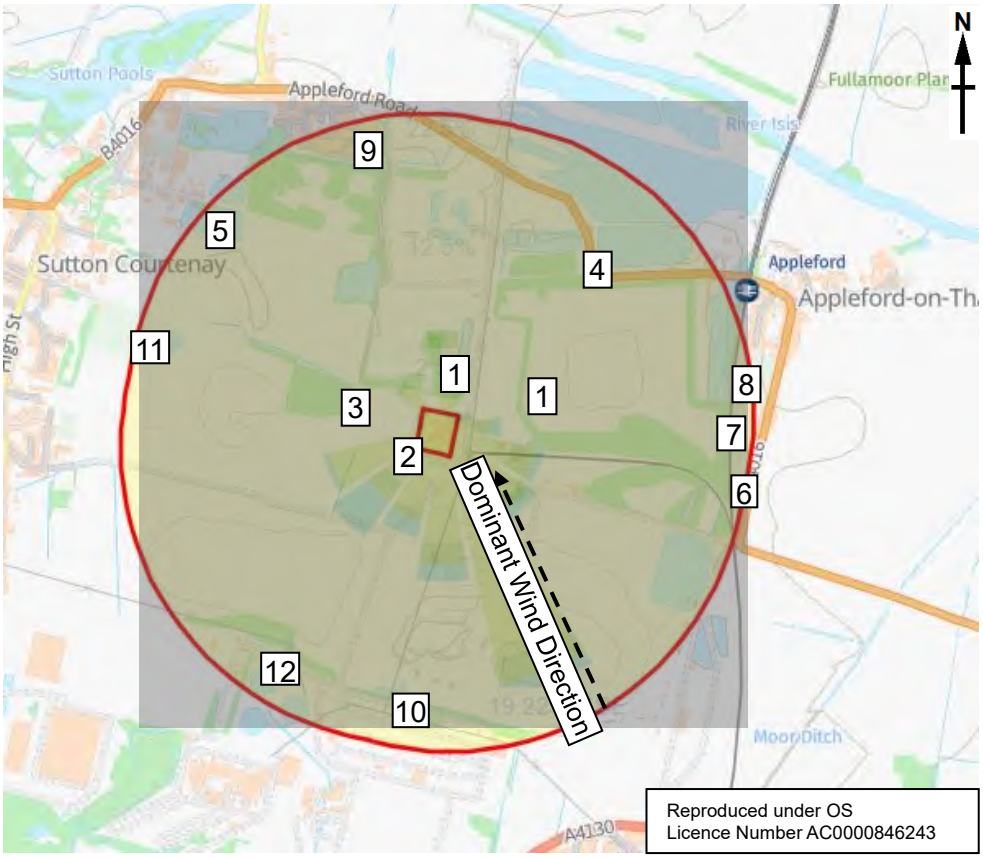
[5] Sutton Courtenay Wind Forecast, Oxfordshire OX14 4 - WillyWeather

Table 3 – Potentially Sensitive Receptors

No	Description	Type	Approximate distance from Permit Boundary (m)	Direction From Site	Location relative to Prevailing Wind Direction
1	Heidelberg Materials	Commercial/Industrial	<10	N & E	Downwind
2	Byway open to all traffic	Public (transient)	<10	S	Upwind
3	European Water Vole	Protected Species	255	W	Crosswind
4	B4016 Appleford Road	Public Highway	670	N/NW/NE	Downwind
5	Harwell Angling Club Fishing Lakes	Public	850	NW	Downwind
6	B4016 Main Road Residences*	Residential	930	E	Upwind
7	Railway Line	Public (transient)	940	E	Upwind
8	Appleford Recreational Ground	Public	950	E	Upwind
9	Properties on Warbler View*	Residential	800	NNW	Downwind
10	RWE Generation UK	Industrial/Commercial	950	S	Upwind
11	Sutton Courtenay Recreational Ground	Public	970	W	Crosswind
12	Didcot Quarter Business Park	Commercial/Industrial	990	SSW	Upwind

* Distance to receptor is at its nearest point and has been used as a proxy for the wider residential area and other small neighbouring residential properties which are at greater distance from the site.

Figure 5 – Potentially Sensitive Receptors (1km Radius)



The prevailing wind direction at the site is predominantly from the south-south-east. The closest residential receptors are positioned downwind but at a significant distance (800m) from the site boundary. Also downwind is the Harwell Angling Club fishing lakes located approximately 850m to the northwest. Given the distance of these receptors to the site, and the nature of the proposed changes, there is unlikely to be a significant change in the potential impact from fugitive emissions on these downwind receptors.

As noted earlier in this report, there are no designated habitats sites within a 1km radius of the site. Given the position and distance of the designated areas from the site, it is considered unlikely that the activities on site could significantly impact these potential receptors.

The protected European water vole has been identified within a nearby stream located approximately 255m to the east of the site. However, all waste management activities are carried out on impermeable surfacing. The drainage system is suitably engineered with a penstock shut-off valve fitted at the discharge point to minimise the risk of surface water contamination. Consequently, there will be no uncontrolled discharge off-site and the risk to nearby surface water features is therefore low.

[3] Risk Assessment and Accident Management Plans

[3.1] Probability and Consequence of Exposure

Probability of exposure at identified receptors is determined by the distance of the receptor to the site and the likelihood of the potential hazard reaching the receptor *i.e.*, considering the strength and frequency of prevailing wind direction and other factors such as vegetation screening, topography etc. There is often an inter-relationship between the specific risk assessments, meteorological conditions, and other locational factors and, where relevant, this has been identified. The probability of exposure is irrespective of the type of hazard presented.

The consequence of exposure is determined by the sensitivity of the receptor to a potential hazard (*e.g.* residential receptors are more likely to be sensitive to potential hazards than industrial receptors). The overall potential risk from a potential hazard to a receptor is arrived at by using a simple risk matrix (Table 4) and combining the probability of occurrence (*i.e.* low, medium, or high) against the likely consequence or impact which also uses a scale of low, medium or high

Table 4 – Simple Risk Matrix

		Consequence		
		Low	**Medium**	**High**
Probability of Occurrence	**Low**	Low	Low	Medium
	Medium	Low	Medium	High
	High	Medium	High	High

[3.2] Residual Risk

Whilst the overall risk is arrived at by considering probability of occurrence and the potential consequence, the residual risk is the risk presented by a hazard after risk management, mitigation, and control measures have been instigated and taken into account.

The risk management measures will be informed by the risk assessment and will include site management procedures, monitoring, use of appropriate plant and equipment and installation of infrastructure to control potential hazards etc. These measures are designed to mitigate the overall risk to acceptable residual risk levels.

[3.3] Risk Assessment

Specific risk assessments using the above methodology have been completed for the following potential hazards and are presented in Tables 4 to 6 below:

- Accidents;
- Noise and vibration; and,
- Contaminated water.

The site will continue to operate in accordance with the EP conditions and site's EMS.

Table 5 – Accident Risk Assessment

Hazard	Receptor	Pathway	Probability	Consequence	Overall Risk	Risk Management	Residual Risk
Fire Uncontrolled burning of wastes or site facilities	Receptors listed in Table 3 above. & Site personnel	Airborne	Low	High - smoke / odour annoyance High–Site personnel injury	Low	A Fire Prevention Plan is in place at the site. All flammable wastes will be segregated and stored in sealed containers and will be routinely inspected. Fire control equipment will be on hand, with major incidents to be dealt with by the Fire Brigade in accordance with the site procedures. Site security in the form of a perimeter fence and gates, which are locked out of hours, help to reduce the potential for arson. No deliberate burning of waste or other fires to be undertaken at site. Site vehicles and plant are subject to regular preventative maintenance in line with site procedures.	Low
Vandalism (Arson included within fire above)	Air, Surface water and Groundwater	Atmospheric / Site drainage	Low	High - Pollution of air/groundwater through leaks from damaged equipment. Due to the nature of the site (an outdoor facility) dispersion rates will be high.	Medium	Site security will prevent access by unauthorised persons. Site security includes, fencing, gates, locking of fuel, gas and oil stores and plant and machinery.	
Flooding	Groundwater / Surface water	Site Drainage	Medium to Low	Medium - pollution of surface water/ groundwater	Medium	The site is not located within a flood risk zone. The risk of flooding is very low from surface water (flash flooding), rivers and the sea. However, a drainage system is in place at the site to manage any residual risk. Waste will be stored in suitable containers or bays. Containers will limit contact of waste with floodwater in the event of a significant flood event within the MRF building.	

Table 6 – Noise and Vibration Risk Assessment

Hazard / Pathway	Receptor				Probability	Consequence	Overall Risk	Risk Management	Residual Risk
	No.[a]	Dist	Direc	Freq[b]					
Noise travels through the air from waste handling and storage areas / from vehicle movements. **Vibration** Whole body vibration can occur from the movement of vehicles, waste storage containers and machinery	1	<10	N & E	High (up to 10.67%)	High – Close proximity to the site, frequently downwind	Medium – Commercial/industrial	High	Noise at the site is most likely to be associated with the handling, movement and loading of wastes. The closest receptor to the site (aggregates business) presents its own noise and vibration risk with moving excavators, conveyor belts, loaders, crushers and screens. Staff monitor site activities during the opening hours to ensure that an unacceptable level of noise does not occur beyond the boundaries. Vehicles on site will not be left idling and drivers will turn off their engines whilst waiting/loading. Noise and vibration prevention measures include regular maintenance of plant and machinery, and use of manufacturers exhaust silencers, as appropriate. All waste is unloaded, moved and transferred for ongoing transport within the MRF building. Site haul roads are regularly maintained to prevent vibration created by site vehicles traversing over potholes and uneven site haul road surfaces.	Low
	2	<10	S	Medium (6.72%)	High – Close proximity to site, occasionally downwind	Low – Public (Transient)	Medium		
	3	255	W	Low (4.10%)	Medium – Close proximity to site, rarely downwind	Medium – Protected Habitat	Medium		
	4	670	N/NW/ NE	High (up to 19.22%)	High – Further proximity to the site, frequently downwind	Low – Public (Transient)	Medium		
	5	850	NW	Medium (7.93%)	Low – Distant proximity to the site, occasionally downwind	High - Public	Medium		
	6	930	E	Low (1.74%)	Low – Distant proximity to the site, rarely downwind	High - Residential	Medium		
	7	940	E	Low (1.74%)	Low – Distant proximity to the site, rarely downwind	Low – Public (Transient)	Low		
	8	950	E	Low (1.74%)	Low – Distant proximity to the site, rarely downwind	High - Public	Medium		
	9	950	NNW	High (up to 19.22%)	Medium – Distant proximity to the site, frequently downwind	High - Residential	High		
	10	950	S	Medium (6.72%)	Low – Distant proximity to the site, occasionally downwind	Medium – Commercial/industrial	Low		
	11	970	W	Low (4.10%)	Low – Distant proximity to the site, rarely downwind	High - Public	Medium		
	12	990	SSW	Low (3.55%)	Low – Distant proximity to the site, rarely downwind	Medium – Commercial / Industrial	Low		

[a] Refer to Table 3 for description and type of receptor, [b] Frequency refers to the frequency that the receptor is downwind of the Site and the potential hazard.

Table 7 – Contaminated Water Risk Assessment

Hazard / Pathway	Receptor	Probability	Consequence	Overall Risk	Risk Management	Residual Risk
Contaminated Water. From wastes as received and site operations	All	Low	Medium	Low	A sealed drainage system with a penstock shut-off valve is installed where clean surface water drains to the environment. All wastes are stored on impermeable hard standing concrete, within the MRF building. All wastes are unloaded, processed and loaded for transport within the MRF building. Spill kits are available fully stocked at all times.	Low

Table 8 – VOC's Risk Assessment

Hazard / Pathway	Receptor				Probability	Consequence	Overall Risk	Risk Management	Residual Risk
	No.[a]	Dist	Direc	Freq[b]					
VOC Emissions. travel through the air from waste handling and storage areas	1	<10	N & E	High (up to 10.67%)	High – Close proximity to the site, frequently downwind	Medium – Commercial/industrial	High	Waste stored in a building to reduce potential impact from any fugitive emissions. Wastes containing CFCs or similar compounds will not be degassed on site, and CFCs will remain in their original containers and stored upright. Waste with potential to emit VOCs if damaged will be transferred offsite as soon as practically possible to reduce potential for leakages. Staff are training in safe handling procedures.	Low
	2	<10	S	Medium (6.72%)	High – Close proximity to site, occasionally downwind	Low – Public (Transient)	Medium		
	3	255	W	Low (4.10%)	Medium – Close proximity to site, rarely downwind	Medium – Protected Habitat	Medium		
	4	670	N/NW/ NE	High (up to 19.22%)	High – Further proximity to the site, frequently downwind	Low – Public (Transient)	Medium		
	5	850	NW	Medium (7.93%)	Low – Distant proximity to the site, occasionally downwind	High - Public	Medium		
	6	930	E	Low (1.74%)	Low – Distant proximity to the site, rarely downwind	High - Residential	Medium		
	7	940	E	Low (1.74%)	Low – Distant proximity to the site, rarely downwind	Low – Public (Transient)	Low		
	8	950	E	Low (1.74%)	Low – Distant proximity to the site, rarely downwind	High - Public	Medium		
	9	950	NNW	High (up to 19.22%)	Medium – Distant proximity to the site, frequently downwind	High - Residential	High		
	10	950	S	Medium (6.72%)	Low – Distant proximity to the site, occasionally downwind	Medium – Commercial/industrial	Low		
	11	970	W	Low (4.10%)	Low – Distant proximity to the site, rarely downwind	High - Public	Medium		
	12	990	SSW	Low (3.55%)	Low – Distant proximity to the site, rarely downwind	Medium – Commercial / Industrial	Low		

[a] Refer to Table 3 for description and type of receptor, [b] Frequency refers to the frequency that the receptor is downwind of the Site and the potential hazard.

[4] Conclusion

Sutton Courtenay MRF is located between the villages of Sutton Courtenay and Appleford, within an area characterised by waste management facilities, including landfills and composting facilities, as well as operational yards used for commercial and industrial activities. There are therefore a limited number of sensitive receptors within close proximity to the site.

The nearest residential areas are present at distance from the site some 800m to the north-west and downwind. A review of the potentially sensitive receptors found that the closest receptors to the site are commercial/ industrial waste management and quarrying sites which border the site to the north, east and south, downwind of the site up to 10.67% of the time. These sites present their own noise and vibration risk and are therefore not considered to be sensitive receptors to the MRF and the associated additional waste types proposed to be accepted.

Residential and commercial properties within a 1km radius of the site are potentially most sensitive to proposed site operations, in particular noise. However, given the nature of the proposed new waste codes and the site management procedures already in place at the site, it is considered unlikely that these would be affected by the proposal and the residual/mitigated risk is therefore considered to be low.

Accidents such as fire or spillages may pose a threat to the local environment and/or sensitive receptors. Nevertheless, pathways are limited due to the nature of the sealed site drainage system and the rural location of the site *i.e.,* a significant distance away from most receptors. Safe site working practices, regular preventative maintenance and effective site management systems reduce the potential risk of accidents occurring and mitigate their consequences.

It is therefore concluded that the proposed additional waste types present a negligible risk to the surrounding receptors and the environment.

Appendix A – EMS-3-13.14-SCTS Noise & Vibration Management v8

NOISE AND VIBRATION

1.0 INTRODUCTION

Owing to the nature of the operations carried out at the installation, there will be emissions of noise, however with the controls below it is not expected that these will be perceptible by sensitive receptors, particularly owing to the distance that any receptors are located (the installation is within a wider landfill boundary). The main sources of noise are considered to be as follows:

- Vehicles using the installation.
- Reversing alarms.
- Mobile plant, e.g., Loading Shovels, excavators.
- Fixed plant, e.g., screens, trommels, ventilation; (Mothballed at present)

Risk assessment has concluded that the generation of vibration as a result of operations at the installation will not be significant and is therefore given no further consideration.

This procedure outlines the management techniques that will be used at the installation to minimise emissions of noise.

2.0 RISK ASSESSMENT

The measures necessary to control noise have been considered in the context of the installation setting, the proximity of sensitive receptors and the proposed operations that will be carried out.

Should the measure identified below be inadequate then an action plan will be drawn up by site management detailing the actions to be taken, responsibilities and timescales.

3.0 OPERATIONAL TECHNIQUES

3.1 Management Responsibility

The site manager will have responsibility for ensuring that nuisances and hazards arising from the landfill due to noise are minimised.

3.2 Liaison with Neighbours

Regular liaison will be maintained with neighbours to ensure they are notified in advance of activities, which may give rise to increased noise levels. Quarterly liaison meetings are held with local parish council representatives.

3.3 Training

All relevant installation personnel (e.g., Managers and Supervisors) will be trained in the need to minimise installation noise and will be responsible for monitoring and reporting excessive noise when carrying out their everyday roles.

3.4 Operational Hours

Except in an emergency and when agreed with relevant regulators, in order to minimise disturbance to neighbour's waste disposal operations involving the use of mobile plant and equipment and the importation of waste will not be carried on outside permitted operational hours.

3.5 Engineering Works

Contract documentation governing engineering works will incorporate specific responsibility for minimising emissions of noise during the work.

3.6 Noise Suppression Equipment

Consideration will be given to the fitting of noise suppression kits on items of plant and equipment where a point source emission issue is noted.

3.7 Selection of Plant and Equipment

During the selection process for new plant and equipment, consideration will be given to the need to meet all legislation and statutory guidance on noise levels and to minimise levels of noise from selected equipment.

If older items of plant are found to give rise to unacceptable noise levels, consideration will be given to their replacement with quieter designs.

3.8 Positioning of Plant and Equipment

When positioning noisy equipment, consideration will be given to the proximity of receptors.

3.9 Maintenance of Plant and Equipment

All plant and equipment in use at the installation will be regularly maintained to minimise noise resulting from inefficient operation of pumps, generators and engines.

3.10 Modification to Plant and Equipment

If an item of plant is found to generate unacceptable noise levels, consideration will be given to modifying the equipment to incorporate noise suppression equipment.

3.11 Reversing Alarms

In the event that reversing alarms are found to give rise to complaints, alternative alarms or technology will be investigated. White noise reversing alarms will be preferred wherever available.

3.12 Sound Barriers

If noise levels are unacceptable in the vicinity of receptors, sound bunds and barriers may be constructed around operational areas (if relevant permissions granted) and acoustic screening erected around fixed plant where practicable.

For temporary plant enclosures will be considered if necessary.

3.13 Speed Limits

The imposition of a speed limit of 15 mph for vehicles delivering waste to the installation will reduce noise associated with high engine speeds.

3.14 Vehicle Circulation Routes

Vehicles using the installation will travel across designated routes that have been designed and located so as to minimise nuisance and hazard to both internal installation users and receptors located outside the installation boundary.

3.15 Road Maintenance

The regular maintenance of roads to prevent the development of potholes will significantly reduce the noise generated particularly by empty vehicles exiting the installation.

4.0 MONITORING TECHNIQUES

4.1 Monitoring of Meteorological Conditions

Wind speed and direction will be routinely monitored and recorded on site although little impact is expected from any weather variations

4.2 Regular Inspection/Monitoring

The site manager will ensure that regular inspections are made of the installation and its perimeter in order to identify any unacceptable or unexpected sources of noise and to establish whether noise is discernible at the perimeter of the installation.

4.3 Quantitative Noise Monitoring

Quantitative noise monitoring will be carried out if it is identified that problems are being caused and to demonstrate conformance with any noise levels imposed by the planning consent. The monitoring will be carried out either within the installation at the noise source, on the boundary of the installation, or at specific receptor locations. The monitoring will be carried out using an integrated sound level meter, at sensitive locations around the perimeter of the installation. The monitoring will be carried out in accordance with the Environment Agency's Noise Guidance 'Internal guidance for the Regulation of Noise at Waste Management Facilities'.

5.0 ACTION PLAN

If a noise problem is noticed or a complaint received by installation personnel, it will be immediately reported to the site manager or the next level of management if they are unavailable. The source of the problem will then be investigated, and appropriate corrective action will be taken.

In the event that noise derived from the site is perceived beyond the installation boundary and gives rise to complaints, action will be taken without delay. The remedial action will be related to the meteorological conditions and the high sensitivity receptors. The following remedial action may be appropriate: -

- Construct or erect acoustic bunds, barriers or screens.
- Undertake maintenance on equipment that will reduce noise levels; and
- Modify plant to incorporate noise suppression equipment.

6.0 RECORDS

A record relating to the management and monitoring of noise will be maintained in the site filing system and installation log. It will include the following details:

- The results of inspections and monitoring carried out by installation personnel.
- Problems including date, time, duration, prevailing weather conditions and cause of the problem.
- Complaints received including address of complainant (if provided)
- Details on the corrective action taken, and any subsequent changes to operational procedures; and
- An evaluation of the effectiveness of the techniques used.

Appendix B – Proposed EWC codes for activity AR5

Proposed List of Waste Codes

Table S2.2 Permitted waste types and quantities under Activity AR5 of Table S1.1 – recycling and transfer of non-hazardous waste.

Maximum Quantities

The maximum quantity of all waste accepted at the site (including that under Table S2.1) shall be less than 160000 tonnes per year.

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 a form which is either sludge or liquid

Waste code	Description
03	**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 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
10	**WASTES FROM THERMAL PROCESSES**
10 11	**wastes from manufacture of glass and glass products**
10 11 12	waste glass other than those mentioned in 10 11 11
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 03	non-ferrous metal filings and turnings
12 01 05	plastics shavings and turnings
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
16	**WASTES NOT OTHERWISE SPECIFIED IN THE LIST**
16 01	**end-of-life vehicles from different means of transport [including off-road machinery] and waste from dismantling of end-of-life vehicles and vehicle maintenance (except 13,14, 16 06 and 16 08)**
16 01 08*	components containing mercury
16 01 09*	components containing PCBs
16 02	**wastes from electrical and electronic equipment**
16 02 09*	transformers and capacitors containing PCBs
16 02 10*	discarded equipment containing or contaminated by PCBs other than those mentioned in 16 02 09
16 02 11*	discarded equipment containing chlorofluorocarbons, hydrochlorofluorocarbons and hydrofluorocarbons
16 02 12*	discarded equipment containing free asbestos
16 02 13*	discarded equipment containing hazardous components other than those mentioned in 16 02 09 to 16 02 13
16 02 14	discarded equipment other than those mentioned in 16 02 09 to 16 02 13
16 02 15*	hazardous components removed from discarded equipment
16 02 16*	components removed from discarded equipment other than those mentioned in 16 02 15
16 06	**Batteries and accumulators**
16 06 01*	lead batteries
16 06 02*	Ni-Cd batteries
16 06 03*	mercury-containing batteries
16 06 04	alkaline batteries (except 16 06 03)
16 06 05	other batteries and accumulators
16 06 06	separately collected electrolyte from batteries and accumulators
17	**CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)**
17 02	**wood, glass and plastic**
17 02 01	wood
17 02 02	glass
17 02 03	plastic
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
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 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 05	**wastes from aerobic treatment of solid wastes**
19 05 01	non-composted fraction of municipal and similar wastes
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
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 21*	Fluorescent tubes and other mercury-containing waste
20 01 23*	Discarded equipment containing chlorofluorocarbons
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 35*	Discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components
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 03	**other municipal wastes**
20 03 01	mixed municipal waste

20 03 02	waste from markets
20 03 03	street-cleaning residues
20 03 07	bulky waste

Waste codes written in blue are proposed additional waste codes