ENERGY AND CLIMATE CHANGE ENVIRONMENT AND SUSTAINABILITY INFRASTRUCTURE AND UTILITIES LAND AND PROPERTY MINING AND MINERAL PROCESSING MINERAL ESTATES WASTE RESOURCE MANAGEMENT

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WALSALL COUNCIL

**MIDDLEMORE LANE WTS & HWRC** 

AMENITY AND ACCIDENT RISK ASSESSMENT

**JANUARY 2025** 





January 2025
BR10255
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V1.1
FINAL

WALSALL COUNCIL

AMENITY AND ACCIDENT RISK ASSESSMENT

**JANUARY 2025** 

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BR10255-002	Proposed Permit Boundary	1:500@A0



## 1 INTRODUCTION

- 1.1.1 Walsall Council proposes to develop a combined Waste Transfer Station (WTS) and Household Waste Recycling Centre (HWRC), including commercial waste recycling centre (referred to as 'small traders' scheme'(STS)) at Middlemore Lane, Aldridge, Walsall.
- 1.1.2 The WTS will accept wastes collected through the Council's services. This will primarily consist of household waste collections, with secondary streams from Grounds maintenance and street sweepings services. Household waste streams will be mixed residual waste (black bin waste), garden waste, mixed dry recycling waste and material collected through bulky waste collections. The facility has been designed with capacity and capability to accept future segregated waste streams, for example food waste.
- 1.1.3 The WTS will be primarily housed in a purpose built, covered building to the north west of the development site. External bays have been allocated for the storage of suitable materials. The WTS will have a maximum design capacity of 125,000 tonnes per annum.
- 1.1.4 The HWRC will be located in the east of the development site, alongside a small traders' scheme to the south of the site. These have a combined design capacity of approximately 55,000 tonnes per annum.
- 1.1.5 A small traders' scheme, offering disposal and recycling options for small businesses will be located to the south of the WTS. This will handle a selection of waste streams from commercial operators similar to those from households.
- 1.1.6 This report provides the environmental risk assessment and accident management plan for proposed operations. The report identifies potential risks and describes the mitigation in place to prevent or minimise those risks.
- 1.1.7 The report has been written in accordance with the Environment Agency's guidance "Risk assessments for your environmental permit".



## 2 SITE SETTING AND SENSITIVE RECEPTORS

- 2.1.1 The HWRC and WTS site is located on Middlemore Lane, Aldridge, northeast of Walsall. The site's nearest postcode is WS9 8DL, centred around grid reference NGR SK 04914 00815. A site layout plan, development boundary and permit boundary (shown in green) are shown on drawing BR10255-002.
- 2.1.2 The site sits on an industrial estate, with the surrounding area to the north and west predominantly industrial and commercial units.
- 2.1.3 The east and south of the site is predominantly residential. The nearest residential property is located approximately 170m northeast of the Site on The Briars cul de sac. There is a field located 90m east of the site currently used for sports recreation purposes.
- 2.1.4 A number of designated habitat receptors have also been identified within 2km of the site, including Stubbers Green Bog SSSI located 630m to the north, Swan Pool & The Swag SSSI 1,200m to the north, and Jockey Fields 1,800m to the north. Local Nature Reserves (LNR) Hay Head Wood, and Cuckoo's Nook and the Dingle are located 1,600m and 1,650m south of the site, respectively, each containing areas of designated ancient woodland. Park Lime Pits LNR is located approximately 1,600m west of the permit boundary. Further ancient woodland is located approximately 750m northeast at Leigh's Wood. There are no further designated habitats or European sites within 2km of the permit boundary.
- 2.1.5 Table 2.1 below provides a list identifying the sensitive receptors within 2km of the site.

Table 2:1: List of Receptors within 2km							
Receptor	Distance from Site	Direction					
Protected Sites / Designated Sites							
Hay Head Wood LNR	1.6 km	South					
Cuckoo's Nook and the Dingle LNR	1.6 km	South					
Park Lime Pits LNR	1.6 km	West south west					
Stubbers Green Bog SSSI	630 m	North					
Jockey Fields SSSI	1.8 km	North north west					
Swan Pool and the Swag SSSI	1.2 km	North west					
Water							
Wyrley and Essington Canal – Daw End Branch	5 m	North					
Unnamed Drain to The Swag	650 m	North west					
The Sway (Pool)	975 m	North west					



Table 2:1: List of Receptors within 2km						
Receptor	Distance from Site	Direction				
Unnamed Pool (Leighs Wood)	775 m	North east				
Unnamed Sluice and culvert	50 m	East				
Unnamed Drain along railway	150 m	South				
Residential						
Pool Green Housing Estate	190 m	South				
Aldridge (The Briars)	170 m	North east				
Rushall	780 m	West				
Commercial / Industrial						
Linley Lodge Industrial Estate	150 m	West				
Red House Industrial Estate	0m	Part of. Extends to South and East				
Beacon Trading Estate	75 m	East				
WestPoint Industrial Estate	20 m	South west				
Anchor Brook Business Park	30 m	North				
BP Garage (Middlemore Lane)	15 m	South				
Businesses on Leighswood Road	310 m	East				
Community Buildings						
Little Rascals Day Nursery	550 m	North east				
Adventure Land Day Nursery	1.4 km	North				
The Old Railway House Children's Nursery	465 m	South east				
ABC Childcare	1.4 km	South south east				
Robin's Nest Nursery	1.8 km	West				
Piccolo Bambini Nursery	1.8 km	West				
Greenfield Primary School	2 km	North west				
Radleys Primary School	1.2 km	West north west				
Leighswood School	850 m	North east				
Cooper & Jordan C of E School	1 km	East				
Whetstone Field Primary School	1.2 km	South south east				
Aldridge School	700 m	South south east				
St Mary of the Angels Catholic Church	810m	Southeast				
St Mary of the Angels Catholic Primary School	900m	Southeast				
St Francis of Assissi Catholic College	1.1 km	South east				
Carehomes						
Alrewych Court	1.5 km	North				
Richmond Hall Care Home	1.6 km	North east				
Alder House Retirement Home	350 m	East north east				
Coleman Lodge	630 m	East				
Old Rectory Gardens	925 m	East				
The Hawthorns	950 m	East				
Aldridge Court Nursing Home	1.3 km	East				
Avondale Care Home	2 km	North east				
Infrastructure						
Northgate Medical Centre	400 m	South east				
Rushall Medical Centre	1.9 km	West				
Railway	170 m	South				



- 2.1.6 The Daw End Branch Canal and local deciduous woodland are sensitive as they may be damaged by emissions of dust from the site. They may provide a habitat to wildlife that could be harmed by emissions of litter, noise and contaminated run-off. Aquatic plants and animals may be affected by potential contaminants within run off. Local residents and users of local businesses may be affected by emissions of dust and noise.
- 2.1.7 Emissions of dust via may harm plants via smothering. Dust may also cause respiratory issues for local human populations if inhaled. Emissions of litter may trap wildlife or cause them to choke if the litter is consumed. Noise may cause disturbance to local wildlife such as birds and bats. Noise can also cause disturbance to human populations and may impact upon psychological health if sustained. Contaminated run-off (e.g. firewater) may drain into groundwater or surface water and cause pollution. This may impact upon aquatic organisms.
- 2.1.8 The facility has been designed to minimise these potential impacts on nearby sensitive receptors including the protected habitats. A Habitats Risk Assessment is provided as Appendix 1.
- 2.1.9 Section 3 demonstrates the stringent control measures employed on site will prevent and minimise polluting emissions beyond the site boundary, ensuring the protection of nearby receptors.
- 2.1.10 As a result of these measures any significant impact on nearby residents and local habitats will be prevented.



### 3 RISK ASSESSMENT

- 3.1.1 Table 3.1 below identifies the potential risks that may arise from the combined operations.
- 3.1.2 This risk assessment demonstrates how risks are minimised, by preventing the risk at source, or by providing measures to break the pathway and prevent pollution migrating towards receptors.
- 3.1.3 Two point-source emissions to air will originate from two dust and odour extraction systems located on the Waste Transfer Station building. The plant is split into two halves to service the east and west ends of the WTS. Discharge flues are located at treatment plant areas, which will be a maximum of 12m tall so that they do not exceed the WTS ridge height. There are no further point-source emissions proposed from the site.
- 3.1.4 Appendix 1 provides a technical note including odour dispersion modelling demonstrating the appropriate stack height for the system to ensure sensitive receptors are protected.
- 3.1.5 All identified hazards that could cause harm are subject to strict preventative or control measures to ensure that all risks are minimised. These will be implemented via the written Environmental Management System to be implemented at the site.



	Table 3.1: Risk Assessment for Middlemore Waste Transfer Station and HWRC (incl. Small Traders' Scheme)							
Hazard	Receptor	Pathway	Risk Management	Probability of exposure after control	Consequence	What is the overall risk		
Water								
Surface water and/or groundwater from contaminated run-off	Wyrley and Essington Canal, surface water and groundwater	Run-off and infiltration	Operational areas of the site are provided with impermeable surfacing and drainage to prevent liquids and runoff from waste storage areas entering surface water without treatment. Fuels and any other liquids stored on site will be stored within bunded containers. Spill-kits will be available nearby which site operatives will be trained to use in case of spillages. The WTS building and external bays benefits from impermeable surfacing draining to foul sewer. The operational areas of the HWRC and Small Traders' Scheme are provided with impermeable surfacing which drains to the surface water sewer. All waste in these areas will be confined within containers to prevent run-off. The surface water drainage system is equipped with interceptors and an Aqua-Filter and Aqua- Swirl hydrodynamic separation and filtration system for the removal of fine sediments, nutrients, heavy metals and	Only clean rainwater will be discharged from the site, to the local surface water sewer system. Good housekeeping and other measures will ensure that rainwater is not contaminated.	Pollution of groundwater and surface water, and impact upon local habitats and species if spillages or leaks enter waterbodies or permeate the ground surface.	Low		



	Table 3.1: Risk Assessment for Middlemore Waste Transfer Station and HWRC (incl. Small Traders' Scheme)   Probability Of exposure What is								
Hazard	Receptor	Pathway	Risk Management	after control	Consequence	overall risk			
			hydrocarbon pollutants from surface						
			water runoff.						
Odour									
Odorous	Site staff, users of	Airborne	All potential odorous waste streams will	Low – low residence times	Disturbance to staff.	Very Low			
materials	nearby industrial units,		be managed within the enclosed waste	limit the potential for	Annoyance, and strong				
within waste	local residents (170 m		transfer building.	odours to develop. The site	odours may cause staff / local				
(WTS)	from site), canal and			will implement stringent	residents to feel unwell.				
	towpath users.		Stockpiles will be managed on a first in	rejection criteria.					
			first out basis. Maximum residence time						
			for waste streams with potential odorous						
			emissions will be 3days.						
			WTS fitted with a ventilation system with						
			carbon filtration system to remove odours						
			prior to emission. The ventilation system						
			will be designed to provide a minimum						
			three air changes per hour.						
			Any excessively odorous loads will be						
			rejected and removed from site at the						
			earliest possible opportunity.						
			Waste bays will be washed down on a						
			regular basis to prevent the build-up of						
			aging waste.						
			The site will be inspected daily. If any						
			noticeable odours are discovered, these						



	Table 3	3.1: Risk Asse	ssment for Middlemore Waste Transfer Station	``````````````````````````````````````	rs' Scheme)	
Hazard	Receptor	Pathway	Risk Management	Probability of exposure after control	Consequence	What is the overall risk
			will be investigated and where appropriate remedial action will be taken.			
Odorous materials within waste (HWRC/STS)	Site staff, users of nearby industrial units, local residents (170 m from site), canal and towpath users.	Airborne	Permitted wastes present a low risk of odour. The facility is designed for the temporary storage of small quantities of waste. There will be continuous throughput of all materials. Potential odorous waste streams will be stored within sealed containers, for example waste oils, or transferred to the waste transfer station operation (e.g. residual waste and garden waste) at regular intervals. Any odorous loads will be removed from site at the earliest possible opportunity. The site will be inspected daily, with operatives in constant attendance during operational hours. If any noticeable odours are discovered, these will be investigated and where appropriate remedial action will be taken.	Low – low residence times and limited quantities of waste will limit the potential for odours to develop.	Disturbance to staff. Annoyance, and strong odours may cause staff / local residents to feel unwell.	Very Low
Noise		I				
Machinery (WTS)	Site staff, users of nearby industrial units, local residents (170 m	Audible	All plant and equipment will be maintained in accordance with the manufacturer's recommendations. Drop	Low – noise will be minimised and controlled by good practice and	Disturbance to staff and local residents. Sustained noise can affect the psychological	Low



Hazard	Receptor	Pathway	Risk Management	Probability of exposure after control	Consequence	What is the overall risk
	from site), canal and towpath users.		heights will be minimised, and engines will be switched off where possible to prevent excessive noise. Plant may be fitted with engine silencers and smart reversing alarms. Majority of operations will be undertaken within waste transfer building. Lagging and acoustic housing provided around the air extraction system to attenuate noise.	monitoring.	health of those nearby. Excessive noise can disturb nearby ecological receptors.	
Machinery (HWRC/STS)	Site staff, users of nearby industrial units, local residents (170 m from site), canal and towpath users.	Audible	All plant and equipment will be maintained in accordance with the manufacturer's recommendations. Drop heights will be minimised, and engines will be switched off where possible to prevent excessive noise. Plant may be fitted with engine silencers and smart reversing alarms.	Low – noise will be minimised and controlled by good practice and monitoring.	Disturbance to staff and local residents. Sustained noise can affect the psychological health of those nearby. Excessive noise can disturb nearby ecological receptors.	Low
Compacting into skips (HWRC/STS)	Site staff, users of nearby industrial units, local residents (170 m from site), canal and towpath users.	Audible	Compacting is necessary to improve payloads and ensure containers are loaded evenly. This will reduce noise by avoiding extra vehicle movements. This activity will be avoided when the site is quiet. Hours restricted from 8.00 to 19.00	Low- The Noise Assessment for the site indicates that the site will not impact on nearby residential receptors.	Disturbance to staff and local residents. Sustained noise can affect the psychological health of those nearby. Excessive noise can disturb nearby ecological receptors.	Low
Noise from moving skips or bins (HWRC/STS)	Site staff, users of nearby industrial units, local residents (170 m from site), canal and	Audible	Staff will be trained to ensure that bins and skips are lifted cleanly avoiding dragging or knocking them. Site managed to minimise the need to move bins with them being removed from site once they	Low- The Noise Assessment for the site indicates that the site will not impact on nearby residential	Disturbance to staff and local residents. Sustained noise can affect the psychological health of those nearby.	Low



Hazard	Receptor	Pathway	ssment for Middlemore Waste Transfer Statio Risk Management	Probability of exposure after control	Consequence	What is the overall risk
	towpath users.		are full if possible.	receptors.	Excessive noise can disturb nearby ecological receptors.	
Delivery / Collection vehicles (all)	Site staff, users of nearby industrial units, local residents (170 m from site), canal and towpath users.	Audible	Fleet properly serviced and maintained. Engines of delivery vehicles will be switched off where possible to prevent excessive noise. Majority of movements will be undertaken within waste transfer building.	Low – noise will be minimised and controlled by good practice and monitoring.	Disturbance to staff and local residents. Sustained noise can affect the psychological health of those nearby. Excessive noise can disturb nearby ecological receptors.	Low
Dust						
Dry waste and generation during bulking operations (WTS)	Site staff, users of nearby industrial units, local railway (150m to south of site), local residents (170 m from site), canal and towpath users.	Airborne	The WTS ventilation and air treatment system will include particulate filtration designed to ensure the maximum dust concentration in the exhaust air shall be less than 5mg/m <sup>3</sup> . Site roads and potentially dusty wastes (e.g. waste garden / parks and DIY waste) will be dampened, if necessary, to reduce the risk of dust being picked up by wind. Dry recycling and residual waste will be stored and handled within the waste transfer building. A road sweeper may be utilised to clear areas of dust. Delivery vehicles will be covered or sheeted. All waste will be stored in bays with concrete walls. In the event of dry weather, external stockpiles may be dampened to prevent the generation of dust.	Low – The implementation of dust management techniques and good practice will minimise the risk of dust being blown across or beyond the site boundary. Majority of material with potential to generate dust emissions will be contained within waste transfer building.	Fugitive emissions of dust can cause disturbance and potential respiratory issues to those both on and offsite.	Low



	Table 3.1: Risk Assessment for Middlemore Waste Transfer Station and HWRC (incl. Small Traders' Scheme)								
Hazard	Receptor	Pathway	Risk Management	Probability of exposure after control	Consequence	What is the overall risk			
Dry waste streams (HWRC/STS)	Site staff, users of nearby industrial units, local railway (150m to south of site), local residents (170 m from site), canal and towpath users.	Airborne	All collected materials will be deposited into fully enclosed containers or skip-style containers with four sides. Containers will not be overfilled. When full, containers will be covered with sheets where risk of dust is present, prior to removal from site. The road sweeper from the adjacent WTS will be available to be utilised to clear areas of dust. Collection vehicles will be covered or sheeted.	Low – The nature of containers, coupled with implementation of dust management techniques and good practice will minimise the risk of dust being blown across or beyond the site boundary.	Fugitive emissions of dust can cause disturbance and potential respiratory issues to those both on and offsite.	Very low			
Mud									
Mud on site roads (all)	Site staff, users of nearby industrial units	Tracked on vehicle wheels	All areas where vehicle movements occur provided with concrete or tarmac surfacing. Site roads will be inspected and cleaned/maintained to minimise the generation of mud. Vehicles will be subject to visual inspection before exiting the site. If necessary, vehicles will be cleaned to prevent mud being tracked onto the highway. A road sweeper may be utilised to clear areas of mud, dust or debris.	Very low – measures will be implemented to prevent the generation and spread of mud.	Annoyance. Potential increase in the risk of road traffic accidents.	Very Low			
General Risks									
Pests (WTS)	Site staff, users of nearby industrial units	Airborne, surface	The site will be kept tidy to prevent the accruing of material that may provide nests for pests. Waste stockpiles will have a short residence time and will be managed on a first in first out basis. Daily	Low – it is unlikely that the operation will attract pests.	Annoyance. Potential spread of disease.	Very Low			



Hazard	Receptor	Pathway	Risk Management	Probability of exposure after control	Consequence	What is the overall risk
			inspections of the site will identify potential infestations. A pest control contractor will be contacted if necessary to remove the infestation.			
Pests (HWRC/STS)	Site staff, users of nearby industrial units	Airborne, surface	The site will be kept tidy to prevent the accruing of material that may provide nests for pests. Waste containers will have a short residence time and will be regularly removed from site as routine operations. Daily inspections of the site will identify potential infestations. A pest control contractor will be contacted if necessary to remove the infestation.	Low – it is unlikely that the operation will attract pests.	Annoyance. Potential spread of disease.	Very Low
Litter (WTS)	Site staff, users of nearby industrial units	Airborne, surface	Waste will be received and removed in covered or enclosed vehicles. Wastes will be subject to visual observation and hand picking upon tipping if needed. Waste streams most likely to contain litter (residual waste and dry recycling) will be stored and handled within the waste transfer building.	Low – site management techniques will limit the potential for litter to migrate beyond the site boundary. The majority of waste with litter generating potential will be handled within the waste transfer building.	Litter can attract pests such as rats and flies. Complaints may occur if litter is blown beyond the site boundary.	Very low
Litter (HWRC/STS)	Site staff, users of nearby industrial units	Airborne, surface	Waste will be removed in covered or enclosed vehicles. Operatives will be instructed to visually inspect the site and incoming waste to identify litter and ensure materials are disposed of to the correct receptacle. They will be	Low – site management techniques will limit the potential for litter to migrate beyond the site boundary. The majority of waste with litter generating	Litter can attract pests such as rats and flies. Complaints may occur if litter is blown beyond the site boundary.	Low



Spillages / Site sileaks (WTS) near	te staff, users of	Pathway	Risk Management responsible for the continuous removal of dropped items to ensure the site does not generate litter. Skips will not be overfilled, preventing spillage and wind whipping wastes that may cause litter.	Probability of exposure after control potential will be stored within enclosed or four sided containers.	Consequence	What is the overall risk
leaks (WTS) near	,		dropped items to ensure the site does not generate litter. Skips will not be overfilled, preventing spillage and wind whipping	within enclosed or four		
leaks (WTS) near	,					
	earby industrial units, anal, groundwater	Surface, water	Liquid wastes will not be accepted at the facility. Fuel and other potentially harmful fluids for use in site plant will be stored in a sealed tank or container with secondary containment. Tanks will be bunded, with the bund providing 110% of the capacity of the tank. The site is equipped with an impermeable pavement. Spill kits will be provided for use in the event of a spill or leak.	Very low - liquid wastes will not be accepted at the facility. Fuel is stored in containers with secondary containment.	Contact with harmful fluids can impact upon human health. Harmful fluids can cause pollution of groundwater and surface water, and impact upon local habitats and species if spillages or leaks enter waterbodies or permeate the ground surface.	Very Low
leaks (HWRC) near	te staff, users of earby industrial units, anal, groundwater	Surface, water	Liquid wastes will be limited to waste oil, or liquids from households such as household chemicals These will be stored in sealed tanks with integral bunding providing 110% of the capacity of the tank or in suitable small containers within a bund. The whole site is equipped with an impermeable pavement. Spill kits will be provided for use in the event of a spill or leak. Fuel for plant machinery will be stored at the WTS.	Very low – Very small quantities of waste will be collected.	Contact with harmful fluids can impact upon human health. Harmful fluids can cause pollution of groundwater and surface water, and impact upon local habitats and species if spillages or leaks enter waterbodies or permeate the ground surface.	Very low



Hazard	Receptor	Pathway	Risk Management	Probability of exposure after control	Consequence	What is the overall risk
Error (all)	nearby industrial units, local residents (170 m from site)	surface and / or water	permitted to operate plant onsite. An induction will be provided for contractors working at the site. The site will be operated in accordance with an EMS.	suitable training for their role. Contractors will be inducted by the Site Manager.	damage to plant and equipment. This can result in a fire or harm to other staff. Spillages can occur that affect surface water, groundwater and soils.	
Plant or equipment failure (all)	Site staff, users of nearby industrial units, local residents (170 m from site)	Airborne, surface and / or water	Plant and equipment will be inspected and maintained in accordance with the manufacturer's recommendations and legal requirements. In the event of damage to plant or equipment or loss of function, suitably qualified engineers will repair the equipment as soon as possible. Damaged plant will be taken out of use until repairs have been completed. Site operations may be halted where necessary to prevent pollution. All site plant will be equipped with fire extinguishers to allow for firefighting in the event of a fire.	Low – plant and equipment will be subject to regular maintenance, and repairs will be undertaken where necessary at the earliest possible opportunity.	Disruption of site activities. In the event of damage to plant or machinery, fires or spillages may occur. Damaged equipment may pose a health risk.	Low
Fire (WTS and HWRC)	Site staff, users of nearby industrial units, local highways, local residents (170 m from site)	Airborne, surface and / or water	Site staff will be observant for signs of a fire onsite. The whole site will be monitored by CCTV out of hours, ensuring that a fire can be detected in the absence of staff. An automatic sprinkler system is provided in the WTS. A water supply is maintained onsite, allowing for the fighting of a fire. Site plant is equipped with fire extinguishers. Waste in the WTS	Low – fire prevention measures ensure that a fire will be detected at an early stage. Resources onsite allow for fighting of a fire, and firewater will be prevented from escaping the site.	A fire can result in the production of smoke, which may cause respiratory issues for those both on and offsite. Firewater may enter surface water bodies or the ground surface, causing pollution of surface and groundwater and	Low



	Table 3.1: Risk Assessment for Middlemore Waste Transfer Station and HWRC (incl. Small Traders' Scheme)								
Hazard	Receptor	Pathway	Risk Management	Probability of exposure after control	Consequence	What is the overall risk			
			will be stored in bays equipped with concrete firewalls, with dampening undertaken if necessary. Waste in the HWRC is stored in appropriate fireproof containers. Please refer to Fire Prevention Plan for detailed measures.		potentially impacting upon habitats and species.				



## 4 CONCLUSION

- 4.1.1 The design and operational measures that will be in place at the site will ensure that activities do not pose an unacceptable risk to the environment.
- 4.1.2 Site equipment, machinery and infrastructure will be maintained in accordance with manufacturer's guidance and relevant legal standards to ensure that the site remains compliant, and risk to sensitive receptors remains low.
- 4.1.3 The site will be monitored daily. Records evidencing compliance will be maintained in the site office. Formal auditing of compliance will take place annually, informing continuous improvement.
- 4.1.4 In the event of an accident, strict procedure will be followed to prevent excessive damage to the site, minimise potential effects upon human health and protect the local environment.



# **APPENDIX 1**

MMHWRC-CPW-10-XX-T-M-0003 - Odour Control Technical Note



DRAWINGS

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