



ENVIRONMENTAL AND ACCIDENT RISK ASSESSMENT

**MERIDEN WASTE TRANSFER STATION
CORNETS END LANE,
MERIDEN,
COVENTRY,
CV7 7LG**

**Document Reference: BF5066/07.R1
May 2022**



**Project Quality Assurance
Information Sheet**

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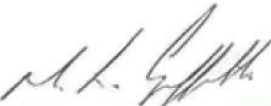
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0	May 2022	First Issue	R Chapple	D Thomas
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**BIFFA WASTE SERVICES LTD
MERIDEN WASTE TRANSFER STATION
CORNETS END LANE,
MERIDEN,
COVENTRY,
CV7 7LG**

**ENVIRONMENTAL PERMIT APPLICATION
ENVIRONMENTAL AND ACCIDENT RISK ASSESSMENT**

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1.0 INTRODUCTION

1.1 Scope

1.1.1 This document presents an assessment of the risks to the environment and amenity posed by the operation of a Waste Transfer Station (WTS) on Cornets End Lane, Meriden, Coventry, CV7 7LG.

1.1.2 This risk assessment has been undertaken in accordance with the Environment Agency (EA) Guidance on 'Risk Assessments for your Environmental Permit'; published 1st February 2016 (updated 25th March 2021).

1.2 Site Setting

Site Description

1.2.1 This Environmental and Accident Risk Assessment (EARA) relates to the operation of a Meriden WTS, Cornets End Lane, Meriden, Coventry, CV7 7LG. The site is centred on National Grid Reference (NGR): SP 23044 81103. The site is within the local authority of Solihull Metropolitan Borough Council. The site location has been depicted in **Drawing No. BF5066/12/01**, additionally, the proposed site boundaries are shown in **Drawing No.: BF5066/12/03**.

1.2.2 The site was originally constructed to support other waste management activities that were regulated under two separate Environmental Permits. These activities included a Biomass Energy Plant (BEP) and Waste Water Treatment Facility (WWTF). Both companies to which the permits were issued have since been dissolved and the associated permits are to be cancelled by the Environment Agency. The existing site infrastructure will therefore be used and adapted to support the proposed waste collection services and transfer operations to be carried out by Biffa.

1.2.3 The site itself currently comprises two buildings; one of which will form the waste transfer station for the reception, storage and treatment of wastes, and another which will contain the site offices and welfare facilities. The associated external areas comprise the surface water attenuation pond, staff car and Refuse Collection Vehicles (RCVs) parking areas, staff welfare facilities, as well as rainwater tanks and sprinkler pumps for fire suppression. The yard area to the east of the environmental permit boundary will be used for the parking of RCVs associated with Biffa's Industrial and Commercial waste collection services fleet of vehicles (this activity is not required to be permitted). Entrance and egress to and from the site for heavy good vehicles is via a junction off a private road that provides access to the adjacent quarry, which junctions with Cornets End Lane to the southwest of the site. The site entrances are gated and will be locked outside of operational hours. Palisade fencing surrounds the site perimeter.

1.2.4 The proposed permitted boundary area is depicted in **Drawing No.: BF5066/12/02**. The site is bounded to the north by Cornets End Lane, beyond which lies an operational quarry and the associated mineral processing and product manufacturing plants and buildings. To the east, beyond the RCV parking area, lies undeveloped land and 'Midland Mix Concrete', a ready-mixed concrete producer. Cornets End Lane is located along the site's southern boundary, beyond which lies an operational and partially restored Berkswell Quarry and Landfill facility. The land to the west of the site is occupied by undeveloped land and trees, beyond which lies Cornets End Lane, a road-side café within a storage container named 'Rachel's Café' and a Pet Boarding Service (In The Doghouse (Solihull) Limited).

- 1.2.5 The village of Meriden is located approximately 1.6km to the north-east of the site, the outskirts of Coventry lie ~7.8km to the east, Solihull is located ~7.8km to the west and the junction of Cornets End Lane and the A452 is ~ 1km north-west of the site. The site lies within an area subject to extensive sand and gravel extraction (and associated restoration), together with agricultural land and Golf Courses, namely North Warwickshire Golf Club which is ~ 370m to the north of the site, as well as Stonebridge Golf Club and Midlands Golf Stonebridge, which lie approximately 1.2km and 1.7km to the north-northwest of the site respectively.
- 1.2.6 The closest residential properties are Keepers Cottage at a distance of approximately 115m to the east-southeast of the site boundary, Cornets End Farm ~310m to the east and Hornbrook Farm c. 530m to the west. The remainder of the surrounding area is occupied predominantly by agricultural land.
- 1.2.7 The local topography is relatively flat with a gently undulating landscape.
- 1.2.8 The site does not lie within 2km of an Area of Outstanding Natural Beauty (AONB), Local Nature Reserve (LNR), National Nature Reserve (NNR), Ramsar site, Site of Special Scientific Interest (SSSI), Special Protected Area (SPA), Special Area of Conservation (SAC) or a Source Protection Zone (SPZ).
- 1.2.9 There are five ancient woodlands situated within 2km of the site. These include The Sommers woodland ~880m north-northwest of the site, The Bogs woodland ~1km south-east and ~1.2km south, Siden Hill Wood c. 1.6km west-southwest and Garden Wood c. 1.6km south-southeast. Deciduous woodland is also present within 2km in all directions, the closest of which lies approximately ~15m north-west of the site boundary at its closest point and extends west and north of the site. These deciduous woodlands are designated as priority habitats.
- 1.2.10 The site does lie within a Nitrate vulnerable Zone (NVZ). These are defined as areas designated as being at risk from agricultural nitrate pollution. The designations are made in accordance with the Nitrate Pollution Prevention Regulations 2015.
- 1.2.11 All permitted waste activities will be undertaken upon within designated areas of the site. Access to the main building within which waste storage will occur will be gained after the vehicles have been checked in through the site waste reception area. The indicative operational layout of the site is illustrated on **Drawing No.: BF5066/12/03**. Egress from the site is via the quarry access road to the north of the site, which junctions with Cornet End Lane to the southwest of the site.
- 1.2.12 **Table EARA1** summarises the potential sensitive receptors that have been identified through a desk top study of the locality and the corresponding minimum distance from the proposed permit boundary of Meriden WTS. The locations of the receptors are shown in **Drawing No.: BF5066/12/05**.

Table EARA1: Identified Potential Sensitive Receptors within 1km of Meriden Waste Transfer Station

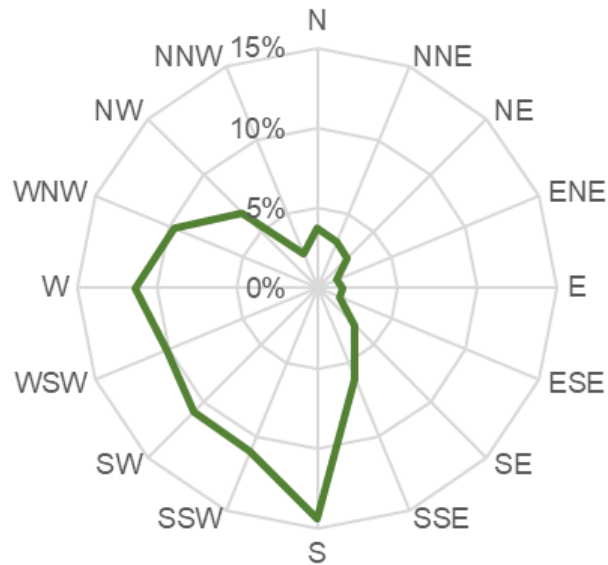
Receptor Name	Receptor Type	Approximate nearest distance from the site boundary	Direction from proposed facility
Secondary B Bedrock aquifer – Mercia Mudstone Group Secondary A Superficial aquifer – Glaciofluvial deposits, mid Pleistocene – Sand & Gravel	Groundwater	0m	Underlies the site and surrounding areas
Industrial Premises	Commercial / Industrial	Adjacent– 1km	NE, E, SE, S, W & NNW.
Local infrastructure e.g. Cornets End Lane, Hampton Lane (B4102), Kenilworth Road (A452) & Somers Road	Highways	Adjacent -1km	N, S & W
Rural	Agricultural, woodland, fields	Adjacent – 1km	All directions
Surface water features	Ponds, streams, drains	50m – 1km	All directions
Keepers Cottage	Residential Property	115m	ESE
Cornets End Farm	Residential Property	310m	E
Mercote Mill Farm	Residential Property	510m	SW
Hornbrook Farm	Residential Property	530m	W
Unnamed scattered residential properties	Residential Properties	515 – 590m	NW, NNW & SE
Park Farm Cottage	Residential Property	700m	SE
Park Farm House	Residential Property	695m	S
Holloway Farm	Residential Property	1km	SE
North Warwickshire Golf Course	Golf Course	370m	N
The Somers	Caravan Site	890m	N
Priority Habitat	Deciduous Woodland	15m – 1km	N, E, SE, S, W & NW
The Somers	Protected Habitat -- Ancient Woodland	880m	N

Meteorological Conditions

- 1.2.13 The local wind speed and direction data has been obtained from the meteorological station located at Birmingham Airport, which lies approximately 5.5 km north-west of the site (International Civil Aviation Organisation (ICAO) Airport Code: EGBB) The National Grid Reference NGR for Birmingham Airport is SP 17505 84071. This weather station is deemed the most appropriate for use in order to characterise the site due to its proximity to the site. Wind patterns at the Birmingham Airport Station are likely to be similar to those experienced at the site.
- 1.2.14 Data from the RenSMART wind data archive, for a 10-year period between 2000 and 2010 has been utilised for the Birmingham Airport Station in order to typify the meteorological conditions likely at the site. The wind rose, as shown by **Figure EARA1** shows the percentage of wind vector that could be generated in each of the 16 points of a compass.

Figure EARA1: Wind Rose for Birmingham Airport Meteorological Recording Station between 2000 - 2010 inclusive (Source: RenSMART)

Direction	Percentage
N	3.78%
NNE	3.15%
NE	2.61%
ENE	1.35%
E	1.60%
ESE	1.52%
SE	3.29%
SSE	6.12%
S	14.43%
SSW	10.99%
SW	10.88%
WSW	10.20%
W	11.41%
WNW	9.73%
NW	6.63%
NNW	2.31%



1.2.15 The wind rose indicates that the predominant wind directions are from the south-western quadrant, which makes up ~46.5% of the winds. It can be observed from **Figure EARA1** that the prevailing wind is from the south.

1.3 Risk Assessment

Risk Assessment Criteria

1.3.1 The risk assessment will be prepared using the widely accepted source-pathway-receptor methodology, and is the preferred method specified in the EA guidance. Where any complete source-pathway-receptor linkage exists, the magnitude of any such risk is qualified by the probability and consequence of any such risk occurring. The criteria to be adopted for the risk assessment are present in **Table EARA2**.

Table EARA2: Risk Assessment Criteria

Probability ⇔ Consequence ↓	Very Low	Low	Moderate	High
Very Low	Negligible	Very Low	Low	Low-Moderate
Low	Very Low	Low	Low-Moderate	Moderate
Moderate	Low	Low-Moderate	Moderate	High
High	Low-Moderate	Moderate	High	Very high

1.3.2 An environmental and accident risk assessment for the waste recovery operations is presented in **Appendix EARA1**. The assessment covers the following potential risks;

- Fugitive emissions to air (dust and particulates);
- Odour;
- Litter;
- Mud and Debris on the road;
- Scavenging Birds, Vermin and Insects;
- Noise & Vibration;
- Fugitive emissions to water;
- Accidents; and
- Protected Habitats & Species.



APPENDICES



APPENDIX EARA1

Environmental and Accident Risk Assessment

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
<i>What is the agent or process with potential to cause harm?</i>	<i>What are the harmful consequences if things go wrong?</i>	<i>How might the receptor come into contact with the source?</i>	<i>What is at risk? What do I wish to protect?</i>	<i>How likely is this contact?</i>	<i>How severe will the consequences be if this occurs?</i>	<i>What is the overall magnitude of the risk?</i>	<i>On what did I base my judgement?</i>	<i>How can I best manage the risk to reduce the magnitude?</i>	<i>What is the magnitude of the risk after management?</i>
Dust/Particulates									
Particulate matter and dusts from delivery vehicles, handling and unloading wastes/materials, including trafficked mud and debris, dust from waste storage and treatment.	Harm to human health - respiratory irritation and illness.	Air transport, deposition then inhalation.	Local human population	Low	High	Moderate	Wastes will be handled and stored within a building. With regard to receptors in the form of public highways and private roads, dust from the site poses very little risk to human health due to the transient nature of these receptors, as members of the public are simply passing through these areas and no long-term dust exposure will occur. Dust is also unlikely to be a nuisance to these receptors due to the internalised nature of the operations.	All delivery and dispatch vehicles will be fully enclosed or sheeted. Delivery vehicles will fall under the European emissions classification of Euro 5 or Euro 6. A vehicle speed limit of 10mph will be imposed at the site to prevent dust suspension by vehicle wheels. Waste delivery vehicle drivers will be advised not to leave vehicles idle when engine power is not required.	Low
	Nuisance - dust on property, clothing etc.	Air transport then deposition	Local human population	Low	Moderate	Low-Moderate	The closest residential property lies 125m from the site (Keeper's Cottage), however it lies east-southeast of the site while the prevailing wind direction is from the south and south-west to the north and north-east. Therefore, this residence is cross-wind of the site and unlikely to be adversely affected by fugitive dust emissions. Similarly, the other residential properties within 1km of the site are either cross wind of the site to the east and south east, or upwind of the site to the south, south west and west. Furthermore the other residential properties have significant intervening distances from the site of 315m – 990m.	If required, manual or mechanical sweeping will be undertaken at the site to prevent the build-up of dusty materials on site surfaces. Waste unloading, handling, treatment (manual and plant assisted sorting and bulking only) and storage will be conducted within the enclosed WTS building. The building has roller shutter doors and will be operated with a 'closed-door' policy. The WTS building will comprise an Air System (ProSonic or similar) which will atomise an odour and dust suppressant with air and water to produce an ultra-fine mist to ensure dust suspension is not an issue within the building. All site plant (i.e. waste handler and loading shovel) will have either Euro Stage V emission standard engines.	Very Low
	Smothering of habitats and crops	Air transport then deposition	Local wildlife habitats/ species	Low	Moderate	Low-Moderate	Wastes will be handled and stored within a building. The surface water receptors (including unnamed ponds, streams and drains) lie in all directions from the site from 50m – 1km. Some of these are downwind of the site, including an unnamed pond 190m north, another pond 275m north east and a drain / stream 50m north. Owing to the fact that any limited fugitive dust emissions from the site would be a coarse fraction range and would fall rapidly from the atmosphere, it is considered unlikely that the ponds would be affected owing to the intervening distance. Surface water features are also unlikely to be significantly or adversely affected by dust emissions due to their wet nature. The protected ancient woodland 'The Somers' lies approximately 880m north of the site, therefore, despite being downwind, the significant intervening distance significantly reduces the risk of any fugitive emissions impacting this woodland. The closest deciduous woodland down wind of the site lies ~195m from the site, therefore there is a considerable intervening distance. Other deciduous woodlands that are closer to the site lie cross and up wind of the site. Furthermore, owing to the dust mitigation measures at the site, these receptors are unlikely to be affected by the site operations.	A jet wash will be hired from a third party and located on a vehicle ramp for use as a wheel wash. Given the internal nature of all waste unloading, treatment and storage, it is considered that it will not be likely to require the use of a jet wash for site cleaning, instead this jet wash will be implemented for ad hoc vehicle cleaning to prevent any build up of mud, dust or debris which could be tracked around the site or onto public highways. Operational staff to be trained to assess dust generation at the site throughout the working day. Further visual assessment to be carried out daily by the site operations manager, TCM or nominated deputy. The site surfaces, both internal and external, will comprise impermeable concrete surfacing which will be easy to clean. Good housekeeping will be implemented at all times to ensure the internal and external site areas do not have a build-up of dust and debris which could become airborne. Waste drop heights will be minimised during unloading and waste treatment to avoid dusty plumes. Any limited fugitive dust emissions from the site would likely be a coarse fraction range and would therefore tend to fall rapidly from the atmosphere (i.e. high deposition rates). Hence, airborne dust concentrations would be expected to decrease appreciably with distance from the source due to dilution within the atmosphere and deposition onto ground near the source. Resultantly, any receptors with an intervening distance from the site are unlikely to be affected. Contact information for the site and the EA as well as the permit reference number will be displayed to the public via signage at the site entrance to ensure Biffa is made aware of any off-site nuisance as soon as possible to allow mitigation measures to be actioned. Any complaints received will be recorded on a 'Dust Complaint Form'.	Very Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
								A Dust Emissions Management Plan (<i>Document Ref.: BF5066/08.R0</i>) has been prepared and will be maintained throughout the operational period of the site.	
Odours									
Fugitive odours from delivery and dispatch of wastes/materials Fugitive odours from waste unloading, handling and treatment of waste. Fugitive odour emissions from waste storage Fugitive odour release during an abnormal event such as a spill or leak	Nuisance, loss of amenity	Air transport then inhalation.	Local human population	Moderate	Moderate	Moderate	Wastes will be handled and stored within a building. Potentially odorous wastes will be permitted and accepted at the facility. Malodorous wastes will be rejected from the site upon delivery. Closest residential property located ~125m east-southeast of the site, with others situated ~315m – 990m from the site. These are all either cross wind or upwind of the site and most have significant intervening distances from the site. As the site is in a rural setting, the human receptors are more dispersed. Receptors such as public highways and private roads are unlikely to be affected by odours due to their transient nature. Commercial and industrial premises lie adjacent north, east and west.	Waste delivery vehicles will be fully enclosed or sheeted to minimise the risk of fugitive release of odour. Waste Pre-acceptance and acceptance checks will be conducted to ensure the waste is compliant and acceptable. Malodorous waste will not be accepted. Waste unloading, handling, treatment (manual and plant assisted sorting and bulking only), storage and loading will occur within the WTS building. This building comprises roller shutter doors and a 'closed-door' policy will be implemented which will reduce the risk of fugitive odour emissions via containment. The WTS building will comprise an Air System (ProSonic or similar) which will atomise an odour and dust suppressant with air and water to produce an ultra-fine mist to which will remain suspended in the atmosphere for an extended period of time to ensure a maximum performance of odour control and suppression. The internal storage of waste will limit the amount of heating experienced as a result of direct sunlight. Heating of potentially odorous waste and waste containing VOC's and SVOC's is a key factor in odour generation. Thereby, the storage and processing arrangements severely reduce the likelihood for the heating of waste by direct sunlight. Putrescible waste will be stored for up to 2 days generally and no more than 5 days. This will minimise the likelihood of waste becoming malodorous when present at the site. Good housekeeping measures will be implemented to ensure that there is no build-up of waste residues which could become malodorous. Equipment used in waste processing will be cleaned after use to remove any residual waste. Following waste dispatch, empty storage bays will be cleaned thoroughly prior to the next delivery of waste to the site. Daily inspections of the site conditions and odour monitoring will be carried out to ensure that any issues are identified as soon as possible and mitigation measures can be implemented. Operational staff will also be trained to assess any odour generation at the site throughout the working day and will alert the site operations manager, TCM or nominated deputy who will investigate the issue and take corrective action. Contact information for the site and the EA as well as the permit reference number will be displayed to the public via signage at the site entrance to ensure Biffa is made aware of any off-site nuisance as soon as possible to allow mitigation measures to be actioned. Any complaints received will be recorded on an 'Odour Complaint Form'. An Odour Management Plan (OMP) (<i>Doc Ref.: BF5066/09</i>) has been prepared and will be maintained throughout the operational period of the site.	Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
Litter									
Litter from waste delivery vehicles	Nuisance, loss of amenity, road traffic accidents and harm to animal health	Vehicles entering and leaving site.	Local human population, livestock and wildlife. Local road users. (All Receptors)	Low	Moderate	Low	<p>Wastes will be handled and stored within a building.</p> <p>Waste types to be permitted at the site may generate litter.</p> <p>Delivery and dispatch vehicles to be fully enclosed or sheeted.</p> <p>Palisade fencing in place to capture any windblown litter.</p> <p>Internal roadways and a jet wash for wheel cleaning is present at the site which can be used where necessary prior to vehicles exiting the site.</p>	<p>All waste delivery and dispatch vehicles will be fully enclosed or sheeted.</p> <p>All wastes will be inspected upon delivery to the site to ensure contaminated wastes are not accepted.</p> <p>All vehicles to be inspected prior to leaving site. A jet wash will be present on a vehicle ramp for wheel cleaning where required.</p> <p>Waste unloading, handling, storage, treatment (manual and plant assisted sorting and bulking only) and loading will occur within the WTS building which comprises roller shutter doors and will operate under a 'closed door' policy. The high level of containment at the site will significantly reduce the risk of any litter from escaping the building. Due to the containment of the internal operations, adverse weather conditions such as high winds will not affect the site operations or increase the risk of litter dispersion.</p> <p>The site offices and welfare facilities will have plenty of rubbish bins for site staff to dispose of their waste in. Regular cleaning will also be undertaken in these areas which will ensure litter is not present which may escape from the building.</p> <p>Security/litter palisade fencing will be maintained along site boundary to prevent litter escaping. Furthermore, closed board fencing is present along part of the eastern boundary. Litter caught in the fencing will be removed. In the unlikely event that these screens fail to capture any windblown litter, litter picking will be conducted within 24 hours.</p> <p>Daily inspections of the site will be conducted which will include inspections for evidence of mud, debris and litter on the site surfaces. Operational staff will also be trained to observe any evidence of such emissions and the site operations manager, TCM or nominated deputy will be alerted. They will then investigate the issue and action the appropriate remedial measures.</p> <p>When required, manual or mechanical sweeping will be implemented to remove mud and debris deposited on site surfaces. Litter picking will be conducted at the site upon signs of litter generation. The source of any litter will also be investigated and remediated.</p> <p>Good housekeeping will be employed at the site to ensure there is not build up of waste residue or litter within the WTS building or the external areas.</p>	Very Low
Litter from waste stored on site		Air transport and then deposition							
Litter from the welfare and office facilities									

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
Mud and Debris									
Waste debris and mud on local roads Tracking of mud and debris onto public roads causing accident, hazards and nuisance to road users.	Nuisance, loss of amenity, road traffic accidents and harm to animal health	Vehicles entering and leaving site.	Local human population, livestock and wildlife. Road users (All Receptors)	Low	Low	Low-Moderate	Wastes will be handled and stored within a building. Internal and external site surfaces comprise impermeable concrete surfacing which will be easy to clean. A private quarry access road is present between the site access points and the nearest public highway.	All waste delivery vehicles will be fully enclosed or sheeted. All waste delivery vehicles will be inspected prior to entering and leaving the site. A jet wash will be hired from a third party and used for vehicle cleaning as appropriate to prevent the tracking of mud and debris onto the site surfaces and onto public highways and private roads. Waste unloading, handling, storage, treatment and loading will be conducted within the WTS building which comprises roller shutter doors and will operate under a 'closed-door' policy. This level of containment will aid in reducing the risk of mud and debris being tracked around the site and onto public roads. When needed, manual or mechanical sweeping will be utilised to prevent the build-up of mud or debris on site surfaces. This will prevent vehicles tracking mud and debris onto public highways and private roads. The internal and external site surfaces comprise impermeable concrete surfacing which is easy to clean and will minimise the tracking of mud and debris onto public roads. Daily site inspections will be conducted to ensure any issues are identified as soon as possible to allow remediation to be implemented. The access road will also be inspected to ensure no fugitive mud or debris emissions are causing nuisance. Site operational staff will be trained to observe any evidence of mud and debris on site surfaces and alert the site operations manager, TCM or nominated deputy immediately. An investigation into the source will be carried out and mitigation measures actioned. Good housekeeping will be implemented at the site to ensure there is not build up of waste mud and debris within the WTS building or the external site areas.	Very Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
Scavengers, Insects and Other Pests									
Scavenging animals and scavenging birds, Pests (e.g. flies) attracted to or infesting wastes	Harm to human health - from waste carried off site and faeces. Nuisance and loss of amenity. Negative effects on habitats and crops	Air transport and over land.	Local human population, crops and local habitats. (All receptors)	Moderate	Moderate	Moderate	Wastes will be handled and stored within a building. Putrescible waste will be accepted at the site which has the potential to attract scavengers, insects and other pests. The site is located in a rural area and, therefore, a variety of wildlife is likely to be in relatively close proximity to the proposed WTS. An increase in pests and scavengers to the area could create a nuisance.	Waste delivery vehicles will be fully enclosed or sheeted. Waste deliveries will be inspected upon delivery to the site. Infested loads will be rejected. Waste unloading, handling, storage, treatment and loading will be conducted within the WTS building which comprises roller shutter doors and will operate under a 'closed-door' policy. This level of containment will aid in reducing the risk of scavengers, insects and other pests being attracted to the site. Good housekeeping will be implemented at the site to ensure there is not build up of waste residue within the WTS building or the external site areas which could attract scavengers and pests. Where required, manual or mechanical sweeping will be carried out to ensure site surfaces are clean. Waste will typically only be stored for up to 2 days, and a maximum of 3 days. In the unlikely event that a waste stockpile becomes infested with insects, insecticides will be used and the waste will be transferred off site as soon as possible. If a stockpile becomes infested with scavengers, a pest control contractor will be deployed, and the waste will be transferred off site as soon as possible. These measures will be actioned quickly to reduce the risk of an infestation spreading to other waste stockpiles. The Air System (ProSonic or similar) within the WTS building will aid in reducing the risk of scavengers and other pests being attracted to the site due to odour suppression. Daily inspections of the site will be carried out and the results will be recorded. Site staff will also be trained to recognise and alert the site operations manager, TCM or nominated deputy of any suspected pest infestations. This enables any issues to be identified quickly and allow further investigation and remediation to take place. Should insects posing a nuisance be observed at site, insecticides offering rapid knock-down and long-term treatment shall be utilised. A specialist contractor shall inspect the facility weekly during the summer months and at appropriate frequencies at other times. In the event that the daily site inspections or the observations of operational staff find evidence of the presence of scavengers such as rats and other pests, a specialist contractor will be called to attend the site for pest control. A record of all incidents will be recorded in the site diary.	Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
Noise & Vibration									
Noise and vibration caused by engine noise and vibrations from site plant and equipment, lorry movements etc.	Nuisance, loss of amenity, loss of sleep or harm.	Noise through the air and vibration through the ground.	Local human population	Low	Moderate	Low-Moderate	<p>Distance of site from receptors (mainly residential property, Keeper's Cottage, within 125m and Cornets End Farm within 315m of the site, which are to the east-southeast and east of the site respectively).</p> <p>Adjacent industrial and commercial premises are unlikely to be adversely affected by noise as they are likely to generate noise themselves (for example, the quarry situated ~70m to the north-east of the site).</p> <p>Waste operations to take place internally which will provide a barrier to noise and vibration and local receptors.</p>	<p>Waste unloading, handling, storage, treatment and loading will be conducted within the WTS building which comprises roller shutter doors and will operate under a 'closed-door' policy. This level of containment will aid in reducing the risk of noise emissions from the site affecting nearby receptors.</p> <p>Closed-board acoustic fencing is situated along part of the eastern site boundary which will provide a buffer to potential noise emissions for the residential properties located to the east-southeast and the east of the site. This has been installed principally to attenuate noise associated with the vehicles collection depot activities.</p> <p>Speed limit of 10mph to be implemented at the site. Internal roads and surfaces will also be maintained and kept free of ruts and potholes to minimise body slap.</p> <p>All plant and equipment used on site will be operated and maintained in accordance with manufacturer recommendations. The only plant on site will be a waste handler and loading shovel.</p> <p>Waste treatment will be restricted to manual and plant assisted sorting and bulking which is unlikely to give rise to significant noise emissions.</p> <p>Noise levels will be monitored daily by site operations manager (or nominated deputy) to ensure that operations are not resulting in significant levels of noise beyond the site boundary.</p>	Low
Water									
Generation of contaminated run-off and leachate from wastes and other hazardous substances handled on site (e.g. fuels, oils etc).	Harm to protected site through nutrient enrichment, leachate, contaminated surface water runoff	Surface water run-off, and sub-surface transport of leachates then base and spring flows to rivers.	Groundwater, surface water bodies and their associated habitats.	Low	Moderate	Low-Moderate	<p>The waste operations will be conducted within an enclosed building which will ensure the waste remains dry (i.e. rainfall will not fall on the waste and result in leachate).</p> <p>The internal and external site area comprise impermeable concrete surfacing.</p> <p>The WTS building comprises a sealed drainage system. The external surface water drainage system comprises a penstock valve.</p>	<p>Waste unloading, handling, storage, treatment and loading will be conducted within the WTS building which comprises roller shutter doors and will operate under a 'closed-door' policy. The building also consists of impermeable concrete surfacing and a sealed drainage system. Any run-off inside the WTS building will enter the central channel drain, to a sump, the contents of which will be pumped and tankered for transfer offsite to an appropriate facility. This level of containment will significantly reduce the risk of contaminated run-off from entering the off-site surface water network.</p> <p>The external site areas also comprise impermeable concrete surfacing and uncontaminated surface water runoff will be directed to the surface water attenuation pond. From here water will be directed off site to the external surface water drainage network. In the unlikely event that the external surface water runoff is contaminated, a penstock valve at the attenuation pond will be used to keep the water on site to be pumped and tankered for transfer off site to an appropriate facility.</p>	Very Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
Flooding of the site	Contamination of buildings, gardens, agricultural land, natural habitats etc downstream resulting from waste washed off-site.	Flood waters	Local human population, crops and local habitats. (All receptors)	Very Low	Low	Very Low	Upon review of the Environment Agency flood risk map, the site lies within a Flood Zone 1 (annual flood probability of less than 0.1%; low risk). Therefore, the site is not at risk of flooding. Only non-hazardous wastes will be handled at the site.	None	Very Low
Accidents									
On site hazards: wastes, machinery, vehicles, surface water attenuation pond.	Bodily injury	Direct physical contact	Local human population	Low	High	Moderate	The site is fully secured. Waste operations are carried out internally	The site is surrounded by continuous, high palisade fencing and gates will be locked shut outside of operational hours. Signs are present at the site entrance and along the perimeter to deter trespassers. All site staff and visitors will receive an induction to the site to ensure safety protocols are adhered to. All site staff will receive thorough training on the site safety procedures and the use of the plant and equipment on site. Appropriate personal protective equipment (PPE) will be provided for all site staff, particularly those handling waste. Designated pedestrian route are clearly marked around the site.	Low
Fire resulting from arson/vandalism or an accident causing the release of polluting materials (smoke or fumes) to air, water or land.	Bodily injury	Direct physical contact	Local human population	Very Low	Moderate	Low	Both combustible and non-combustible waste will be accepted at the site. All wastes are handled and stored within a secure building.	No fires are permitted on site. There is a dedicated smoking shelter and smoking will not be permitted in any other location on site. All flammable substances (e.g. fuels) will be kept in bunded / double skinned tanks located away from the waste transfer building. Waste unloading, handling, storage, treatment and loading will be conducted within the WTS building which comprises roller shutter doors and will operate under a 'closed-door' policy. This building will be locked shut outside of operational hours, therefore, access for intruders would be prevented. The WTS building is equipped with an automated sprinkler system, strategically placed fire extinguishers and fire hoses, thermal imaging cameras which will monitor the temperature of waste stockpiles and raise an alarm if the temperatures being to rise to enable preventative measures to be taken, such as spreading out the waste to allow cooling. Fire alarm and smoke detection systems are in place. Furthermore, a third party will provide monitoring for the site via CCTV cameras to ensure that in the event a fire broke out, it would be detected as soon as possible and action can be taken to control and extinguish the fire. The site is surrounded by continuous, high palisade fencing and gates will be locked shut outside of operational hours. Signs are present at the site entrance and along the perimeter to deter trespassers. Plant and equipment will be operated and regularly maintained in line with manufacturers recommendations. Plant and equipment will be inspected daily as part of the site checks. In the event any damage is observed, it will be recorded and reported	Very Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
								<p>to the site operations manager, TCM or nominated deputy. Any repairs will be affected as soon as possible or within 5 working days (subject to replacement material availability). Mitigation measures will be undertaken immediately if there is a possibility for ignition.</p> <p>The waste storage bays are separated by fire walls. Stockpiles containing combustible waste will remain 1m below the top of the wall to ensure freeboard space and prevent a fire from over topping the firewalls and entering the neighbouring storage bay.</p> <p>An external fire quarantine area has been identified which is capable of holding at least 50% of the largest combustible waste stockpile on site, in line with guidance.</p> <p>Site staff will be trained in the fire protocols, including the locations and use of firefighting equipment, emergency exits, emergency contacts and the fire assembly point. An Incident Management Plan (IMP) will be made available to staff.</p> <p>Firefighting equipment at the site will be clearly marked and tested, at appropriate intervals, to confirm their suitability and functionality.</p> <p>Access routes will remain clear to ensure fast access for emergency services vehicles.</p> <p>Records of all incidents will be kept on site together with the remedial action taken.</p>	
Leaks and Spillages from on-site plant/vehicles, waste or contaminated rainwater runoff (including firewater).	Deterioration of water quality, contamination of ground/surface waters,	Direct run off from site across ground surface, indirect runoff via the soil layer or transport through soil/groundwater	Groundwater, surface water bodies and their associated habitats.	Moderate	Moderate	Moderate	<p>Only non-hazardous wastes will be handled at the site.</p> <p>Liquid wastes will not be accepted at the site.</p> <p>The site surface water collection networks discharges to surface water.</p>	<p>All wastes will be handled within the waste transfer building with consists of impermeable concrete pavement with a sealed drainage system.</p> <p>All vehicles delivering and dispatching wastes will be sheeted or fully enclosed.</p> <p>Spills kits will be strategically positioned around the site.</p> <p>External yard and haulage routes consist of impermeable concrete pavement.</p> <p>A penstock valve is fitted at the discharge point from the surface water attenuation lagoon, which can be shut-off in the event of a large spill or fire.</p> <p>The eastern section of the site drains to a pumping station designed with a storm attenuation capacity. The pump can be shut off in the event of a large spill or fire within this catchment area.</p> <p>The condition of the site surfacing and penstock valve will be inspected daily. The drainage network will be inspected/surveyed every five years, or sooner if issues with the network are identified. Any repairs will be undertaken as soon as reasonably practicable.</p>	Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
Abnormal Conditions									
Containment Damage	Harm to human health - respiratory irritation and illness. Nuisance – dust, olfactory, and noise emissions Contamination of surrounding land, groundwater and surface water.	Air transport then deposit or inhalation, direct run off	Local human population, crops and local habitats. (All receptors)	Low	Moderate	Low-moderate	Waste unloading, handling, storage, treatment and loading will be conducted within the WTS building which comprises roller shutter doors and will operate under a 'closed-door' policy. An impermeable concrete surface and sealed drainage system is also present in the WTS building.	Waste delivery vehicles will be fully enclosed or covered. The internal sealed drainage system will be regularly inspected to ensure there are no issues or loss of containment. In the event an issue is found with the internal sealed drainage system, repairs will be carried out as soon as practicable. The external drainage system, impermeable surface and penstock valve will also be regularly inspected. The site internal and external impermeable concrete surfaces will be inspected daily to ensure there is no damage. Any required repairs will be done as soon as practicable. In the event the WTS buildings roller shutter doors are not functioning as they should be, repairs will be conducted as soon as possible. The doors will remain closed until they are in working order again. In the event that an issue with the containment measures at the site arises, and results in a spill / leak of waste, mitigation and control measures will be taken. The procedures for a spills / leaks are outlined above and will be followed.	Low
Power loss	Harm to human health and local habitats and surface water via fugitive emissions Nuisance to local human receptors via fugitive emissions	Airborne transport	Local human population, crops and local habitats. (All receptors)	Very Low	Moderate	Low	There are no major process plant items which rely on mains power. The Air System is electrically powered. Roller shutter doors can be operated manually. Rising main Pumping station is mains powered.	If power / water is lost for a sufficiently long period of time where it has the potential to affect ancillary functions outside of the main operations then alternative means of power generation/water supply will be sought.	Very low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
Vandalism and security breach	Bodily injury	Direct physical contact	Local human population	Low	Moderate	Low-Moderate		<p>The site is surrounded by security palisade fencing and closed board fencing on part of the eastern boundary.</p> <p>The access gate will be locked shut outside of operational hours.</p> <p>CCTV will be installed and operated across the yard and in the WTS building. Out of hours monitoring will also be implemented for security and early fire detection. Signs will be installed on the perimeter fencing and gates to alert potential trespassers or vandals of the presence of CCTV in order to deter their illegal entrance to the site.</p> <p>Site security infrastructure will be inspected daily as part of the daily site inspection. Any damage will be recorded on the check sheet and will be reported to the site operations manager, TCM or nominated deputy.</p> <p>Any damage to the integrity of the boundary, gates or any other security structure, where practicable, will be repaired by the end of the working day. If it is not possible to make repairs within a working day, temporary repair measures will be implemented. Final repairs will be carried out within 7 working days of the damage being detected or any other such period as agreed in writing with the EA. All damage and repairs (temporary or permanent) are to be recorded in the Site Diary.</p> <p>All visitors to the site (including personnel) must report to the site office to sign in and sign out on exit.</p>	Very Low
Operator error	<p>Bodily injury</p> <p>Harm to human health - respiratory irritation and illness.</p> <p>Nuisance – dust, olfactory, and noise emissions</p> <p>Contamination of surrounding land, groundwater and surface water.</p>	Direct physical, air transport then deposit or inhalation, direct run off	<p>Local human population, crops and local habitats.</p> <p>(All receptors)</p>	Low	High	Moderate	-	<p>Technically competent people oversee the management of activities at the site, in accordance with the fit and proper person requirements.</p> <p>Training (including refresher training) will be given to all site staff on the environmental permit, health and safety and incident response procedures.</p> <p>Site staff will be trained on site equipment/plant prior to first use and supervised by a technically competent person.</p> <p>Employment of Biffa's Standard Operating Procedures (SOPs) developed in accordance with published Best Practice and Health and Safety Executive Guidance.</p>	Low
Cross-connected drains	Deterioration of water quality, contamination of ground/surface waters,	Direct run off from site across ground surface, indirect runoff via the soil layer or transport through soil/groundwater	Groundwater, surface water bodies and their associated habitats.	Low	Moderate	Low-Moderate	-	Suitably qualified engineers will ensure that all drains are installed to approved designs	Very Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
Emissions from plant or equipment due to abnormal conditions	Harm to human health - respiratory irritation and illness.	Air transport, deposition then inhalation.	Local human population	Low	High	Moderate	-	<p>All machinery used on site will be operated and maintained in accordance with manufacturers' recommendations.</p> <p>The plant and equipment to be used on site will be classified as Euro 5 or Euro 6 for emissions ratings.</p> <p>All operational areas will be underlain with an impermeable concrete surfacing as is appropriate to the environmental risk posed by that part of the overall operation.</p> <p>All machinery will undergo regular checks and maintenance in line with manufacturers recommendations.</p> <p>All plant and equipment will be inspected for damage / leaks before and after use as part of daily operation and maintenance checks. Any damage will be recorded on a check sheet and reported to the site operations manager, TCM or nominated deputy.</p> <p>Any plant or equipment identified as being defective will be removed for active use and repaired as soon as possible.</p>	Low
Inadequate waste acceptance procedures	<p>Harm to human health - respiratory irritation and illness.</p> <p>Bodily harm</p> <p>Nuisance (e.g. dust for non-compliant particularly dusty waste loads)</p>	Transported by vehicle	Site operatives and site users	Low	Moderate	Low-Moderate	-	<p>All wastes will undergo stringent pre-acceptance procedures in accordance with Biffa's Standard Operating Procedures (SOPs) which are informed by relevant Duty of Care Requirements and Health and Safety Executive Guidance.</p> <p>All site staff, particularly the site operations manager and TCM, will have knowledge of the Environmental Permit and on the types of waste accepted and prohibited at the site.</p> <p>Accompanying paperwork will be reviewed to ensure the details are correct and that all fields are completed.</p> <p>All waste loads will be visually inspected during unloading within the WTS building.</p> <p>Any non-conforming wastes will be identified by the site operatives. This will either be re-loaded onto the delivery vehicle for immediate transfer off site, or where this is not possible the waste will be placed into quarantine containers and the transfer of this waste to an appropriate facility will be organised as soon as possible.</p>	
Protected Species and Habitats									
On site activities	Harm to a protected site through contamination, nutrient enrichment, smothering, disturbance, predation etc.	Any	Protected species and habitats	Low	Moderate	Moderate	<p>All wastes will be handled within the waste transfer building that comprises impermeable pavement and a sealed drainage system.</p> <p>There is one protected habitat, The Somers Ancient Woodland, situated 880m north of the site, and numerous priority habitats in the form of deciduous woodland which lies from between 15m and 1km from the site boundary to the N, E, SE, S, W and NW.</p> <p>Dust emissions are considered above.</p>	<p>Waste delivery vehicles will be fully sheeted or enclosed.</p> <p>Waste unloading, handling, storage, treatment and loading will be conducted within the WTS building which comprises roller shutter doors and will operate under a 'closed-door' policy. This level of containment will significantly reduce the risk of the waste on site to affect any protected or sensitive habitats.</p> <p>There is a significant intervening distance between the site and the ancient woodland.</p> <p>The closest deciduous woodland lies cross wind of the site.</p> <p>The mitigation and control measures for the site to prevent fugitive emissions which could affect species and habitats have been outline previously in this risk assessment.</p>	Low