

Data and information				Judgement				Action	
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>
Fugitive Emissions to Air (Smoke)									
Smoke emissions from a major fire at the WTS involving non-hazardous combustible waste e.g. plastic packaging and WEEE	Harm to human health – respiratory irritation and illness	Air transport, then inhalation	Site personnel, local population, and air quality.	High	High	High	<p>Predominant wind direction is from West/West South West.</p> <p>Residential receptors are located 50m North of the site boundary, industrial premises (including places of work) are located adjacent to the site.</p> <p>The site will accept a range of non-hazardous wastes and WEEE that will may release a range of pollutants when burnt.</p>	<ol style="list-style-type: none"> 1. The fire mitigation strategy aims for a fire to be extinguished within 4 hours of starting. 2. Procedures will be incorporated into ‘Emergency Action Plan’. 3. No fires are permitted on site. 4. The majority of wastes will be stored in containers with 750mm wide inspection corridors/paths maintain between them that will reduce the rate of fire spread and enable targeted firewater use; 5. Immediate action will be taken to extinguish all fires if safe to do so. 6. There are several FRS stations within a short distance of the site. Incident response times are likely to be between 10 and 25 minutes. 	Low
	Visual impairment of drivers/train drivers caused by thick smoke, disruption to services	Air transport	Users of local infrastructure e.g. railway lie, local roads.	High	Moderate	Moderate	<p>Railway line located adjacent to sites northern boundary.</p> <p>The A4232 trunk road is located ~600m west of the site.</p> <p>Local roads within the industrial estate and residential areas of Rumney.</p>	<ol style="list-style-type: none"> 7. A fire hydrant is located on Lamby Way (c.65m from the site) and will be able to supply above the minimum rate required based on the maximum pile size i.e. <10 l/s. The distance will minimise friction losses along the hose length and will also provide a flow rate what will allow more than one jet to be applied to a pile fire. 8. If necessary, a representative of Biffa will contact the local authority who will inform local residents/users of the industrial park and advise them to close all windows and doors until the fire has been extinguished. 9. A representative of Biffa will contact Network Rail and the South Wales Trunk Road Agency should the safety of nearby railway lines or any major road networks be at risk. 10. Firefighting equipment will be available and maintained, and site operators will be trained in their correct use. 11. The combustion risk of waste types stored on-site which have been identified as potentially combustible; including incidental contaminants (e.g. wood and plastic) is considered to be low. All waste identified as having combustible properties will be proactively monitored by site personnel for potential combustion indications and will be ‘conditioned’ to limit combustion potential. 	Low

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Firewater									
Failure to contain firewater	Pollution of land and water	Run-off, absorption to ground and site drains.	Land, groundwater, water abstractions	Low	High	Moderate	Local superficial geology comprises underlying comprise of Tidal Flat Deposits comprising of soft/firm gravelly clay. Surface water from yard areas and roofs discharge to the surface water sewer network	<ol style="list-style-type: none"> The site design includes for the construction of engineered impermeable surfacing across the site. In the unlikely event of a fire in the operational area, all firewater will be contained on site. The Sustainable Drainage System servicing the external areas of the site is fitted with a penstock valve (Penstock 3) which will allow the diversion of any firewater to the onsite underground attenuation storage tank should a fire break out at the site. The location of Penstock 3 is located on Drawing No. BF5023/9/04 Rev1. The attenuation tank has a capacity of c.420m³ and the projected water supply required to tackle a fire within the largest waste bay on site (88m³) would equate to approximately 106,000 litres (106m³) of water over a 3-hour period. Therefore, the onsite storage tank is more than capable of containing the firewater volumes estimates for the site. The Emergency Incident Plan will be available to the FRS at the site entrance and will notify them of the requirement to shut-off the site drainage system discharge using Penstock Valve 3. Upon arrival at the site, the FRS will consider the utilisation of sprays or fogs to tackle a fire, which would reduce the amount of fire water run off created. Fire involving non-hazardous combustible waste is likely to be relatively small in volume (max. pile size 88m³). 	Low
	Pollution of surface water	Run-off and site drains	Surface water	Low	High	Moderate			Low