FIRE PREVENTION PLAN

SECURE WASTE AND RECYCLING FACILITY
CHIMNEY ROAD
TIPTON
WEST MIDLANDS
DY4 7BY

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Project Quality Assurance
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FIRE PREVENTION PLAN
SECURE WASTE AND RECYCLING FACILITY, CHIMNEY ROAD, TIPTON, WEST MIDLANDS

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SECURE WASTE AND RECYCLING FACILITY
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FIRE PREVENTION PLAN

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1.0 INTRODUCTION

1.1 Scope & Context

1.1.1 This Fire Prevention Plan (FPP) has been prepared by Sirius Environmental Limited (Sirius) on behalf of Biffa Waste Services Limited ('Biffa') in support of an application to vary the waste activities currently regulated at their waste management facility located off Chimney Rd, Tipton, West Midlands , DY4 7BY under Environmental Permit EPR/FB3809KS. The site is located on NGR: SO 97944 92922.

1.1.2 The changes sought by the application to vary Environmental Permit EPR/FB3809KS are to facilitate the operation of a Secure Waste and Recycling Facility (SWaRF) focusing on the secure destruction of confiscated, counterfeit and online return goods and packaging waste.

1.1.3 The document provides a structured framework approach in effectively preventing potential fires associated with the processing and storage operations at the site. This FPP has been produced in accordance with the Environment Agency's Fire Prevention Plan Guidance (updated 11th January 2021).

1.1.4 This FPP meets the fundamental objectives of the FPP Guidance as it demonstrates that the site can:

- Minimise the likelihood of a fire happening;
- Aim for fire to be extinguished within 4 hours; and
- Minimise the spread of fire within the site and to neighbouring sites.

1.1.5 This FPP has been structured in accordance with the EA Fire Prevention Plan Guidance and considers the following relevant aspects of the facility:

- Managing common causes of fire
- Preventing self-combustion
- Managing waste piles
- Preventing fire spreading
- Quarantine area
- Detecting fires
- Supressing fires
- Firefighting techniques
- Water supplies
- Managing fire water
- Actions during and after an incident

1.1.6 This FPP is a 'live' document and will form part of the key environmental management documentation for the facility. All monitoring procedures, responsibilities and compliance actions will be updated as and when required.

1.1.7 In line with Section 5 of the EA's Guidance on Fire Prevention Plans (2021), this document has been produced as a standalone document, with all documentation required appended. This FPP forms part of the site's management system. As such, the requirements of this Fire Prevention Plan will be communicated to all relevant personnel on site and appropriate training will be provided where indicated as part of this FPP.

2.0 SITE DETAILS

2.1 Activities

2.1.1 Biffa previously operated a non-hazardous Waste Transfer Station and Materials Recycling Facility on the existing site. Biffa are now seeking to redevelop the site into a Secure Waste and Recycling Facility (SWaRF).

2.1.2 Principally, this is for the purposes of destroying counterfeit, 'grey market' or confiscated goods, in addition to returned online orders to prevent them reaching the market. Whilst wastes will be treated onsite, this is for the purposes of an 'initial destruction' culminating in compacted, baled or tankered wastes, almost all of which will be dispatched offsite for further processing and recovery

2.1.3 The operator is proposing to accept a range of non-hazardous and hazardous waste streams which will be bulked, treated and stored on site pending transfer to a suitably permitted facility.

2.1.4 Activities at Tipton SWaRF will include the treatment via manual sorting/de-packaging, shredding, milling, bulking, chemical treatment, blending, compaction and baling of a range of non-hazardous and hazardous wastes.

2.1.5 This includes the treatment/storage of:

- Depackaging and blending of Hazardous Alcohol and Cosmetics (e.g. Perfume and Aftershave)*
- Depackaging and blending of Non-Hazardous Alcohol and other non-alcoholic liquids (Including beverages).
- Cigarettes / Tobacco shredding*
- Vapes and other WEEE destruction*
- Manual sorting and separation of non-hazardous products including food and destruction of packaging*
- Shredding and baling of Textiles*
- Nitrous oxide canister degassing and chemical treatment

2.1.6 Wastes which are considered to be combustible are marked with an asterisk.

2.1.7 Each waste stream will be subject to a set of specific treatment activities using specific plant and equipment.

2.2 Layout

2.2.1 The proposed operational layout of the facility is illustrated in **Drawing No. BF5094/05/02.**

2.2.2 All treatment activities will be carried out internally within either of the two buildings – the main processing building, and the alcohol and cosmetics building. External operations will be restricted to the reception and offloading of waste deliveries and the storage of treated wastes in containers and articulated trailers only.

2.2.3 The treatment activities carried out in the two buildings are summarised as follows:-

Main Processing Building

- **Hazardous Vapes and WEEE destruction** – milling and separation of vape (and suitable WEEE) contents and components, including evaporation of battery electrolytes and nicotine in a dryer *(Capacity: 9.6 tpd);*
- **Hazardous Nitrous Oxide Canister Destruction -** mechanical piercing and / or degassing (Dependant on canister size) of nitrous oxide canisters, and treatment of nitrous oxide via a heated catalyst reaction unit prior to emission to air (as N_2 and O_2 – inert gases) *(Capacity: 1.12tpd - gross).*
- **Tobacco and Packaging Destruction** - manual sorting/de-packaging, shredding and compaction of hazardous and non-hazardous tobacco products (hazardous and non-hazardous waste to be processed and stored separately*) (Capacity: 10 tpd);*
- **Manual Sorting and Repackaging of Online Returns** – Manual sorting, separation, de-packaging of non-hazardous and hazardous non-saleable products (including the removal of batteries from electronics, and the removal of secondary packaging from food).
- **Non-Hazardous Clothing and Textiles** - manual sorting/de-packaging, shredding and compaction of non-hazardous textiles;

Alcohol and Cosmetics Building

- **Non-Hazardous Liquid Destruction** – compacting/baling of plastic and metal packaged non-hazardous alcohol and non-alcohol products to segregate the contents and the blending of subsequent liquids for recovery off-site;
- **Hazardous alcohol and cosmetics destruction** – shredding of glass packaged hazardous alcohols and cosmetics in a controlled environment for blending and subsequent recovery for off-site transfer (Capacity: 40tpd);

2.2.4 Details of the processing plant to be fitting is each of the buildings are presented in **Table 1.**

Table 1: Waste Processing Equipment used in the Main Processing Building

Equipment	Qty	Processes	Abatement Measures / Notes
Main Processing Building			
Vape Hammermill	1	Vape destruction	Nicotine gas passed through carbon filter Hammer mill provides controlled atmosphere (6 bar N_2 blanket).
Ulster U45 30Kw Industrial Shredder	1	Cigarette and packaging shredder	Fitted with Donaldson PowerCore CPC-6F dust filter system with explosion relief and flame arrestor
30kW Short Bed Shredder with CK 400 HFE PC Semi auto baler	1	**Textile Shredder**	Produces 400kg bale. Hopper has localised fire suppression.
Large N_2O 'Wagons'	6	Nitrous Oxide Cannister Processing	Up to 26 cannisters per wagon. Wagon is fitted with non-return valves so is not required to be fully populated. Pipework connects to destruction unit. No diffuse release.
Medclair GEDs (Gas Extraction and Disposal System)	1		Hopper infeed and Double airlock with cutting mechanism to puncture canisters

Equipment	Qty	Processes	Abatement Measures / Notes
Main Processing Building			
Medclair DU2000 N2O Destruction Unit	1		Continuously monitored and controlled by sensors and control unit with alarm. Includes an integrated UPS (Uninterruptable Power Supply)
Alcohol Processing Building			
Baler with sump	1	Non-hazardous alcohol de-packaging	No abatement included due to low risk and emissions profile of wastes
U-45LB 30kW Industrial shredder with discharge mesh and sump.	1	Hazardous Alcohol / Cosmetics (Glass)	Spray bar fitted in feed hopper to douse shredder with continuous water flow
			Air extraction system with wet scrubber at entry and exit from shredder, which removes alcohol vapour prior to release.
Inclined loading conveyor	1		500L collection tank with spill bund, stop valves and pump to external tank farm
Storage Tanks (located external to building	3	Alcohol and cosmetics (hazardous and non-hazardous stored separately)	High level alarm. Containment bunding with 110% of single tank capacity.

** Not site processing capacity*

2.2.5 Fire extinguishers are located at designated points around the buildings as well as fire hose reels which are supplied by the mains water supply to the site.

2.2.6 Protective clothing and equipment are also stored within the waste buildings and office. Pollution control equipment stored on site comprises spill kits and bunding.

2.3 Local Community

Site Location and Setting

2.3.1 The facility is located off Chimney Road, Bagnall Street Industrial Estate, approximately 2.5km east of Tipton town centre. The National Grid Reference (NGR) for the site is 397917E 292933N.

2.3.2 The facility currently comprises a main building in the west, external storage areas/bays in the north and southeast, with a site Office and car park in the north. The site is surrounded by corrugated fencing. Access to the site is gained via a gated entrance to the east onto chimney road.

2.3.3 The site is currently covered entirely by impermeable pavement.

2.3.4 As part of the redevelopment of the site, the existing southeastern storage bays are to be removed, and a new building constructed in their place to facilitate the alcohol and cosmetic treatment and storage activities. The impermeable surfaces and drainage system are to be redesigned, with the surface water collection and discharge network adapted accordingly. The drainage system is shown in **Drawing No. BF5094/12/03.**

2.3.5 All waste delivery and dispatch vehicles will arrive at the site via an existing tarmacked access junction that connects to Chimney Road along the eastern site boundary. All deliveries will be pre-booked in advanced and appropriate information shared between the delivery vehicles and site. The site access point will be upgraded to control vehicle access and egress, with only one vehicle being allowed entry into the weighbridge area at a time, whilst waste acceptance checks are carried out. The driver will pass on the relevant paperwork, e.g. Waste Transfer Note (WTN) for Non-Hazardous materials, and Hazardous Waste Consignment Note for Hazardous materials, with the receiving person completing the relevant sections of the note. Once the waste

is accepted, the delivery vehicle will be directed to the unloading apron located between the two site buildings.

2.3.6 The operational layout and permit boundary is shown in **Drawing No. BF5094/12/02.**

Sensitive Receptors

2.3.7 Bagnall Street Industrial Estate forms part of a larger industrial complex which encompasses the residential conurbation of Harvills Hawthorn, located approximately 300m east of the site. Around this area, the industrial complex extends over 2km to the north and generally between 1 to 1.5km to the northeast, south and southeast.

2.3.8 The canalised section of the River Tame flows northwards immediately west of the site, beyond which are the A41 dual carriageway (Black Country New Road), a disused railway line and Walsall Canal respectively. Beyond this infrastructure are the residential suburbs of Toll End, in which the nearest residential property is c. 160m from the site boundary.

2.3.9 As previously alluded to, the site is surrounded to the north, east and south by the wider extents of an industrial estate. This area is considered to represent a commercial/industrial site and includes a large number of places of work. Businesses located within closest proximity to Tipton SWaRF include (but are not limited to) an Iceland Warehouse to the east, car parking facilities and a HGV training site (to the north) and Aquila Truck Centre (who provide vehicles, machines and services to the logistics and construction industry) to the south. Other businesses within the wider industrial estate include Cromwell Tools (maintenance and repair supplies), Charter Castings Limited (producer of Aluminium and Zinc Castings), Stainless International (stainless steel supplier and processor), Speedy (tool and equipment hire), The Appliance Recycling Group, Wicke UK (manufacturer of wheels and castors), Enablelink (waste vehicle recycling company) etc.

2.3.10 The locations of nearby receptors are illustrated in **Drawing BF5094/12/04**.

2.3.11 The nearest Public Right of Way (PRoW) (which is classified as a “Recreational Route”) and is located ~130m to the west of the site, adjacent to the Walsall canal in a north south alignment. This PRoW is also classified as a “traffic free off-road cycle route”.

2.3.12 There are a number of Grade II listed buildings within 2km of the site, with the closest sites associated with bridges or locks located at various points along the Walsall Canal.

2.3.13 There is one Local Nature Reserve (LNR), Sheepwash LNR, situated within 2km of the site which is located ~ 715m to the south. There are no sites designated as Special Area of Conservation (SAC), Special Protection Areas (SPA`s), RAMSAR sites, Sites of Special Scientific Interest (SSSI) or National Nature Reserves (NNR) within a 2km of the site.

2.3.14 There are numerous Local Wildlife Sites (LWS) within 2km of the site boundary in all directions from the site, the closest of which is Ocker Hill Balancing Pool, which lies ~950m to the north/northeast of the site.

2.3.15 The site is located within the administrative area of Sandwell Metropolitan Borough Council. The entire borough has been designated as a designated AQMA’s (Air Quality Management Areas) for Nitrogen Dioxide as stated by

DEFRA. This can probably be attributed to the high density of main roads which are located in the area.

2.3.16 The site is located within a Nitrate Vulnerable Zone (NVZ) for surface water as designated by DEFRA.

2.3.17 The site is not located within a groundwater Source Protection Zone (SPZ).

2.3.18 The nearest surface water feature to the site, is the River Tame which is located ~12m to the west of the site. The River Tame is one of the principal tributaries of the River Trent, the confluence with which lies ~30km to the north east of the site. As previously mentioned, the Walsall Canal is located ~120m to the west of the site, beyond the River Tame and the Black Country New Road.

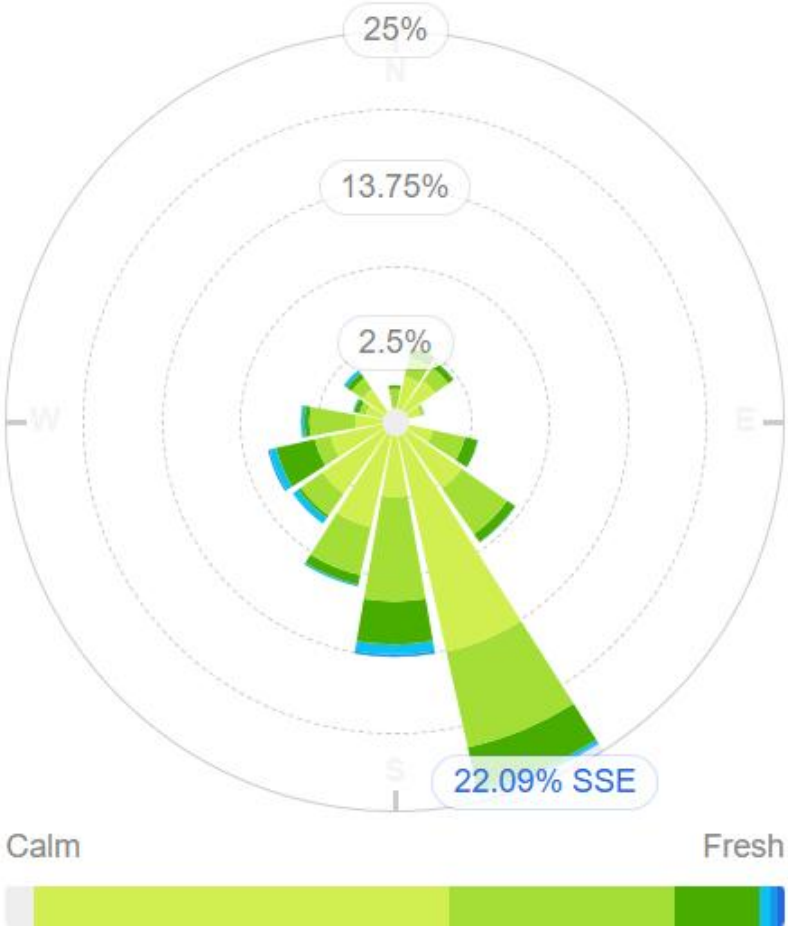
Meteorological Conditions

2.3.19 The spread of fire across land and spread of smoke may be affected by the local weather conditions with particular reference to wind direction.

2.3.20 A wind rose showing the five-year average wind direction (vector) and speed recorded at Coleshill, located approximately 24km east of the site, is presented in **Figure 1**. The weather station is deemed the most appropriate for use in order to characterise the site due to its proximity and its environmental setting. Wind patterns at the Coleshill are likely to be similar to those likely to be experienced at the site.

2.3.21 **Figure 1** shows that the wind will be blowing primarily from the south-southeast and south.

Figure 1: Wind Rose for Coleshill Recording Station between (5-year average)



3.0 FIRE PREVENTION

3.1 Introduction

3.1.1 Prevention and ultimately negating the initial fire risk are given the highest priority in terms of controlling a fire. The operator will employ the following methods to ensure fire prevention at the site:

- Sources of ignition will be strictly controlled and managed.
- Fire prevention messages will be reinforced by utilising appropriate signage.
- All visitors will follow the correct safety and fire prevention procedures.
- High level site security measures are in place which will deter unauthorised access.

3.1.2 A regular maintenance and site inspection programme (including a 30-minute end of day fire watch) will be employed and the operator will ensure that a good house-keeping policy is employed.

3.1.3 Appropriate separation distances are observed between stores of combustible materials.

3.1.4 All site staff will be trained in Fire Awareness to understand operation practices necessary to minimise the risk of fire.

3.2 Control of Common Causes of Fire

Arson or Vandalism

3.2.1 All reasonable precautions are taken to prevent unauthorised access to the site.

3.2.2 The integrity of all fences and locks will be regularly inspected. Any damage identified will be repaired as soon as practically possible.

3.2.3 A network of CCTV with cameras with overlapping coverage is installed at the site to further assist with surveillance.

3.2.4 The emergency services will be contacted immediately should a break-in occur.

Plant and Equipment

3.2.5 Details of the plant and processing plant/equipment to be used at the site are presented in **Table 1.** Industrial heaters are not permitted for use at the site.

3.2.6 Materials transfer around the site will be via electrically powered forklift trucks, with a DSEAR Zone 2 specification, preventing it becoming a potential source of ignition. All FLTs are parked internally overnight within the main processing buildings, with at least 6m maintained between combustible materials or 1m from concrete wall units.

3.2.7 Due to the safety features of the FLTs (i.e. the pyroban explosion protection systems) used at the site, they are not fitted with fire extinguishers. The safety features ensure that the operating temperature of the plant is regulated, as is the airflow through the unit to prevent blocking of air vents; thus reducing the risk of fire caused by plant. The trucks have built-in gas detection systems to detect LEL via a Pallister detector. Brakes and exhaust temperatures are monitored to ensure they stay below the maximum operating temperature and exhausts on the trucks are at a high level with the base of the truck sealed to prevent anything being syphoned into the engine. In the event any of these

controls are not operational, the truck alarms will alert the operator and it will shut down. Due to these risk prevention controls, it is not considered necessary for the trucks to be fitted with fire extinguishers.

3.2.8 At the end of each working day, all plant and equipment will be a cleaned of waste materials / debris prior to shut down.

3.2.9 All plant and equipment undergo daily visual inspection and subsequent completion of a logged weekly inspection. If a fault is discovered, the TCM will be notified, and use of the plant / equipment will be suspended until the problem has been addressed.

3.2.10 Particular attention should be paid to dust settling on hot exhausts and engine parts. This will be checked periodically throughout the day as well as at the end of every day prior to shut down.

3.2.11 Records will be kept of any problems encountered and the remedial action taken.

Electrical Faults

3.2.12 All plant and equipment will be maintained in good working order to prevent the advent of electrical faults and will be operated in accordance with manufacturers and company guidelines and procedures. All portable electrical/electronic compliances will be subject to regular PAT Inspections. Where DSEAR assessment have highlighted the requirement for ATEX rated equipment, these will be maintained by a COMPEX electrical engineer.

3.2.13 Any fuse boxes and site wide electrical systems will have regular and planned inspections which will be fully certified by a qualified electrician. The maintenance programme will be implemented to reduce the ignition risk posed by potential electrical faults. This will include the assessment of on-site electrics for faulty or damaged wiring etc.

3.2.14 Regular maintenance checks of electrical equipment/cables are detailed in a currently relevant Group Standard – GS16 – Electrical Safety and BWI16-01 Checking electrical appliances and cables, as well as Management Operational Guidance (MOG16) – Electrical Safety.

3.2.15 Any major electrical installations will be implemented in accordance with Building Regulations and registered with Development Control.

Discarded Smoking Materials

3.2.16 A strict ‘No Smoking’ policy is enforced throughout the site

3.2.17 A designated smoking area is available outside the operational area of the site, adjacent to the main offices. The location is shown in **Drawing No. BF5094/12/05**

Hot Works

3.2.18 Hot work is defined as cutting and welding operations that involve the use of portable gas or arc welding equipment, or involve soldering, grinding, or any other similar activities producing a spark, flame, or heat. Any such works will be subject to a full risk assessment in accordance with the Permit to Work requirement set-out under Biffa’s Health and Safety standards.

3.2.19 Hot works will be carried out by technically competent staff and at a safe distance from combustible materials. Contractors on site undertaking such activities will undergo induction training and will be competent in the use of equipment / completion of the activity they are undertaking. A permit to work supported by a risk assessment will be required before any hot works are undertaken at the facility. Issuing the permit will ensure that there is an additional person there on fire watch, that the area is clear of waste. It may also be necessary to ensure that the work area is checked an hour after completion, as sparks from hot work can smoulder for a significant time period after work is completed.

3.2.20 Fire extinguishers and 50m manual hose reels are available within the site so they can be used immediately should a fire occur. These are illustrated in **Drawing No. BF5094/12/05.**

Ignition Sources

3.2.21 No routine aspect of the facility requires the use of any naked flames. Industrial heaters and heating pipes are not utilised on site.

3.2.22 ATEX zones within processing plant are fitted with appropriate arrestment plans e.g. nitrogen blankets, ATEX dust abatement, water quenching

3.2.23 Any ignition sources as part of non-routine activities on site will be subject to permit to work. Any such works will be kept at least 6 metres away from the stored waste on site.

3.2.24 In the event that hot works are required to be carried out on site, this will be carried out by trained staff and at least 6m away from combustible and flammable materials. A permit to work supported by a risk assessment will be required before any hot works are undertaken at the facility.

Gas Bottles & Other Flammable Items

3.2.25 Nitrous oxide canisters are stored in a designated secure cage unit in the main processing building, separated from all other storage by 6m. Once treated the cannisters are no longer pressurised and do not present a significant risk in the event of a fire.

3.2.26 Flammable alcohol and cosmetics are stored and processed in a separate building to all other combustible waste streams, which is a designated ATEX zone.

Leaks & Spillages of Oils, Fuels and Other Flammable Substances.

3.2.27 All plant and equipment is maintained in good working order thus reducing the potential for the leaking and trailing of combustible liquids. If a site vehicle is found to be trailing liquid then the vehicle shall be moved to an appropriate area and will be repaired as a matter of urgency.

3.2.28 The site undergoes daily inspections, and therefore any trailing/pooling of combustible fluid will be identified and remediated immediately. Spill kits are available on site and will be used for this purpose.

3.2.29 Spill kits are strategically located around the site to deal with any leaks of spills of raw materials or wastes.

3.2.30 Any leaks or spills during loading/unloading of waste delivery vehicles in the main service apron will be managed by shutting off the isolation valve fitted to the discharge point.

Batteries

3.2.31 Batteries (including lithium and lithium-ion) will be stored in appropriate containers/containers within the main waste transfer building with a fire break between (fire wall or 6m separation) other combustible materials and other sources of ignition.

3.2.32 Damaged lithium and lithium-ion batteries will be isolated and stored externally in a waterproof container filled with sand or similar inert materials.

Build-up of Loose Combustible Waste and Dusts

3.2.33 Regular checks throughout the day will be carried out to ensure all loose waste (combustible or otherwise) is cleared and placed in the appropriate dedicated waste storage area.

3.2.34 The build-up of dust will be monitored as part of daily inspections and cleared where observed.

Reactions Between Wastes

3.2.35 Waste acceptance checks in place to identify incompatible materials as early as possible. If incompatible waste is found on site this will be either removed or temporarily stored within the non-confirming waste quarantine area. Wastes are visually inspected as part of daily checks.

Hot Loads

3.2.36 No hot loads will be accepted by the site.

3.2.37 On arrival at the site, the wastes will be inspected for conformance with their relevant documentation, and for any signs of smouldering. Should any signs be observed, the load is to be rejected and a note made in the Site Diary.

3.2.38 Should any signs of smouldering be observed after the load has been deposited, it should be moved immediately to the quarantine area located in the main yard area of the site, as defined in **Drawing No. BF5094/12/05.**

Hot and Dry Weather

3.2.39 All waste will be stored and handled internally, or externally in containers or curtain-sided articulated trailers to prevent heating.

Residual Risk Assessment

3.2.40 A summary of the residual risks associated with each common potential source of ignition following the implementation of the relevant controls is summarised in **Table 2.**

Table 2: Residual risk assessment of common causes of fire

Ignition Source	Residual Risk
Arson	**Very Low**
Plant and Equipment	**Very Low**
Electrical Faults	**Very Low**

Discarded Smoking Materials	**Very Low**
Hot Works	**Very Low**
Hot Exhausts	**Very Low**
Ignition Sources	**Very Low**
Gas Bottles and Other Flammable Substances	**Very Low**
Leaks and Spillages of Oil and Fuels	**Very Low**
Batteries	**Very Low**
Build-up of Loose Combustible Waste and Dust	**Very Low**
Reactions Between Wastes	**Very Low**
Hot Loads	**Very Low**
Hot and Dry Weather	**Very Low**

3.3 Preventing Self-Combustion

Managing Storage Times

3.3.1 As presented in **Table 3** combustible wastes will not be stored in excess of 3 months.

3.3.2 Due to the sensitive and / or hazardous nature of wastes, and the resultant specific storage and treatment techniques, their journey through the site will be closely tracked. This will also allow the site management to ensure that the storage times specified in this plan are adhered to. All storage areas will be managed to ensure full stock rotation is achieved.

3.3.3 The Site Manager or nominated deputy will be responsible for managing the rotation of waste. Due to the sensitive nature of some wastes, the processing of certain streams may be prioritised over others. However, when practicable, all material will be processed through the site on a 'first in – first out' principle.

3.3.4 As waste is treated in batches, the subsequent fractions will not remain onsite for longer than 3 months, minimizing the opportunity for combustion to occur.

3.3.5 In the event that the primary route for onward transfer of any wastes is not available, the waste will be diverted to alternative authorised facilities as per Biffa's established business continuity plans.

3.3.6 A daily review of the buildings will be made by the Site Manager as part of the daily site Operations and Maintenance Inspections. These checks are aimed at reviewing the general housekeeping and identifying any risk sources etc.

3.3.7 Waste will be received and accepted in accordance with Biffa's established for waste acceptance and rejection procedures. This includes SOP 01 - Pre-Acceptance of containerised waste, SOP 02 – Waste Acceptance and Tracking, and SOP 04 – Non-conformance and Material Rejection.

3.3.8 Given the limited storage durations implemented at the facility, no special sampling or testing provisions are required for baled wastes.

3.3.9 Waste Storage areas will be closely inspected for any indications of self-heating and / or smouldering, paying particular attention to the most inaccessible areas.

3.3.10 If any evidence of heating or smouldering is observed, the waste will be moved to the external fire quarantine area and doused with water.

Monitoring and Control of Temperature

3.3.11 Operational site staff will be trained to monitor waste visually throughout the day

Seasonality

3.3.12 Due to the specific nature of the wastes onsite, it is considered unlikely that any self-heating related to seasonality (e.g. particularly hot weather) will occur. Additionally, the wastes are stored within a building or containers which will limit exposure to high temperatures.

4.0 FIRE MANAGEMENT

4.1 Management of Waste Storage Areas

Volumes and Dimensions

4.1.1 The internal caged storage areas for palletised waste in the main building have a maximum volume of 240m^3, with an additional cage for the storage of pressurised Nitrous Oxide canisters located at least 6m from other wastes.

4.1.2 Processed waste will be stored externally in skips or containers with capacities of up to 40 cubic yards (~35m^3) outside the main processing building with textiles, de-packaged goods and packaging stored in palleted, bulk bag or baled form in curtain-sided articulated trailers with individual capacities of up to ~70m^3.

4.1.3 All storage areas onsite are within the maximum pile sizes allowed for all combustible waste specified in Section 9.2 of the current FPP Guidance (last updated on January 2021).

4.1.4 The form of each waste type stored on site is described in **Table 3**.

Internal Storage

4.1.5 Designated storage areas are present within both the main processing building and alcohol / cosmetics building. These comprise locked, caged areas in which all types of palletised waste will be stored.

4.1.6 The main processing building features 3No. cages, each with a capacity of 80m^3 palletised waste, totalling 240m^3. An additional cage is available for the storage of unprocessed Nitrous Oxide canisters only, which is located with 6m separation to other combustible wastes.

4.1.7 Approximately half of the alcohol / cosmetic building footprint is dedicated to the storage of incoming wastes, with 120m^3 storage for unprocessed hazardous alcohol and cosmetics wastes and non-hazardous alcohols / beverages pending destruction.

External Storage

4.1.8 The external areas outside each of the processing buildings will be used for the containerised and / or trailered storage of processed wastes.

4.1.9 This consists of skips or containers (including compactors) with a capacity of 35m^3, as well as up to 4No. Stand trailers with a maximum capacity of 70m^3 each.

4.1.10 This area is covered by impermeable concrete, which features a sealed drainage system.

4.1.11 The typical and maximum storage durations for each combustible waste type are detailed in **Table 3.**

Table 3: Material Storage Arrangements

Materials/Substances	Form	Max. Bay Size (D)mx(W)mx(H)m	Max. Height (m)	Approximate Maximum Volume	Maximum Storage Time
Main Processing Building					
Mixed palleted wastes	Wrapped on pallets or Open topped IBCs	8 x 5 x 2	2	80m3 (240m3 aggregate)	3 months
Mixed palleted wastes					
Mixed palleted wastes					
Nitrous oxide cannisters	Open topped IBCs or Wrapped on pallets or Open topped IBCs	Not Applicable		Not Applicable	
Alcohol & Cosmetic Building					
Flammable Liquids in glass packaging	Wrapped on pallets or Open topped IBCs	5 x 12 x 2	2	60m3 (120m3 Aggregate)	3 months
Non-combustible liquids in plastic and metal packaging	Wrapped on pallets or Open topped IBCs				
External Service Apron					
Decanted hazardous and non-hazardous liquids	Within bunded tank farm	Not Applicable	Not Applicable	3No. 30m3 Tanks	3 months
Shredded tobacco products and shredded packaging	2No. 40 cubic yard skips			$70m^3$ ($35m^3$ per container)	
Shredded textiles	1No. 40 cubic yard skip			$35m^3$	
Textiles; cardboard, plastic and metal packaging, shredded glass	Baled, bulk bags or open top IBCs in curtain sided articulated trailers	13.6 x 2.5 per trailer	2 per trailer	280 m3 ($70m^3$ per trailer)	

Container Storage Arrangements

4.1.12 All containers will be stored such at least one side remains accessible so that a fire can be extinguished. Similarly, containers will be stored so that any lifting or towing mechanisms are accessible to facilitate their movement by site plant minimise the spread of fire.

4.2 Preventing Fire Spreading

4.2.1 There are four principal methods by which a fire can spread from one waste storage area to another:

- Windblown burning fragments/embers.
- Heat radiation between wastes
- Flame lick between wastes
- Collapse or partial collapse of burning waste which is on fire resulting in burning materials travelling to other wastes.

4.2.2 All waste will be stored with a minimum 6m separation distance from other waste storage areas, the site boundary and potential sources of ignition.

4.2.3 All plant and machinery will be parked at a minimum of 6m from the waste storage areas when not in use

4.3 Quarantine Area

4.3.1 An area of ~65 m2 is available in the external yard area to provide a dynamic fire quarantine area capable of holding at least half of the largest waste store to support fire-fighting capability. The fire quarantine area is at least 6m from the buildings, wastes, vehicles and other infrastructure. The location of the fire quarantine area is identified on **Drawing No. BF5094/12/05.**

4.3.2 The placement of the quarantine area is based on the following factors:

- It provides an open area of the site to allow for unburnt waste or burnt waste which has been suppressed to be situated at least 6m from any burning or smouldering materials; and
- It is situated at least 6m from any potentially flammable liquids on site.

4.3.3 In the event of a hotspot being identified by the detection system, un-ignited pallets or bales of wastes within the appropriate storage area or trailers will be safely transferred using the FLTs and placed in the quarantine area.

4.4 Fire Detection

Active Monitoring/Operational Fire Watch

4.4.1 During operational hours, trained site staff carry out daily inspections of site, as documented in the daily inspection forms which are recorded within the site diary. As part of these inspections a fire watch is undertaken for any signs of increased heat such as smouldering or signs of fire. Should signs of increased heat such as smouldering or signs of fire be detected, site management will be informed immediately.

4.4.2 Depending on the severity and location of the fire, if safe to do so unburnt material in close proximity can be separated using available mobile plant and removed to the quarantine area to prevent the fire spreading from the initial pile. Firefighting with the use of mobile plant and other site equipment is to be carried

out by competent and trained operatives for the suppression of small-scale fires only.

4.4.3 Staff are instructed to evacuate and call the FRS for significant (large-scale) fires which may affect their safety. During a major fire, site operations will cease, and inputs will be diverted to alternative Biffa or third-party sites until normal operations can be resumed.

4.4.4 The site is monitored 24/7, meaning fires can be detected outside of operational hours.

4.5 Fire Suppression

4.5.1 No building wide automated fire suppression systems are installed in the main processing and alcohol and cosmetic buildings.

4.5.2 The processing plant with risks of explosive/flammable atmospheres are fitted with automated suppression / abatement systems which reduce the risk of ignition. Further details are presented in **Table 1.**

4.5.3 Manually operated and deployed fire hose reels (50m length) are installed at the on the eastern elevation of the main processing building. These hoses will be used by site staff to tackle fires where deemed safe.

4.5.4 The FRS will be contacted to respond in the event of a major fire onsite.

4.5.5 The installation of manual fire suppression system at the site is deemed appropriate given the nature and scale of waste management activities carried out and the prevention measures implemented (refer to **Section 3.0**) and the associated residual risks **(Table 2)**.

4.5.6 The locations of fire extinguishers and hoses are shown in **Drawing No. BF5094/12/05.**

4.6 Fire Fighting Techniques

4.6.1 The site has been designed in order to allow active firefighting.

4.6.2 Upon identifying or being made aware of a fire, the site manager, or nominated deputy on site at the time of the incident, will raise the alarm, alert all present on site to the fire and its location and alert the emergency services.

4.6.3 The site will be evacuated in accordance with the site evacuation/emergency plan except for those staff involved in active firefighting.

4.6.4 All staff, contractors and visitors would follow the Fire Evacuation procedure as included in **Section 4.7.**

4.6.5 Trained staff will only tackle the fire using either the fire extinguishers, fire packs or hose reels if it is safe to do so.

4.6.6 The Site manager or nominated deputy and site fire marshals will be responsible for ensuring that all personnel, visitors and sub-contractors are accounted for, and to give the Emergency Services that information on arrival.

4.6.7 All personnel working on site will be provided training in the Fire Prevention Plan and all associated procedures and controls, via site induction training, toolbox talks or third-party training as appropriate. Follow on toolbox talks are scheduled to refresh training.

4.6.8 Training will be provided to all new starters and temporary employees working at the site. Refresher training will be carried out to all personnel at least annually.

4.6.9 The FRS will be contacted by site staff during operational hours and by the on-site security team outside of operational hours.

Indicative FRS Response Times

4.6.10 The indicative FRS Travel Times are included in **Appendix 1.**

4.6.11 The nearest fire station to the site is Tipton fire station, located 1.4 miles from the site, which is permanently staffed. Travel time to site on Chimney Road would be approximately 5 minutes, total mobilisation time would therefore be anticipated to be less than 15 minutes.

4.6.12 In the event that the Tipton crew is unable to attend, crews are available from West Midlands ~~Bromwich~~ Fire Station which is located 2.2 miles away, and also permanently staffed with a 6-minute travel time to site respectively.

Maintenance

4.6.13 All fire fighting equipment will be maintained and operated in accordance with company guidelines.

4.7 Fire Evacuation Plan

4.7.1 The Fire Assembly Point is located just outside the site entrance and is clearly signposted. This is shown on **Drawing No. BF5094/12/05**.

4.7.2 Sites rules are reinforced via use of fire drills and planned response scenarios.

4.7.3 All personnel to follow the instructions of the Fire Marshals and the Site Manager.

4.7.4 A list of trained Fire Marshals is maintained and displayed on the site, together with a list of on call staff to attend the site in the event of a fire outside of normal operation hours.

4.7.5 The Fire Evacuation Procedure is provided to staff, contractors and visitors which states:

- On discovery of a fire, immediately operate the fire alarm by pressing the nearest break glass call point and / or contact the Site Manager to ensure the alarm is raised.
- Fire Marshals and staff must only tackle to fire if they are trained to do so, the equipment is appropriate and if their safety or that of others is not compromised.
- Leave the building / work area by the nearest available exit / safe route and report directly to the assembly point located at the main office.
- Leave quickly but in a calm, controlled and orderly manner. Do not detour to collect personal items.
- Do not re-enter the building / work area for any reason until authorisation has been given by the Site Manager / Fire Brigade.
- The Site Manager will assess the situation and call the Fire and Rescue Service if required.

4.7.6 This document is reviewed and updated annually, or sooner if required. The document details all hazards and the control measures that are in place and / or required to prevent fires.

4.7.7 Management will also contact their customers and clients and advise them to re-direct their waste vehicles to alternative facilities until the site is operational.

4.7.8 The site would cease operation until the EA / FRS confirm that it is safe to recommence operations. Emergency contact details (**Appendix 2**), procedures and site plans will be readily available and will be stored in numerous locations in case the site office is inaccessible in the event of a fire.

4.8 Water Supplies

4.8.1 There are two fire hydrants located on Chimney Road within 20m of the site boundary, the closest of which is approximately 5m away from the Southeastern corner.

4.8.2 An additional six hydrants are present throughout the site, in addition to two fire hoses within the main processing building. These are shown in **Drawing No. BF5094/12/05.**

4.8.3 These are considered to represent an adequate water supply for the fighting of fires onsite.

4.9 Fire Water Management

4.9.1 The absence of any superficial deposits over a Secondary A Aquifer results in the underlying aquifer being classed with a high groundwater vulnerability to contamination, although the site is not located within a Source Protection Zone. Fire waters will therefore need to be prevented from infiltrating the underlying groundwater. The concrete service apron, internal surfaces and storage bays are therefore engineered with impermeable pavement.

4.9.2 The external surface water drainage network discharges to surface water. A penstock valve is fitted within the site boundary as shown on **Drawing No. BF5094/12/03** which enables the discharge to be shut off in the event of a fire at the site.

4.9.3 Concrete pavement will extend across an area of ~1.1Ha, with the lowest points located in the western sections of the site. The concrete apron is kerbed (100mm high) along all external boundaries of the site. The northern, western and southern boundaries also comprise raised earth bunds to at least 500mm above the height of the kerb line. The site is therefore capable of fully containing 288m^3 of firewater estimated to be generated during when extinguishing a fire involving the largest combustible waste pile.

4.10 During and after an incident

<u>During</u>

4.10.1 During any firefighting or subsequent clear up operations, any incoming wastes will be diverted to a suitably permitted facility, and all third-party material will be diverted from the site to alternative outlets.

4.10.2 The Environment Agency and Local Authority will be informed by Biffa of any major incident. A nominated member/members of the Biffa team will contact (by telephone or in person should the relevant contact numbers not be available) the closest relevant receptors to the site, in the event the fire poses a health and safety risk to them. It is not considered feasible to contact every residential property located further afield individually, and therefore the nominated member of staff would contact the relevant Local Authority, and the Local Authority would make contact with other local residents/local businesses

After

4.10.3 Once the FRS is satisfied that the fire has been extinguished, the following steps will be carried out to ensure that the site is fully decontaminated prior to the site returning to full operation:

- Affected materials will be quarantined for a minimum of 24 hours. After this period, Biffa will ensure that it is taken to the most suitable facility for treatment and / or disposal.
- All fire water captured on site will be transferred off site via tanker to an appropriate facility.
- The site will undergo deep cleaning, including the drainage system, and the site infrastructure will be tested. Any damaged equipment / infrastructure will be replaced or repaired as soon as practicable.

4.10.4 Waste which is directly affected by fire is removed from site by a suitably licensed contractor to a suitably permitted facility. It is likely that due to the effect of fire on waste of some compositions, the waste will likely be removed in stages with appropriate duty of care and/or consignment documentation.

4.10.5 If waste streams have become mixed or contaminated with fire water, then the waste will be removed from the site for disposal by a suitably licensed contractor to a suitably permitted facility with the associated documentation.

4.10.6 Quarantined fire waste waiting removal from site will be removed from site as soon as it is safe to do so, once confirmed with the FRS. It will then be delivered to an appropriate disposal outlet with the relevant duty of care/consignment documentation.

4.10.7 The water which is contained on site and in the sealed drainage system as a result of firefighting will be tankered off-site using an authorised permitted contractor and disposed of correctly with the associated consignment documentation. The documentation will be retained for the period legally required (3 years).

4.10.8 Only once the above works have been done and the site has been inspected will the operator re-open the site. The EA will be informed at every appropriate juncture.

4.11 Fire Prevention Review

4.11.1 Biffa review and test the provisions of this FPP on an annual basis to ensure that the measures in place continue to be effective and remain applicable to the operations on site.

4.11.2 Such tests may take the form of a physical FPP drill. This drill is more in-depth and targeted than a normal fire drill, with consideration given to FPP measures and appropriate actions. It allows the Site Manager and/or Responsible Person/s to identify areas where additional training may be required.

4.11.3 A desk based FPP drill assessment may also be undertaken which too will address the above aims.

4.11.4 A record of the FFP drill, including type, appropriate actions and results will be maintained and stored within the site office and made available to the EA, on request.

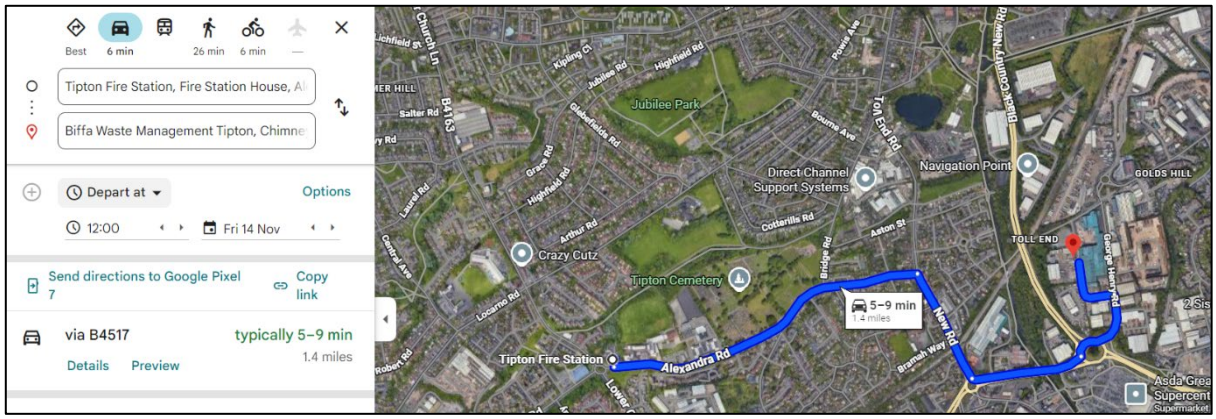
4.11.5 A review and if required revision of the FPP will be completed annually, in response to operational changes, or as a result of a fire on site.

APPENDIX 1

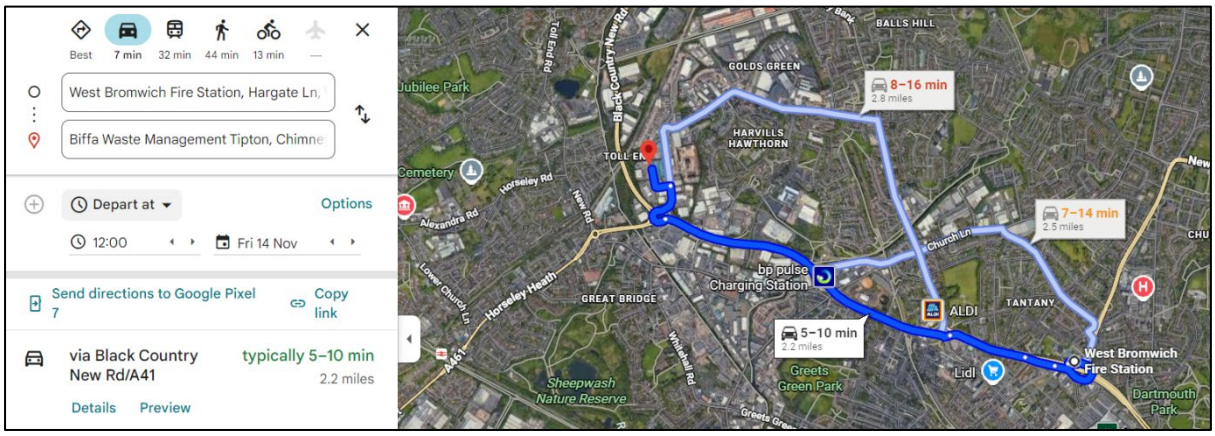
Indicative Fire Rescue Service Travel Times

Tipton SWARF - Indicative Fire Response Times

Primary FRS – Tipton Fire Station (Permanently Staffed)



Alternative FRS – West Bromwich Fire Station (Permanently Staffed)



APPENDIX 2

Emergency Contact Details

EMERGENCY PROCEDURES

SITE DETAILS	
Site Address:	Biffa
	SWaRF
	Chimney Road, Tipton, West Midlands
Postcode:	DY4 7BY
Grid Reference:	**SO 97944 92922**
///What3words	**///volunteered.gosh.ever**

EMERGENCY CONTACT DETAILS			
Tipton Police Upper Church Lane, Tipton DY4 7	**101**	**Environment Agency:**	**0800 807060**
Hospital: Pensnett Road, Dudley, West Midlands, DY1 2HQ	**0121 4242000**	**Electricity:** National Grid	**0800 6783105**
HSE: 19 Ridgeway 9 Quinton Business Park Quinton Birmingham B32 1AL	**0300 003 1747**	**Gas Supplier:**	N/A
		Water Supplier: South Staffs	**0330 123 0116**
		Sewage: Water Plus	**0345 0726072**

ROLE	NAME	MOBILE
Operations Director	Harry Kemp	07736 599204
Project Manager	Anthony Davis	07879 484554
Site Manager	Jim Wainwright	07921 385449
Operations Manager	Chris Nicklin	07921 385871
H&S Business Partner	Samantha Thorpe	07921 386421
H&S Business Partner	Lewis Dartnall	07736 596969
Group Environmental Compliance Manager	Elsa McConnell	07925 643936
Sandwell Council	tipton_local@sandwell.gov.uk	0121 5694330