Biffa Waste Services Limited

Middlesbrough Waste Transfer Station

Fire Prevention Plan

Version 2 – May 2024

Contents:

1. GENERAL CONSIDERATIONS 4
2. FIRE PREVENTION PLAN IMPLEMENTATION AND USE 4
   2.1. Location of FPP 4
   2.2. Environmental Management System (EMS) 4
3. SITE INFORMATION 5
   3.1. Site Location and Surrounding Land Use 5
   3.2. Permitted Area 5
   3.3. Sensitive Receptors 5
   3.4. Windrose 6
   3.5. Site Type and Permitted Activities 6
   3.6. Waste Types 7
   3.7. Hours of Operation 7
   3.8. Site Access 7
   3.9. Site Security 7
   3.10. Site Plans 8
4. COMBUSTIBLE WASTE STREAMS 8
   4.1. Combustible Wastes 8
   4.2. Incidental Combustible Wastes 8
   4.3. Combustible Non-Waste Materials 8
5. MANAGING COMMON CAUSES OF FIRE 9
6. PREVENT SELF-COMBUSTION 12
   6.1. Storage Times 12
   6.2. Control Temperature 13
   6.3. Contingency Plan 13
7. MONITORING AND CONTROLS 13
   7.1. Management of Waste Piles/Storage 13
   7.2 Waste Stored in Containers 14
8. PREVENTION OF FIRE SPREAD 15
   8.1. Fire Walls 15
   8.2. Storage bays 15
   8.3. Minimum separation distances 15
   8.4. Storage Summary 15
9. QUARANTINE AREA 16

10. DETECTING FIRES 16
10.1. Detection System 16
10.2. Alarm Systems 17
10.3. Fire Alarm Test and Drills 17
10.4. Active Monitoring/Operational Fire Watch 17
11. SUPPRESSING FIRES 17
11.1. Manual Fire Suppression 17
12. WATER SUPPLIES 18
12.1. Environment Agency Guidance 18
12.2. Current Site Water Supply 18
13. MANAGING FIRE WATER 18
13.1. Water Containment 18
13.2. Containment Provisions Summary 19
13.3. Assessing risks to groundwater from fire water 19
14. DURING AND AFTER AN INCIDENT 19
14.1. Mitigating the Impacts of a Fire 20
14.2. Fire Affected Waste 20
14.3. Fire Water Removal 21
14.4. Fire Prevention Review 21

Drawings:
Environmental Permit Boundary: M8030100
Site Layout Plan: M8030200
Sensitive Receptors: M8030300
Fire Prevention Plan: M8030401
Drainage Plan: M8030501

Appendices:
Appendix FPP1: Permitted EWC Codes
Appendix FPP2: Waste Acceptance Procedure

1. GENERAL CONSIDERATIONS

This Fire Prevention Plan (FPP) has been prepared in accordance with the measures stipulated in the Environment Agency's Fire Prevention Plan Guidance.

The FPP identifies areas of fire risk posed by the permitted operations. It details how those risks are to be mitigated and what measures are to be employed to reduce the likelihood of a fire occurring. In addition, it also details the actions which are to be taken in the event of a fire to limit the damage caused to the environment or human health.

Fire Prevention Guidance does not apply to:

- Hazardous wastes.
- Dangerous substances (i.e. those under Control of Major Accident Hazard Regulations); and
- Combustible liquids.

The information contained within this FPP aims to meet the 3 main objectives of the EA FPP Guidance:

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

Under current fire safety legislation (Regulatory Reform (Fire Safety) Order 2005), a responsible person must carry out, or appoint a competent person to carry out, a suitable and sufficient fire risk assessment of the risks of fire to employees and others who may be affected by the site.

2. FIRE PREVENTION PLAN IMPLEMENTATION AND USE

This FPP forms part of the Site's overarching Environmental Management System (EMS) but has been prepared for use as a standalone document which can be referred to for information, or to meet an operational requirement relating to the prevention of fire.

2.1. Location of FPP

The existence and location of the FPP documentation will be cascaded to all site staff and is readily available in both electronic and hardcopy form, for daily use and in the event of an incident.

Copies of the FPP and associated documentation, such as drainage plans, waste storage plans, and emergency contact information is stored in the entrance to the site office and in the weighbridge. The documents are available at all times for use in an emergency.

2.2. Environmental Management System (EMS)

Biffa is externally certified to the following standards, registered through the NQA:

- ISO14001 (Environmental Management);
- ISO9001 (Quality Management);
- ISO45001:2018 (Occupational Health and Safety Management); and
- ISO27001 (Information Security Management).

The above standards form part of the wider overarching Management System (Biffa Group Integrated Management System) that governs operations at this facility. This is supported via a site-specific Environmental Management System (previously termed a Working Plan).

Consequently, operational procedures for the management of the facility will ensure that all appropriate pollution prevention and control techniques are delivered reliably and on an integrated basis.

3. SITE INFORMATION

3.1. Site Location and Surrounding Land Use

The site is situated on the Skippers Lane Industrial Estate, located 3km east of Middlesbrough. The National Grid Reference (NGR) for the site is NZ 52792 20225.

Since the site is situated on the Skippers Lane Industrial Estate, the immediate surrounding land use is primarily industrial.

3.2. Permitted Area

The permitted area is shown on Drawing M8030100 - Environmental Permit Boundary. All references to the 'site' in this FPP refer to the permitted area, including infrastructure, plant, and equipment.

3.3. Sensitive Receptors

Sensitive receptors within 1km of the Environmental Permit boundary have been identified and checked using the approved Multi Agency Governmental Information for the Countryside (MAGIC) interactive mapping tool.

MAGIC provides geographic information about the natural environment from across government departments. This information which is available includes those rural, urban, coastal, and marine environments across Great Britain.

The searches confirmed that there are none of the following ecological, cultural and heritage receptors within 1km of the site's boundary:

- Ramsar's;
- Sites of Special Scientific Interest (SSSI's);
- Special Areas of Conservation;
- Special Protection Area's (SPA);
- Ancient Woodland;
- Areas of Outstanding Natural Beauty;
- National Nature Reserves; and
- National Parks;
- World Heritage Sites;
- Scheduled Monuments;
- Registered Battlefields; and
- Registered Parks and Gardens.

Table 1 identifies the locations of receptors that are considered to be potentially sensitive and could reasonably be affected by the activities occurring on site.

Table 1: Identified Sensitive Receptors

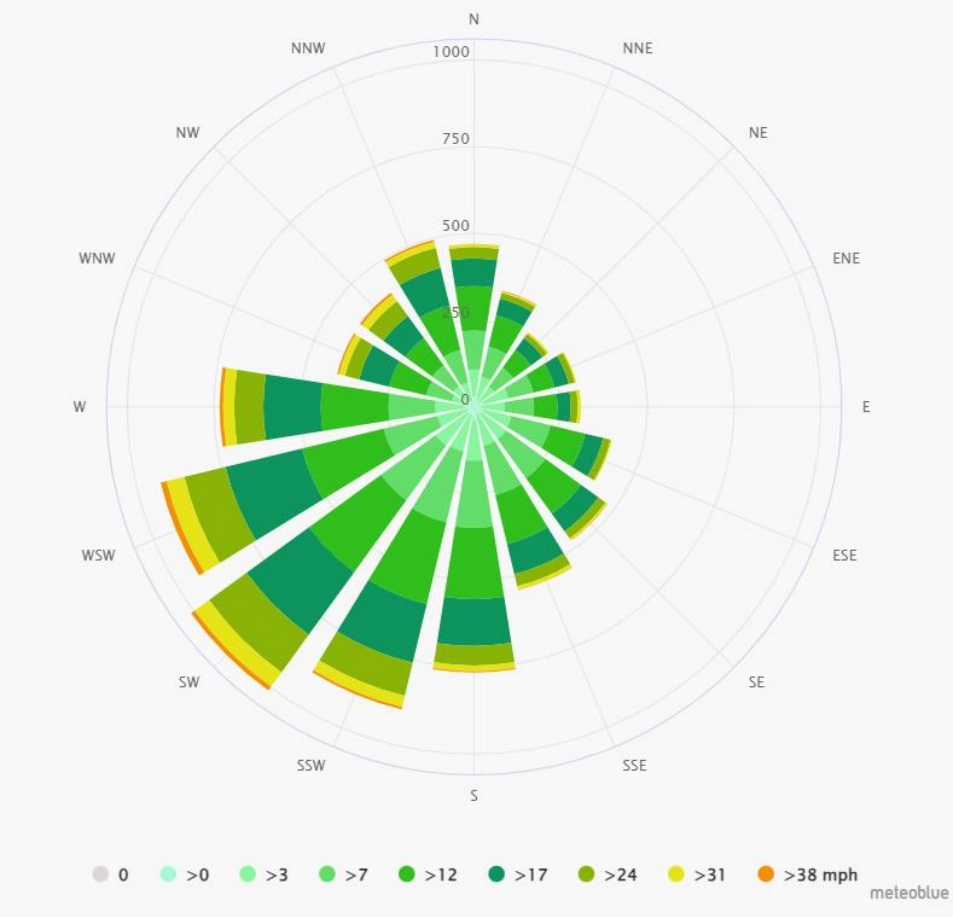
Receptor Name	Receptor Type	Direction from Site	Approximate distance from Site boundary at closest point (m)
Public Greenspace	Fields	North	180m
Residential properties in South Bank	Residential Properties	West	1000m
Industrial premises on Skippers Lane Industrial Estate	Commercial / Industrial	Adjacent / Surrounding the site	0 - 100m
Brunel Road	Highways	West	100m
Webb Road	Highways	South	60m
Owens Road	Highways	East	40m
Middlesbrough Road	Highways	North	200m
Cleveland Retail Park	Retail	Southeast	480m
Residential properties at Brambles Farm	Residential	Southwest	500 - 1000m

A66	Major Roadway	North	485m
AVG Biogas plant	Industrial	North	851m
Railway line	Transport link	North	945m
St. Peter's Catholic College	School	East	1000m
Spencer Beck	Woodland	South	480m
Church of Saint Peter	Listed Building	Northeast	785m
War memorial circa 5m SW of Church of Saint Peter	Listed Building	Northeast	773m
War memorial	Listed Building	Northeast	925m
1 Millbank Street	Listed Building	Northeast	825m
Church of St John the Evangelist	Listed Building	Northeast	987m

3.4. Windrose

Simulated historical wind data has been utilised from the Meteoblue archive. This information is based on 30 years of hourly weather model simulations in order to typify the meteorological conditions likely at the site. The wind rose, as shown by Figure 1 shows how many hours per year the wind blows from any given direction on each of the 16 points of a compass. The wind rose indicates that the predominant wind directions are from the southwest quadrant, and the prevailing wind is from the southwest.

Figure 1: Middlesbrough Wind Rose



3.5. Site Type and Permitted Activities

The Site operates as a general wastes transfer station, including receipt of asbestos wastes for transfer, and as a vehicle depot.

The waste operations carried out on site are detailed below:

D15: Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where the waste is produced).
R13: Storage of material pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced).
D14: Repackaging prior to submission to any of the operations numbered D1 to D13.
D9: Physico-chemical treatment not specified elsewhere which results in final compounds or mixtures which are disposed of by any of the operations numbered D1 to D12.
R3: Recycling/reclamation of organic substances which are not used as solvents.
R4: Recycling/reclamation of metals and metal compounds.
R5: Recycling/reclamation of other inorganic compounds.

3.6. Waste Types

The Environmental Permit allows waste types to be accepted on site which are defined as 'combustible materials' in the FPP Guidance. The full list of permitted waste types accepted on site can be found in the Environmental Permit for the Site and are detailed in Appendix 1.

3.7. Hours of Operation

The hours of operation for the site are detailed below:

Day	Hours
Monday to Friday	07:00 – 17:00
Saturdays, Sundays, and Bank Holidays	07:00 to 13:00

3.8. Site Access

The site is accessed via a security gate located on Brunel Road, off the A66 which runs parallel to the north of the site. There is a car parked labelled accordingly and is located on the right upon entry to the site.

3.9. Site Security

The following control measures are implemented on site to collectively form robust site security, to reduce or where possible prevent access to persons who are not permitted to access site.

- **Security fencing**: the site is bordered by 2m high security fencing consisting primarily of palisade fencing with "crank" tops. The site boundary fencing is inspected daily, any defects identified are recorded and rectified temporarily by the end of the working day, if a complete fix is not achievable. A complete fix will be carried out as soon as practicable, depending on materials and contractors.

- **Lockable site entrance gates**: Two 2m high Gates will be provided at the site entrance, at the access from the public highway. Gates are fitted with a padlock to BSI standard and is locked when the site is not occupied.

- **Site Security:** The site benefits from an out of hours security guard who monitors the CCTV and undertakes regular checks of the site outside of operational hours.

- **CCTV:** CCTV is in operation on site to monitor operational activities during the operation of the site. The CCTV can be monitored daily by staff within the site office.

- **Weighbridge:** The weighbridge is manned during operational hours as detailed in section 3.7, where material is received on site, preventing both vehicles and pedestrians from visiting site unless they are scheduled to do so.

- **Visitor attendance:** Visitors sign in system. All visitors are also required to record their attendance at the Biffa site office.

3.10. Site Plans

Up-to-date site plans are on display in the site office and detail:

- Site layout;
- Waste storage arrangements;
- Firefighting equipment locations (Pollution Control Equipment); and
- Personal Protection Equipment (PPE).

4. COMBUSTIBLE WASTE STREAMS

4.1. Combustible Wastes

The site is permitted to accept and store combustible waste streams, including wood and scrap metal. Each waste stream is stored separately and in accordance with the EA's FPP Guidance as detailed within this FPP document.

4.2. Incidental Combustible Wastes

The acceptance of permitted non-combustible waste streams will occasionally contain combustible wastes because of the nature of their production, even though the practices for removal of contamination are embedded into the waste acceptance procedure for the site, the likelihood of combustible waste being present remains and therefore the associated risk is managed through additional controls being implemented which include further monitoring and removal.

4.3. Combustible Non-Waste Materials

The site stores hazardous and combustible non-waste materials which enable the operations to take place at the site, the majority of the substances detailed below are used in relation to the on-site workshop. No substances are stored within the transfer shed, and none of them are stored within 6m of any waste storage areas on site. These non-waste materials are stored on site and their containment methods are detailed in Table 1 below. The areas in which these non-waste materials are stored is identified on the Site Layout Plan.

Table 2: Combustible Non-Wastes Storage Arrangements

Combustible non-waste				
Hazardous (Non-waste) Substance	**Form**	**Containment**	**Quantity**	**Location**
Diesel	Liquid	Double skinned bunded above ground tank	2,500 litres	Under canopy in the yard
AdBlue	Liquid	Double skinned bunded above ground tank	5,000 litres	Under canopy in the yard
Oxygen	Gas	Gas Cage	50 litres	Vehicle Workshop under canopy
Argon	Gas	Gas Cage	50 litres	Vehicle Workshop under canopy
Hydraulic Oil & Gear Box Oil	Liquid	Double skinned bunded above ground tank	3 x 1,800 litre tanks	Vehicle Workshop
Waste Oil	Liquid	Double skinned bunded above ground tank	2,000 litres	Vehicle Workshop

Aerosols used in vehicle workshop (e.g. brake cleanser)	Gas	COSHH Cabinet	Various (maximum 15 litres)	Vehicle Workshop

5. MANAGING COMMON CAUSES OF FIRE

Table 3 provides a summary of the potential causes of fire and associated preventative measures, considered in accordance with the Environment Agency's Fire Prevention Plan Guidance.

Table 3: Fire Sources and Preventative Measures

Cause	Preventative Measure
Arson	The location of the site, being on the Skippers Lane Industrial Estate has several security measures in place to limit the likelihood of arson, including: • The site is bordered by 2m high security fencing consisting primarily of palisade fencing with "crank" tops. Limited sections of the site boundary are secured with concrete post and section walls. Two 2m high gates will be provided at the site entrance, at the access from the public highway. Gates are fitted with a padlock to BSI standard and is locked when the site is not occupied. • CCTV is in operation on site to monitor operational activities during the operation of the site. • Out-of-hours site security. In addition to this, the Biffa site has measures in place to further limit the likelihood of arson: • Site security fencing and lockable site entrance gates; • Visitor's sign-in system; • Inspection and maintenance procedures; and • Manned weighbridge.
Plant and Equipment	Plant and Equipment are operated and maintained in accordance with the manufacturer's recommendations. Plant maintenance is recorded on the mobile plant inspection sheet files, located in the site office. Inspection of plant and equipment is undertaken daily to ensure appropriate safeguards are in place and to check for any faults. All mobile plant is fitted with fire extinguishers – the waste handler and loading shovel are both fitted with fire extinguishers. Induction and refresher training is provided to all staff at the site regarding the safe operation of plant and equipment relevant to their role, in accordance with the EMS. Once daily operations have ceased, mobile plant is stored externally adjacent to the transfer station shed and external storage bays, and more than 6 metres away from any ignition sources. The plant will remain here overnight. A fire watch is undertaken at the end of every shift for approximately 30 minutes, the fire watch assesses the storage areas, equipment and plant and looks for any evidence of fire. In the event of a safety failure or suspected fault with an item of plant or equipment, the relevant person/s will ensure that the plant or equipment is shut off in a safe manner and not used until the equipment can be repaired or replaced.
Electrical Faults	The electrics on-site are certified by a suitably qualified electrician. Regular safety checks are carried out and periodic inspections are undertaken by a suitably qualified electrician every 3 years.

	Portable appliance testing (PAT) is conducted annually, and fixed electrical testing is carried out every 5 years for the offices (commercial). The first test after construction for the other buildings (industrial) on site is carried out after 5 years and then every 3 years to comply with the Health & Safety at Work Act 1974, the Management of Health & Safety at Work Regulations 1999, the Electricity at Work Regulations 1989, the Workplace (Health, Safety and Welfare) Regulations 1992 and Provision and Use of Work Equipment Regulations 1998. Records of faults and/or daily electrical maintenance are recorded in the site daily log and actioned as soon as practicably possible.
Discarded smoking materials	A strict no smoking on site (operational area) policy is enforced. Smoking is only permitted within the designated area as shown on the Fire Prevention Plan drawing (M8030400). This area is situated more than 6 metres away from any waste storage areas or chemical/oil storage areas.
Hot works	Biffa operate a permit to work system, which includes any hot works which are to take place on site. Hot works are completed by competent contractors who are appropriately trained to complete the work, and a fire watch by a competent person is undertaken at the end of the works in accordance with the hot works permit. Whenever possible hot works are performed in the workshop away from other sources of fuel. No hot works are permitted within 6 metres of any storage area of combustible waste. Where work is required within or near to waste storage areas, the waste and area will be cleared to prevent materials catching a light. Site has trained Fire Marshals on site that are utilised for monitoring any hot works performed on site.
Industrial heaters	The workshop has two LPG heaters which are fed from the mains gas supply. There are no industrial heaters in the site office or waste transfer shed.
Hot exhausts	Drivers are asked to turn off their engine if the vehicle is not in use. Vehicle movements are limited to a speed limit whilst on site to ensure they can be controlled more easily, when working in/around the waste storage areas and are able to reduce the contact which they have with waste piles. Mobile plant is parked away from combustible material when not in use. Fire watches are carried out at regular intervals during operational hours by employees and by security guards during non-operational hours. Vehicles are left for a 30-minute cooling down period and fire watch prior to operational staff leaving site at the end of a shift. Mobile plant is parked away from the main shed and combustible waste storage areas. In the event of planned maintenance shutdown of the site or in the event of a safety failure or suspected fault with an item of plant or equipment, consideration will be given to the high-risk time for hot exhausts (one hour after switching off when dust can settle on hot surfaces).
Ignition sources	All ignition sources are kept a minimum of 6m away from the storage of combustible and flammable wastes. No naked lights are permitted on site, except for in the designated smoking area.
Batteries	Batteries will be stored in appropriate waterproof containers/containers under cover. Damaged batteries will be stored separately from other batteries. Batteries will be stored with a separation of 6m away from or with a fire break between other combustible sources
Leaks and spillages	The most common types of spillages which could occur on site are oil, diesel and chemical. Maintenance of mobile plant, vehicles and equipment should prevent this

	issue from occurring. However, in the event of a failure to contain, the spillage procedure will be initiated. The site has spill kits located in the transfer station shed, the canopy where the fuel tank is located, and workshop, so these are readily available should they be required. Any spillages will be cleared immediately in accordance with the site's Emergency Plan document and the appropriate remedial action taken are recorded electronically on a near miss/hazard form and this is entered onto the Incident Reporting System. The absorbents will then be placed in a suitable container in the Quarantine Area, prior to being taken to a suitably licenced site for disposal. If a spillage occurs, the area is clearly marked, using a traffic cone(s) and/or a cordon. The source of the leak or spillage is identified to prevent any further spillage/leak. Absorbent socks are placed strategically to contain the spill, with granules placed onto the affected area to absorb the liquid. The granules are left until they have reached their full absorption capacity at which they are removed and placed into a bag and stored within the Quarantine Area for non-conforming waste, ready for scheduled removal off site with the relevant documentation. All spillages are recorded on the Daily Inspection Sheet and Site Diary. If a spillage is of substantial environmental significance, it will be reported to the Environment Agency. A spillage is considered to have substantial environmental significance if the following occurs: • The liquid is one of those specified previously. • It has entered a drain or watercourse. • If the volume of liquid is relatively large. • The spillage has occurred on unmade ground.
Build-up of loose combustible waste, dust, and fluff	Site inspections occur daily, staff are vigilant in checking waste storage areas and areas where debris and dust can accumulate are cleared regularly to prevent a build-up and minimise the risk of fire. The site is cleaned regularly to prevent an accumulation of loose combustible waste, dust and fluff. The Site Manager or nominated representative inspects the site daily for any infrastructure defects and loose combustible waste, dust and fluff any defects are rectified immediately. The findings and any corrective actions are recorded on daily inspection forms. Employees are trained to visually inspect for any infrastructure defects and loose combustible waste, dust and fluff and if they are detected to report them immediately.
Reactions between wastes	The initial stage of the waste acceptance procedure commences via an enquiry from a potential customer. The Technical Support Staff are informed of the nature of the waste and this stage the decision is taken whether the waste is considered for technical assessment. Where such assessment may be required, Biffa contacts the customer for any further information and decide whether the material is suitable for acceptance and treatment. All general waste is subject to an appraisal by Biffa on arrival; this assessment is carried out after deposition. All the above assessments include consideration of whether wastes may fall under the following categories:

	• Flammables; • Cyanides; • Acids; • Reactive; • Oxidising agents; • Alkalis; and • Organics. Wastes which are deemed to be compliant are deposited in the relevant storage bay. If the waste is non-compliant or where combustible reactions may occur, each waste stream is stored separately in appropriate containers within the quarantine area for non-compliant waste prior to removal from site to suitably licenced facility.
Deposited hot loads	Hot and/or smouldering loads will be rejected from site in accordance with the Waste Acceptance Procedure, each load is visually inspected at the site entrance where possible or at the reception hall to ensure compatibility with accompanying delivery notes, therefore minimising prohibited wastes and the acceptance of hot loads. In the unlikely event a hot load is accepted on to site and is tipped, it will be removed to the fire waste quarantine area where it will be spread out to cool and then be removed from site to an appropriate permitted facility.

6. PREVENT SELF-COMBUSTION

Self-combustion of waste on site is not considered to be a significant risk due to the short storage times and nature of the waste.

The site is managed as follows to minimise self-combustion:

- Robust waste acceptance procedures;
- Storage times are kept to a minimum;
- Storage volumes are minimised; and
- Implementing stock rotation measures following the First In, First Out (FIFO) principle.

6.1. Storage Times

Table 4 stipulates the storage times and volumes for each permitted combustible waste stream on site.

Table 4: Storage Times for each permitted combustible waste stream

Waste Stream	Storage Location / Containment	Dimensions (m) (L) X (W) X (H)	Storage Volume	Max storage time
General waste	Internal Bay (Waste transfer shed)	10 x 8 x 4	320m³	72 hours
General waste	Internal Bay (Waste transfer shed)	10 x 6 x 4	240m³	72 hours
Glass	External Bay	9 x 12 x 4	432m³	1 week
Mixed C&D	External Bay	9 x 9 x 4	324m³	72 hours
Scrap metal	External Bay	9 x 9 x 4	324m³	1 week
Mattresses	Enclosed container	-	40-yard container	10 days
Wood	Enclosed container	-	35-yard container	1 month
Plasterboard	Enclosed container	-	25-yard container	1 month
Bonded Asbestos	Enclosed container	-	40-yard container	3 months

6.2. Control Temperature

Temperatures within the combustible waste storage areas will be controlled throughout the period of storage, to reduce the risk of heat generation i.e. hot spots, therefore minimising the risk of self-combustion, temperature control measures used on site are as follows:

- **Storage areas:** Storage areas are sized according to operational requirements but are appropriate for the storage of wastes, including restrictions as stipulated within the FPP guidance.

- **Stockpile sizes:** Stockpiles are managed, to ensure that they remain within the limits stipulated within this FPP and as required under FPP guidance.

- **Storage time limits:** Combustible waste is not kept on site for longer than 3 months to prevent heat generation from the degradation processes of the waste.

- **First-in, first-out:** The First In, First Out (FIFO) principle is applied to waste stored on site. Wastes which have been recently deposited on site are removed first, ahead of waste which may have just been deposited.

6.3. Contingency Plan

If the site is not able to operate under normal conditions due to unforeseen circumstances such as:

- Plant breakdowns;
- Environmental incidents;
- Logistical issues; or
- Off-taker closures

The site contingency plan will be implemented. Contingency options could include the following:

- Reschedule delivery times/days for inbound waste.
- Stop all deliveries to site or deliveries to site for the effected waste streams.
- Increase the number of outbound movements of waste.
- Divert scheduled waste deliveries to other internal sites or third-party sites.
- Cease all waste activities.
- Restrict some waste activities.
- Restrict waste volumes.

In the unlikely event that the circumstances could subsequently result in the exceedance of the sites storage capacity or waste storage time, the Environment Agency will be informed, and an agreement reached regarding the actions which must be taken.

7. MONITORING AND CONTROLS

7.1. Management of Waste Piles/Storage

The volume of waste stored within the areas stipulated within the tables, is in accordance with the maximum permitted within FPP guidance to enable effective waste management, and all material is stored in its largest form. Therefore, reducing the risk of fire and if required, reducing the volume of water supply required to suppress a fire.

For the purpose of the FPP, the largest combustible waste pile is considered to be the Mixed C&D at a maximum volume of 324m^3. Although this waste stream is typically non-combustible, there is the potential for it to contain incidental amounts of combustible material.

Table 5: Waste Storage Volumes

Waste Type	How is it stored?	Form	Bay Dimensions			Maximum Volumes (m^3)
			Length (m)	Width (m)	Height (m)	
General waste	Internal Bay (Waste transfer shed)	Loose within bay	10	8	4	320m^3
General waste	Internal Bay (Waste transfer shed)	Loose within bay	10	6	4	240m^3
Glass	External Bay	Loose within bay	9	12	4	432m^3
Mixed C&D	External Bay	Loose within bay	9	9	4	324m^3
Scrap metal	External Bay	Loose within bay	9	9	4	324m^3

The waste streams stored as stipulated in the table above are received on site, following the waste acceptance procedure, and are delivered to the relevant storage area for unloading. During the unloading the waste is checked for any non-permitted or conforming loads/contamination. If non-conforming or contaminated loads are identified, the measures stipulated within the procedure will be initiated. See Waste Acceptance Procedure for further details (Appendix FPP2).

The general waste stream is stored within waste piles which undergo daily disturbance through the unloading/loading and pushing up of waste by the mobile plant, which gives rise to robust stock rotation, where possible following the strict first-in-first-out procedure. Therefore preventing/mitigating the build-up of heat generation (self-combustion) and amenity issues from arising.

Combustible waste streams stored externally to the sheds are managed using the same first-in, first-out principles as stipulated above for the internal waste storage areas.

7.2 Waste Stored in Containers

The only waste stored in containers is wood, mattresses, plasterboard, and bonded asbestos, as detailed in Table 6 below. The site is designed so that all skips are easily accessed and movable. When a container becomes full, the site operations are designed so that it can be removed and replaced with an empty one efficiently to not disrupt normal operations.

Table 6: Waste in containers: Storage Volumes

Waste Type	How is it stored?	Maximum Volumes (m^3)
Wood	Open container stored externally	35-yard container
Mattresses	Open container stored externally	40-yard container
Plasterboard	Open container stored externally	25-yard container
Bonded Asbestos	Enclosed locked container	40-yard container

Each container is accessible from at least one side so a fire can be extinguished. In the event of a fire in a container on site, the containers will be moved to prevent the fire spreading. In the event of a fire, the site's ability to move skips quickly would be utilised to reduce the risk of fire spread. If a container were to ignite, it would be removed by site operatives, using the grab stored on site and placed in the quarantine area immediately.

8. PREVENTION OF FIRE SPREAD

8.1. Fire Walls

The Alphabloc 'A' frame fire walls that are used to separate combustible wastes stored in bays internally and externally on site are designed to:

- Resist fire (both radiative heat and flaming).
- Have a fire resistance period of at least 120 minutes to allow waste to be isolated and to enable a fire to be extinguished within 4 hours.
- The blocks used to construct fire walls are class A1 fire resistant in accordance with clause 4.3.4.4 of EN 13369.

8.2. Storage bays

None of the storage bays that contain combustible waste exceed the maximum dimensions specified in the FPP guidance.

Waste stored in bays is managed using the first in, first out procedure which is monitored visually. Due to the nature of the operations waste may be disturbed during 'pushing-up' of the waste for optimum containment, therefore visual monitoring is the most effective solution. However, although duty of care documentation can be used to evidence the age of waste loads within storage bays, it is not feasible to use this method solely due to the handling process.

Site endeavour, where operationally possible, to keep a 1 metre 'freeboard' space between the top of the waste pile and the top of the bay walls.

Combustible wastes that are stored in bays are inspected daily to ensure that they comply with the above, any issues that are identified are recorded and actions taken to rectify.

Combustible waste stored in bays is subject to the controls in respect of storage times, monitoring and controlling temperature as detailed in the combustible waste tables.

8.3. Minimum separation distances

Blocks/fire walls with a resistance (both radiative heat and flaming as stipulated in the Fire Walls section above) are used to adequately contain waste streams and reduce the requirement for separation distances between combustible wastes.

During normal operations combustible waste streams which are stored in areas/bays without the required fire-resistance are stored at least 6 metres away from:

- Other combustible waste streams
- Flaming material/hot works (where operationally possible)
- Sources of ignition (where operationally possible)
- Buildings
- Site perimeter (where operationally possible)

8.4. Storage Summary

The site operates within the permitted limitations of the permit and associated documentation e.g. Environmental Management System and the Fire Prevention Plan and although we endeavour to ensure that these limits are not exceeded, there are times due to operational issues that the exceedance of such may occur for a temporary period, such as; plant breakdowns, emergency situation, site closures.

In the event that a situation should occur whereby we are likely to exceed storage volumes for a certain waste stream for longer than a 24-hour period, the Environment Agency will be informed and during this time the waste will undergo increased checks for evidence of fire and will be disturbed to also prevent the build-up of heat.

In the event that the total combined storage capacity of the site (based on the cumulation of volumes stipulated within the EMS and FPP) was to be exceeded the EA will be notified and discussion had regarding the best possible solution to reduce any potential environmental risk.

9. QUARANTINE AREA

The site has two quarantine areas that each serve a separate and distinct purpose:

- One quarantine area for non-compliant waste; and
- One quarantine area for use in the event of a fire.

Each quarantine area is identified on Fire Prevention Plan drawing (M8030401). The fire prevention quarantine areas are kept clear during normal operational hours, with no operations taking place in the area. The fire waste quarantine area is large enough to hold 50% of the largest stockpile (324m^3) of combustible waste, as detailed in Table 7.

Table 7: Quarantine Area Dimensions

Quarantine Area	Primary Use	Location	Length (m)	Width (m)	Height (m)	Volume (m^3)
Non-Compliant Waste	Temporary storage on non-conforming waste.	Container located externally, adjacent to the transfer shed	-	-	-	35-yard container
Fire Waste	Separation of unburnt waste.	Dynamic area outside the entrance to the transfer station shed and external bays	10	8	4	320

The placement of the quarantine areas is based on the following factors:

- It provides an open area outside the transfer shed 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
- Proximity to flammable liquids – the quarantine area is situated at least 6m from any potentially flammable liquids on site such as fuel tanks.

The Site Management or nominated deputy will instruct all site operatives under the direction of the FRS when and if present and when and how the unburnt and/or burnt waste will be moved to the most appropriate quarantine area.

The following procedure will be implemented on site, under the instruction of the Fire Services:

- To allow for effective firefighting to take place the waste will be moved by on site plant to the quarantine area.
- The movement of the waste will be overseen at all times by the Site Manager or nominated deputy to minimise any spillages and ensure the waste volumes remain within manageable limits.
- To limit any spillages and to eliminate the possibility of a fire pathway to the spilled waste, plant will not be overfilled when moving the waste.

All site operatives will be trained to follow this FPP and all procedures listed in the above sections. Records of the training will be held on site and refresher training is provided on an annual basis.

In the event of non-compliant waste being identified within the waste load, the vehicle will be requested to remove the load off site immediately. If the vehicle has already unloaded the waste, it will be moved to the relevant quarantine area and removed off site within 72 hours. The site works to a site-specific Waste Acceptance Procedure.

10. DETECTING FIRES

10.1. Detection System

The following is an overview of the fire detection measures which are utilised on site:

- CCTV

- Visual inspection
- Smoke detectors/fire alarms

Inspection, maintenance, servicing and repairs of all infrastructure and equipment to detect fires is carried out as per the manufacturer's instructions.

10.2. Alarm Systems

The site office and buildings benefit from an internal fire alarm system which can manually be activated by site staff using the call points at the first sign of a fire. All site operators and visitors are instructed to report any sign of fire.

10.3. Fire Alarm Test and Drills

A fire alarm test is carried out weekly, and a fire drill is carried out and documented on a 6 monthly basis to identify weakness in the evacuation strategy. Findings will be recorded, and any proposed actions will be completed, with additional training delivered if required.

A yearly FPP familiarisation test will take place to assess the continuing effectiveness of the FPP, whilst also refreshing operatives understanding of the FPP requirements. This will ensure that staff know what to do to prevent a fire occurring, what to do during a fire if one breaks out, and site-specific requirements that are detailed within the site's FPP.

This FPP is implemented across the site and all fire management equipment is tested on an annual basis.

If any issues are found during these fire drills, the FPP will be updated or amended accordingly, and site operatives will be re-trained.

Regular checks are made of all escape routes and equipment.

10.4. Active Monitoring/Operational Fire Watch

During operational hours, trained site staff carry out daily inspections of site, as documented in the daily inspection forms and recorded within the site diary. As part of these inspections a fire watch is undertaken, specifically in the combustible waste storage areas 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.

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.

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.

During non-operational hours, the site benefits from an out-of-hours site security guard who is present on the site between 17:00 and 07:00 Monday – Friday, and over the weekend from 13:00 to 07:00 Saturdays, Sundays and Bank Holidays. The site security guard conducts hourly checks of the site, including all waste storage areas, as part of these inspections a fire watch is undertaken, specifically in the combustible waste storage areas for any signs of increased heat such as smouldering or signs of fire. The site security guard documents the details of the walkaround in the site log.

11. SUPPRESSING FIRES

11.1. Manual Fire Suppression

Foam, water, carbon dioxide and powder extinguishers are provided onsite. The extinguishers are inspected annually.

Access to hydrants, hoses and extinguishers is kept free of debris and obstacles at all times.

The location of fire extinguishers and hoses and on-site water supplies are illustrated on Fire Prevention Plan drawing (M8030401). The transfer station building is constructed to the appropriate standards. Should fire compromise the stability or integrity, the buildings and site will be immediately evacuated.

12. WATER SUPPLIES

12.1. Environment Agency Guidance

Environment Agency guidance for fire prevention requires that, for a 300m^3 stockpile, a total of 360,000 litres (360m^3) of water would be required to extinguish the fire.

12.2. Current Site Water Supply

The facility has access to the following water supply to cover the Middlesbrough Transfer Station:

- Four fire hydrants are located within the vicinity of the site:
    - 30m directly to the northwest of the site on Brunel Road, which has an estimated flow rate of 1,000 litres/minute.
    - 30m directly to the southeast of the site on Webb Road, which has an estimated flow rate of 1,000 litres/minute.
    - 100m to the northeast of the site on Blatchford Road, which has an estimated flow rate of 1,000 litres/minute.
    - 125m east of the site on Webb Road, which has an estimated flow rate of 1,000 litres/minute.

  Therefore, the available water supply from these hydrants over a period of 3 hours is 720,000 litres (4,000 litres * 180 minutes).

Based on the FPP Guidance fire water calculations (a 324m^3 storage area being the largest combustible pile on site, and it requires 6.7 litres of water per cubic metre to extinguish: 324 * 6.7 = 2,170.8 litres/min. 2,170.8 * 180 = 390,744 litres/3hours), it is calculated that 390,744 litres of water would be required to put out the largest combustible stockpile on site. Therefore, the site has a sufficient supply of water.

13. MANAGING FIRE WATER

13.1. Water Containment

The largest waste pile on site currently is the 324m^3 and therefore, as a worst-case scenario would require approximately 390,744 litres of water to extinguish a fire over a 3-hour period.

The total amount of water required to fight a fire of the largest waste pile is not anticipated to run off the waste, once it has been utilised. The volume of fire water run-off from the waste is considered to be significantly lower, assuming 25% of the total volume will be absorbed by the waste and 50% will be evaporated:

Total volume of water required: 390,744 litres
Evaporation at 50%: 195,372 litres
Absorption at 25%: 97,686 litres
Remaining volume of water: 97,686 litres

Due to the falls of the site, firewater runoff would flow to the yard and towards the site's drainage system. To prevent firewater entering the drainage network and discharging via the soakaways, drain mats will also be deployed by site staff or the FRS.

The yard benefits from impermeable hardstanding and kerbing around its edges to prevent firewater escaping site. The use of booms will also be available for deployment by site staff or the FRS to increase the height of the kerbing on site. Therefore, sufficient surface area is available to provide the required fire water containment capacity at the site.

The site drainage details are shown on the Drainage Plan (M8030501).

13.2. Containment Provisions Summary

The deployment booms and drainage mats have been proven to effectively contain a volume of fire water which exceeds the volume required for the current volumes of waste on site. Booms have been evidenced as an effective containment method to contain water and drainage mats prevent run-off and therefore pollution, entering the watercourse.

13.3. Assessing risks to groundwater from fire water

The site is not located within a Source Protection Zone, and the site is situated in a low category groundwater vulnerability area, areas that provide the greatest protection to groundwater from pollution. They are likely to be characterised by low-leaching soils and/or the presence of low-permeability superficial deposits.

In addition to this, the site is covered by impermeable surfacing, which is fully kerbed, and all water run-off is contained within the site and its drainage system, therefore significantly reducing any potential risks to groundwater.

14. DURING AND AFTER AN INCIDENT

On the discovery or suspicion of a fire, the following procedure will be implemented:

- Activate the nearest fire alarm, this will automatically initiate an evacuation of site operatives.
- If the size of the fire is small and manageable and it is safe to do so, staff who are trained may make a dynamic risk assessment and attempt to tackle the fire using one of the site's fire extinguishers.
- The Site Manager or responsible person is to contact the Environment Agency as soon as it is practicably possible.
- The Site Manager or responsible person is to contact, where necessary the local authority.
- The Site Manager or responsible person must continue to liaise with the Commander and Command centre of the Fire Service throughout the incident, taking instruction when required.

The Site Manager or responsible person should contact the source of any deliveries scheduled within the next 48 hours to advise of the fire in order for a hold to be placed on the delivery or alternative arrangements to be made, initiating the Contingency Plan, including diversion of waste streams.

Additional fire/emergency procedures are used on site and detail the actions which need to be taken in the event of a fire, these include what actions are to be taken during a Fire Alarm. In addition, there are fire action notices are located and maintained at various points around the site to remind staff of the actions to be taken in the event of discovering a fire or hearing the fire alarm.

Emergency contact details will be provided in a separate document within the Gerda box once delivered.

Firefighting is to be carried out as detailed in the Emergency Plan a summary of which is detailed below:

- Trained Fire Team members will carry out intervention duties in accordance with the Fire Prevention Plan including the use of mobile plant to prevent fire spread.
- All other personnel, including visitors and sub-contractors, must evacuate the site by the nearest available safe route, and assemble at the designated Assembly Point. Do not allow sub-contractors to leave the site, until all are accounted for, and cleared to do so, by the Incident Controller and Senior Fire Officer.
- It will be the responsibility of the Incident Controller and fire marshal's, to ensure that all personnel, visitors and sub-contractors are accounted for, and to give that information to the Emergency services on their arrival.
- Under no circumstances, should further vehicles be permitted on site, until authorised by the Business Unit Manager or Senior Fire Officer, and one person must be nominated to prevent access to the site from the main gate, and to ensure clear access for the emergency services. Vehicles should be directed to wait away from the site entrance, until further notice.
- Should there be casualties, the site first aider(s) will, without danger to themselves, provide assistance and request further medical assistance if required.
- Access to the immediate area should be restricted to members of the trained Fire Team, the Emergency Services, and site first aider(s) if safe to do so.

- As soon as is practicable, the Business Unit Manager will inform both the Immediate Line Manager and the SHQ Coach.

All other personnel, including visitors and sub-contractors, must evacuate the site by the nearest available safe route, and assemble at the designated Assembly Point. Do not allow sub-contractors to leave the site, until all are accounted for, and cleared to do so, by the Incident Controller and Senior Fire Officer.

Middlesbrough Fire Station (Cleveland FRS) is located at: Park Road South, Middlesbrough, TS5 6LG, 2.4 miles from the site.

Fire evacuation practices (drills) are carried out at least annually. The findings are recorded and reviewed for any necessary improvements to be made.

In the event of a fire, in addition to alerting the FRS, the EA shall be informed, as soon as practicable, and in accordance with the reporting requirements set out within the permit.

The infrastructure and equipment that are available on site or in proximity to assist in fighting a fire include:

- Fire hydrants
- Fire hoses
- Fire Extinguishers
- Plant

14.1. Mitigating the Impacts of a Fire

After an event, the following procedure will be implemented depending on the severity of the fire:

1. A small, controllable, and containable fire that can be dealt with in-house using suitably trained staff and firefighting equipment located on site:

The fire will be recorded in the site diary, including the causes of the fire and methods used to manage the fire. Any outcomes to be implemented on-site will be incorporated within updates to this FPP, as required.

2. A larger fire that requires the presence of the Fire Service:

If the site has been told to evacuate or to cease operations by the EA and/or Fire Services, the operator will wait until instructed that it is safe to re-enter the site. The fire will be recorded in the site diary, including the cause (if known) and the methods used to manage the fire. An assessment will be carried out to determine whether further mitigation measures could have prevented the fire. Any outcomes to be implemented on-site will be incorporated within updates to this FPP and the site's EMS and an internal investigation may be carried out.

If the damage caused by the fire is sufficient and prevents the continuation of operations, the site will cease accepting waste and will divert deliveries to a suitably licensed facility, in accordance with the contingency planning provisions described previously.

The Site Manager or responsible person will liaise with the EA to determine a plan of action to recommence permitted operations or reduced operations at the site, and the timescales involved in order to achieve this.

14.2. Fire Affected Waste

Waste which has been affected by the fire, identified as either waste which has been burnt or dampened with water during fire suppression will be separated from waste which has not been affected if it is possible to do so.

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.

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.

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.

14.3. Fire Water Removal

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).

14.4. Fire Prevention Review

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.

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.

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

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.

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

Review Date	Reviewer	Comments	Proposed review date