MPG

Fire Prevention Plan

The Old Crown Dyeworks

EFR Ltd.

Document Reference: 346/1—R1.2 - FPP

MPG

Minerals
Waste
Environment

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Fire Prevention Plan

Plan version: 2.0
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Site details

Site name: Old Crown Dyeworks
Site address: Old Crown Dyeworks, Bradford
Operator name: EFR

Who this plan is for

The purpose of this Fire Prevention Plan (FPP) is to guide staff and contractors in the prevention of a fire and to aid staff, contractors and emergency services in the event of a fire.
The FPP has been produced from the Environment Agency template using information supplied by the operator.

Document revisions

Version	Amendment	Date	Approved by
V1	Original	May 2022	
V2	Amendments based on additional info request from EA dated 22/08/2023	August 2023	

Contents

In the event of a fire:

If a fire is discovered on site, the following actions will be taken:

a) DONT PANIC

b) RAISE THE ALARM (IF NOT DONE SO ALREADY)

c) NOTIFY THE SITE MANAGER (IF SAFE TO DO SO)

d) DO NOT TRY TO TACKLE THE FIRE YOURSELF UNLESS YOU ARE TRAINED IN DOING SO AND YOU ARE SURE OF THE NATURE OF THE FIRE

e) LEAVE ANY BUILDINGS USING THE NEAREST EXIT (I.E. FIRE DOOR OR ROLLER SHUTTER DOOR) AS QUICKLY AND AS ORDERLY AS POSSIBLE

f) ASSEMBLE AT THE SPECIFIED FIRE ASSEMBLY POINT WHICH IS LOCATED BY THE SITE ACCESS GATES

g) THE SITE MANAGER OR DELEGATED OPERATIVE WILL BE IN CHARGE OF CALLING THE EMERGENCY SERVICES ON **999** AND ENSURING THAT ALL PERSONS WHO WERE WORKING AT THE SITE ARE ASSEMBLED SAFELY

h) INFORM ALL NEIGHBOURING PREMISES WHO ARE LIKELY TO BE AFFECTED

i) DO NOT RETURN TO THE SITE UNTIL YOU HAVE BEEN GIVEN THE 'ALL CLEAR' BY THE EMERGENCY SERVICES AND THE SITE MANAGER

j) INFORM THE ENVIRONMENT AGENCY ON THE INCIDENT HOT LINE AND ALSO THE LOCAL OFFICER WHERE POSSIBLE

Types of combustible materials

Combustible waste

Products which may contain combustible materials	Fire risk	Ignition risk
Mixed General Waste containing combustible materials	Medium	Low
Paper and Cardboard	High	Medium
Plastics	Medium	Very Low
Plasterboard	Very Low	Very Low
Textiles	Medium	Low
Scrap Metal	Low	Low
Wood	High	Medium
RDF	High	Medium
WEEE	Medium	Low
Inert Soil and Stones	Very Low / none	Very Low / none

Other combustible materials

Other combustible products on site (non-waste and not for processing)	Fire risk	Ignition risk
Gas bottles	High	High
Hydraulic Oils	High	Medium
Diesel fuel for machines	High	Medium

Persistent Organic Pollutants (POPS)

The waste accepted at the site does not contain POPs.

Objectives of this fire prevention plan

There are three primary objectives on this Fire Prevention Plan (FPP):

- To minimise the likelihood of a fire happening
- To aim to extinguish any fire within 4 hours
- To minimise the spread of a fire both within the site and to adjacent properties.

Using this fire prevention plan

Where the plan is kept and how staff know how to use it

A copy of the FPP will be stored in the weighbridge office and site offices in a red file clearly marked 'Fire Prevention Plan'. An electronic copy will be held by the site's TCM/Site Manager in case of an emergency.

EFR's Management Systems and FPP form part of the staff and contractor induction to ensure all staff and contractors are aware of their responsibilities and know how to respond in the event of a fire.

Testing the plan and staff training

All new and existing staff will undergo induction training and annual refresher training / assessment on the contents and requirements of the FPP and specifically what to do if a fire breaks out. Emergency fire drills will take place every 6 months to assess compliance and knowledge of the FPP. The inductions, training and fire drills are the responsibility of the TCM/Site Manager. Ongoing toolbox talks will take place to inform staff of recent changes either operationally or legislatively.

The FPP will be reviewed annually, or sooner in the event of an operational change, near-miss, or incident. The training records (see example in EMS) will be retained in the site office and an electronic copy held as a back-up.

Activities at the site

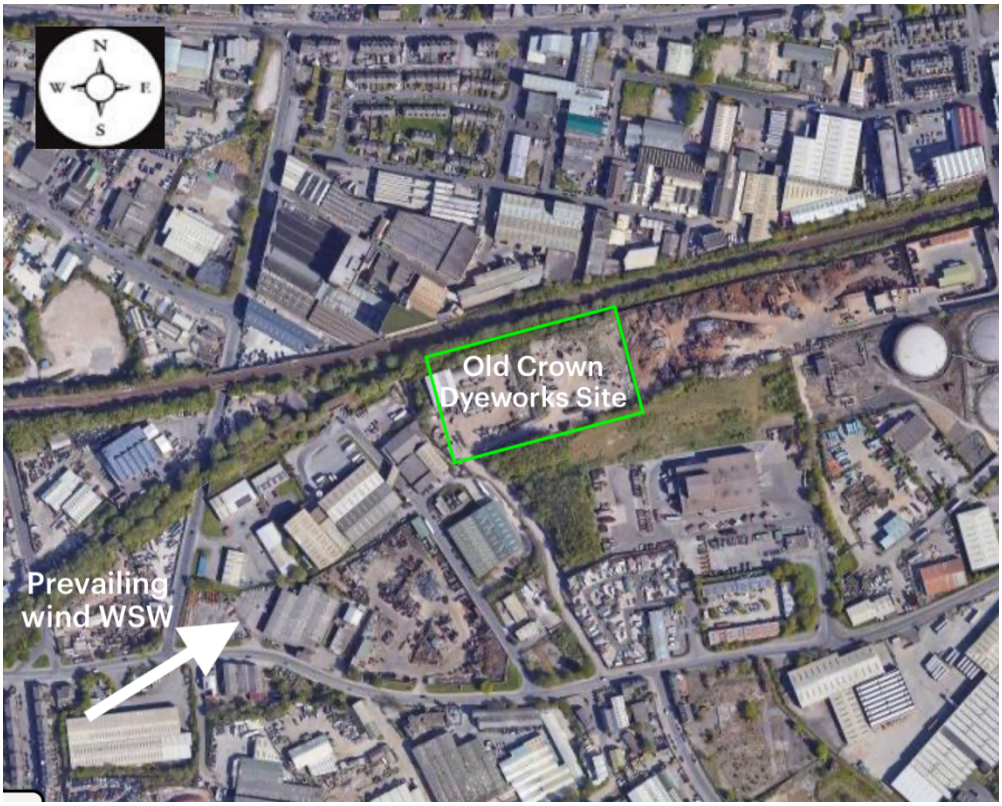
All incoming vehicles arrive at the site entrance and report to the weighbridge/site office. The details of the load are recorded, and duty of care documents checked by the operator. If acceptable, a visual inspection is made of the load to correlate the load with the paperwork and Environmental Permit. If the waste is not as described or not suitable, it is rejected and returned either to the producer or to a suitable facility. If the waste complies, the vehicle is directed to the appropriate tipping area (waste reception bay).

During tipping, a second visual inspection is carried out. Should the waste be found to be unsuitable, it is either reloaded and removed from the site or quarantined with removal arranged at the earliest opportunity. Waste is sorted both by hand picking or by various pieces of plant (including the trommel) and transported (either via conveyor or on-site plant and machinery) to the appropriate bay, with large or bulky items also removed and placed in the appropriate bay.

Rejected wastes discovered at any stage in the process will be deposited in the skip provided for non-conforming wastes or rejected. Where necessary, particularly where the rejected waste discovered would be classed as a difficult, hazardous or clinical waste, the Environment Agency will then be contacted to agree a course of action. The contents of the rejected waste skips will be recorded in the site diary.

For outward consignments of wastes produced on site, the driver of the collection vehicle will be instructed to report to the site/weighbridge office or the machine/plant operator. All relevant documentation will be completed, and the vehicle will be passed to pick up the load and take it to the designated recycler/disposal site. The product or waste will be loaded using the loading shovel.

Prevailing Wind



Site plan

The site plans are attached as Appendix 1 to this document:

346/1 - 1 – Location Plan
346/1 - 2 – Sensitive Receptors
346/1 - 4 – Layout Plan
346/1 - 5 – Drainage Plan
346/1 – 6 – Fire Plan
346/1 – 7 – Fire Layout Plan

Planned events and reasonably foreseeable unplanned events

Planned downtime

During planned downtime, material will be diverted to an alternative site through prior agreement and no waste would be accepted on site unless the site can accommodate it and process without delay.

Temporary Site Closure/unplanned events

Preparation for reasonably foreseeable unplanned events will be made by prior agreement to divert waste to an alternative outlet with a local operator (such as AWM in Leeds) until the site is able to accept waste.

Manage common causes of fire

Arson

The site is surrounded by a 2.4-metre-high palisade perimeter fence and the main gates are padlocked when the site is not manned. The site has a 24-hour security presence with regular patrols during both operational and non-operational hours.

The gates and fencing will be checked on a regular basis (daily) and the results of the inspections will be marked on record form EFR/RF/4. Defects in the gates and fencing which may permit unauthorised access to the site will be recorded in the site diary. Until repair is carried out, temporary measures will be taken before the end of the working day, to ensure that access to the site through the defective gate/fence is not possible.

During operational hours, all visitors are asked to sign into and out of the site and are accompanied at all times.

Plant and equipment

The following plant and equipment is / will be used on site for the movement and processing of waste:

- Loading Shovels
- Excavator/crane grab
- Telehandlers
- Shredder
- Conveyor belts
- Trommel
- Barrel screen

Plant is only operated by trained drivers / operators. Training includes the requirement for daily checks for the specific plant operated in order to ensure they are operated safely and to prevent the failure of equipment which could have potential adverse impacts on the operations or the site.

Preventative maintenance is also in place for each item of plant or equipment. This is in place through manufacturers maintenance and on-site internal preventative maintenance which is recorded in the preventative maintenance check sheet with any defects reported to the Site Manager for action and recorded in the site diary. All plant is equipped with a fire extinguisher, either carried in a cab for example, or attached to or next to fixed plant.

Any major defects found during the daily site inspection which are likely to lead to a breach of permit conditions will be repaired or rectified by the end of the working day in which they are found, where possible. If a repair is not possible by the end of the working day the EA will be contacted to agree a suitable timescale for repair.

All defects and problems likely to give rise to pollution will be recorded on the form EFR/RF/4 or similar form with repairs/solutions being carried out immediately.

All mobile plant is stored off-site (as it is hired in as and when needed), or on the eastern side of the site, away from any waste storage.

Electrical faults including damaged or exposed electrical cables

Electrics certification

All electricals are checked and PAT tested. The relevant test certificates can be found at the company's head office. External cables are armoured and checked as part of site daily checks.

Regular maintenance and electrical checks are carried out by a qualified electrician throughout the year.

Electrical equipment maintenance arrangements

All electrical equipment will be included in a 'Electrical Equipment Maintenance Register' and will be checked on a periodic basis. As above, PAT testing is carried out at the appropriate intervals. The relevant test certificates can be found at the site office.

Discarded smoking materials

Smoking on site policies

Smoking is strictly prohibited on site. A smoking area has been designated near the site entrance more than 10 metres from the permitted building or combustible material, as shown on the attached plan.

Hot works safe working practices

Hot works would only occur on site as part of maintenance or repair programmes for plant and equipment, and do not form part of the waste processing operations at the site. A Hot Works Permit must be gained prior to hot works commencing, which will only be granted once a risk assessment and method statement has been produced. All dust and debris will be removed from the item requiring repair prior to hot works commencing which will be confirmed by the maintenance operative and site manager. A fire watch (see section page 9) is carried out for at least 1 hour following completion of hot works. All hot works must have easy access to a fire extinguisher and must be monitored by the site manager. External contractors must be inducted and must also complete an appropriate risk assessment and method statement, agreed with the site manager who will issue the Hot Works Permit, prior to carrying out hot works.

Hot works do not form part of the waste process on site. Hot works may occur as part of plant maintenance, which may have to be carried out near to waste. Cutting by use of sthil saw and oxyacetylene and/or welding is carried out in designated areas outside of the permit boundary unless it is an isolated repair of the fixed plant internally. When not in use, equipment is locked in a tool store outside of the permitted area. Manufacturers' instructions are followed for safe use of equipment.

Industrial heaters

Use of industrial heaters

No Industrial heaters will be in use.

Hot exhausts and engine parts

Vehicles on site are checked prior to a shift starting as part of the site daily checks and are cleaned down periodically throughout the day and at the end of the shift. Fire watch procedures are in place as stated below.

Fire watch procedures

Fire watch procedures are in place at the site. A fire watch is carried out three times during the shift (roughly mid-morning, middle and end) with temperature checks carried out using an FLIR Thermal Imaging Camera.

A fire watch is carried out as follows:

- Visual observations of the stockpiles are recorded on the daily check sheet.
- Surface temperature checks using a FLIR Thermal Imaging Camera. Temperature results for each stockpile are recorded in the daily checks book and the trends are observed. The FLIR camera shows the whole pile while a probe could miss a hot spot.
- A hot spot is identified by the following observations (either in isolation or together):
    - A surface temperature above 50 °C
    - An upward trend in temperature over the course of the shift.
    - Observing steam, smouldering or smoke

If a hot spot is found during the fire watch process, then the waste is either wetted down and / or spread and turned or smothered with inert material (if necessary). It is the site manager's discretion as to which method is most appropriate. If the hot spot does not cool when mitigation measures are actioned, and a combustion incident occurs then active firefighting would be carried out by fire trained staff in accordance with the active firefighting procedure (as detailed in this FPP). If there is a failure to tackle the fire safely then the fire service would be called. The EA would be informed of any incident of fire, regardless of whether the fire services were required.

Fire watches are also carried out on hot engines and exhausts twice daily, once during mid-morning and one during mid-afternoon, when engines are plant may have been running for extended periods of time, only if the exhaust or engine is located for operational purposes near to combustible waste. However, during all works, engine temperature gauges are monitored for any overheating.

Ignition sources

Ignition sources are listed below and are kept at least 6 metres away from combustible material.

Potential Ignition Source	Management of ignition source
Incoming waste contamination	Waste brought into the site could have contamination present including potential ignition sources such as batteries or gas canisters. Waste acceptance procedures are in place and visual inspections are made at 3 points along the process. Any waste found to be non-conforming is rejected at the earliest opportunity or quarantined ready for removal. Visual checks are carried out throughout the day by the site manager and site operatives, and fire watches are carried out.
Hot works	Hot works are managed through a permit process and only carried out in designated areas, unless for specific parts of fixed plant. Fire extinguishers are made available during all hot works and a fire watch is in place following completion of hot works.
Smoking	Smoking is prohibited on site. A smoking area has been

	designated near the site entrance more than 10 metres from the permitted building or combustible material.
Batteries	Batteries are stored in designated storage boxes away from combustible material outside the building(s).
Naked flames	There is a 'no naked flame' policy throughout the company.
Arson / vandalism	Security fencing and CCTV in place.
Heaters	There are no heaters on site.
Hot exhausts	All vehicles are cleaned down, when necessary, throughout the day, and at the end of each shift. Regular fire watches are carried out throughout the day.
Plant failure	Plant is maintained to the manufacturer's standards with planned preventative maintenance in place.
Operational sparks	Training is in place for all mobile plant operators to prevent contact or scraping of buckets on the floor of buildings to prevent the production of sparks.
Build-up of waste	Maximum volumes of waste are in compliance with the EMS. All equipment is cleared of waste at the end of the shift and periodically throughout the day, where necessary.
Reflective or glass waste	Reflective or glass waste is stored out of direct sunlight wherever possible to prevent the reflection of light.

Leaks and spillages of oils and fuels

All fuel storage tanks on site are bunded to contain any potential fuel leaks and are capable of containing a minimum 110% of the volume of the fuel tank. All pipework and associated infrastructure is located within the bund. Electronic locks are fitted to tank valves to prevent unauthorised operation. All valves and gauges on the tanks are constructed to prevent damage from frost.

All plant and vehicles on site are subject to routine preventative maintenance and manufacturer's maintenance. A spillage procedure is in place (in the EMS), which would be followed in case of leaks or spillage of oils or fuels.

A Spill Kit is available on-site including sand and absorbents. Spill kits will be checked as part of the site daily inspections to ensure sufficient supplies are available as and when required. Waste operations will be carried out on an impermeable surface with a sealed drainage system where required.

Build-up of loose combustible waste, dust, and fluff

Daily checks of plant and equipment include the requirement to check and ensure no build-up of dust or fluff. Dust and fluff will be cleared away immediately and the area regularly monitored to prevent further build-up. Regular inspections for maintenance/ housekeeping are in place throughout the site to prevent dust and fluff build-up and recorded on form EFR/RF/4. A cleaning regime is in place at the end of every shift.

Drop heights are also kept to a minimum to prevent excessive dust emissions caused by depositing loose wastes. If there is a risk that dust could be emitted following a malfunction or breakdown of plant, that piece of plant is shut down until it can be repaired, and the high dust risk has been reduced.

Reactions between wastes

The types of waste brought into The Site are unlikely to cause reactions. However, any incompatible waste encountered would be stored separately or quarantined until they can be removed to a suitably permitted site. Should any contamination of accepted waste occur, this waste would also be quarantined.

Waste acceptance and deposited hot loads

The waste acceptance procedure is as follows:

- All incoming waste vehicles report to the weighbridge at the site entrance. The details of the load are recorded, and duty of care documents checked by the operator. Acceptable waste types are listed in The Site's Permit.
- If accepted, a visual inspection is made of the load to correlate the load with the paperwork. The visual inspection also identifies potential fire risks and hot loads at an early stage. Each load is checked for steam or smoke, batteries (in particular lithium-ion batteries), oils or other contaminants (including rags soaked in oils or chemicals).
- If waste is not as described or not suitable, it is rejected.
- If the waste complies, the vehicle is directed to the appropriate tipping area.
- If any unacceptable wastes are found after the load has been tipped, they are quarantined in the designated quarantine area until the customer has been contacted to arrange onward movement and the Environment Agency informed.

The Site does not accept hot loads. If a load is later found to be hot after acceptance, it is moved to the quarantine area and a fire watch is carried out.

Hot loads are identified during the visual inspection of incoming waste, during initial inspection and during tipping. If an incoming waste load is steaming or smoking, then the load is considered hot. Other potential fire risks that are identified at the weighbridge include batteries, oils, or other contaminants and rags soaked in oils or chemicals.

If a hot load is determined to be an immediate fire hazard or an emergency, then the active firefighting procedure is implemented.

Hot and dry weather

Daily fire watch checks will be carried out three times a day, as a minimum. During summer months when temperatures are in excess of 28˚C, a fire watch will be carried out hourly on external materials through a visual inspection and the use of a FLIR thermal imaging camera. Storage times will be kept to a minimum through a FIFO (First in, First Out) principle. Waste is stored predominantly in buildings, out of direct sunlight.

Prevent self-combustion

General self-combustion measures

The FIFO stock rotation principle is applied throughout The Site to ensure waste is not stored for longer than necessary and that older waste is moved before the newer, incoming waste. The fire watch procedure is followed to identify if any waste is self-heating.

The maximum dimensions of stockpiles of specific waste types are complied with to ensure that the stockpiles can be managed for heat build-up and that the correct separation distances are maintained. Complying with the maximum stockpile dimensions ensures that there is the lowest possible risk of fire spreading between piles of waste and between bays.

If there is plant failure and it is necessary to store waste for longer than specified in the EMS then the fire watch is carried out more regularly.

Manage storage time

Method used to record and manage the storage of all waste on site

The details of incoming waste are recorded at the weighbridge and the duty of care documents are checked by the operator to check the load is acceptable. The quarterly waste returns are produced based on the details recorded on the site's recording system. The system records incoming and outgoing waste to automatically update the volume of waste on site at any one time. The system is updated, at a minimum, daily.

The following table shows that maximum storage times for different types of waste on site.

Waste stream	Location (must match site plan)	How it is stored For example this may include piles, bays, containers, skips, racks, bales	Max. time waste will be stored
C&D Inert Waste	Soil and stones bay	Bay	1 month
Fines	Fines bay	Bay	72 hours
Hardcore	Hardcore bay	Bay	1 month
Green Waste	Green waste bay	Bay	72 hours
Plasterboard	Plasterboard bay	Bay	2 weeks
Wood	Wood bay	Bay	72 hours
General Waste	General waste bay	Bay	72 hours
Incoming waste	'Bulk Waste Bays'	Bay	72 hours
Incoming waste	'Bulk Waste Bays'	Bay	72 hours
Incoming waste	'Bulk Waste Bays'	Bay	72 hours

If the maximum storage capacity of the site is reached, then no further waste would be accepted until waste can be removed from site and taken to a suitably permitted facility.

If waste is stored for longer than the durations listed above due to variations in supply and demand, plant failure or another emergency, then stockpiles will be specifically monitored during daily fire watches and the readings recorded in the site diary.

Stock rotation policy

The FIFO principle is applied to all waste types. It is noted however, that wastes of different types will each be treated with the FIFO principle. For example, C&D waste may arrive on day 1, whilst some waste packaging may arrive on day 2. The waste packaging may be processed on day 2 and leave The Site before the C&D waste, which may not be completely processed until day 3. However, the oldest waste packaging would always leave The Site before the newest waste packaging, etc.

Monitor and control temperature

Reduce the exposed metal content and proportion of 'fines'

The Site does not accept fines. Metal is sorted from the waste as part of the processing, but it is not considered that the metal content of imported wastes causes a significant fire risk.

Monitoring temperature

Manual temperature monitoring is not carried out unless as part of a fire watch. A trigger temperature of 50 degrees at surface or 60 degrees in the core of a waste pile is set as the point at which a hot spot is considered to be present. Once this occurs, continuous monitoring is carried out. If the temperature continues to rise, the waste would be wetted down or covered with inert materials. The procedure used is at the Site Manager's discretion. Should neither of these techniques work, and a combustion event occurs, the active firefighting procedure takes over.

Controlling temperature

Waste stockpiles are agitated during the loading/sorting and segregating process which prevents the build-up of heat. The processing of waste does not produce additional heat.

The site operates under a FIFO principal to ensure that older waste is processed before new waste, reducing standing times.

The temperature of the waste is monitored using a FLIR Thermal Imaging Camera and recorded in the site diary as part of the fire watch procedures (detailed within this FPP). Mitigation measures are outlined in the fire watch procedures if a hot spot or combustion incident is observed.

Dealing with hot weather and heating from sunlight

Waste is predominantly stored and processed indoors and is kept on site for the shortest amount of time possible. Waste that is stored outdoors (eg. hardcore) is unlikely to combust due to heating from sunlight.

In hot weather, more regular fire watches will be carried out; every 2 hours.

Waste bale storage

Waste is not baled, and instead leaves The Site loose.

Manage waste piles

Storing waste materials in their largest form

Waste is stored in its largest form where this is possible. Waste arriving at The Site is processed at the earliest opportunity. Equally, once processed, waste leaves The Site at the earliest opportunity. Therefore, where waste cannot be stored in its largest possible form (for example, shredded waste), it is stored for the shortest possible time before being removed from The Site.

Maximum pile sizes for the waste on your site

Waste stream	Location	How it is stored	Max. length (m)	Max. width (m)	Max. height (m)	Volume (m^3)
C&D Inert Waste	Soil and stones bay	Bay	25	18	3	675
Fines	Fines bay	Bay	17.7	18	3	478
Hardcore	Hardcore bay	Bay	18	18	3	486
Green Waste	Green waste bay	Bay	18	7.2	3	194.4
Plasterboard	Plasterboard bay	Bay	18	7.2	3	194.4
Wood	Wood bay	Bay	18	7.2	3	194.4
General Waste	General waste bay	Bay	18	7.2	3	194.4
Incoming waste	'Bulk Waste Bays'	Bay	14.2	13.2	3	281
Incoming waste	'Bulk Waste Bays'	Bay	14.2	13.2	3	281
Incoming waste	'Bulk Waste Bays'	Bay	14.2	16.95	3	361

Note: all bays have a minimum freeboard of 1m, and the bay walls are therefore at least 4m in height.

Waste stored in containers

Types of containers you are using

Wastes such as plasterboard and green waste may be stored in containers before leaving The Site. These containers would be roll-on / roll-off (RORO) skips.

Accessibility of containers

All containers would be accessible from the open side of a bay, and can readily be moved by on-site plant.

Moving containers in a fire

If it is safe to do so, containers may be moved during a fire to prevent spreading. Ideally, the container would be moved to the quarantine area. If this is not possible (for example, the quarantine area is in use or access is blocked due to the fire), then the container would be placed at the farthest possible distance (within the concrete yard area) from other combustible waste, buildings or infrastructure.

When using plant to move containers, an 'escape route' would be first cleared or decided upon, so that should the fire spread, the plant operator can release the container and leave the vicinity if required.

Prevent fire spreading

Separation distances

All waste is stored in fire resistant bays (see details below), and therefore these act as an alternative to separation distances between free-standing piles. However, it is noted that all waste is separated by the thickness of the bay walls (approximately 1m). In addition, a freeboard of at least 1m is provided by all bays (i.e. waste is stored in the bays to a height of 3m, with additional bay height of at least 1m).

Fire walls construction standards

'Lego' concrete block walls are used for fire walls (see details below).

Storing waste in bays

'Lego' concrete blocks are appropriate for resisting both radiative heat and flaming. They are designed to have a fire resistance of at least 120 minutes, typically achieving Class A1 of BS EN 13501-1:2002. The Site operates under a FIFO system. All waste arriving at The Site is immediately sent for processing, and once processed, is removed from The Site at the earliest possible time. All waste arriving at The Site is recorded in accordance with the duty of care and Waste Acceptance Procedures.

Temperature checks of wastes in bays is carried out using an FLIR camera throughout a shift to monitor for anomalous temperatures, as well as during any fire watch that is carried out.

As waste is stored exclusively in bays, spreading of fires between piles is not relevant. Waste bays are never over-filled, with a freeboard of 1m maintained at the top and side of bay walls, which seeks to prevent the possibility of lighted material moving out of the waste bay and igniting other wastes. If possible, and safe to do so, burning materials may be pushed to the back of a bay to further prevent this from happening.

If other wastes are considered to be at risk of ignition, these will be removed to another bay or the quarantine area, to prevent the spreading of fire.

All bay walls are at least 4m in height, to provide a minimum freeboard of 1m above any stored waste. The bay sizes and maximum storage capacities are shown in the table above.

Quarantine area

Quarantine area location and size

The location of the quarantine area is shown in Plan ref: *346/1 – 4*. The size is approximately 9m x 20m. The quarantine area is therefore large enough to contain 50% of the largest combustible waste bay.

How to use the quarantine area if there is a fire

The quarantine area can be used in two ways if there is a fire:

1. Remove hot / smouldering / burning waste (if possible and safe) to isolate it from other waste, and subsequently extinguish any fires.
2. Remove other waste, in order to prevent unburnt waste from igniting.

Procedure to remove material stored temporarily if there is a fire

If waste is already in the quarantine area, and the area is needed for emergency use in the case of a fire, the already stored waste could be moved to another concrete / sealed surface area of The Site. Waste would only be moved to an area where ignition was unlikely, and it would not block emergency access.

Detecting fires

Detection systems in use

The Site has 24hr security. The Site uses a bespoke system installed by Kooi Systems, which offers Rising Early Detection (RED). RED has a rotating-thermometric camera that continuously monitors and records the temperature in the sites waste piles. An alarm is immediately sent to the RED alarm centre and site security/staff if the temperature exceeds a specified value (to be agreed during trial – currently ongoing). The heat-spot can then be located on site and the waste agitated to reduce the heat and prevent a fire occurring.

Certification for the systems

Certification will be through the installer / manufacturer of the system(s).

Suppressing fires

Suppression systems in use

A bespoke control system, in addition to a pump house with 30,000l water tank is

included as part of the suppression system.

Certification for the systems

N/A

Firefighting techniques

Active firefighting

Approved operators will be trained to competently and safely use the site's firefighting infrastructure. Should a fire be detected on site, trained operators will attempt to extinguish the fire with the equipment on site (fire blankets, extinguishers and separate burning material from unburnt. If this isn't possible, the Fire Rescue Service should be called immediately, followed by the EA's incident reporting line.

The preferred method of fighting a fire that is self-contained and manageable, with no danger of spreading, is to attempt to extinguish with fire blankets, extinguishers and accessible water.

All operations in the vicinity of the hot spot or combustion incident will cease and plant will be removed from the vicinity (if possible) until the hot spot has been assessed and, where appropriate, remediated. Where it is deemed necessary, the affected area will be isolated from the rest of the pile and / or other piles moved away.

The preference is to extinguish material in situ and to use techniques that will produce minimal residues where this can be done safely without increasing fire risk. The methods to cool a hot spot in situ include use of water, separating the unburned or burning material (whichever is most accessible) from the pile, or smothering with inert material. If it is not ideal to cool in situ then the preferred means would involve site operatives using plant to remove material from the affected area of the pile, spreading it on the adjacent ground where it does not compromise minimum separation distances and allow cooling immediately adjacent to the pile. Failing that the material would be moved into the quarantine area.

Regular temperature checking of a hot spot will occur during cooling by use of the FLIR camera to confirm that the material is cooling. When it has returned to a normal temperature the cooling actions cease. If the cooling actions are not successful such

that a hot spot develops into a combustion incident the fire trained site operatives will tackle the fire as detailed in the fire procedure. Should they be unable to safely tackle the fire, then the fire service will be called.

Water supplies

Available water supply

The locations of the nearest fire hydrant is shown on drawing ref: *346/1 – 6-Fire*, it is capable of delivering a minimum flow of 1200 LPM with an ideal flow 4500 LPM.

The hydrants would supply a more than necessary water supply to extinguish a worse-case scenario fire on the site within 4 hours. In addition, The Site has a 30,000 litre water tank, which would seek to extinguish detected fires before they are able to burn an entire waste pile, meaning that, in practice less water (or in a best-case scenario – no water) is required from external hydrants.

Show the calculation for your required water supply

Maximum pile volume in cubic metres	**Water supply needed in litres per minute**	**Overall water supply needed over 3 hours in litres**	**Total water available on site in litres**
361	2,120	381,600	30,000 stored plus up to 4500 LPM from nearest hydrant

Managing fire water

Containing the run-off from fire water

The Site is not within a Source Protection Zone, nor within 100m of any known private drinking water abstractions. The groundwater vulnerability of The Site is medium-low.

All of the operations take place on an impermeable surface with a total area of around 5,600m^2. The impermeable surface will have a level surface, with drainage along the

entrances to buildings capturing any run-off from waste storage and processing. The remainder of The Site is generally flat, with a very slight fall towards the east (approximately 50cm). If a fire were to occur, sandbags would be placed around any point of the site that would require it to prevent water leaving the site. Clay drain mats would be used to cover any grates should this be required.

In addition to the containment, a tanker company (such as JM Crowthers and Son Ltd. – based in Leeds) would be called out to remove water during the event to reduce the amount of fire water held on site. The water collection tank on site can also contain approximately 30,000l and uses a traffic light system to warn when emptying is required. During a fire, this tank would also be emptied if possible and safe to do so.

During and after an incident

Dealing with issues during a fire

During and after a fire, all suppliers would be told not to deliver materials to site and operations would cease until the Fire Service/Environment Agency confirm the site can be reopened. All incoming waste would be diverted to a permitted site through arrangement with the site operator.

Notifying residents and businesses

The following neighbouring businesses would be contacted in the event of a fire by the TCM/Site Manager, or a member of staff designated to do so by the TCM/Site Manager. All surrounding businesses that could be impacted by the fire would also have a site representative visit to ensure they are aware of the ongoing incident.

- Network Rail would be contacted at the earliest opportunity due to the proximity of the railway line to the site – 03457 11 41 41
- Adams Fast Food Supplies – Mount Street, Bradford, BD4 8TA – 01274 733622
- Seafresh Wholesale Distributors – Bowling Back Lane, Bradford, BD4 8TA – 01274 724444
- Matthew Kitson (commercial vehicle repairs) – 25 Mount Street, Bradford, BD4 8TA – 01274 733622

- Bowling Back Lane Household Waste Recycling Centre (Bradford Council) – Bowling Back Lane, Bradford, BD4 8SZ – 01274 432111
- Mary Street Caravan Site – Mary Street, Bradford BD4 8TF – To be contacted in person.
- A member of staff will be sent to businesses on the northern side of the railway should this be deemed necessary during a fire event.

Clearing and decontamination after a fire

In order to clear and decontaminate the site after a fire, the Fire Service would advise when the residues would be safe to be removed off site. The wastes would then be assessed by the Site Manager to gauge their condition before being sent to onward sites. All damaged waste and waste from the decontaminating process would be sent to a suitably permitted landfill; the waste is unlikely to be hazardous so would be sent to a non-hazardous landfill with prior permission.

The site would then have a full deep clean after a fire following the removal of burnt waste to a suitably permitted facility. Fire water run-off will be removed from site by a specialist contractor (such as Crowthers – details below) and disposed of accordingly.

- JM Crowthers and Son Ltd. based in Leeds – 0113 253 2191

Making the site operational after a fire

A full investigation will take place following a fire which will include a remediation assessment detailing how the site can return to being operational. Any fire damaged waste shall be removed from site to a suitably permitted facility at the earliest opportunity. Damaged plant and equipment will be assessed and repaired or replaced as necessary. Damage to buildings will be inspected by an engineer (where appropriate) and repaired.

From the structural reports the Company's Operations Director will determine whether the site is safe to re-open, either with no damage occurring or with minor repairs that can take place whilst the site is operational. If major repairs are needed an assessment will be made into the length of time this will take and the continuation of the use of alternative outlets in the short/ long term. All clean-up work of waste and debris would be carried out internally and any structural work would be quoted for by an external qualified engineer/ builder.

The site will be required to be fully functional and able to meet the requirements of the EMS prior to waste operations recommencing.

The FPP will be reviewed and updated, where appropriate, following an incident.

Testing of detection and suppression is carried out on a monthly basis and repairs are carried out if necessary.