MURFITTS INDUSTRIES

PREMIUM GRANULATED RUBBER

Fire Prevention Plan

wiser environment

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SITE DETAILS

Murfitts Industries Limited,

Unit 13 Slyfield Industrial Estate,

Moorfield Road,

Guildford,

GU1 1RU

OPERATOR DETAILS

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APPENDICIES

APPENDIX	TITLE	DATE
Appendix A	CCTV Specification	-
Appendix B	Drainage Infrastructure Plan	11/10/2023

DRAWINGS

REFERENCE	DATE	TITLE
K18.19~20~001	22/12/2023	Permit Boundary
K18.19~20~002	22/12/2023	Sensitive Receptors Plan (1km buffer)
K18.19~20~004	02/09/2024	Site Layout Plan
K18.19~20~005	22/12/2023	FRS Route Plan
K18.19~20~006	01/05/2024	Drainage Plan

TABLES

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Table 1	Combustible Waste
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Table 5	Water Supply Calculations
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1. SCOPE

This Fire Prevention Plan (FPP) is intended as a working procedure document to prevent and limit the causes of fire, and to mitigate the impacts of fire should one occur. It applies to everyone on site:

- Site Management;
- Technically Competent Manager;
- Trained Site Operatives
- Visiting Contractors
- Emergency Services

This document has been prepared using the guidance and template provided by the Environment Agency (EA)[1] (as updated 11th January 2021).

This Fire Prevention Plan (FPP) was initially prepared for the Standard Rules (SR2021 No.13) Environmental Permit and is to be amended to support the variation application to amend the existing annual throughput to 15,000 tonnes per annum. The amendments to this FPP will be relatively minor, with a slight increase to the baled stockpile on site. Increased throughput shall primarily be catered for with more efficient processing of material, however maximum quantities of material stored on site at any one time will increase to 160 tonnes on site at any one time.

The Operator, Murfitts Industries Limited (MIL) is part of the European Tyre Enterprise Ltd (ETEL) Group who are an international tyre and automotive service, maintenance and repair business group that operate multiple retail brands including Kwik-Fit and Stapletons Tyre Services (STS).

Given the link between these actors within the industry, the permit currently incorporates a Non-Waste Framework Directive to cover the movements of EoLT between ETEL Group; these are the majority of the movements on site, with the remainder covered under the existing Standard Rules permit. The variation will increase the annual throughput to 15,000 but the option to cover movement inter-group under the Non-Waste Framework Directive will be retained.

[1] https://www.gov.uk/government/publications/fire-prevention-plans-environmental-permits/fire-prevention-plans-environmental-permits#fire-prevention-objectives

This FPP supports the environmental permit issued to MIL which covers the physical treatment of non-hazardous waste (end of life tyres). A hard copy of this FPP will be available on site, and all staff shall be made aware of the measures outlined in the FPP. Required training of the related procedures shall take place, and in the case of an emergency the FPP shall be presented to the Fire & Rescue Service upon arrival to site.

This site is to operate as part of a nationwide network of hubs accepting EoLT for storage and/or treatment (baling) before onward transfer to other permitted facilities where EoLT are processed and shredded. This strategic operation is ancillary to the main activity of distribution of new tyres to the retail sector in the UK and allows for a close-loop system for the tyre industry.

The Environmental Permit covers the management of EoL tyres which are collected on takeback following delivery of new tyres to retail outlets that are not part of the ETEL Group.

EoL tyres are also collected from Group retail outlets, these are handled through the same secure supply chain, and on-site process but are done so under a Non-Waste Framework Directive exemption.

Other hubs within the network, as they meet the appropriate location criteria, are to be operated in accordance with Standard Rules Environmental Permit (SREP) *SR2021 No 13: storage and mechanical treatment of end-of-life tyres for recovery*. The activities at the hubs are limited to either storage and onward transfer, or storage and baling prior to onward transfer, so are inherently low risk. Volumes of EoL tyres stored on site are less than 100 tonnes, and given the secure supply chain and logistics control, typically remain on site no longer than 72 hours under normal operational conditions. The Hub located at Portbury is operated under a Bespoke Environmental Permit given location restrictions in the vicinity of the site.

The processes that will be carried out at the Guildford facility are the following:

- The EoLT are delivered to the site, some to the designated storage area for **storage** and onward dispatch to processing sites within the ETEL group.
- Some EoLT will be **baled** before transfer to processing facilities.
- the baled EoLT are stored in the designated area, prior to onward dispatch to a permitted MIL processing facility.

The existing annual throughput of the site is 5,000 tonnes; an increase to 15,000 tonnes is proposed within the permit variation.

All deliveries to the site are planned:

- Under normal operating conditions all EoLT received will be processed directly into the waiting trailer and dispatched by the end of the following working day.
- Under abnormal conditions, e.g., plant breakdown or organised shutdown, delivered EoLT will be diverted to the Murfitts Industries Limited national network of permitted facilities.

The EoLT received at the site are contained either within the delivery vehicle, in cages (loose tyres), held within the processing equipment, or a designated storage area (baled tyres).

Small quantities of loose tyres may also be located directly on impermeable surface, outside of normal storage areas, as part of handling processes, including the loading, unloading, and movement of waste within the site.

The site location is shown on Sensitive Receptors Plan (K18.19~20~002), Permit Boundary Plan (K18.19~20~001).

The site layout plans show how key areas and processes are arranged (Site Layout Plan K18.19~20~004).

The permitted boundary covers approximately 0.2 ha, with the storage and baling process occurring on a limited part of this area.

The site is located at Unit 13, Slyfield Industrial Estate, Moorfield Road, Guildford, GU1 1RU with the site location is shown on drawing K18.19~20~002 Sensitive Receptor Plan (1km Buffer).

The National Grid Reference for the site is SU 99920 52527. The site lies in the Slyfield Industrial Area north of Bellfields, a suburb of Guildford. For more detail on the surrounding land use please see the Sensitive Receptors Plan (K18.19~20~002)

The site is approximately 1.1 km W of the A3. The site is accessed via the A320 and Moorfield Road (see Sensitive Receptors Plan K18.19~20~002).

2. TYPES OF COMBUSTIBLE MATERIALS

2.1. Combustible waste

Table 1: Combustible Waste

Waste Stream	EWC
End of Life (EoL) tyres	16 01 03

2.2. Other combustible materials (non-waste)

No other combustible material will be stored within the operational area, or in proximity to the storage bays. All fuels used for operating plant and machinery are stored away from waste piles and outside of the permitted area.

3. USING THIS FIRE PREVENTION PLAN

3.1. Location

The plan is held in hard copy, and readily available at the site office during operational hours and is available on request to any visitors or contractors.

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

A hard copy of the plan shall be readily available at the site office during operational hours and is available on request to visitors and contractors. All staff are to read the FPP as part of their induction and sign a training log.

Any changes to the plan shall be communicated to staff via training.

Visitors and visiting contractors are given a brief overview key fire related measures such as the evacuation muster point and any fire extinguishers in their work area. If their visits extend over considerable length of time or on a regular basis, then they will be encouraged to read the plan in full and sign a training log.

Emergency services will be allowed immediate access to the plan and further hard or digital copies can be made available if required.

3.3. Testing the plan and staff training

All employees as part of their site induction are instructed to review this FPP to understand measures to prevent fire occurring, measures to undertake during a fire event and actions following an event. A signed record will be kept of this. Feedback will be sought following this to understand if any further training and guidance is required.

Visitors to site will be accompanied on site but will, during their induction to site, have the relevant measures described within this FPP described to them.

Evacuation drills are conducted six monthly, unannounced and at a time at the discretion of the Site Management, in accordance with the Fire and Emergency Evacuation Procedure. Drills are timed to ensure that site staff reach the assembly point in targeted timescales. Fire wardens will ensure that all areas of site are cleared and all personnel on site accounted for. Site is zoned so each Warden is responsible for a certain area, with each designated area signed off as cleared following the test.

As described within this FPP, firefighting will only take place if safe to do so, in very low scale incidents. Any larger scale incidents will result in the FRS being contacted, any scheduled deliveries diverted, and evacuation procedures carried out.

Following the drill any issues with infrastructure, training or adhering to the drill procedure are recorded and corrective actions recorded. Any issues are addressed through site meetings and further training if/when necessary.

3.4. Activities at the site

The Guildford facility is provided to bale and store EoLT, taken directly from ETEL Group customers. The Guilford facility is part of a wider network of ‘hubs’ which will store and/or treat EoLT before they are dispatched for further processing at one of the several facilities permitted and operated by MIL. The Hubs will be operated by ETEL Group.

Murfitts Industries Limited operate a number of EoLT tyre recycling facilities across the UK, processing tyre into various size grades for reuse as sports pitch infill, artificial turf infill, playground rubber mulch, carpet underlay, road surfaces, and other uses.

4. PLAN OF SENSITIVE RECEPTORS NEAR THE SITE

Sensitive Receptors are shown on the Sensitive Receptors Plan (K18.19~20~002) and in the Sensitive Receptors Table.

The Sensitive Receptors identified are in all directions from the site.

4.1. Prevailing wind direction

The closest observing station where weather data is available is Heathrow Airport located approximately 25 km NNE from site. Figure 1 below illustrates the prevailing wind direction of WSW which would transport any windblown emissions ENE from site.

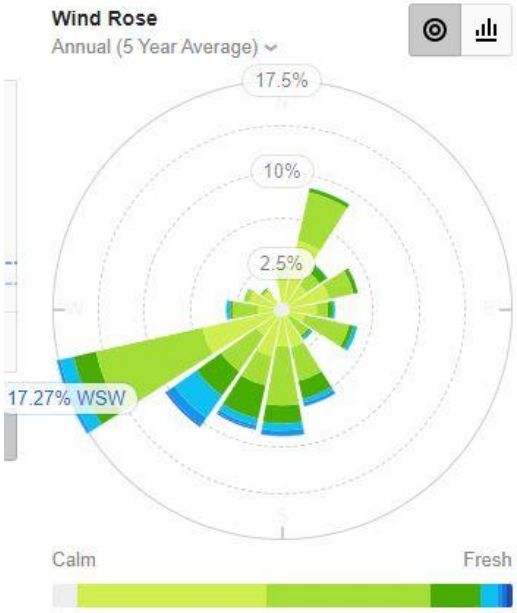

Figure 1: Heathrow Airport Windrose (willyweather.co.uk)

5. MANAGE COMMON CAUSES OF FIRE

5.1. Arson

The proposed site is secured by palisade fencing, and benefits from a gated entrance. It is located within a large industrial area with multiple neighbouring businesses, any unsolicited activities would be detected by the site's CCTV cameras which are monitored by an external security company 24/7/365. Additionally, STS occupy the wider site and operate 24/7. The site is also secured and locked outside of operational hours.

5.2. Plant and equipment

Site is equipped with specialist tyre processing plant and machinery (two balers).

All site equipment will be maintained in line with the manufacturer's guidance.

All mobile plant will be equipped with fire extinguishers.

5.3. Electrical faults including damaged or exposed electrical cables

Any electrical faults noticed on site during normal inspections or throughout the working day are isolated.

A qualified electrician will be called to resolve the problem. If required, the electricity supply will be isolated at the fuse box to prevent an ignition risk.

5.4. Electrics certification

All electrics are certified every five years.

5.5. Electrical equipment maintenance arrangements

Electrics are fully certified by a competent person, every 5 years.

All electrical equipment is tested in accordance with equipment specific requirements, and portable appliances tested at a frequency dependant on type of appliance, age, and frequency of use.

5.6. Smoking on site policies

The site operates a strict no smoking policy in all areas other than designated smoking areas which will be located outside of the permitted area.

5.7. Hot works safe working practices

The works onsite do not require the introduction of a source of ignition to the working area and therefore do not require a related risk assessment. In the unlikely occurrence that hot works are required on site, a hot works permit shall be issued.

5.8. Industrial heaters and use

No industrial heaters are used on site.

5.9. Hot exhausts and engine parts

Staff shall remain vigilant when mobile plant and equipment for any signs of combustion and will carry out checks at the start and end of the working day to ensure there is no ignition risk.

When not in use, the mobile plant is stored away from any combustible material and equipped with fire extinguishers.

6. FIRE WATCH PROCEDURES

The site supervisor will conduct start and end of the day checks to the site, fleet, and the security of the site.

This will occur every day operations are undertaken, and when material is held with the storage bays or cages.

Outside these times the staff of the wider STS site will be passing through the area and undertake informal checks.

This is complemented by the presence of CCTV (see Appendix A for representative specification) which is monitored 24/7/365 by an external security company who have direct access to duty staff at all times. CCTV overlooks the main processing and storage areas. In the event of a fire or an intruder both the relevant emergency services and site staff shall be alerted by security staff. Remote access for site managers will be implemented across all Hub facilities, which will allow site managers to view cameras and receive alerts at all times. CCTV cameras have sight of all combustible waste piles on site.

7. IGNITION SOURCES

The most likely causes of fire at the site have been identified and described below, with a summary of the management controls for restricting the possibility of a fire outbreak.

7.1. Batteries

Batteries are not accepted on site and are unlikely to arrive on site as all EoLT's are source segregated.

7.2. Leaks and spillages of oils and fuels

No liquid wastes are accepted onto site. Liquids (fuels etc.) will be held in sealed containers away from vehicular movements. All such containers will be provided with secondary containment and have a spill kit available for deployment in close proximity should a spillage occur.

Any leaks or spills will be recorded in the daily site diary and event log. Incident Response procedure will be followed (see Site Layout Plan K18.19~20~004).

The site will utilise a simple 'Stop-Contain-Divert' model for containing spillages and have spill kits or granules available on site to protect the surface water system and to prevent pollutants from entering the site drains.

Site staff are trained and familiar with their use in an emergency through the use of spill drills.

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

Regular housekeeping and inspection of the site will occur at the end of the working day and weekly as minimum.

All equipment is checked prior to use and inspected as part of a daily site inspection routine.

Annually the storage bay will be emptied for a deep clean. This process will also be conducted as and when required.

7.4. Reactions between wastes

Non-permitted wastes are rejected during inspection and acceptance. Site staff are trained in waste acceptance procedure and will carry out site inspections daily.

Given that the site receives a single stream of waste, adverse reaction is extremely unlikely. If wastes are seen to react, then they are either isolated in situ if possible or moved away from waste piles (see Site Layout Plan K18.19~20~004).

8. WASTE ACCEPTANCE AND DEPOSITED HOT LOADS

EoL tyres will enter the Guildford Hub via STS vehicles, taken directly from ETEL Group. Upon entering site, a load is inspected against the relevant waste transfer documentation to ensure that descriptions are correct.

Deliveries are pre-booked to ensure control and to reinforce the site's acceptance procedure.

Once a visual inspection has been conducted and the load accepted, they are unloaded into cages to be taken directly to the baling area or stored while they await to be baled.

Small quantities of loose tyres may also be located directly on impermeable surface, outside of normal storage areas, as part of handling processes, including the loading, unloading, and movement of waste within the site.

In the unlikely occurrence where non-conforming waste may be found within loads, it shall be segregated and stored away from waste piles or in a suitable container. Where there is risk of serious pollution, the Environment Agency shall be informed immediately.

Quarantined waste shall be removed from site within seven days and appropriate signage shall be used to identify quarantined waste. Records of rejection of non-conforming waste shall be recorded.

Table 2: Waste Acceptance Procedure

WASTE ACCEPTANCE PROCEDURE	SPECIFIC STANDARDS
Waste inspection	All waste is visually inspected for non-permitted wastes, quality, and conformance with Environmental Permit requirements. Non-conforming loads are refused entry and details are recorded.
Quarantine storage and waste which are reject	Dependant on the level of risk posed quarantined waste shall be removed from site as soon as practicable and within seven days. Appropriate signage shall be used to identify quarantined waste. Records of any non-conforming waste shall be recorded in the site diary.
Identification of wastes	Arriving waste must meet the standard of the relevant EWC code.

9. HOT AND DRY WEATHER

EoLTs are not accepted or stored in large quantities (see Section 11). The risk of hot and dry weather increasing levels of combustion is offset by quick turnaround times from delivery to processing to dispatch. Loose tyres are stored in cages. Baled tyres are stored on an impermeable surface, in excess of 6 m from other wastes, vehicles or the boundary of the site.

To further reduce risk a stock, rotation policy is in place on site; where practical, oldest waste is cleared first while waste pile sizes are kept to a minimum.

10. GENERAL SELF-COMBUSTION MEASURES

Self-combustion is unlikely to be an issue at the site given the limited time that material is held onsite.

The core strategy is the First In, First Out (FIFO) procedure, waste first accepted is the waste first removed from site.

Daily checks are made on the site as part of the fire watch procedure.

Due to the limited period of time that waste is to be stored, the nature of permitted waste types and being stored in their largest form, the risk of self-combustion from a high temperature exothermic reaction is very low.

All operational staff will be required to remain vigilant and implement an informal fire watch throughout the day.

Site inspections are carried out routinely each day with a formal ‘End of Day’ carried out to check for fire risks and signs of self-heating will be immediate reported and dealt with.

Onsite there are only two storage locations; one for loose tyres, in which they are stored within cages and a designated area for baled tyres. The associated dimensions and/or tonnages are listed in the Section below.

In the event of a fire from self-combustion the firefighting techniques detailed in Sections 16 and 18 will be implemented.

11. MANAGE STORAGE TIME

Table 3: Storage Times

WASTE STREAM	EWC	MAX. STORAGE TIME ON SITE	MAX. STORAGE LIMIT ON SITE*
End-of-life tyres (loose)	16 01 03	72 hours	192 m^3 (approx. 32t)
End-of-life tyres (baled)	16 01 03	72 hours	171 m^3 (approx. 127t)

**Indicated maximum is the sum of both EoLT's accepted through the SR permit and the NWFD exemption.*

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

Under normal operating conditions waste will arrive in a 'Just in Time' supply chain and will leave site in the same manner. However, where operational requirements dictate, there may be a requirement to store loose EoLT's or baled EoLT's for a maximum of 72 hours either before or after processing.

Under normal operating conditions EoLT's will flow through the site within the following working day from receipt, significantly less than the 3-month period identified in fire prevention plan guidance as requiring extra measures to prevent self-combustion.

11.2. Stock rotation policy

Waste will be managed on a First In, First Out (FIFO) procedure, waste first accepted is the waste first removed from site, though in reality waste is constantly being added to, and removed from the input bay.

12. MONITOR AND CONTROL TEMPERATURE

12.1. Monitoring & controlling temperature

No formal temperature measurement will be undertaken.

Daily site inspections incorporate monitoring of temperature for any waste stored on site. Site staff are trained to be vigilant for any signs of self-heating throughout the day and are trained in first response to any fire detected.

Waste accepted on site is not deemed as high risk for self-heating or combustion. The quick turnaround times prevent the build-up of latent heat. All materials stored are in limited quantities and stored within cages or designated areas in accordance with separation distances outlined within FPP guidance.

CCTV cameras monitor the operational area and are managed 24/7/365, by an external security company. Remote access for site managers to view CCTV cameras will be implemented. CCTV cameras have site of all combustible waste piles (see Appendix A for representative specification of cameras).

12.2. Dealing with hot weather and heating from sunlight

EoLT's, both baled and loose are stored outside and are done so on an impermeable surface. The quick turnaround times reduce the impact of direct heat from sunlight.

13. MANAGE WASTE PILES

13.1. Storing waste materials in their largest form

Waste is stored in its largest fraction size within cages or baled and stacked.

13.2. Maximum pile sizes for the waste on your site

Storage locations are identified on K18.19~20~004 Site Layout.

Table 4: Pile Sizes

WASTE STREAM	LOCATION	HOW IT IS STORED	MAX. LENGTH (M)	MAX. WIDTH (M)	MAX. HEIGHT (M)	VOLUME M^3	MAX. TIME IT WILL BE STORED
EoL Tyres (loose tyres)	Input area	Whole, loose, in cages	15	6.4	2	192	72 hours
EoLTyre (baled tyres)	Output bay	Baled in a stacked pile	10.5	9	1.8	171	72 hours

13.3. Waste stored in containers and types of containers

Cages are the only ‘containers’ on site. These can be moved by personnel or mobile plant to the quarantine area (see Site Layout Plan K18.19~20~004) or away from other wastes.

13.4. Accessibility of containers

Accessible from at least one side at all times.

13.5. Moving Containers in a Fire

By personnel (if safe to do so) or by mobile plant.

14. PREVENT FIRE SPREADING

14.1. Separation distances

The quarantine area (8 m x 5 m x 2.5 m), identified in Site Layout Plan K18.19~20~004, is capable of holding in excess of 50% (100 m^3) of the largest waste pile (192 m^3) at any one time. In the event of a fire, a minimum separation distance of 6 m will be provided in order to adequately isolate burning material and prevent the spread of fire.

A minimum separation distance of 6 m from all permanent structures is also provided, unless separation distance requirements are reduced by way of fire walls and bays designed to an appropriate level of fire resistance.

14.2. Fire walls construction standards

The site will not need to use fire walls given the small quantities of waste on site. There is the requisite space on site to allow 6 m separation distances from buildings and other wastes. Loose tyres are stored in cages, also 6 m from other storage areas, buildings or processing equipment.

Legio block walls have been indicated around the baling area as an additional safety precaution in the unlikely event of a fire.

15. STORING WASTE IN BAYS

Waste is not stored within bays. Baled tyres are stacked a maximum of three high to a height of approx. 1.8 m; well below the 4 m maximum height of waste piles as specified within the fire prevention plan guidance.

Loose tyres are stored within cages and at least 6 m from other wastes and infrastructure on site.

A separation distance of at least 6 m from the boundary and other wastes on site mean fire walls are not required on site.

16. QUARANTINE AREA

16.1. Quarantine area location and size

Quarantine area and the associated 6 m separation distance is shown on the Site Layout Plan (K18.19~20~004). In accordance with the guidelines set out by the Environment Agency, the quarantine area (8 m x 5 m x 2.5 m) can hold up to 50% (100 m^3) of the largest waste pile (192 m^3) and is provided with a 6 m separation distance from other structures and waste storage areas.

16.2. How to use the quarantine area if there is a fire

The quarantine area can be used for both burning and non-burning waste. In the event of a fire, where safe to do so, burning or smouldering material will be isolated and transferred to the quarantine area for extinguishing. Use of this area will only be carried out where safe to do so, or under instruction of the Fire Service.

17. DETECTING FIRES

17.1. Detection systems in use

Staff will be trained to undertake two scheduled fire checks throughout the operational day (start and end of the day).

The site is remotely monitored 24/7 by CCTV and in the event of an intruder or a fire the alarm will be raised with emergency services and nominated site personnel. Remote access for site managers will be installed, which will supplement the monitoring by the external security subcontractor. Representative specification of the cameras utilised is included within Appendix A.

All staff will remain vigilant to monitor for the outbreak of any fires and raise the alarm if there are any fires on site. They will notify the appropriately appointed out of hours contact and emergency services.

18. SUPPRESSING FIRES

18.1. Suppression systems in use

Fire extinguishers are placed strategically on site as well as on all mobile plant used. These are the primary suppression in the event of a fire on site. Given the limited quantities of waste stored at any one time and that all loose tyres are processed and dispatched (as baled tyres) usually within the same day, extinguishers shall be viable as an initial measure to tackle a fire. All fire extinguishers on site are maintained in accordance with manufacturers guidance, and checked as part of daily site inspections. If used an extinguisher is replaced following the fire event.

All site personnel involved with the handling and processing of waste are trained in the use of fire extinguishers.

In the event of a larger scale event, two fire hydrants are located on Moorfield Road (140 m & 160 m approx.) and would be viable for a longer-term strategy.

19. FIREFIGHTING TECHNIQUES

19.1. Initial response

The aim of the initial response is to extinguish a fire in its earliest stage before it can take hold, using the in-situ fire extinguishers which are placed at key locations. Site staff are aware of locations for fire extinguishers.

19.2. Transfer and storage area

Upon detection, only if safe, the burning or smouldering material will be extinguished in-situ, by trained staff members using the extinguishers.

If it is not safe to fight the fire in-situ, waste will be isolated from the rest of the pile and moved to the quarantine area for extinguishing.

If it is not safe to tackle the fire, the Fire Service will be called, and material left within the storage areas.

19.3. Fire and Rescue Service Strategies

In the event of a fire, the Fire Service has one access point to the site (see Site Layout and Plan K18.19~20~004, and the FRS Access Route Plan K18.19~20~005) and may consider the following strategies.

Early Intervention

- Apply water or use extinguishers to specific burning areas of small, localised fires.
- Isolate and transfer material to the quarantine area for spreading out and cooling with water.

Fire extinguishers are accessible across the site.

19.4. Out of Hours

Should a fire be discovered out of hours via CCTV monitoring the Fire Service shall be notified as well as nominated site personnel. Remote access of cameras is available for site managers, and they will also be notified through this system, as well as from the external security company.

20. WATER SUPPLIES

20.1. Available Water Supply

Site has access to two hydrants in the locality as discussed in the section above, the nearest fire hydrant is shown in the Site Layout and Drainage Plan K18.19~20~004; 006. These hydrants will be available as a strategy for a larger scale event. They are maintained by the Fire Service and the local water company, so the fire hydrant both conforms to, and is maintained in accordance with, all relevant standards (BS 750 or equivalent).

The water will be supplied from the nearest fire hydrant see plan: K18.19~20~004 Site Layout. The fire hydrant is maintained by the Surrey Fire and Rescue Service.

20.2. Water supply calculation

Table 5: Water Supply Calculation

A	B	C	D	
MAXIMUM PILE VOLUME (m^3)	**WATER SUPPLY NEEDED (L/min)**	**WATER SUPPLY NEEDED OVER 3 HOURS (L)**	**TOTAL WATER AVAILABLE ON SITE (L)**	**SUFFICIENT SUPPLY?**
See Table 4	Based on 1200l/m^3 - Pile volume (A) x 6.67L	(B x 180 minutes)	From hydrant (See Table 6 below)	Is D greater than C
192	1,280	230,515	720,000	**YES**

REQUIRED	**VOLUME OF WATER REQUIRED**	**230 m^3**
	MAXIMUM PILE SIZE 192 m^3	***FROM EA FPP GUIDANCE*** • 2000 litres x 180 minutes = 360,000 litres per 300m^3 • 360,000 litres/300m^3 = 1,200 litres / m^3 of waste • 1200 litres / 180 minutes = 6.67 litres / m^3 / minute ***SITE SPECIFIC REQUIREMENT*** Based on largest pile size. 192 m^3 x 1200 litres = 230,400 litres / 1000 = 230 **m^3**
	Fire Hydrant	*Predicted supply (given 100 mm diameter).* • 2000 l/min x 180 minutes =360,000 *litres* • 360,000 x 2 (two hydrants) = 720,000 litres • *720,000 litres/ 1000 = 720 m^3*
TOTAL AVAILABLE		**720 m^3**

21. MANAGING FIRE WATER

21.1. Containing the Run-Off from Fire Water

The site benefits from an impermeable surface and sealed drainage system. The drainage infrastructure is demonstrated on the plan (see Appendix B). The impermeable surface covering the indicated storage areas on site (Site Layout Plan, K18.19~20~004) is facilitated with ACO drainage channels which run into the surface water drainage system detailed within plan (Appendix B). The fall of the site causes surface water to flow into these ACO drains before moving through the surface water system.

In the event in which water needs to be contained to prevent contamination, drainage covers, and a containment barrier will be deployed.

Representative images of the drainage covers and containment barriers that may be utilised are shown in the images below. These measures shall be stored together within a designated area to ensure quick deployment when required. The containment barrier can be erected by two people in a maximum of 10 minutes, whilst drainage covers can be set out by a single individual. The containment barrier shall be set out across the entrance to site, approximately 0.65 m high. Drainage covers shall be placed across those ACO drains indicated in the Drainage Plan (K18.19~20~006).

Based on the calculations provided in Section 20 to determine firewater requirements, the anticipated volume of water required in accordance with EA FPP guidance is 201,600 litres.

Whilst it is likely that a significant proportion of water used to fight the fire will evaporate, containment calculations are presented to account for containment of the total volume.

TABLE 8 FIRE WATER CONTAINMENT CAPACITIES

FIRE WATER CONTAINMENT	
Maximum volume of fire water run-off (based on pile sizes)	230 m^3
Surface area available for fire water storage	1946 m^2
Total Catchment volume	1946 m^2 X 0.2 m = 389 **m**^{3}

22. DURING AND AFTER AN INCIDENT

22.1. Dealing with issues during a fire

During a fire, operations shall cease, and all incoming waste is diverted from the site.

Site staff will only engage in active firefighting if safe to do so. The Fire Rescue Service shall be contacted and presented with FPP on arrival.

22.2. Notifying residents and businesses

In the event of smoke emissions becoming an issue the operator will inform neighbouring residents and businesses through the city council website and their social media channels.

The Environment Agency shall be contacted as per permit requirements on the Environment Agency Incident Hotline: 0800 80 70 60.

22.3. Clearing and decontamination after a fire

After an incident a third-party contractor will be instructed to clear any residue (liquid or solid), decontaminate areas onsite impacted by a fire, and desilt the interceptor.

22.4. Making the site operational after a fire

After an incident the site shall be inspected fully for any signs of damage to infrastructure and where appropriate fixes made. Site will not reopen until this has taken place.

The root cause of the fire will be established, and all site procedures and this document will be reviewed, and updated where necessary. Staff will be training will be undertaken to embed lessons learnt, and ensure any changes in practices and operation are clearly understood.

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