SHERBOURNE RECYCLING

FIRE PREVENTION PLAN

April 2023

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Version	Amendment	Approved by:	Date
1	NA	L Shannon	June 2022
2	Amended to reflect updated detail provided by Clegg, specifically Sections 6 and 10	L Shannon	April 2023

1. Introduction

1.1. Summary

1.2. This document has been prepared by Sherbourne Recycling Limited (SRL) for the operation of their Materials Recycling Facility (MRF) located at the Sherbourne Resource Park in Coventry.

1.3. Sherbourne Recycling Limited (SRL) is a waste management company specialising in the treatment of recyclate arising from household waste collections. The company was established in February 2021 to design, build and operate a state of the art facility on behalf of its Shareholders, made up of eight local authorities based in the West Midlands.

1.4. This document provides the structured framework and approach that SRL will take to effectively preventing potential fire associated with the processing and storage operations at the site manage site operations. Ensuring the site is operated in a safe, efficient and environmentally complaint manner.

1.5. The Fire Prevention Plan (FPP) has been developed to include an assessment of fire risk on site and the measures in place to prevent, detect, suppress, mitigate and contain fires.

1.6. This FPP document (referred hereafter as the 'FPP') has been produced in accordance with the updated Environment Agency's FPP Guidance (published 29th July 2016 and updated 11th January 2021)

1.7. Structure of the Fire Prevention Plan

1.8. This FPP has been structured in accordance with the EA FPP Guidance and considers the following relevant aspects of the facility;

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

1.9. Status of the Fire Prevention Plan

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

1.11. The FPP is a standalone document and is/will be made available to all employee and relevant contractors and visitors to the site.

2. Site Background

2.1. **Site location and background**

2.2. The site shall consist of a MRF designed with the flexibility to adapt as demands of the sector grow and evolve and as such the permission submitted is based on the MRF receiving up to a total of 250,000 tonnes of feedstock per annum.

2.3. Processing activities on site shall be limited to sorting, separation, screening, baling and storage.

2.4. Waste of a similar type will be deposited by RCV's and HGV's directly inside the building into designated bays within the reception hall (See Item 1, Annex A) where it will be temporarily stored prior to processing, with an expected standard processing time of 1 week. Maximum storage is anticipated to be no longer than 14 days.

2.5. All activities, including processing and storage of waste prior to onward transportation will be undertaken within the building.

2.6. The site is located at the Sherbourne Resource Park 255 London Road, Coventry, CV5 3AR.

2.7. The Site is centred at National Grid reference SP 34857 77570 and comprises land north east of London Road, approximately 2km from the centre of Coventry. The residential area of Whitley Village is approximately 0.5km at its closest point, to the south of the site beyond the A4082 road. The Site is approximately 4.4ha in size.

2.8. The site layout and location can be found in Annex A.

2.9. Prior to construction the site was overgrown with shrub and trees. It was formerly classified as allotments but de-registered in 2010 in support of Coventry City Council's (CCC) Local Plan 2017 (CCCLP), specifically waste management site allocation (Policy EM8). The adoption of the CCCLP in 2017 formally removed the site from the Green Belt in order to facilitate the use of the site for a waste facility, as identified by Policy GB1 of the Local Plan and supporting Policies Map (https://www.coventry.gov.uk/localplan/).

2.10. The site lies to the south of the west coast mainline railway line that runs east to west through Coventry. Disused allotments sit between the site and the railway line. Immediately adjacent to the site to the north west and west are the existing Coventry and Solihull Waste Disposal Company (CSWDC) Energy from Waste (EfW) Plant and Household Waste Recycling Centre (HWRC). The Humber Road allotments, which are still active, sit to the east of the site and to the east lies the CCC Whitley Depot. Further to the east and south east lies the Seven Stars Industrial Estate.

2.11. The site is accessible via a designated road (approximately 200metres) through CCC's Whitley Depot operational site, accessed off the A46 London Road to the south on the site entrance. The designated access road design incorporates a two-way route whereby two HGVs are able to pass at any point along the road.

2.12. Vehicles will enter the site along the south western boundary. RCV/HGV waiting areas are provided close to the entrance to the site next to the weighbridge and site office building, where facilities for drivers will be provided.

2.13. The site office is strategically positioned to control vehicle movements into and out of the site (via a controlled barrier system) and the weighbridges.

2.14. Proximately to Water Course

2.15. The site is shown on the Environment Agency's Flood Map for Planning to be located wholly within Flood Zone 1 (See Item 4 Flood Risk Assessment, Annex A). Therefore is considered an area of low probability with regards to flooding (land assessed as having a less than 1 in 1,000 annual probability of flooding (<0.1%)

2.16. There are no watercourses or bodies of water within the site area. The closest watercourse to the site is the River Sherbourne, a Main River, located approximately 20m to the west of the site boundary at its closest point.

2.17. The River Sherbourne flows southwards to ultimately join the River Sher, approximately 2km to the south of the site. The River Sherbourne, whilst located close to the site, is situated several metres lower than the site entrance with London Road (A46). Based on LIDAR data, the banks of the watercourse are situated at an elevation of approximately 67mAOD in comparison to an elevation of approximately 72mAOD at the site entrance

2.18. Although the site is not considered to be highly sensitive in terms of proximity, the facility has been designed to prevent and mitigate the offsite impacts associated with fire as far as practically possible.

2.19. Potentially Combustible Wastes

2.20. At any time, there may be the following types of combustible waste present at the facility:

- Plastics;

- Fibres;
- Metals;
- Residual;
- Aerosols and canisters;
- Batteries;
- WEEE; and
- Mixed waste containing any combustible waste

2.21. In addition to the waste streams outlined above, there will also be a small amount of diesel and oil stored onsite for services and utilisation of equipment. This is stored within self-bunded containers, within the workshop and outside of the building and away from any flammable wastes, flammable materials or sources of ignition.

2.22. Operation of the fire protection system on site will include the use of 5 x diesel operated pumps located in the Sprinkler Pump Room (See Item 6, Annex A). Proper routines will be established, including regular staff briefings regarding the process of refilling the sprinkler diesel pump day tank from the bulk storage barrels. All activities will be carried out in accordance with specific codes requirements, industry standards and operational and maintenance manuals.

2.23. Any controlled substances necessary for servicing the facility will be a locked COSHH cabinet located within the maintenance workshop. Access to items stored within the COSHH cabinet will be restricted to named individuals who have undertaken all necessary training, and controlled by the COSHH log, which will be monitored and maintained by the maintenance team.

2.24. Gas canisters used by the maintenance team will be stored externally to the building in a locked and labelled cage away from any waste operations. This cage will also be used to house any gas canisters contained within infeed materials until such time that they can be identified and a suitable route for disposal arranged. A log of all canisters within the cage will be monitored and maintained by the maintenance team.

2.25. Rags from the maintenance of equipment will be disposed of in designated metal containers, which will also service office / general wastes. These containers will be stored externally to the building.

2.26. Any non-conforming waste identified during the sorting process will be removed from the general areas of waste storage and processing and kept in a quarantine bay (unless otherwise defined), until such time that the waste can be correctly identified and arrangements made for disposal.

3. Potential Fire Sources

3.1. Table 01 outlines common sources of fire and the measures that SRL will take to reduce the risk.

Table 01: Common Sources of Fire

Source of Fire	Proposed Management Controls	Residual Risk
Arson	The site is protected from intruders through the use of 24/7 CCTV, security gates, a secured perimeter (1.8m palisade fencing surrounding the complete boundary), barrier access control and shared night security services with adjacent operational sites. CCTV will be monitored by an external contractor who will liaise with the management team when the site is unmanned. On site lighting covers the full site, up to and including the site perimeter, and is motion activated. The site will operates a 24/7 CCTV cameras that monitors the building interior, including reception, processing and outfeed halls. Use of metal containers with close fitting locks for storage of chemicals / equipment / waste.	VERY LOW
Plant and equipment	The site will be subject to a regular inspection and maintenance programme which would identify any electrical or mechanical machinery faults which could result in a machinery fire. Mobile Machinery will always be parked a minimum away from waste bays. This will limit the potential for fire spread from machinery to material. All machinery will be visually inspected at the beginning and end of every shift. Machinery will be regularly cleaned to remove any dust, waste etc to ensure that it does not accumulate on moving parts. All relevant machinery on site will have fire protection suppression. All relevant site vehicles will be fitted with fire extinguishers with the potential for sparks regularly being monitored by site employees. When not in use mobile plant and equipment will not be stored within 6m of waste and flammable items.	VERY LOW
Electrical faults including damaged or exposed electrical cables	The risk of damaged or exposed electrical cables is controlled via the regular inspection and maintenance programme. Any electrics on site are fully certified by a qualified electrician, portable items will be PAT tested once per year and a permit to work will be issued by engineering manager for use of items are identified as necessary. All extension cables are to be unwound before use to prevent overheating.	VERY LOW
Discarded smoking materials	All SRL employees and contractors will be informed of the Company smoking policy during their site induction. A signed copy will be held on record.	VERY LOW

	Smoking (including use of vapes) will only allowed to take place at the designated smoking location outside of the building where all waste activities take place. Vapes will not be permitted to be carried on any person in operational areas. Any employee/contractor found smoking in a non-designated area on site will be subject to a disciplinary investigation / immediate dismissal. No smoking or discarded smoking paraphernalia will be permitted within 6m of waste and flammable items. Ad-hoc visitors will not be permitted to smoke on site, including in their own vehicles.	
Hot works	Hot works are defined as gas cutting, welding and grinding. Where hot works are carried out on site, a permit to work will be issued and details recorded. All forms will be completed electronically and saved on the Company Portal and filled for 3 years. The activity will be very closely managed and with the presence of a fire watchmen for at least 1 hour following cessation of the hot works. Where possible hot works will be undertaken in the maintenance workshop. Gas canisters will be stored outside in a locked and labelled cage away from any waste operations. Where hot works are being undertaken in an operational area all waste will be removed from the area to a distance of 6m where practicable. A fire watch will be put in place throughout the activity and fire extinguishers will be placed close to the activity to enable any fire to be quickly extinguished. Once the hot works have been completed the equipment will be removed from the area and stored within the maintenance area, the fire watch will stay in place for a further hour with the fire extinguishers still in the area. Hot works equipment will be stored within the maintenance workshop.	VERY LOW
Hot exhausts and plant	The site has a regular inspection and maintenance programme which identifies any signs of a fire caused by dust settling on any hot exhausts and engine parts. This is carried via visual checks throughout the day and the Walkover Inspection as well as at the end of the working day. Machinery is regularly cleaned to remove any dust, waste etc to ensure that it does not accumulate on moving parts. Mobile plant that is not in use it will be stored away from combustible waste.	VERY LOW

	When not in use mobile plant and equipment will not be stored within 6m of waste and flammable items.	
Ignition sources	Ignition sources including welding equipment will be stored well away from combustible wastes within the workshop. If hot works are required within the waste processing area a hot works permit must be issued via the maintenance team and an active fire watch must be in place. Hot works must be completed 1 hour before the site closes and a fire watch put in place with extinguishing equipment. Where hot works are being undertaken in an operational area all waste will be removed from the area to a distance of 6m where practicable. A fire watch will be put in place throughout the activity and fire extinguishers will be placed close to the activity to enable any fire to be quickly extinguished. Once the hot works have been completed the equipment is removed from the area and the fire watch will stay in place for a further hour with the fire extinguishers still in the area.	VERY LOW
Spills and leaks	Any fuel stored on site will be within a fully bunded tank to ensure any leaks and spillages are contained. Spill kits will be retained across the site for use in the event of any localised leaks or spillages. All operational employees will be trained on how to use the spill kit as well as the procedures to carry out in the event of a spillage. All waste bays, containers and storage facilities on site will be monitored on a regular basis to ensure no spillages of contaminated waste are taking place. All COSHH products are stored within a locked COSHH cabinet.	VERY LOW
Build-up of loose combustible waste and dust	The site has a regular inspection and maintenance programme which will identify any build-up of wastes and dust. Machinery will regularly cleaned to remove any dust, waste etc to ensure that it does not accumulate on moving parts. The site will be inspected regularly throughout the day with a final check undertaken half an hour after the end of each shift by shift supervisors in accordance with the sites inspection procedure. If any dust, waste etc is identified then the area will be immediately cleaned (swept, /cleaned etc). All inspections are logged on the Site Walkover Inspection Form. All forms will be completed electronically and saved on the Company Portal.	VERY LOW
Dust Ventilation Plant	Provision of water spray system within the dust bag filter actuated via spark detection sensor/ Regular exchange of bins and housekeeping in vicinity of bins.	LOW RISK

	Ductwork and extraction fan cleaning in accordance with manufacturers guidance. Cleaning to be undertaken using anti-static tools and workwear. All electrical connections installed and maintained in accordance to BS 7671 and checked regularly.	
Mechanical Ventilation Plant	Regular replacement of air filters within air handling units, as per manufacturers recommendation. Cleaning of ventilation grilles, ductwork and air handling unit on a bi-annual basis. Cleaning to be undertaken using anti-static tools and workwear.	LOW RISK
Reactions between wastes	All waste is accepted on site in accordance with the sites Environmental Management System. This ensures that no incompatible or unstable wastes brought into site and quarantined until suitable alternative disposal is arranged.	VERY LOW
Hot loads	SRL will not accept hot loads. The sites stringent waste acceptance procedures should ensure the rejection and dampening down of any hot loads, or removal to the quarantine area to ensure no further environmental damage elsewhere. Nevertheless, in the unlikely event a hot load is accepted onsite it would be immediately moved outside of the building to prevent combustion and allow material to cool.	VERY LOW
Fire general	At the end of each working day a watch will stay on site for an hour after all waste operations have finished. Once the watch has left the site the site will be monitored via the CCTV camera system and night / weekend security. CCTV will be available for remote monitoring.	VERY LOW
Chemicals and fluids	All chemicals and fluids such as lubricating oils and greases will be either stored within the COSHH cabinet along with aerosols and paints or on a bunded drip tray within the maintenance area. The area will be kept free from ignition sources and equipped with dry powder fire extinguishers.	VERY LOW
Lithium Ion batteries	The company will work with suppliers of contract waste to promote the exclusion of batteries from wastes.	LOW
Offices	Overheating electrical equipment, incorrect use of cable extensions, faulty connections. All equipment to be PAC tested on a regular basis, office set up by ICT support services	VERY LOW
Hot Weather	During hot weather waste can heat up, however the site is able to mitigate this in the following ways: All waste is stored inside a building meaning it is shaded from direct sunlight where practicable;	LOW RISK

	Any potential build-up of heat within the waste can be released by always treating the waste that has been on site longest first (first in first out policy); Always minimising storage times to as a short a period as possible; Ensuring there are no reflective surfaces reflecting light onto the waste piles; and Roller shutter doors that can be opened to allow cooler air to enter the building	
Lightning Strike	Lightning protection installation.	LOW RISK
Incoming Vehicle Fires	Vehicles to be visually inspected upon arrival on site for obvious external signs of smoke. Tipping in Quarantine Bay where any suspicion relating to waste collected raised.	LOW RISK
Waste Compactors	All conveyors leading to containers to be cleared of all materials at regular intervals. Good housekeeping to keep any spillage to a minimum. To be located a minimum of 2metres from the building façade. All electrical connections installed and maintained in accordance to BS 7671 and checked regularly.	LOW RISK

4. Prevention Measures

4.1. Fire Watch

4.2. Due to the potential for fire on site a fire watch will be required to be present during certain activities, both planned and unplanned, such as repairs via hot works.

Table 02: Fire Watch Procedures

Activity	Fire Watch Specifics	When fire watch required
Use of mobile plant creating hot exhausts / lithium battery over heating	All employees will be trained to spot sources of fire and associated activities as part of induction / on-going annual training. All employees will be aware of the location of closest fire extinguisher.	At all times
Hot works	Appointed person to monitor the activity and have a fire extinguisher to hand.	During the hot works and after use for 1 hour

	The Fire watch cannot be the person carrying out the activity.	
Waste Treatment	All employees will be trained to spot sources of fire and associated activities as part of induction / on-going annual training. All employees will be aware of the location of closest fire extinguisher.	At all times
Non-operational hours	Use of Flame detectors to monitor for the detection of fire linked to alert via mobile app person in charge during out of hours working. Use of CCTV to actively monitor the site overall, both inside and outside of the building.	All non-operational periods

4.3. Waste Storage

4.4. All waste will be contained within bays. Each of the bays will be constructed from reinforced pre-casted concrete panels, and designed to contain and encourage flow of any moisture or liquids to the drainage system.

4.5. The reception hall will consist of 9 bays for the reception of dry mixed recyclate and a single bay for non-conformance waste and material quarantine.

4.6. The process hall will consist of 3 glass bays.

4.7. The outfeed hall will include 10 bays for the storage of separated baled wastes.

4.8. Details of bay dimensions and storage capacities are details in the Tables below.

4.9. All waste accepted on site will be loose.

4.10. With the exception of residual waste and glass all processed material will be bale and stored in the outfeed hall in material specific bays.

4.11. Bay walls will be sealed and have a fire resistance period of at least 120 minutes to allow the waste to be isolated.

4.12. All concrete blocks utilised in the walls are Class A1 fire resistant in accordance with Clause 4.3.4.4 of BS-EN 13369– 'Common Rules for precast concrete products'.

4.13. Structural concrete are specified in accordance with BS EN 1992, BS EN 13670, BS EN 206 and BS 8500.

4.14. Reinforcement for structural reinforced concrete complies with BS 4449 Steel for the reinforcement of concrete; and BS 8666 Scheduling, dimensioning, bending and cutting of steel reinforcement for concrete.

4.15. Welded wire fabric complies with BS 4482 Steel wire for the reinforcement of concrete products; and BS 4483 Steel fabric for the reinforcement of concrete.

Table 03: Storage Bays

Hall	No of bays	Waste type	Storage	Maximum Storage Time	Fire Risk & Key control measure
Reception	9	DMR	Loose	1 month	Low Risk
Reception	1	Non-conformance	Loose	1 week	Low Risk
Process	3	Glass	Loose	1 week	Low Risk
Outfeed	10	OCC	Baled	1 month	Low Risk

		News and Pams Mixed paper PET bottles HDPE Bottles Mixed plastic bottles Steel cans Aluminium cans			
Exterior	NA	Residual	Compactor	1 day	Low Risk

Table 04: Bay Dimensions

Hall	Bay	Width	Depth	Height	M³
		(m)			(m³)
Outfeed	1	26.28	3.08	5.00	323.77
	2	8.74	12.60	5.00	440.50
	3	7.97	12.60	5.00	401.69
	4	8.77	12.60	5.00	442.01
	5	14.88	7.53	5.00	448.19
	6	7.51	7.48	5.00	224.73
	7	12.15	13.10	5.00	636.66
	8	10.85	13.10	5.00	568.75
	9	10.68	13.10	5.00	559.37
	10	11.36	12.53	5.00	569.36
Reception	1	8.64	17.63	5.00	609.01
	2	8.59	17.63	5.00	605.49
	3	8.59	17.63	5.00	605.49
	4	8.61	17.63	5.00	607.25
	5	6.71	19.56	5.00	525.17
	6	8.64	17.14	5.00	592.32
	7	8.59	17.14	5.00	588.90
	8	8.59	17.14	5.00	588.90
	9	8.61	17.14	5.00	590.61
	10	9.57	19.88	5.00	761.32
Glass	1	5.00	9	5.00	180
	2	5.00	9	5.00	180
	3	5.00	9	5.00	180

4.16. Waste Acceptance

4.17. The site will operate a 'first in first out' policy and regularly carry out full stock rotation. Regular site inspections ensure that freeboard space is maintained and piles are managed correctly.

4.18. The site initially intends to operate initially at 175ktpa over 2 shifts, operating between 06:00 and 22:00 Monday to Friday and 07:00 – 12:00 Saturdays. The processing equipment has the capacity to operate at 250kpta through the extension of operating hours to 24/7 activities Monday to Sunday.

4.19. Waste of a similar type will be deposited by RCV's and HGV's directly inside the building into designated bays within the reception hall where it will be temporarily stored prior to processing, with an expected standard processing time of 1 week. Maximum storage is anticipated to be no longer than 14 days.

4.20. Seasonal variations in materials will be monitored by the site using the sites tracking system and tonnages. Should the site near capacity steps will be taken to stop / delay further deliveries.

4.21. Waste bay details will be attached to the weighbridge ticket for tracking.

4.22. In the event that material requires storage for longer than 3 months, SRL will rotate stock piles on a monthly basis and monitor temperatures within the waste (as outlined below).

4.23. Storage times of processed material will be kept to a minimum.

4.24. At any point there will be no ignition sources stored or allowed within 6m of any waste piles unless for operational reasons, this includes:

- Smoking
- Hot Exhausts
- Hot works

4.25. Push Walls

4.26. Cast in situ concrete push walls are designed and constructed to be independent to the building frame.

4.27. Push walls are constructed to a height of 5m with a 1m high steel plate. In the reception hall there greedy boards are fixed to the top of the wall to prevent waste materials spilling over the top of the push wall.

4.28. The push walls are designed to accommodate the static loads imposed by the waste mass and the dynamic loading applied by the operational plant and equipment.

4.29. All exposed formed concrete finishes are in accordance with BS EN 13670 and the National Structural Concrete Specification.

4.30. Waste within the bays will always be stored to allow a 'freeboard' space of at least 1m at the top of the bay. This will remain clear at all times to prevent the potential spread of fire over the top of the walls. The maximum height of any stored waste will be 4metres.

4.31. Quarantine Area

4.32. The sites quarantine area will be vacant at all times unless in use. The location of the quarantine area will be in Bay 10 in the Reception Hall The bays will be able to hold a maximum of 569m³, stored to a height of 4m. The dimensions of the quarantine area are 12.53m (L) x 11.36m (W) x 5.00m (H).

4.33. Waste will be removed to the quarantine area using the front loader handling machine, this is a safe way of transporting hot waste to the quarantine area without endangering employee personnel.

4.34. The quarantine area will be made out of pre-cast push walls and have a fire resistance period of at least two hours to allow the waste to be isolated.

4.35. All concrete blocks utilised in the walls are Class A1 fire resistant in accordance with Clause 4.3.4.4 of BS-EN 13369– 'Common Rules for precast concrete products.

4.36. The quarantine area is separated with a wall around it from waste storage, treatment and ignition sources.

4.37. Temperature Control

4.38. Temperature of the waste piles will be controlled through a number of measures.

4.39. Visual inspection of stock piles for sign of smoke or residual heat will be carried out throughout the operational day by trained employees working in the reception/outfeed halls. In addition, a member of the management team will carry out a visual inspection of the whole site daily in accordance with Site Walkover Inspection to ensure that the site is being managed correctly.

4.40. The loading shovel operator in the reception hall will routinely turn stockpiles to aid detection of hotspots and moisture levels where waste is not processed within 1 week of receipt.

4.41. In the event that hotspots are detected waste will be transported in a loading shovel bucket to the quarantine area where it can be spread out and dampened down.

4.42. All employee will undergo specific fire response training including the use of operational handling machines, fire extinguishers and hoses. This training will be site specific and provided to all site employee. This training will be provided by a suitably qualified fire-fighting professional and refresher training will be undertaken every 6 months.

4.43. If a flame is detected within these two areas, employees and the Senior Management Team will instantly be notified.

4.44. **Waste Tracking**

4.45. The company employs a system of monitoring waste through puts and storage times.

4.46. As the feedstock is consistent it is processed based on its age. The waste that has been stored on site for longest period of time is the waste that is processed first. This minimises the length of time that waste is stored on the site and reduce the potential for heating.

5. Building Construction

5.1. The Building is constructed from a steel framework system, with internal masonry brickwork and external wall and roof cladding.

5.2. All exposed steelwork is protected against structural damage caused by impact and/or heat (fire) through the application of intumescent paint or encasement within concrete.

5.3. All penetrations through walls are protected from fire spread through the use of fast acting doors and deluge systems.

5.4. The structural fire resistance of the building is 90 minutes in accordance with BS 9999, increased to 120 minutes for elements of structure which interface with the 120-minute rated compartment walls.

5.5. Compartmentation is provided between the main uses in the building. Fire resistant construction measures are applied to specific areas with this building in accordance with BS 9999.

5.6. Table 05 outlines fire resistance between areas detached elsewhere in Section 5 of this document.

Table 05: Fire Resistance

Room	Fire Resistance (mins) and Guidance Applied
Within Office	60/60/60
Compartment wall between Office and Outfeed and Process Hall	120/120/120
Waste Storage Area	120/120/120
Fuel Storage Spaces	120/120/120
Transformer Room for equipment above low voltage	120/120/120
Protected Stair	60/60/60
Workshop	120/120/120
MCC Rom	120/120/120
Compressor Room	120/120/120
Welfare	30/30/30

5.7. **Fire Walls**

5.8. There is a full height wall with a minimum two-hour fire rating constructed between the Reception Hall and the Process Hall, between the Process Hall and the Outfeed Hall and between the Process and Outfeed Halls Offices.

5.9. **Workshop**

5.10. Constructed from brickwork to ensure a minimum 2-hour fire rating is achieved.

5.11. **MCC and Compressor Rooms**

5.12. The MCC room includes ventilation and air conditioning and minimum 2-hour fire rating. The MCC Room also has a separate fire door with a minimum 2-hour fire rating.

5.13. The MCC room incorporated a gas fire suppression system designed to BS-EN 15004. Coverage includes beneath raised floors and above false ceiling containing cables.

5.14. The Compressor room includes a minimum 2-hour fire rating.

5.15. **Cladding**

5.16. **The external material used in the MRF building is a trapezoidal composite wall and** roof **cladding system.**

6. Fire Detection and Protection

6.1. **Building Protection**

6.2. The building is protected by an automatic fire fighting sprinkler system throughout. This system is designed and installed to the National Fire Protection Association NFPA 13 Standard for sprinklers and NFPA 15 for water spray fixed system for fire protection.

6.3. The sprinkler system will limit the temperature of the fire so to help protect the structural steel frame for the softening effect due to heat. In addition it will limit the temperature of the smoke being extracted to within the operational temperature of the ventilation fans.

6.4. An automatic fire-fighting gas suppression system is provided to Electrical, Transformer, UPS, MCC and the Process Control Rooms, in accordance with BS EN 15004-1, in lieu of a sprinkler system to water sensitive equipment. The system is a total flooring inert gas type, with the suppression system designed to provide a uniform concentration within the protected area.

6.5. An in-cabinet Firetrace system is installed within other major control panels that are located outside of the rooms protected with gas suppression.

6.6. Hose reels with semi-rigid hoses are installed in cabinets throughout the site, designed to BS 671-1: 2012 Fixed Fire-fighting Systems.

6.7. The site has an external fire hydrant ring main with 8 external fire hydrants located at 90m intervals.

6.8. Water supply to systems is controlled by an external pumphouse (5 x diesel pumps) and on site water supply and a dedicated mains connection to fill tanks separate from the main potable water supply.

6.9. Portable fire extinguishers will be located in all areas within the facility, offices, plant room and other ancillary areas.

Table 06: Building Protection Summary

System	Area covered
• Sprinkler system with aspirating detection and alarm system • Sprinkler systems operated via value manifolds and controls located across the site, primarily external but also within the Process Hall	• Halls – the facility is made up of 3 distinct halls (Reception, Process and Outfeed) • Main offices (purpose built within Outfeed Hall) including server room
• Water cannons • Secondary protection to roof level sprinkler system	• 3 x cannons located in the Reception Hall - automatic and remote (from the weighbridge) operation • Targeting recyclate reception storage bays
• Gas suppression system	• All electrical rooms (MCC, transformer, UPS, LV, gas suppression control) • Process Control Room (located in Process Hall)
• Deluge system/fire shutters	• Building penetrations between various Halls
• Fire hose reels	• Located in key areas throughout the various Halls
• Fire extinguishers	• Weighbridge gate house • All offices (main and additional control rooms) • Picking stations (within the Process Hall)

	• All electrical rooms (MCC, transformer, UPS, LV, gas suppression control) • Located throughout the Halls and across the process plant

6.10. Processing Equipment Protection

6.11. The processing equipment is protected by an automatic fire fighting sprinkler and deluge systems with heat and IR flame detection.

6.12. Fire detection and suppression systems installed on and around processing equipment to comply with Chubb and NFPA guidance

Table 06: Processing Plant Protection Summary

System	Area covered
• Deluge systems	• High risk areas i.e. trommels, ballistic separators, star screens, bunkers and balers
• Sprinkler system operated by detection • Sprinkler systems operated via value manifolds and controls located in plant rooms / enclosures across the site, primarily external, but also within the Process Hall	• Below/covered conveyors, picking stations and all other areas not covered by deluge or roof sprinkler system
• Heat and IR flame detection	• Across processing equipment

6.13. Building Detection and Alarm

6.14. The automatic detection and alarm system interfaces to shutdown processing equipment and other items of the building service plant and equipment from operating.

6.15. Visual alarm signals also operate in any high noise areas to provide sufficient warnings to personnel wearing ear defenders.

6.16. Escape Routes

6.17. Safe escape routes provided through the facility including process plant to comply with building regulations and BS:9999, as details in diagrams 01, 02 and 03.

6.18. The employee muster point is located away from the main building in the carpark area.

6.19. Weighbridge gatehouse to be used as control point in an emergency evacuation. Repeater panels, canon control and access to all CCTV all available from the gatehouse.

Diagram 01: Travel Distances and Escape Routes in the Outfeed Hall and Offices

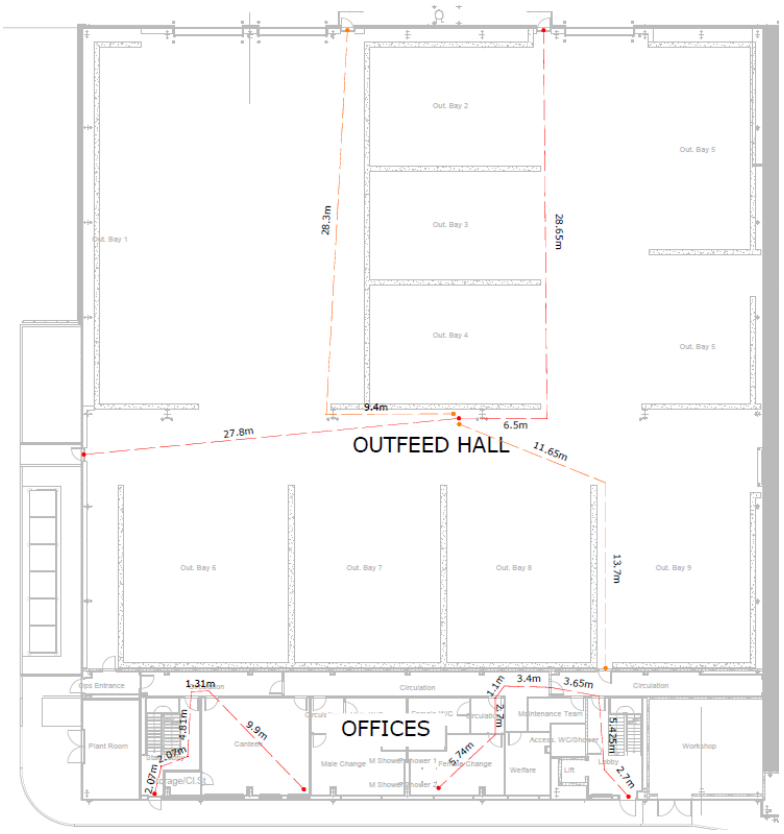


Diagram 02: Travel Distances and Escape Routes in the Reception Hall

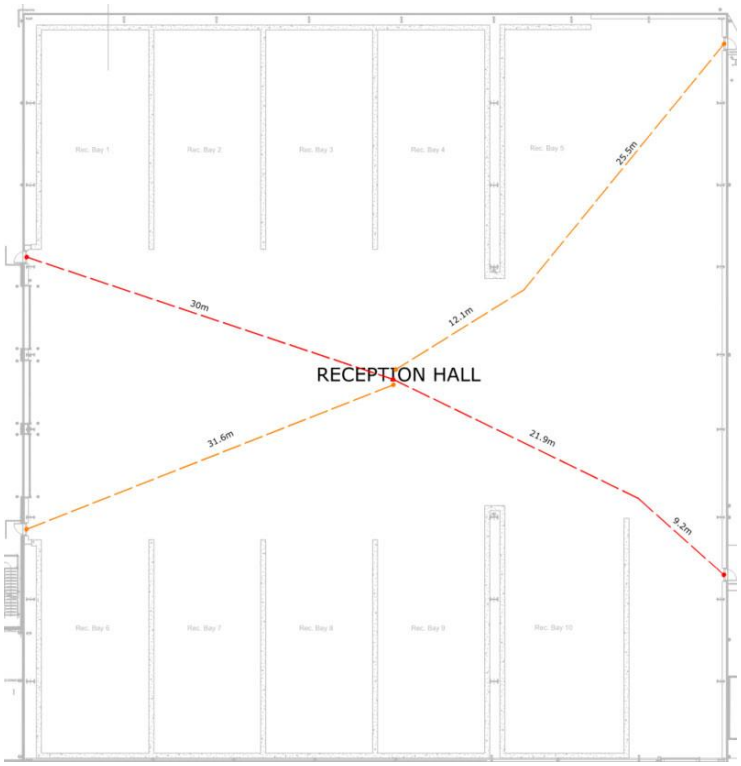
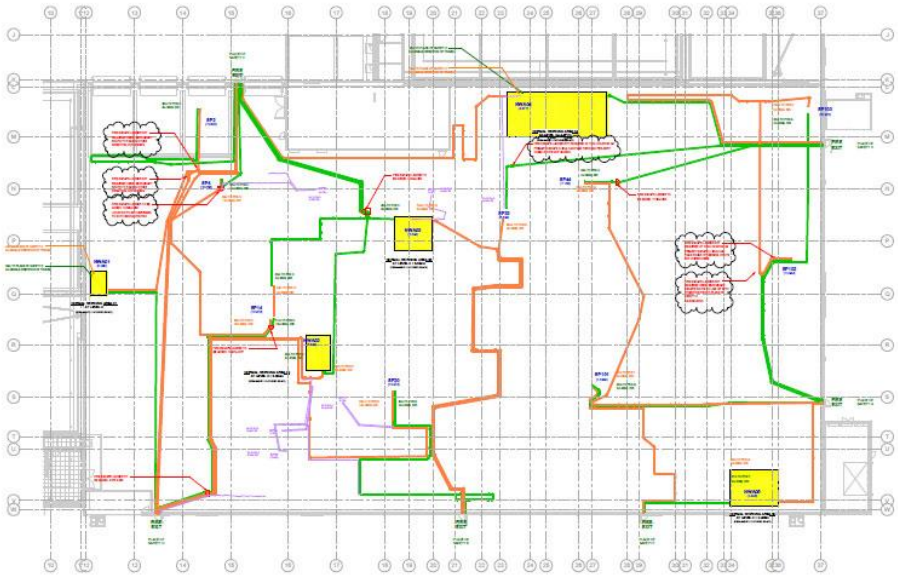


Diagram 03: Travel Distances and Escape Routes in the Process Hall



6.20. Diagram 04 details final doors used as final exit points. Electronic systems used for security / control purposes will be interfaced with the alarm and detection system to disengage when a fire is detected.

Diagram 04: Escape Points

6.21. Emergency escape lighting / internally illuminated signage and fire alarm systems utilise internal batteries to provide back-up power.

7. Maintenance and inspection

7.1. All plant and equipment will be maintained according to the manufacturers or supplier's recommendations as per OEM manuals, bespoke Computerised Maintenance Management System (CMMS) will be utilised to manage the Plant Preventative Maintenance schedules.

7.2. PPM schedules will be developed in line with the OEM manuals for all the equipment.

7.3. In line with maintenance activities a schedule for maintenance cleaning will be in place and followed in line with most stringent manufacturer's requirements.

7.4. Each production day will finish with a dedicated maintenance shift.

7.5. Annual plans will be maintained for planned servicing and calibration in line with OEM requested intervals and recorded and evidenced.

7.6. All training associated with equipment maintenance will be subject to Standard Operating Procedures (SOPs) in line with the Original Equipment Manufacturer (OEM) manuals.

8. Fire Fighting Techniques

8.1. The site has been designed to allow active firefighting if required, however the sites suppression system is designed to detect and extinguish any fire within the building.

8.2. An automatic fire detection and alarm system category L1 / P1 has been designed in accordance to BS 5839: 2017 to all areas of the building. This satisfies both the property protection and life safety requirements. The alarm from the facility will incorporate remote signalling to an alarm receiving centre.

8.3. Upon identifying or being made aware of a fire, the manager will raise the alarm, alert all present on site to the fire and its location and alert emergency services. All emergency contacts to be setup for the WMP folder.

8.4. In the event of a fire in the reception hall remote activated cannons will be used to control the fire. The cannons will be operated from outside of the process hall, which will be evacuated. Employee will only tackle the fire using the fire extinguishers and onsite hose points if:

8.5. It is safe to do so;

- The fire is small and not spreading to other areas;
- Escaping the area is possible by backing up to the nearest exit; and
- The fire extinguisher is in working condition and personnel are trained to use it.

8.6. In the event of a small fire:

- Employee will remove burning material using the sites mobile plant to the quarantine area.
- Trained employee will then use on site hoses and extinguishers to extinguish the fire.

8.7. In the event of a developed fire, employee are to await the Fire and Rescue Service (FRS), who would then take the appropriate actions. All personnel working on site will be provided training in the FPP and all associated procedures and controls. EA training record shall be maintained onsite.

8.8. The FPP training will be provided to all new starters and temporary employees working at the site. FPP refresher training will be carried out to all personnel at least annually.

8.9. The access route and hard standing around the building has been designed to allow for 100% vehicular access of the perimeter.

8.10. The maximum permitted reversing distance required by the fire and rescue service is 20m.

8.11. The route around the building is appropriate for the appliance access, typical minimum requirements are listed below:

- Width between kerbs 3.7m
- Width between gateways 3.1m
- Turning circle between kerbs 16.8m
- Turning circle between walls 19.2m
- Clearance height 3.7m
- Carrying capacity 12.5 tonnes

9. Water Supplies

9.1. Water Supply

9.2. The site has a dedicated mains connection.

9.3. The fire suppression system is fed by 2 purpose built tanks (total volume 1960M³), which is constantly filled with water and is connected to the main water supply.

9.4. In the event that the fire retention tanks are drained the Company will arrange for water to be tankered to site to refill.

9.5. Site Wide Hydrants

9.6. Fire hydrants will be located no more than 90 meters apart.

9.7. The closest external site hydrant is located within Whitley Depot approximately 120m from the site entrance.

9.8. Each fire hydrant is clearly indicated by a plate, fixed nearby in a conspicuous position in accordance with BS 3251. Locations are shown in the Fire Brigade Access Drawing 2159-FB01-B.

10. Managing Fire Water

10.1. The system has been designed to not flood in any rainfall event for up to 100 years return period, including additional 40% capacity to account for changing frequencies/magnitude of events as climate change.

10.2. System Activation

10.3. At the activation of the fire alarm the following sequence of events will occur:

- Penstock 1 in manhole F14 must close;
- Penstock 2 in manhole F14 must open;
- Penstock in manhole S24 must open;
- Penstock in manhole S37 must close; and
- Roller shutter doors are to stop minimum 100mm above ground floor level to allow the sprinkler water to escape the building.

10.4. The total volume of the two sprinkler tank is 1960M³, this represents as discharge of 16,333 l/min for 2 hours.

10.5. Anticipating a 30% evaporation rate as steam or absorption of water by the products within the building there is on site storage at 70% capacity (1372m³) of the total sprinkler tank volume.

10.6. During a fire event the sprinkler system will discharge activating the roller shutter doors to close and the penstocks valves to open/close in sequence as outlined in 10.3.

10.7. If capacity at the ACO channel drains at the roller shutter doors is exceeded, water will overflow to additional channels as identified on the Foul Surface Water Drainage Plan, which will be captured by ACO channels on door thresholds and at the edge of the perimeter access road.

10.8. Water will fill the QMax channels until maximum height is reached, at which point water will begin to fill the Buffer Tank which is designed to accommodate a small fire scenario (10 minutes discharge of the sprinklers).

10.9. The Buffer Tank is designed to accommodate the following in a small fire situation:

- Maximum design discharge peak flow of 14,440 l/min for 10 minutes;
- A hose reel operating at a minimum 1893 l/min for 10 minutes;
- Total storage provided = 163.5 m³

10.10. If water in the tank exceeds capacity the water will flow through the overflow pipe into Attenuation Tanks.

10.11. The penstock on manhole S37 ensures fire water collected by the surface water system cannot be discharged from the site.

10.12. In a major fire situation once the buffer tank volume maximum level has been exceeded water will overflow to the Attenuation Tanks.

10.13. Following a fire emergency the water in the Buffer and Attenuation Tanks will be pumped out using a temporary pump and tankered off site.

10.14. Following a major fire event the entire drainage system will be flushed out and then pumped dry again.

11. During and After an Incident

11.1. **During**

11.2. All drainage will be closed.

11.3. During any fire-fighting or subsequent clear up operations, any incoming wastes will be diverted to an alternative waste processing site.

11.4. All nearby residents, businesses and the Environment Agency will be notified during any firefighting taking place on site. Telephone numbers are stored on site.

11.5. **After**

11.6. Any burnt material will be disposed at an appropriate facility as non-hazardous waste. It is anticipated that the clearing of burnt material will not take long, as the company are confident that any fires will be appropriately controlled and therefore will not result in significant volumes of burnt waste.

11.7. All fire water captured within the holding area and sump will have been removed by tanker.

11.8. Once the burnt material has been cleared off site, site operation can return to normal.

11.9. After any incident the FPP will be reviewed.

12. Fire evacuation

12.1. **Training**

12.2. SRL's Fire Evacuation Procedure will be issued to all employees and contractors as part of their site induction. Included within the training will be details of Fire Officers (and duties) and emergency evacuation protocol. A site walk over will be included in the site induction, including identification of emergency exits, routes and the site fire assembly point.

12.3. SRL will appoint a number of Fire Officers who will received enhanced fire training and hold key responsibilities in the event of a fire / alarm being raised. Duties will include; identification of the potential fire sources, notification to any emergency services as appropriate, co-ordinating building evacuation, and identification of any missing individuals.

12.4. All site visitors will be notified of any planned fire alarm testing upon arrival on site, and safely escorted to the fire evacuation point where an alarm is raised.

12.5. Hardcopies of the Fire Evacuation Procedure will be displayed throughout the building and in the weighbridge/site office, and on the Employee Portal.

12.6. A list of trained Fire Officers will be maintained and displayed alongside the Fire Evacuation Procedure. Details will included names officers, contract details, areas of responsibility a list of on call employee to attend the site in the event of a fire outside of normal operation hours.

12.7. Details of the fire evacuation procedure will be available across the site and form part of the employee induction process.

12.8. Drills and Testing

12.9. As a minimum SRL will twice yearly undertake a fire evacuation drill exercise to ensure all employee know how to safely leave the building and locate the muster point.

12.10. The senior management team will monitor and review the process to understand any successes/failures, and use any identified outcomes to inform changes to procedures, and identify training.

12.11. As a minimum the Fire Evacuation Procedure will be reviewed annually.

12.12. The Fire Shield System will be tested monthly in the following manner to ensure all components are working:

- All pumps will be run for 10 minutes every week
- Weekly visual checks of all components
- IR3 detectors only require inspection at the 6th monthly service

12.13. All checks and tests are to be recorded in the sites fire log book.

12.14. Fire Assembly Point

12.15. The fire assembly point is located in between the weighbridge and main facility, within the car parking areas.

12.16. Travel Distances

12.17. Maximum travel distance limitations include consideration includes all elevated process plant walkways, staircases, working areas and cabins. Use of egress ladders within the process hall maintains maximum travel distances.

12.18. Escape Doors

12.19. The doors used for escape for room or floor areas are not less than 800mm clear width as per BS9999 Section 16.6.1.

12.20. Where there are electronic locking / access control devices for security purposes, escape doors are manually openable in the direction of escape.

12.21. Horizontal Means of Escape

12.22. Where horizontal means of escape are provided to final exit, the final exit door width is not less than 850mm.

12.23. Signage and Emergency Lighting

12.24. Emergency lighting and internally illuminated signage and the fire alarm system will utilise internal batteries to provide back up power. These batteries will be capable of a continuous standby supply and be fully rechargeable within a period of 24 hours.

13. Attendance by the Fire Service

13.1. SRL will work with the local Fire Brigade to build a relationship. Regular visits will be encouraged for site familiarisation and details of fire detection systems and the Fire Evacuation Procedure will be shared.

13.2. The closest fire station is at The Old Fire Station, Old Fire Station, Hales St, Coventry CV1 1JA, 1.8 miles away, allowing a rapid response time, however their attendance should not be required due to the presence of the fire suppression system.

13.3. The Old Fire Station is not operated on a full time basis.

13.4. There are two 24hour fire stations located within 3 miles of the site:

- Binley Fire Station
  Address: Hopswell Highway,Coventry,CV25FQ
  Distance:2.6 miles
  Response time:7minutes

- Coventry Fire Station
  Address: Radford Road, Coventry, CV1 4EL
  Distance:3 miles
  Response time:8 minutes

13.5. In the event of attendance, the external access road has been tracked for suitability of a fire retainer, proving full facility boundary access.

13.6. A hard copy of the site FPP will be located at the main site entrance within a weatherproof box clearly marked FPP. Details will be shared with Fire Service contacts.

13.7. The fire services will only be manually called after the event is confirmed; viewed by an operative on the facility floor or via the CCTV security system.

13.8. The fire alarm system will be interfaced to shutdown process equipment and other items of building services plant and equipment from operating.

13.9. Visual alarm signals will also be provided in any high noise areas to provide sufficient warnings to personnel wearing ear defenders.