



Fire Prevention Plan

Bridgnorth Recycling Facility

Bridgnorth IWMF, Faraday Drive, Bridgnorth, Shropshire, WV15 5BA
Permit Reference: EB3005KB

Document control

Version	Revision date	Revision notes
V1	December 2020	Permit application to change from standard rules to a bespoke permit
V2	April 2024	Permit application to update list of wastes

The following drawings form part of this document:

- VES_TD_BRGN_200_001 DRAINAGE PLAN
- VES_TD_BRGN_200_001 FIRE MANAGEMENT PLAN

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1. Process Overview

1.1. Summary

The Bridgnorth Recycling Facility 'BRF' which is part of the Bridgnorth IWMF uses a combination of manual and automated mechanical dismantling techniques for the recovery of recyclable materials. The combination of techniques available at the facility are adaptable, enabling recovery of a diverse range of materials would typically be pre or post consumer products.

The principal activities include:

- Recovery of flat screen display units including LED, LCD and plasma televisions, PC monitors, and small WEEE.
- Recovery of WEEE and other more diverse waste inputs either for bespoke recycling or secure destruction contracts.

The BRF is co-located within a larger Integrated Waste Management Facility 'IWMF' including a non hazardous waste transfer station and a household waste reception centre 'HWRC'. Other than shared access / egress there is one instance only where the BRF shares operational areas with the waste transfer station. The BRF utilises a single Legioblock bay within the transfer station for storage of shredded mixed plastics. The BRF is separately permitted and otherwise operates independently of the transfer station and HWRC. Other facilities which are part of the wider site include associated main and ancillary offices, a vehicle wash and fuel storage tanks.

There are two vehicular access points both located on Faraday Drive; both entry points allow for full access to the site perimeter, all buildings and waste storage areas.

The principal inputs to the BRF are pre and post consumer products mainly comprising waste electronic equipment 'WEEE'. WEEE accepted at the site includes flat panel display units as well as small WEEE. The facility is able to accept an extensive waste list due to the ability to adapt dismantling practices to suit client recovery requirements and has the ability to undertake secure destruction including issue of the required evidence of disposal. Inputs to the BRF are a mixture of hazardous and non hazardous waste.

The transfer station is brick built with a steel roof and access is via a roller shutter door. The interior of the building comprises an array of manual dismantling / processing stations (some under extraction to air via a carbon filter), shredding machinery, a robot for the removal of mercury CCFL tubes, an extraction booth for mercury tube storage and a waste storage racking system.

The BRF is served by a fire detection and suppression system shared with the waste transfer station comprising an on site pump house, a 667m³ above ground tank, and associated internal sprinkler arrays.

The internal floor of the BRF building is dished and banded at the entry points to contain fire water and there is an internal drain leading to the waste transfer station so in the event of a fire the adjacent building provides tertiary fire water containment. Water from the external storage area is diverted to foul sewer via an onsite pumping station. In the event of a fire the pumping station can be switched off to contain water on site.

Maximum waste tonnages accepted at the BRF is limited to 25,000 tonnes per year.

1.2. Site setting and location (within 1km)

The facility is located off Faraday Drive, Bridgnorth (SO 72927 92382), situated within an Industrial Estate which is a mixture of commercial and light industrial activities including a gym and fitness club. The closest residential receptors are approximately 100m to the west on Stourbrige Road. To the north beyond the industrial estate are residential receptors on Birchlands / Oaklands. To the south beyond the industrial estate are scattered rural receptors, the closest being approximately 530m away. To the north west is a farm beyond which is agricultural land over 800m from the facility. Due west comprises agricultural land in excess of 1000m. There is a nursing home 720m to the south and a primary school 770m to the northwest. The local 'A' road network includes Stourbridge Road (A458) running east-west directly south of the facility and the Kidderminster Road (A442) running north-south approximately 770m to the west of the facility.

1.1. Operational profile

The facility operates within the hours of 06:30 to 16:00 from Monday to Friday with occasional Saturdays.

1.2. Maintenance and review of the FPP

Training, document access and key review intervals

Training / review aspect	Details
Post holder responsible for FPP related training	Andrius Piskovas
Review interval criteria	Annually unless there have been no changes.
	Following an incident which resulted in actual or potential fire.
	Following instruction by the Environment Agency under the relevant condition of the environmental permit.

Training overview	<p>The Veolia Management System 'VMS' includes a procedure that defines the process and responsibilities of personnel involved in the identification and evaluation of learning and development needs as well as the subsequent implementation of essential training to enable all employees to perform effectively and proficiently in their individual jobs.</p> <p>Site personnel are aware of the parts of the permit relevant to their role and a copy of the permit is available.</p> <p>A training matrix for all site personnel is in place and updated with all personnel trained according to the requirements of their role, including refreshers</p> <p>Monitoring is in place to demonstrate competency.</p>
Training interval	<p>Management will maintain a statement of training requirements for each operational post and keep a record of the training received by each person whose actions may have an impact on the environment.</p>

2. Process Stages

2.1. Waste Inputs

Pre-acceptance and waste acceptance procedures are in place for all waste received at the facility to ensure that incompatible or reactive wastes are not accepted. Any incorrectly declared deliveries are quarantined immediately and dealt with in line with local procedures and guidance as detailed in the permit and management system.

Most waste arriving at the BRF will be deposited within the covered bay in the external yard area to the north of the main loading door or smaller volumes for secure destruction may be stored within the interior racking system. In some cases caged waste may be unloaded directly into the factory for processing. The input bay is 10 x 12 x 3m giving a maximum storage capacity of 250m³. As well as benefiting from Legioblock construction, the input bay is also in excess of 6m from the BRF building.

The types of waste accepted make hot loads unlikely however, in the event that a hot load is detected during acceptance, although each incident will be event specific and the site management / fire marshal shall be responsible for managing the situation, the primary options are to direct the load to the quarantine area or if already deposited to isolate the waste from other waste if possible.

The BRF does not accept wastes which are likely to result in the buildup of heat or odour emissions so waste inputs are treated in an order that maximises process efficiency. The residence time within the input bay is typically very low, typically around 3 days.

2.2. Storage & loading

Waste inputs are either from householders via HWRC, directly from Producer Compliance Schemes 'PCS', or commercial waste direct from business. The deliveries are principally by articulated heavy goods vehicles but smaller vehicles can be accommodated. All deliveries are pre booked and pre acceptance is carried out prior to arranging a delivery slot. Waste material predominantly arrives at the site containerised either in cages (c.1.2 x 1m x 1m) or bagged (2m³ bulk bags) but may also be delivered loose. Following acceptance checks (including a visual assessment) and weighing, waste arriving is either offloaded using Manatu and fork lift trucks and placed in either the external covered bay or directly placed into the internal racking system. Loose waste may be tipped directly into the external covered bay.

The external covered bay is of 120 minute fire retardant concrete Legioblock construction with a canvas 'Zapp Shelter' roof to prevent rainwater ingress. The internal racking system comprises 15 multi level isles split between 1m³ boxes and 2m³ bulk bags for a total of 200m³ of storage. The racking system is adjacent to the transfer station and separated by a fire wall.

There is space in the interior of the plant for two RORO which can be used either to store inputs or outputs depending on the processing and recycling demands and the types of materials being processed.

The nature of the waste streams transferred do not suffer adversely from seasonal variations and therefore a consistent input and output quality is obtained throughout the year.

2.3. Processing

Waste inputs may be subjected to either or both manual and mechanical dismantling techniques. Waste processing at the site comprises a series of manual dismantling stations which can be used for any compatible waste type using a selection of hand and power tools. The site has a primary conveyor fed shredder and associated picking station with a capacity of approximately 1 t/h. There is a robot which is designed to extract and seal mercury CCFL tubes from flat screen display units. Tube extraction can also be done by hand at a manual station under negative extraction. Mercury tubes which are in process are stored under negative extraction. In the case of tube handling and in process storage the extracted fumes are exhausted to the atmosphere via a carbon filter.

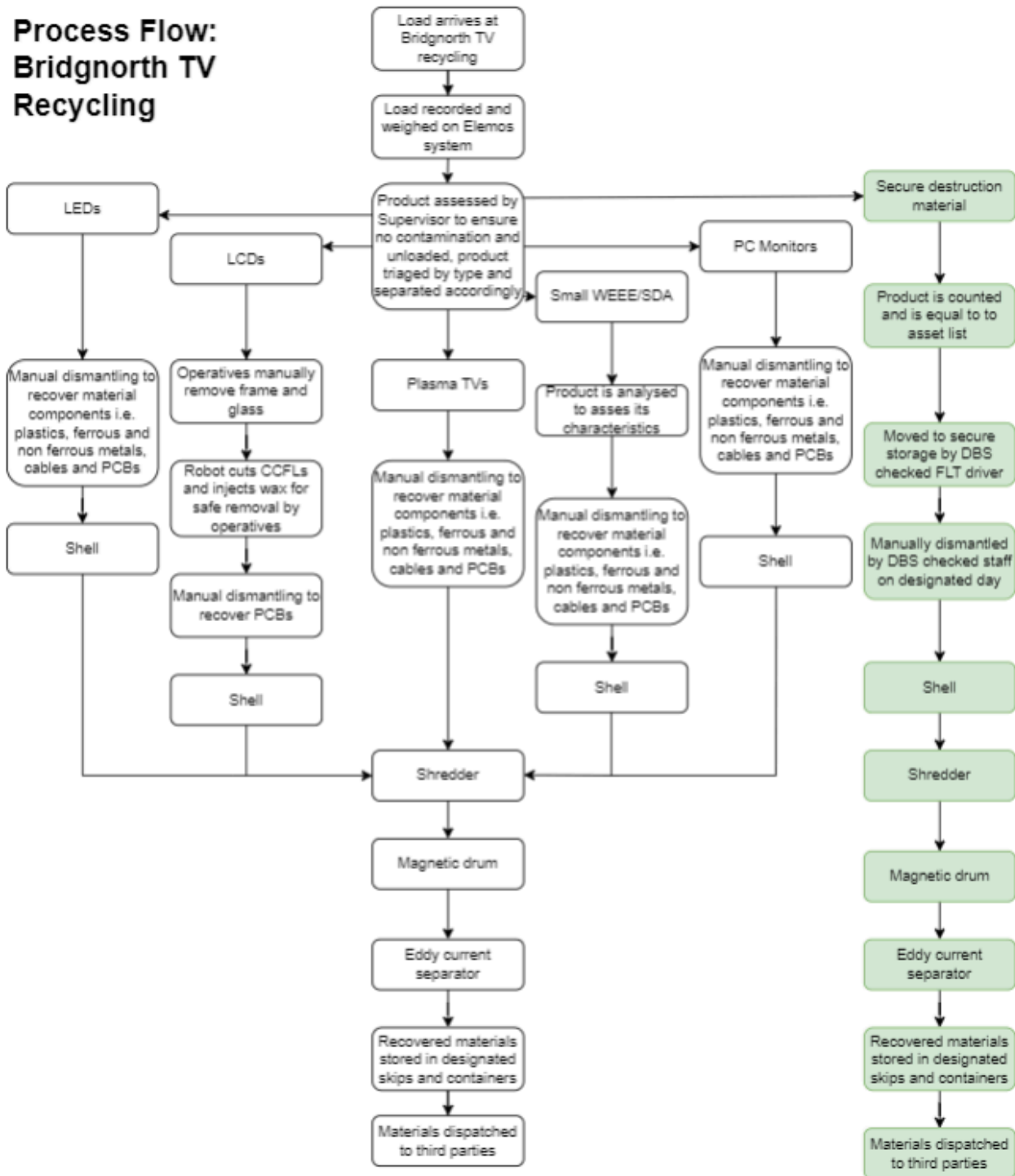
Residual material from the shredder comprising PCB, and metals are collected in the external residue storage area via a network of chutes. This comprises two RORO skips, one for ferrous and one for non ferrous material. PCBs are collected into a 2m³ bulk bag situated under a canopy. Residual material may also be diverted from the shredder directly into containerised storage. This may be undertaken for smaller loads of material for secure destruction, residuals can then be placed directly into the racking system.

The site has the capacity to operate a smaller shredder for small electronic items such as mobile phones, hard drives and SD cards. Residual materials from this process can be stored directly in the racking system.

Recoverable material which is extracted by manual dismantling are bulked into 1 - 2m³ containers and placed directly into the racking system.

A process flow diagram for the process is shown below.

Process Flow: Bridgnorth TV Recycling



3. Managing Common Causes of Fires

3.1. Arson

The permitted area will be securely fenced around its entire perimeter with 2.4m high weld mesh type fencing, along with bespoke lockable gates across the site entrance. In addition the site has manned CCTV coverage with complete out of hours coverage provided by a specialised security company.

Any unauthorised access would be detected and trigger an intervention either by VES staff, security staff, Police or other enforcement agency responder as appropriate.

3.2. Plant & Equipment

Plant operating at the site includes a forklift and a Telehandler (Manatu). All vehicles, plant and equipment will be maintained in accordance with manufacturer's recommendations.

The site, including all plant and equipment and electrical equipment will be subject to a recorded daily check to confirm there is no build-up of loose combustible waste, dust and fluff. Daily checks are recorded for the site as a whole and all vehicles. Alternative plant will be hired at short notice should it be required.

A planned preventative maintenance and inspection programme for static and mobile plant and equipment is in place. A daily check sheet is completed for all static and mobile plant, if an issue is identified then a defect sheet is completed, passed onto the maintenance team, recorded electronically, and once appropriate repairs are completed the defect sheet is signed off and filed in the relevant mobile plant folder. All vehicles, plant and equipment will be maintained in accordance with manufacturer's recommendations.

Unused plant and plant maintenance will be kept away from combustible waste, during operational hours this will be outside the building. During non-operational hours the forklift trucks are stored internally adjacent to the exterior wall of the BRF and the diesel telehandler is stored externally. Both locations are marked on plan reference VES_TD_BRGN_200_002.

All electrical installations repairs and maintenance will be carried out by suitably qualified electricians certified to NICEIC.

Portable appliance testing is carried out annually and fixed electrical systems are checked every 3 years.

3.3. Smoking Policy & Procedures

The Veolia Smoke Free Policy and Smoke Free Procedures are applicable to the facility. The designated smoking shelter is located in the north eastern corner of the BRF.

3.4. Hot Works & Ignition Sources

Hot works will be carried out, when required, by external contractors and will be subject to a job specific risk assessment.

Site operatives are trained to recognise the signs of self-heating or an emerging fire. Key site staff are also trained to deal with unstable lithium batteries. In the event an emerging incident is identified action will be taken immediately including isolation of material and spreading material out to release heat. Specific fire watch inspections are carried out as part of the site during shutdown / closure at the end of each shift. Fire watches at shift closure will include the inspection of hot exhausts and engine parts.

Industrial heaters will not be used on site. There will be no naked flames, space heaters, furnaces, incinerators, or other sources of ignition within 6m of any combustible waste.

Bunded fuel and AdBlue storage tanks are located to the northwest boundary of the facility.

3.5. Cleaning Regime

Daily site inspections will be carried out for the build-up of loose combustible waste and dust. Any areas identified by the inspection as requiring cleaning will be cleaned as soon as reasonably practicable. All plant is maintained in line with manufacturer recommendations and regular service intervals carried out. All plant inspected on a daily basis and records of checks and defect reporting will be recorded. Alternative plant will be hired in at short notice should it be required.

3.6. Leaks and spills

Emergency spill response kits are located on site in two locations; internally by the shredder and the main roller shutter door and externally by the fire system pump house. The spill kits are equipped to deal with hydrocarbon spills, solvent spills and any other organic liquids (this includes hydrophobic oil absorbents).

A procedure is in place which describes what to do in the event of a spillage. Relevant staff are trained in spillage response via toolbox talks.

3.7. Hot and dry weather

The waste types accepted at the BRF are not likely to be impacted by hot, dry weather.

4. Waste types and storage conditions

4.1. Waste types

The mixture of manual and mechanical dismantling techniques available at the BRF mean it can adapt to a range of waste inputs these can be broadly classified as follows:

1. Flat screen display units: This could comprise LED, LCD or plasma screens including computer monitors
2. CRT screens: This includes display screens built which utilise cathode ray tube technology
3. Small WEEE: Any other WEEE which are not flat screens. The plant is not able to treat items requiring ODS capture such as refrigerators.
4. Non WEEE pre / post consumer products of metal / plastic construction: This includes items which contain no electronic components but which are of a similar construction and would mostly comprise pre and post consumer products or parts which are predominantly plastic and metal construction.
5. Non routine waste: The BRF has an extended list of input wastes which mean it can respond to more bespoke requests for dismantling and recycling. The extended waste list effectively includes those from any sector which are assessed as suitable for treatment through the plant. For example this includes textiles and furniture.

Most of the waste accepted by the facility will fall into categories 1 - 3 above and the treatment required for these items will be similar. Non-routine waste will be an ad hoc small proportion of total waste treated with the philosophy that the plant is able to respond to bespoke client requests for dismantling and recycling predominantly as part of the secure destruction process.

4.2. Residence times

Self heating is not a high risk within the BRF because the waste types accepted are not particularly susceptible to chemical, biological, and physical exothermic processes. This is due to the chemical stability of the waste and the lack of organic content.

All residence times are restricted to less than the guidance maximum of 90 days.

4.3. Battery contamination

The waste streams accepted by the site include WEEE where batteries are routinely present. It is a regulatory requirement for these batteries to be removed and accounted for separately. Battery removal is carried out manually and once segregated are stored separately within the racking system. It is not anticipated that the non WEEE wastes accepted by the site, including those accepted for secure destruction are likely to contain battery contamination.

Operatives are trained to be aware of the risk of batteries (particularly lithium) entering the shredding process. Where identified these will be removed to the appropriate storage location immediately. Operatives are trained to act quickly where a lithium battery is showing signs of instability.

4.4. Storage location and dimensions

The facility is able to accept a broad range of waste inputs and has the following storage locations:

External covered bay: This is a 10 x 12 x 3m Legioblock bay with a 'Zapp' shelter roof. The Legioblocks are cast concrete of 0.8 x 1.0 x 0.8m dimensions interlaced to form the bay walls with a fire retardancy rating of 120 minutes. The bay is also more than 6m from the BRF building and there are no adjacent bays. The nearest waste is in adjacent moveable RORO containers. The likelihood of fire spreading from this location is therefore minimal. The bay is principally designated for waste inputs but can be multifunctional depending on business needs. Inputs are usually in cages and bags which are offloaded from the receiving vehicle and moved into the bay. The height of the bay roof can also accommodate direct tipping if required. The bay may also be used for residual (processed) materials either as an overspill or during shredder breakdown. There may also be some sorting of input material carried out in the bay. The bay has a maximum capacity of 260m³ which means it is suitable for any waste type. Freeboard is maintained to 0.25m vertically and 0.5m laterally, this deviation from the 1m guidance value can be justified given the lack of adjacent bays and the distance to adjacent waste as well as the low risk of self heating. Gully drainage adjacent to the Legioblock bay is diverted to foul sewer via the pumping station in the yard.

Racking system: The racking system comprises 15no. 1.7m wide 5.3m deep aisles each with four vertical storage tiers (total height 5.3m). The aisles are split between storage of 1m³ boxes and 2m³ bulk bags. A number (1-3) of the aisles are assigned to input material for the secure destruction process. The total storage capacity of the racking system is 200m³. The wall which the racking system is attached to is fire rated. Fraction sizes may vary by waste type from <30mm to >150mm.

Residual storage area: Residual ferrous, non ferrous and plastics are collected in three external containers. Ferrous and non ferrous metals are discharged via a chute in two moveable RORO skips of approximately 30m³ each. PCB's are collected via a chute to a 2m³ bulk bag which is situated under a canopy. Drainage in the external residual storage area is diverted to foul sewer. Fraction sizes are in the <30mm range.

Dedicated mixed plastics bay: The BRF has use of a single Legioblock bay in the adjacent waste transfer station for use with mixed plastics. Mixed plastics are transported from the shredder in a lidded container and transported to the adjacent transfer station. The bay has a capacity of 22 tonnes representing one dispatch vehicle load. Fraction

sizes are in the <30mm range. A freeboard of at least 1m is maintained both vertically and laterally.

Internal RORO: There is space inside the factory for 2 moveable RORO skips of approximately 30m³ each to accommodate ad hoc or bespoke waste processing requests. Fraction sizes may vary by waste type from <30mm to >150mm.

Waste types within FPP scope

Waste type	Waste Description	Fraction size	Location type	Max tonnes stored	Storage location designation * Subject to change to meet operational needs	Storage capacity (m ³)	Residence time (days) Typical / maximum during normal operation
Internal areas within the WTS							
Mixed plastic	Mixed plastics from WEEE and other products	30 - 150mm	Designated bay in co-located WTS		Marked 'FPD Plastic' (adjacent waste transfer station)	90	7 - 14
PMMA and acrylic	From display screens	>150mm	Racking		Anywhere within racking system	200	30
External cables	From WEEE	>150mm	Racking				30 - 60
Plugs and chargers	From WEEE	>150mm	Racking				30 - 60
PCB (grade 1 - 3)	From WEEE	30 - 150mm	Racking				30 - 60
Mercury shards	Extracted mercury tubes from display screens	30 - 150mm	Racking				7 - 14
Secure destruction inputs (WEEE / metals / plastics / textiles / various)	WEEE or non WEEE comprising plastic and metal / occasional ad hoc streams	<30 - <150mm	Racking				1 - 7
Batteries	Batteries from WEEE	<30 - <150mm	Airtight plastic stillages		Nr. main roller shutter door	1	7 - 30
WEEE / metals / plastics / textiles / various		30 - 150mm	Internal RORO x 2		Inside factory	60	14 - 30
External areas							
WEEE / metals / plastics / textiles / various	WEEE or non WEEE comprising plastic and metal / occasional ad hoc streams	> 150mm	Covered Legioblock bay		External covered bay (Zapp shelter)	260	1 - 7

Fire Prevention Plan - Hortonwood IWMF

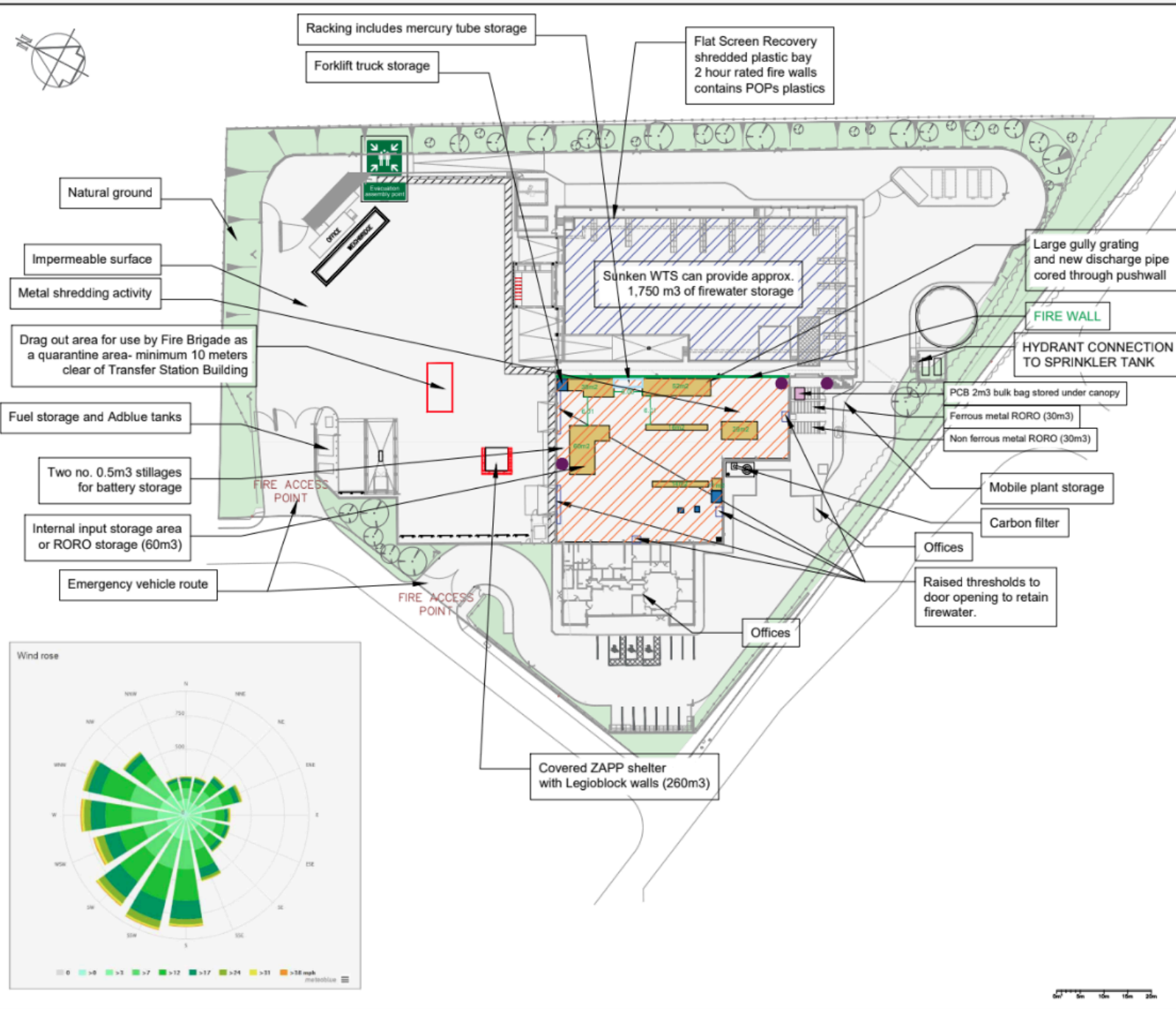
Ferrous metal	Ferrous from WEEE and other products	30 - 150mm	RORO		Rear residue storage area	30	3 - 7
Non ferrous metal	Non - ferrous from WEEE and other products	30 - 150mm	RORO		Rear residue storage area	30	30
PCB	From WEEE	30 - 150mm	Bulk bag		Rear residue storage area	2	30

Other waste

Waste type	Waste Description	Location type	Current bay designation * Subject to change to meet operational needs	Storage capacity (m ³)	Residence time (days) Typical / maximum
N/A	N/A	N/A	N/A	N/A	N/A

Non waste material

Waste type	Description	Location type	Current bay designation * Subject to change to meet operational needs	Storage capacity (m ³)
Diesel	Product for vehicle refuelling	Bunded tank	See site plan	27
Ad blue	Product for vehicle refuelling	Bunded tank	See site plan	2.5
Lithium power tools	Power tools for manual dismantling	Metal container	TBC	TBC



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SAFE PEDESTRIAN ROUTE
 COMBUSTIBLE MATERIALS
 PROCESS AREA
 POLLUTION CONTROL EQUIPMENT
 EVACUATION ASSEMBLY POINT

Rev	Description of revision	Drawn	Checked	Appr	Date



Technical Direction,
 8th Floor, 210 Pentonville Road, London, N1 9JY
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BRIDGNORTH FLAT SCREEN

FIRE MANAGEMENT PLAN

Drawn	Initials	Date	Scale	Sheet size
Drawn	RB	30.04.24	1:375 @A1, 1:750 @A3	A1
Checked				
Approved				

Job No: BRGN
 Drawing No: VES_TD_BRGN_200_002
 Revision: -



4.5. Temperature Control & Monitoring

It is not considered necessary to measure the temperature of the waste as heat build-up will be highly unlikely given the short timescales and waste types. Waste piles will be visually monitored throughout the working day for signs of combustion.

5. Preventing Fire Spreading

5.1. Separation Distances

The external covered bay (Zapp shelter) is of fire resistant construction and in excess of 6m from the adjacent BRF building. The residual storage area is comprised of containerised material which can be moved in the event of a fire. Internally stored RORO can also be moved in the event of a fire. The dedicated mixed plastics bay in the adjacent transfer station is of fire retardant construction with a 1m vertical and lateral freeboard. The racking system is adjacent to a wall between the BRF and adjacent transfer station which is fire rated.

In process materials

The nature of the work carried out in the facility is sequential dismantling requiring sorting at each stage and movement of sorted material into storage. There are therefore multiple locations within the processing floor where material is considered 'in process'.

5.2. Fire Walls & Bays

The external covered bay is constructed of Legioblocks which are cast concrete 0.8 x 1 x 1.2m in size. The Legioblocks are designed to provide a minimum of 120 mins fire resistance.

5.3. Quarantine Area

The emergency or 'quarantine' area of 8 x 10m will be available at all times located in the yard area to the north of the BRF show on drawing reference VES_TD_BRGN_200_002. This area is capable of containing over half of the largest waste pile and is excess of 6m from adjacent combustible material. The quarantine area has in excess of 6m of permanently clear area all around for ease of access for fire control and is located on impermeable paving with a sealed drainage. Emissions of contaminated fire water off site can be prevented by shutting off the pumping station serving the main yard area.

5.4. Non- conforming waste

A separate quarantine area is located within the building for the purpose of temporary storage of non-conforming waste only.

6. Fire detection

Regular visual inspections of waste streams for evidence of combustion e.g. signs of smoke will be carried out by operatives handling waste material.

All loads arriving at the site will be visually inspected as they arrive. Non-conforming loads will be recorded with the load inspection sheet.

The flat screen processing building is fitted with a smoke detection system consisting of red laser beam detection connected to a manned alarm system out of hours. The detection system is designed, installed and maintained in accordance with a UKAS accredited scheme, details of the accreditation will be available on site and on request. The maintenance of the system is covered by a maintenance contract covering maintenance as per manufacturer's recommendations. If a fire is detected then the system will trigger the sprinkler heads to activate in the area(s) of the building where the fire is occurring to control the spread of the fire. In most cases experience shows these systems are effective in extinguishing the fire without further intervention. If a waste storage location does catch fire the most appropriate course of action will be to allow it to be extinguished entirely by the suppression system keeping the doors to the WTS closed to prevent excess air flow into the building. This approach would be agreed with the fire rescue service on a case by case basis at the time of their attendance.

CCTV coverage

Approval of the site for secure destruction means that there is extensive CCTV coverage. There are 11 external cameras and 5 inside the factory.

The cameras are monitored 24 / 7 by absolute surveillance, and are armed after the last person has left site for the day.

In the event of a fire being detected, site management would be contacted and would arrange for site attendance. A call list is in place ensuring that the out of hours monitoring service will always have contacts available on a 24/7 basis 365 days a year. Veolia has sufficient trained yellow plant both based at the BRF and at nearby facilities drivers that staff will be available out of hours in the event of the need for plant and machinery to be used to assist the Fire Service.

Emergency contact procedures and contact details are appended to this document.

7. Fire Suppression

The sprinkler system currently installed is designed in accordance with BS EN 12845 and NFPA 13. The sprinkler system has a capacity of 20mm per minute with a tank capacity of 667m³

The sprinkler systems in the transfer station and the BRF building are valved and activated independently, the wall between the transfer station and the BRF building is a fire wall. A pumped hydrant c/w pressure reducing valve is provided in the pumphouse which is capable of delivering a minimum of 3000l/min. Upon opening the hydrant, the pressure drop will actuate the pumps, allowing water to be fed from the fire tank.

Based on a maximum stockpile size of 260m³, the system provides in excess of 6.66l/min per m³ for a minimum of 3 hours, the fire tank is also fitted with a direct hydrant coupling allowing the fire service to extract water using their own pumps.

Two additional hydrants are provided on a hydrant ring main fed from the mains, these are located in the centre of the yard and in the carpark, these are installed in accordance with BS750 and BEN14339. The flow rate for the two additional hydrants on the town main are rated at 900l/min.

The fire suppression system is fully automatic, the fire suppression system design installation and maintenance is covered by UKAS accreditation, details will be available on site and on request.

Fire extinguishers will also be located in various locations within the flat screen processing building and around the site to manage small fires that may arise as a result of the operation. In the case of a large fire the evacuation plan will be put in place to exit the site and allow the fire services to intervene. As a minimum fire extinguishers will be located at the robot, the shredding line and at the manual operations area.

Internal and external RORO can be extinguished rapidly by filling the container volume with fire fighting water.

A quarantine area is located in the yard area to the north of the BRF capable of containing a minimum of half of the largest stockpile of waste. The quarantine area has in excess of 6m of permanently clear area all around for ease of access for fire control. Sealed drainage of the quarantine area is facilitated by isolation of the surface water drainage system in the yard area by switching off the pumping station.

8. Fire Fighting

In the event of a fire taking place within the permitted area, the most effective fire strategy would be to extinguish any fire as soon as possible and therefore a 'controlled burn' would not be a favourable option.

The on-site resources available for firefighting include but are not limited to fire extinguishers, hoses, UKAS fire suppression system, yellow plant including forklift truck, telehandler, wheeled loading shovel (stationed at the adjacent waste transfer station) and trained fire marshals. However, it should be noted that, with the exception of the fire suppression system, the use of these resources prior to the arrival of the Fire Service will be very limited by Health and Safety procedures.

The table below describes the heavy plant available in the event of a fire. All VES controlled vehicles using the site will be fitted with appropriate fire extinguishers.

Vehicle type	Function
Pallet trucks	Moving waste, dragging out, creating fire breaks
2 forklift trucks	Moving waste, dragging out, creating fire breaks
1 diesel telehandler (Manatu)	Moving waste, dragging out, creating fire breaks
Wheeled loading shovel (stationed at the adjacent waste transfer station)	Moving waste, dragging out, creating fire breaks

Fire extinguishers will also be located in multiple locations within the WTS building and around the site to manage small fires that may arise as a result of the operation; in the case of a large fire the evacuation plan will be put in place to exit the site and allow the fire services to intervene. As a minimum fire extinguishers will be located at the site entrance / exits. The primary use of fire extinguishers is to facilitate the escape of personnel in the event of a fire, however they may also be used to quickly extinguish very small / localised fires. The available yellow plant could be utilised to move non-burning waste away from risk of catching fire and into the quarantine area, this would normally only be carried out under the supervision of the fire service. The primary resource for fire suppression or extinguishing will be the automatic fire suppression system, followed by the attendance of the Fire Service.

In addition to on-site resources, VES as a large waste management company has the resources, including financial, to deal with a fire related incident and the subsequent aftermath such as contingency arrangements and fire water management. All Veolia controlled vehicles using the site will be fitted with appropriate fire extinguishers.

Fire Rescue Service locations

Station name	Address	Crew type	Drive time to site (min)
Bridgnorth Fire Station	Bridgnorth Fire Station Innage Lane Bridgnorth, WV16 4HL	Retained	7
Much Wenlock Fire Station	Much Wenlock Fire Station, Smithfield Road, Much Wenlock, TF13 6BD	Retained	14
Tweeddale Fire Station	Tweeddale Fire Station Bridgnorth Road, Madeley, Telford, TF7 4JD	Wholetime	17
Telford Fire Station	Telford Fire Station Stafford Park 1, Telford, TF3 3BW	Wholetime	19

9. Water Supplies

Based on a stockpile size of 260m³, the system provides in excess of 6.66l/min per m³ for a minimum of 3 hours, the fire tank is also fitted with a direct hydrant coupling allowing the fire service to extract water using their own pumps.

In addition to the suppression system with water tank and hydrant connection, two additional hydrants are provided on a hydrant ring main fed from the mains, these are located in the centre of the yard and in the carpark, these are installed in accordance with BS750 and BS EN14339. The flow rate for the two additional hydrants on the town main are rated at 900l/min.

10. Fire Water Management

The Integrated Waste Management Facility area is served by both foul and surface water drainage networks. The BRF comprises two external storage areas, the external covered bay in the northern yard area and the residuals storage area to the south. Gully / 'ACO' local to these two areas have been diverted to the foul sewer network. Yard areas outside of these two areas drain to the surface network.

Foul network

The foul network has a northern and southern leg; both combining before discharging off site near the junction of Faraday Drive and Stourbridge Road.

The northern leg comprises the waste transfer station (including street sweeping bay), the weighbridge (including offices), vehicle wash area, the yard area surrounding the BRF's external covered bay and the site office facilities. The northern leg is a pumped discharge served by an underground pump located in front of the transfer station building. The pump control switch is located internally to the transfer station (both locations are shown on plan reference VES_TD_BRGN_200_001 DRAINAGE PLAN).

The southern leg of the foul network includes HWRC offices and the yard area surrounding the BRF residual storage area. This leg drains by gravity to the discharge point and can be isolated using a drainage bung stored within the BRF offices.

Surface water network

Similarly to the foul network the surface water network comprises two legs; northern and southern both combining before discharging off site near the junction of Faraday Drive and Stourbridge Road.

The northern leg comprises uncontaminated surface water from the northern yard area. This leg drains by gravity via an interceptor to the discharge point. The interceptor is fitted with a penstock valve. The southern leg comprises uncontaminated surface water from

the southern yard areas including the HWRC. The southern leg discharge can be isolated using a drainage bung if required.

Fire water containment and disposal

The action to be taken will depend on the location of the fire (BRF specific).

Fire inside BRF building

To contain any contaminated firewater in the event of suppression system activation fire water will initially be contained within the BRF building and is prevented from immediately entering the external yard area due to either dishing of the floor area or containment kerbing. There is a hydraulic connection between the BRF and the adjacent waste transfer station which is at a lower height. The waste transfer station therefore acts as additional remote storage for fire water with a capacity of 1,750m³. The pumping station should be closed as there are gully drains running across the vehicular entry points connecting into the drainage network.

ACTION: Shutdown foul pumping station, close surface water penstock.

Fire in the external covered bay

Local drainage is diverted to the foul sewer and this should capture any water directed into the bay. This water will then drain to a pumping station in the northern yard area before being sent to the final point of discharge at the western tip of the site near the junction of Faraday Drive and Stourbridge Road. To prevent discharge off site the pumping station can be deactivated allowing water to collect in the yard area. The surface water network in the northern yard area drains by gravity via an interceptor before also being discharged at the final discharge point near the junction of Faraday Drive and Stourbridge Road. The interceptor has a penstock valve which can be closed to prevent off site discharge.

ACTION: Shutdown foul pumping station, close surface water penstock.

Fire in the residual storage area

Waste in the residual storage area is stored within two 30m³ RORO and a 2m³ bulk bag. A fire in either RORO is low risk as the volume of water required to extinguish the fire is likely to be less than 30m³ which is the volume of the container. Any leakage or overtopping would be contained by the surrounding gully drains. A fire in the 2m³ bulk bag is likely to require lesser amounts of water due to the limited volume of waste material. In the event of a fire in this location, contaminated water would drain by gravity via the sewer system to the final point of discharge near the junction of Faraday Drive and Stourbridge Road. The site holds a drainage bung which can be used to block the foul network.

ACTION: Bung foul network.

Surface and foul isolation descriptions

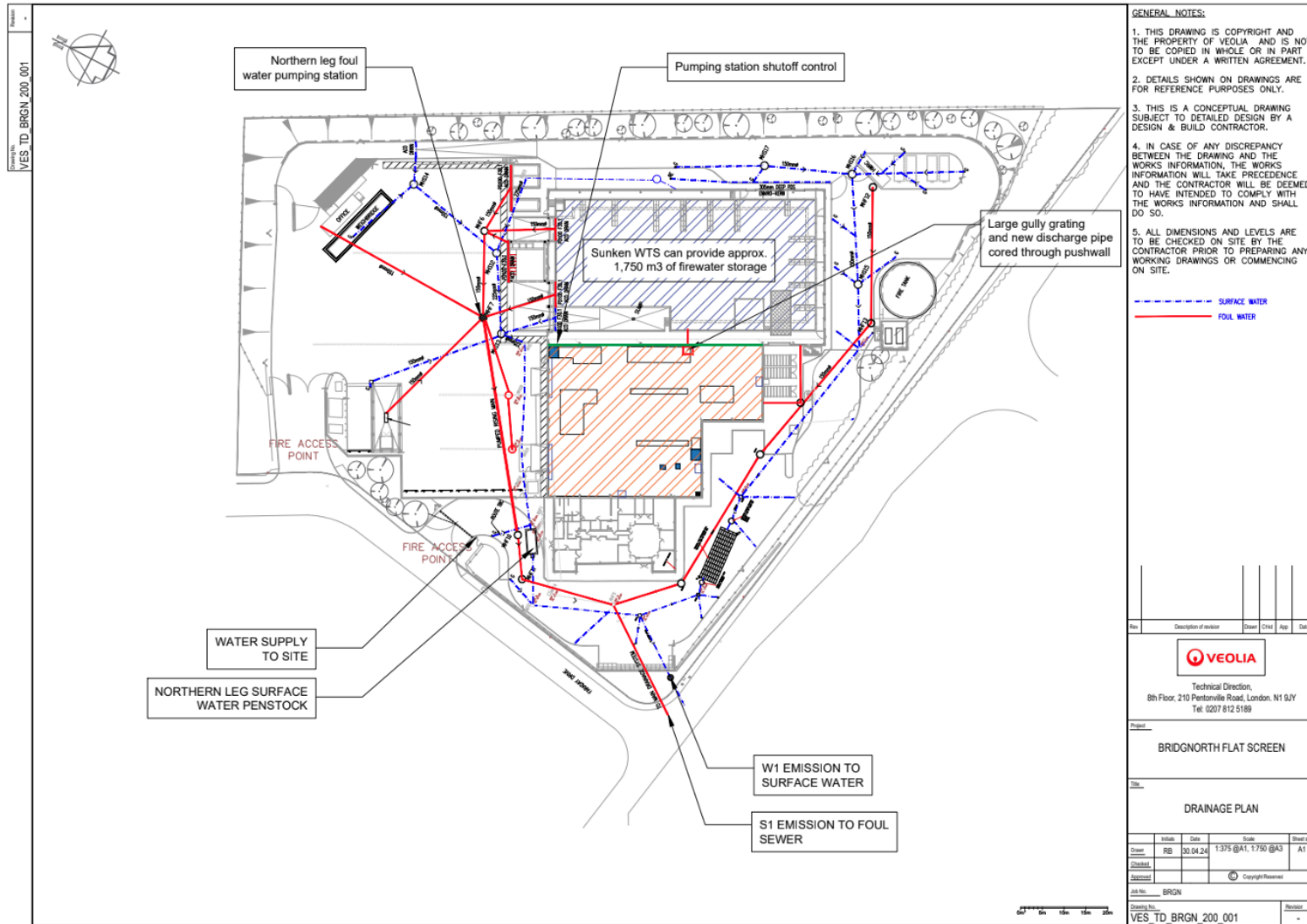
The site is served by a foul water pumping station a surface water penstock and there is also a drain bung available. The following table describes their function:

Isolator reference	Section of site covered
Pumping station	Isolation of the northern foul network leg. Foul water discharge from the BRF external covered bay. Isolation switch is inside the co-located waste transfer station.
Penstock valve	Isolation of the northern surface water drainage network including when the quarantine area is being used.
Drain bung	Isolation of the southern foul network.
Drain bung	Isolation of the southern surface water network.

Access to tanker fleet

In addition Veolia has access to a large tanker fleet and therefore extraction and disposal off site is a contingency option. There are multiple locations on the drainage network that could safely be used for extraction of firewater during an incident.

10.1. Drainage plan and Isolation (map)



11. Amenity Issues

Receptor type screening

The table below describes the types of receptors that are present within 1km of the Facility.

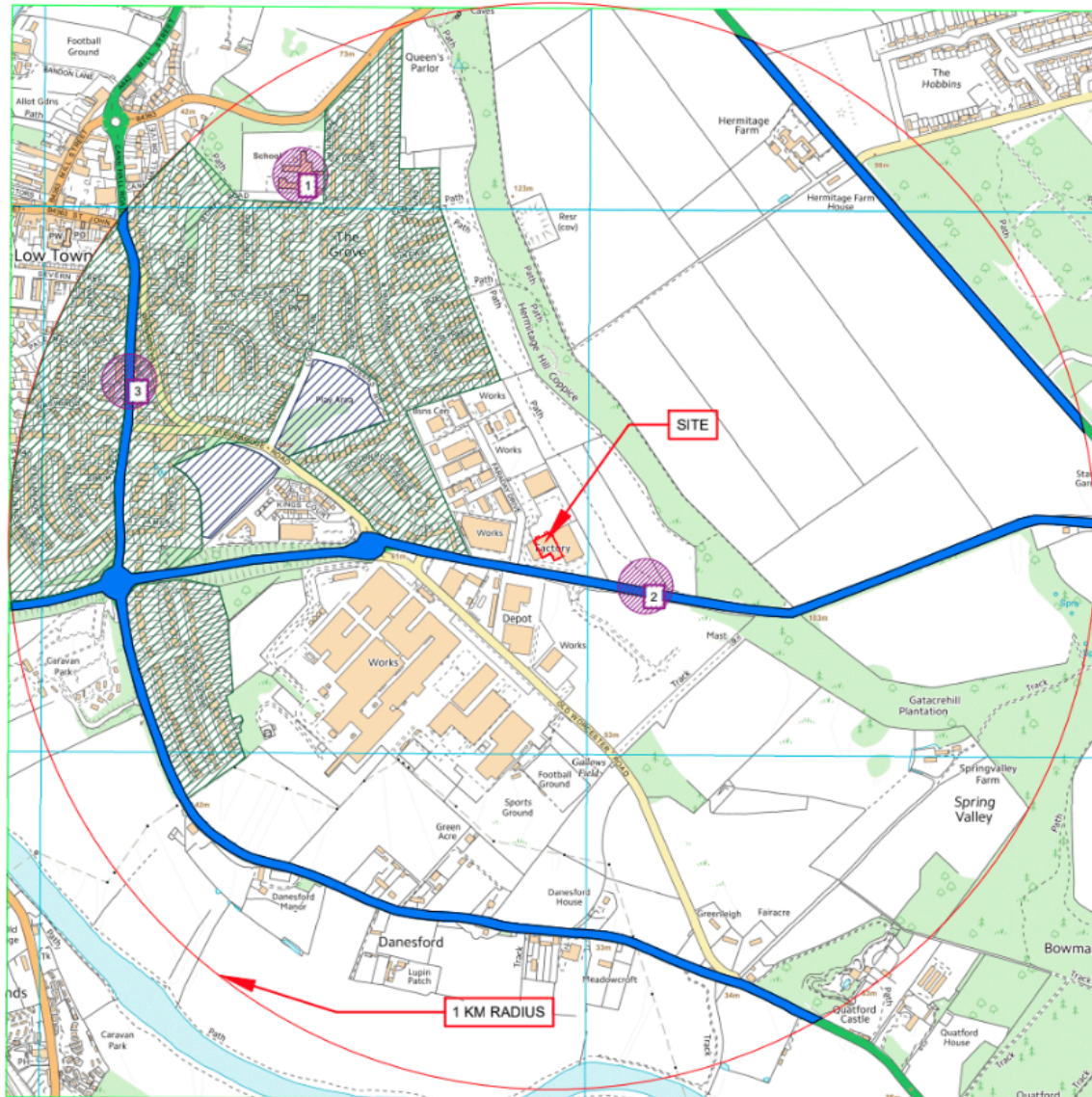
Receptor type	Present within 1km	Distance
Schools	Yes	780m northwest
Hospitals / nursing homes	Yes	723m south
Residential	Yes	175m west
Roads (A Roads, Motorways)	Yes	25m south
Commercial / Industrial	Yes	Within 50m north, west
Railways	No	
Bus stations	No	
Pylons (directly adjacent to site)	No	
Utilities	No	
Airports	No	
Water for human consumption	No	
SSSI, SAC, SPA, RAMSAR	No	
Watercourses	Yes	958m south (R.Severn)
Groundwater	Yes	Beneath (principal aquifer)
Boreholes, wells and springs	No	
Other: N/A	No	

The facility is located off Faraday Drive, Bridgnorth (SO 72927 92382), situated within an Industrial Estate which is a mixture of commercial and light industrial activities including a gym and fitness club. The closest residential receptors are approximately 100m to the west on Stourbridge Road. To the north beyond the industrial estate are residential receptors on Birchlands / Oaklands. To the south beyond the industrial estate are scattered rural receptors the closest being approximately 530m. To the north west is a farm beyond agricultural land over 800m from the facility. Due west comprises agricultural land in excess of 1000m. There is a nursing home 720m to the south and a primary school 770m to the northwest. The local 'A' road network includes Stourbridge Road (A458) running east-west directly south of the facility and the Kidderminster Road (A442) running north-south approximately 770m to the west of the facility.

There are no designated ecological receptors within screening distance. The River Severn is 958m south of the site. The underlying groundwater is a principal aquifer, there are no source protection zones within 1km of the site.

Receptor detail (1km screen)

Receptor reference R-Residential, commercial, industrial, infrastructure E-Ecological	Land use e.g. house, school, hospital, commercial	Direction from site (North, South, East, West)	Approximate distance to site boundary (m)
R1	'A' Road - Stourbridge Road (A458)	South	25
R2	Commercial	North and west	50
R3	Residential (Stourbridge Road)	West	100
R4	Nursing home (Danesford Grange)	South	720
R5	School (St Mary's Bluecoat)	North West	780
E1	River Severn	South	925
E2	Principal Aquifer	-	0



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KEY RECEPTORS:

1. ST MARY'S BLUECOAT C OF E PRIMARY SCHOOL
2. A45B
3. A442

- RESIDENTIAL AREA
- PARK
- ROAD NETWORK

A LAYOUT REVIEWED RB 20 05 20

Rev	Description of revision	Drawn	Checked	Appr	Date

Technical Direction,
 8th Floor, 210 Pentonville Road, London, N1 9JY
 Tel: 0207 812 5189

**BRIDGNORTH FLAT SCREEN
 WW15 5BA**

**KEY RECEPTOR
 LOCATION**

Drawn	Initials	Date	Scale	Sheet no.
IR	IR	04.03.16		A1
Checked	LH	04.03.16		
Approved	LH	04.03.16		

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Job No: BRGN
 Drawing No: VES_TD_BRGN_100_023
 Revision: A

PLANNING

12. Contingency Measures

In the event of a fire, the site (transfer station, HWRC and BRF) will be closed and incoming waste can be diverted to different sites depending on the type of waste.

Details of the contingency in place for closure of the transfer station and HWRC are included in the Business Continuity Plan (BCP) agreed with Shropshire County Council. The BCP is reviewed regularly and is available on request.

The BRF will be accepting small quantities of waste from a large number of sites over a large geographic area, therefore in the short/medium term the flat screens can be left uncollected at the place of original collection, usually a HWRC, as the volumes from each site will be very small.

Following the extinguishing of a fire and only when the site is cleared of all fire damaged wastes, fire water and the infrastructure repaired, checked and drainage systems cleaned and reinstated will the site be in a position to re-open. Prior to re-opening the local Environment Agency officer will be contacted and evidence provided to demonstrate the site is fit for purpose.

In the event that the fire suppression system is activated, fire water will be retained within the BRF and adjacent transfer station prior to off site disposal via road tanker. Veolia operates an extensive fleet of waste water tankers with a 24 hour call out availability and based locally.

Fire damaged wastes can be directed to the ERF's at Battlefield, Shrewsbury and four Ashes, Staffordshire or alternatively the Ling Hall Landfill all of which are operated by Veolia.

13. Fire Drills

A fire drill will be carried out every 6 months, following each drill an assessment is undertaken and any lessons learned will be implemented. The fire alarm system will be functionally tested every week. A number of the site staff will be specifically trained and appointed as Fire Marshalls.

The fire drill will vary on each occasion and cannot be prescribed in advance. The precise nature of the drill will be decided by the fire marshal and operational management based on factors such as perceived risk, incidents at other facilities, experience of staff, consultation with H&S advisers etc. The drills will generally be focused around the FPP and Emergency Plan.

14. Emergency Management Plan

Site Name:	Bridgnorth IWMF	Environmental Permit Reference: EPR/EB3005KB
Address and Grid Reference:	Faraday Drive Bridgnorth WV15 5BA Grid ref: SO 727925	
Operating Hours:	Flat Screen Recycling Facility: 6:30 - 16:30 Monday - Friday Collection depot: 06:30-17:00 Monday-Friday, Saturdays following bank holidays WTS 09:00-17:00 Monday-Friday, short hours Saturdays following bank holidays HWRC 09:00-17:00 Monday-Sunday	

Facility Type:	<ul style="list-style-type: none"> Flat screen recycling Facility Transfer Station Household Recycling Centre Collection Depot & Offices 	No of Staff Drivers/Loaders: Transfer Station: Office:	FSR Operatives: 34 Drivers/Loaders: 39 Transfer Station: 8 Office: 10
Site Manager:		Telephone:	
Route from nearest main junction Turn into Faraday Industrial Estate from the main junction with the A458. Main access/egress is the right			
RESPONSIBILITIES/CONTACTS In the event of an emergency/incident contact:			
Emergency Coordinator 1:	Andrius Piskovas	Telephone:	07867373552
Emergency Coordinator 2:	Tony Brooks	Telephone:	07976708561
Area Manager:	Shaw Wallace	Telephone:	07771797694
Business Line Director:	Gavin Twyford	Telephone:	07875003701
QHSE Manager:	Adam Hobday	Telephone:	07881008611

Crisis Hotline:	08450 710755
Emergency Spill Response:	08007838020
Emergency Services Direct Dial:	999