

For Blaenau Gwent County Borough Council

Fire Prevention & Mitigation Plan

Silent Valley Waste Transfer Station



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Version Control Table

Version	Date	Author	Description
1	01 April 2021	WRAP	First Draft

If there is a fire on site right
now go to Section 5 on
page 29 of this document.

Contents

1.0	Silent Valley Waste Transfer Station	7
1.1	Introduction	7
1.2	Activities.....	9
1.3	Site Drainage.....	11
1.4	Sensitive Receptors	11
2	Daily Operations	13
2.1	Training	13
2.2	Waste Acceptance Procedure	13
2.2.3	Material seasonality and Off-taker Agreements	14
2.3	Waste Storage	14
2.4	Potential Ignition Sources and Control Measures.....	19
3	Pile Turning and Monitoring	24
4	Fire Prevention and Mitigation Infrastructure.....	24
4.1	Use and Specification of Fire Walls	24
4.2	Quarantine area.....	24
4.3	Fire Detection System	25
4.4	Fire Suppression System.....	26
4.5	Water supply and Fire Water Containment	26
5.	Procedure in the Event of a Fire	29
5.1	Firefighting Strategy	29
	Small Fire.....	29
	Uncontainable Small Fire or Large Fire	29
5.2	Contingency Plan	31
5.3	Emergency Access to Site	31
5.4	Disposal of Contaminated Material.....	31
5.5	After a Fire Incident	32
6.	Impact Reduction	32
	APPENDICES.....	33
	Appendix 1 – Sensitive Receptor Contact Details.....	34
	Appendix 2 – Permit to Work Procedure	36
	Appendix 3 – FPMP Improvement Program	38

List of Figures and Tables

Figure 1: Silent Valley WTS permit boundary

Figure 2: The location of the existing WTS is highlighted in red and the Interim Plateau in blue

Table 1: Sources of waste streams accepted onsite

Figure 3: Waste storage areas (upper elevation)

Figure 4: Waste storage areas (lower elevation/interim plateau)

Figure 5: Site drainage layout

Figure 6: Sensitive receptors

Table 2: Waste pile volumes and storage times

Table 3: Ignition Sources and Control Measures

Figure 7: Silent Valley WTS Fire Strategy Signage

Figure 8: Firewater Storage area and Mitigation Measures – Lower Yard (illustration only)

Figure 9: Firewater Storage area and Mitigation Measures – Upper Yard (illustration only)

Figure 10: Fire Action Plan

Table 4: Impacts of Fire and Approach to Minimising Impacts

Table 5: Sensitive Receptor Contact Details

1.0 Silent Valley Waste Transfer Station

1.1 Introduction

This Fire Prevention and Mitigation Plan (FPMP) is applicable to Blaenau Gwent County Borough Council's (BGCBC) Silent Valley Waste Transfer Facility located at Cwm, Ebbw Vale, NP23 6PZ. Though the site is owned and insured by BGCBC, the legal operator is Silent Valley Services (SV) who provide the service on behalf of the authority. Therefore, reference to SV is made throughout the plan. The environmental permit for the site is held by SV.

There is no public access to the site. The site is located at the top of a valley. The Cwm Merddog Nature Reserve, which is a designated SSSI site, is located to the south of the site. The site is accessed by Cemetery Road.

The layout of Silent Valley WTS is detailed in Figure 1 & 2. The site includes two main areas, each at different elevations:

1. The main site area (located at the top of the access road) consists of two buildings and an impermeable outdoor yard . There are two main buildings:

'Building 1' : material input bays for residual waste, AHPs, green waste, co-mingled recycling and bulky waste (e.g. wood, metal, dense plastic).

'Building 2' :contains:

- Material input bays for comingled plastics and metals, loose card, paper and food.
- A sorting line for the manual picking of aerosol cans and mechanical sorting of comingled plastics, steel, and aluminium cans into separate streams
- Baling equipment for the baling of cardboard, plastics, and aluminium and steel.
- A blast cage for aerosol cans
- Bunded storage container for batteries
- DOLAV storage containers for Small WEEE
- Storage bank for textile
- Storage of aluminium and steel can bales, and card bales.

2. **Interim plateau** is an uncovered area at a lower elevation of the site. The area is currently utilised for ad hoc bulking of waste wood and dry mixed recyclate (DMR) on an impermeable concrete slab with A frame push walls. Bagged DMR arising from commercial collections is transferred into a standing trailer typically once a week, then transferred to offtakers. Wood is stored loosely and bulk loaded into trailer when sufficient tonnage accumulates. Both waste streams are containerised. The rest of the Interim Plateau consists of a separate impermeable concrete pad (used to sit the wheelwash used during the lifetime of the closed landfill) and permeable surfacing and some storage of vehicles/containers.

Figure 1: Silent Valley WTS permit boundary

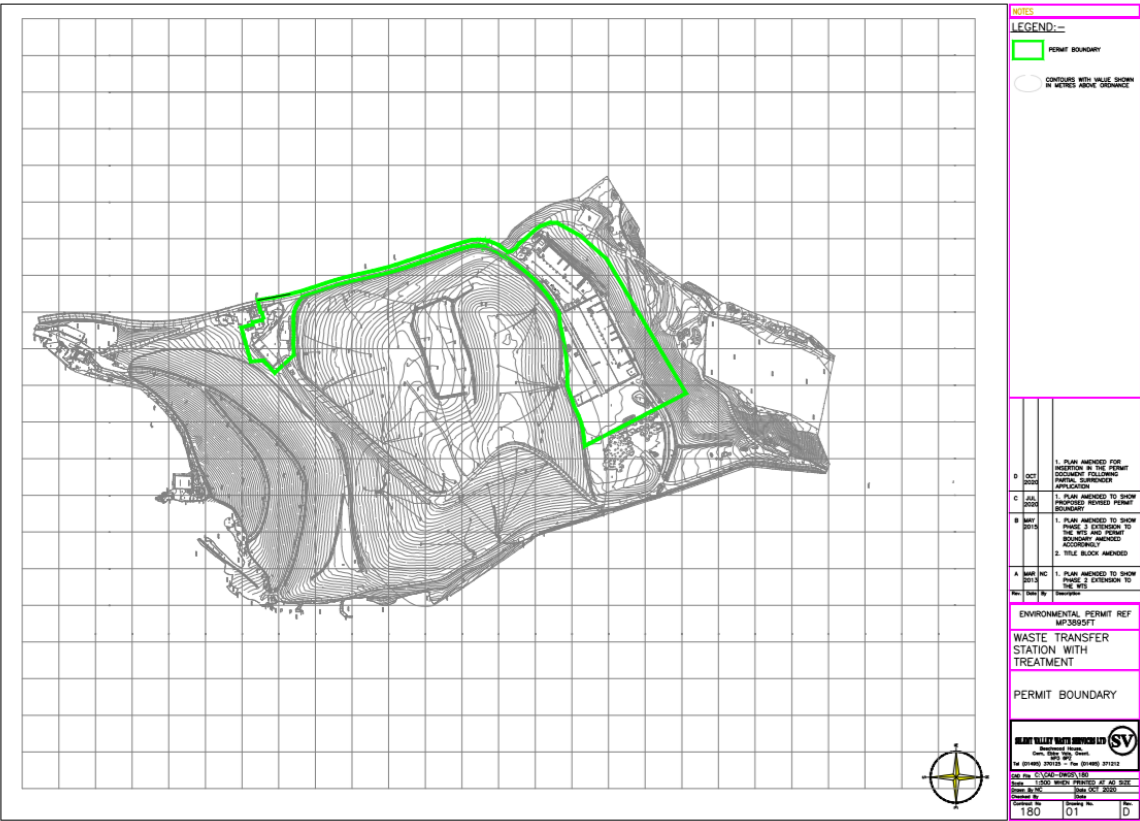


Figure 2: The location of the existing WTS is highlighted in red and the Interim Plateau in blue



1.2 Activities

The site operates as a waste transfer facility currently accepting residual waste, dry recyclables, food waste, WEEE, textiles, unprocessed green waste, tyres, bulky waste (arising from BGCBC's kerbside collections and from HWRC), non-hazardous commercial / industrial or trade wastes, wood and absorbent hygiene products (AHPs) and a small amount of household batteries. The material arrives from the following sources:

Table 1: Sources of waste streams accepted onsite

Service	Material stream(s)
BGCBC domestic residual collection	Residual waste, AHPs
BGCBC domestic kerb-sort recycling collection	Card, paper, glass, steels, aluminium, plastics, textiles, batteries, small WEEE
BGCBC domestic food waste collection	Food waste
BGCBC commercial residual collection	Residual waste
BGCBC commercial recycling collection	Co-mingled dry recycling
BGCBC bulky waste collection	Bulky waste (i.e. furniture)
Tai Calon (social landlord)	Bulky waste (i.e. furniture), construction and demolition waste

The permit allows BGCBC/SV to accept up to 74,999 tonnes of waste material per year.

It is the objective of this plan to minimise the risk of a fire starting on site and to ensure that, in the event of a fire occurring, it is identified as early as possible and effective measures are implemented to extinguish it, whilst minimising the impacts of the incident. It will be reviewed, and updated periodically by the Site Manager as infrastructure works are progressing over the next 24 months, or more frequently if required after discussions with NRW. Details of how the site will be developed over the next 24 months are provided in a separate document (Appendix 1) .

Figure 3: waste storage areas (upper elevation)

Container schedule	
1-Residual	
2- Green	
3-Trade	
4 & 5-Residual trade	
6- Bulky	
7-LPG bottles	
8- WEEE (LDA)	
9-WEEE (SDA)	
10-Tyres	
11- Inert	
12- Spare	
13- Plastic bottles and cans	
14,15,16- Material from picking belt	
17- Cardboard	
18- Paper	
19- Food	
20- Baled aluminum	
21- Baled card	
22- Baled steel	
23- Baled plastic	
24- Glass	
25- HH batteries	
26- Textiles	
27- Quarantine	

SILENT VALLEY WASTE SERVICES LTD  Sheepwash, Shepton Mallet, Dorset, DT12 4PL Tel: (01485) 312125 - Fax: (01485) 312122	
SILENT VALLEY WASTE TRANSFER STATION	
WASTE AND RECYCLATE CONTAINER LAYOUT	



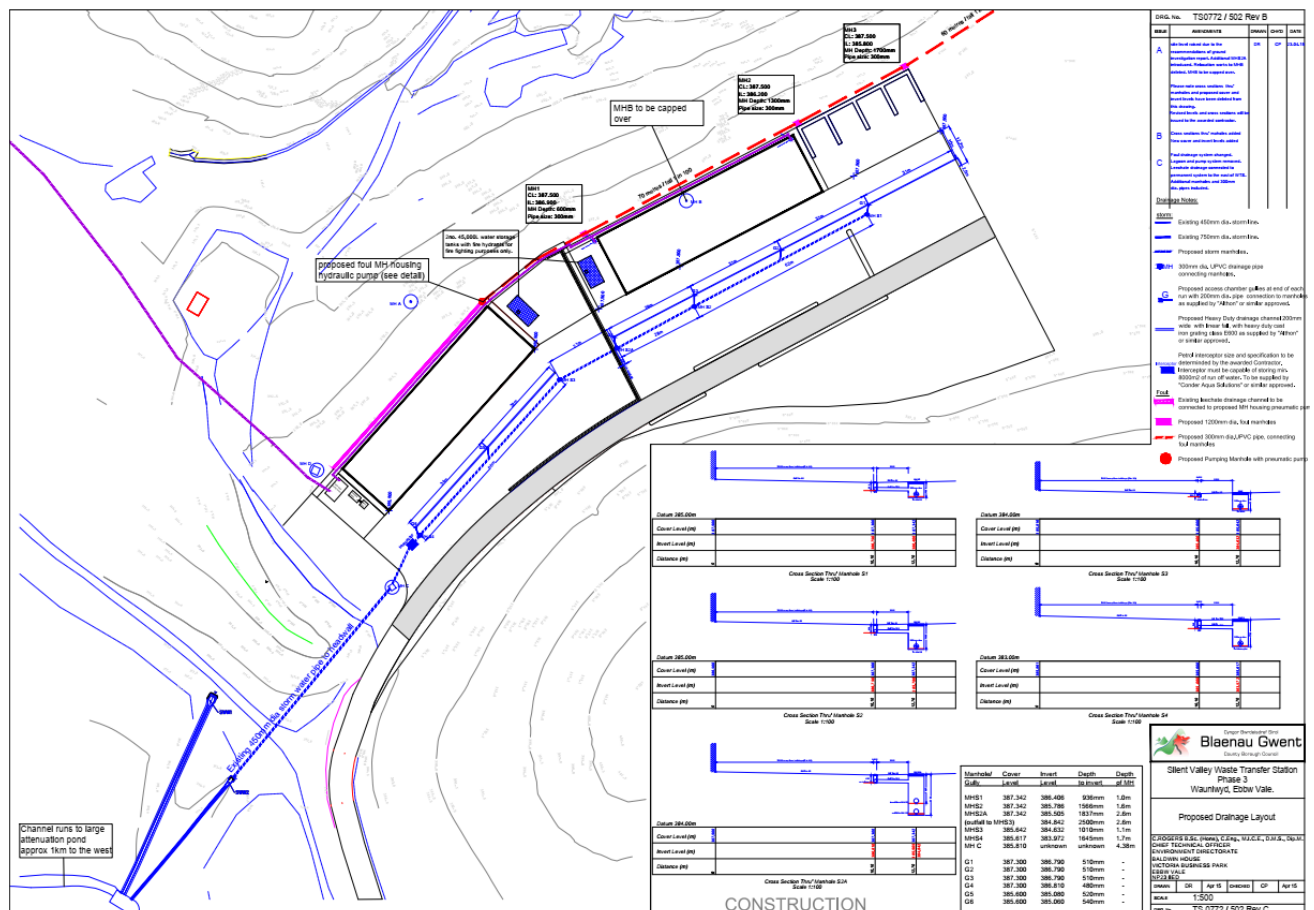
Figure 4: waste storage areas (lower elevation/interim plateau)



1.3 Site Drainage

The site drainage plan is illustrated in Figure 5. The operational areas of the main site area drain to surface water through the interceptor. Isolation valves are not currently in place but will be retrospectively fitted to prevent any firewater water draining into the interceptor during a fire incident. The foul drainage is a closed system, all runoff from inside the buildings feed into the foul with an outfall into the leachate lagoon to the south of the WTS. BGCBC and SV are in the process of sourcing the appropriate snake bunds which will be used to prevent fire water entering the foul drainage system during an incident.

Figure 5: Site drainage layout

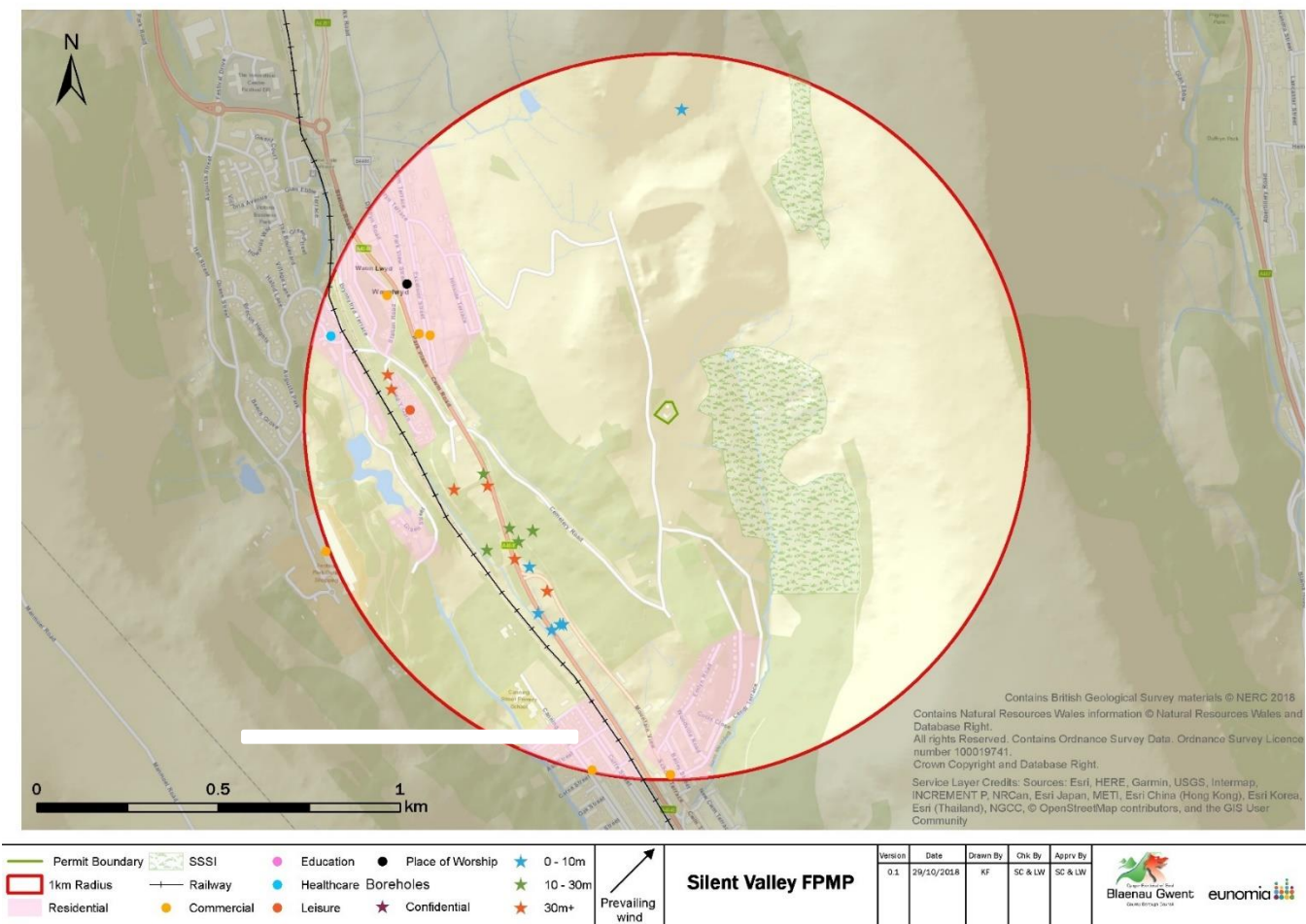


1.4 Sensitive Receptors

A map of the sensitive receptors within 1km of the site is detailed in Figure 5. There are no powerlines over the site. The sensitive receptors that are most likely to be affected by a site fire have been identified in Table . These receptors may need to be contacted during a fire incident with updates on the expected duration, where available contact details are available.

In the event of a site fire, BGCBC will use its website and social media channels to communicate information with sensitive receptors throughout the borough. BGCBC/SV officers will also visit high risk sensitive receptors to deliver the message in person.

Figure 6: Sensitive receptors



2 Daily Operations

2.1 Training

All staff engaged on the site are fully trained as part of their induction on fire prevention and mitigation measures, monitoring activities, and the emergency procedures on site. Staff are informed of any procedural updates on an ad-hoc basis and receive refresher courses as necessary. Fire marshals are appointed to the site who receive fire marshal training and training in the correct use of fire extinguisher every three years, the training is delivered by an external fire safety consultant. The course is delivered in both theory and practical sessions (live firefighting), and certificates are issued to each individual once they have successfully completed the course. At all times, at least one fire marshal is on site. The Records of training are kept on site in the site office and in the main office at Beechwood House.

Where required, all contractors working on site and when appropriate, any other site visitors are issued and asked to sign a copy of the Site Rules for Contractors and Visitors, which includes details of the relevant fire prevention and evacuation procedures. In addition, notices identifying fire marshals and outlining key instructions in case of hearing the fire alarm or discovering a fire on site are displayed prominently at key locations. The evacuation procedure is regularly reviewed and updated alongside the FP&MP.

A copy of this FP&MP is kept on site in the site office at Silent Valley's Beechwood House office, Cwm, Ebbw Vale.

2.2 Waste Acceptance Procedure

All combustible materials accepted on site are detailed in Table 2.

All vehicles arriving and departing the WTS will be required to go over the weighbridge where the relevant paperwork is checked before weights are recorded and the subsequent ticket is issued. The vehicle weight and material types are recorded in line with the MF Regulations. Site operatives carry out visual checks on material capacity throughout the day to ensure that suitable storage space is available for all incoming wastes.

If possible, before the waste is unloaded into its correct material bay a visual load inspection takes place to ensure consistency with the waste transfer note. If it is not possible to inspect the waste prior to unloading, the waste is inspected immediately after off-loading in the appropriate waste reception area.

The site operatives ensure, as far as is practicable, that all wastes disposed at the site are permitted by the site permit. If waste is found to be non-compliant/unauthorised prior to being off-loaded from the vehicle, then the load is rejected and the vehicle is directed off site. All details are recorded in the site diary.

If wastes are found to be non-compliant/unauthorised after off-loading, the waste will either be reloaded onto the delivery vehicle for onward transport (if it is safe to do so) to a suitably permitted facility; or removed to the designated quarantine area/container. SV management will be informed immediately and will organise for the safe removal of the non-compliant waste by a qualified contractor. All incidents of non-compliant waste will be recorded in the site diary. NRW will also be notified immediately of any major waste rejection incident.

2.2.2 Unauthorised waste

The site operatives ensure, as far as is practicable, that all wastes received at the site are permitted by the site permit. Any users that are identified as bringing unauthorised wastes onto the site are refused access and advised of the nearest permitted facility for that particular waste (if known). Details of the attempted unpermitted deposit are recorded in the site diary including date and time, description of the waste and the vehicle registration number. Any suspicious circumstances are reported to SV management.

If any unauthorised waste is discovered on site, the site operatives will visually inspect the waste and only after determining that it is safe to do so, using the appropriate PPE, relocate the waste to the quarantine area/container.

If on visual inspection it is determined that the waste may be hazardous, physically unsafe to move, or the nature of the waste cannot be determined, then the immediate area will be cordoned off to prevent further contact and all site operations in the immediate vicinity will be suspended, and traffic and customers diverted as required. In certain circumstances the site may need to be temporarily evacuated and closed until the site is deemed safe to re-open.

SV management will be informed immediately and they in turn shall contact NRW to agree an action plan for the safe removal of the unauthorised waste by a qualified contractor. A qualified contractor will be contacted to remove any non-conforming waste from site immediately. In all such instances, all details will be recorded in the site diary and an incident report form will be completed.

2.2.3 Material seasonality and Off-taker Agreements

As the materials to be stored at this site are from households and local businesses, seasonal variation in throughput will be minimal, slight increases may be seen over the Christmas holidays, during sporting events and the summer period.

BGCBC has off-taker agreements in place with UK based re-processors for **all** material streams and is able to order additional collections if an increase in material volume is expected or received. Contract periods vary by material type, running on average from one to two years with options to extend. The contracts also have the flexibility for material to be collected loose or baled, this means if the baler breaks down, metals, plastics and card can still be moved off site regularly under the standard contract arrangements. BGCBC are in a long term contract for both the residual (until 2040) and food (until 2033) waste streams.

Within standard operating, as soon as a full load is available for collection, a collection is ordered and the material removed from site. No material from this site is sold on the spot market to ensure reliable material removal from the site.

2.3 Waste Storage

The volume of material received through the facility is low and the site operates on a high turnover basis. Appropriate loose material bays have been designed to allow storage of material for a maximum of 12 days, and the bale storage bays to allow two loads of baled card plus a 15% contingency. This is the operational minimum required to support BGCBC's waste collection services.

Materials received on site that do not require sorting or baling are tipped in the relevant material storage bay. Site operatives manage the material within each storage bay to ensure

material is moved off site on a first in / first out principle. This is managed through the consolidation of the oldest material to make sure this leaves the site first, preventing the build-up of 'old' material at the back of a bay.

Commingled plastics and cans are tipped into a processing bay next to the processing plant in Building 2. The material is then sorted into plastics, aluminium cans, and steel cans. Aerosol cans are extracted from the picking line prior to baling to remove the combustion/explosion hazard from the process. The plastics are immediately compacted into bales, which are then stored in a bay outside Building 2.

Loose card is also tipped into a material bay in Building 2. The material is baled throughout the working day to allow the management of material volumes in the storage bay. The bales are stored undercover in a bay in Building 2.

Bulky waste and furniture is tipped in a material bay in Building 1. Site operatives then deconstruct the material into its constituent recyclable parts.

The length of time combustible materials are stored on site is detailed in Table 2. This has been divided into 'Standard' operational activity and 'Exceptional Circumstances'. Standard storage is exceeded in 'Exceptional Circumstances', e.g. hauliers are unable to remove containers from the site, requiring additional storage time, during which time the Exceptional Circumstances times are adhered to.

The following hazardous materials are stored on site:

- Aerosols;
- Gas bottles.

Table 2: Waste Pile Volumes and Storage Times

Waste stream	Max. Height (m)	Max. Length (m)	Max. Width (m)	Max. Volume (m³)*	Max Area (m²)	Standard Max. Storage Time on Site (Days)	Exceptional Circumstances Max. Storage Time on Site (Days)	How Material is Stored
Building 1								
Residual/AHP	3	9	18	404	162	2	14	Loose in bay
Green waste	3	9	14	313	126	5	10	Loose in bay
Co-mingled recycling	3	9	9	150	81	5	10	Loose in bay
Bulky	2.5	9	15	231	135	5	10	In bay
Separated wood	1 x 40yd³ RORO skip					7	14	Containerised
Building 2								
Co-mingled Plastics and Cans (steel and aluminium) loose	3	9	5	119	54	7	14	Loose in bay
Aerosol (manually separated out)	1100 litre vented lockable wheelie bins					21	28	Containerised
Card	3	9	10	252	90	2	4	Loose in bay
Paper	3	9	7	150	72	12	24	Loose in bay
Batteries	Proprietary 105 litre drums with sealed lid (0.210m³)					21	28	Containerised
Small WEEE	DOLAV Containers- 660 litres (1.32m³)					70	140	Containerised
Textile (storage bank)	Dedicated 3.5 yd³ containers					14	28	Containerised
Food waste	110yd³ sealed trailer					1	7	Containerised
Aluminium bales	4	9	9	198	81	35	45	Baled & pyramid stacked

Steel bales	4	9	9	205	81	35	45	Baled & pyramid stacked
Card Bales	4	9	9	205	81	10	20	Baled & pyramid stacked
Plastic Baled	4	9	9	205	81	12	24	Baled & pyramid stacked
Tyres	Safely loose stacking on yard area				~14m ²	35	70	Loose/ stacked
Interim plateau								
Bulked wood	In standing trailer					Ad-hoc use of area/max 10 days		Containerised
Dry mixed recyclate (pending removal)	In standing trailer					7	15	Containerised

2.4 Potential Ignition Sources and Control Measures

Table 3 sets out the potential ignition sources which could be present on site and the control measures and procedures to mitigate against the potential fire risk.

Table 3: Ignition Sources and Control Measures

Potential Ignition Source	Risk	Control Measures / Procedures
Arson or Vandalism	Combustible materials stored on the WTS are potentially at risk from arson. It is possible that a trespasser may enter the site and commit either an act of vandalism leading to an ignition source, or an act of arson.	Fencing (approximately 1.8m in height) is installed around the perimeter of the WTS site with 3 strands of barbed wire giving an overall height of 2.4m and lockable gates at the site access points will be kept closed when the site is not in use. Doors to the buildings on site are lockable and of a secure construction. Staff check that the site and equipment is secure as part of their daily procedures. Signs are erected at site entrance to discourage trespassers. The site is fitted with emergency and intruder lighting, as well as an intruder alarms in Buildings 1 and 2 which will be activated when the site is unmanned. Alarm checks are routinely carried out. CCTV is operational around all elevations and surround areas of Buildings 1 and 2. A CCTV live feed is monitored throughout operational hours. The CCTV is recorded, so any incidents that occur outside of operational hours can be reviewed. A security guard is permanently post at the site 365 days a year.
Plant and Equipment Failure	A fault or electrical failure in the onsite plant including forklifts, balers, telescopic handlers, excavator, dump truck, hookloader, 4x4s, sort line and suction sweepers could provide an ignition source.	All mobile plant are fitted with suitable extinguishers for fighting vehicle fires. All plant stored on site are subject to a servicing and maintenance agreement as per the manufacturer's instructions. Daily checks will be conducted to ensure that no material is trapped within the equipment or plant, leading to a fault or ignition from friction. Daily checks are conducted to identify any defaults. Where a default or defaults are identified, senior site staff will be informed and be responsible for isolating the equipment and arranging for the default(s) to be rectified by qualified service agents in accordance with the manufacturer's instructions. Plant /equipment service records will be maintained by senior staff and will be stored securely on site. Servicing certificates and repair receipts will also be stored. Mobile plant will be stored at least 6m away from combustible materials when not in use.
Electrical Faults	No electrical equipment is stored within 6m of combustible waste.	N/A
Discarded Smoking Materials	The whole site is designated as a non-smoking area.	N/A

Potential Ignition Source	Risk	Control Measures / Procedures
Hot Works	Hot works undertaken on site could provide an ignition source due to sparks or residual heat in the material being treated.	Hot works is not undertaken onsite by SV staff. If contractors have to undertake any hot works, a permit to work system is in place (see Appendix 0), which covers electricity and hot works if required. Any hot works will be undertaken at least 6m from the storage of any combustible material. A fire watch will be undertaken at 30 minute intervals up to one hour following the completion of any works.
Industrial Heaters	Industrial heaters are not used in the Material Processing or Bale Store buildings.	N/A
Hot Exhausts	Dust that has settled on exhausts and engine parts could cause an ignition source.	Regular visual checks are undertaken throughout the day to check for dust build up. Staff will be trained to safely remove the build-up of dust on exhausts and engine parts if a risk is identified.
Ignition Sources	No naked flames, space heaters or furnaces are used on site.	N/A
Batteries in ELV	No end of life vehicles stored on site.	N/A
Batteries in WEEE	Batteries entering waste processing machinery could cause an ignition source.	No WEEE processing or treatment occur on site.
Leaks and Spills of Oil and Fuels	There is the potential for fuel/oil to leak from site vehicles or storage tanks	Oils are stored in a double lined storage tank within a dedicated lockup shipping container located on impermeable pavement, bunded to 110% capacity. The integrity of the oil storage tank and bunds are visually inspected on a daily basis. Spill kits are located throughout the site. If staff identify a fuel or oil spill they are trained to use the spill kits provided to remove the ignition source immediately upon discovery. Supervisors are responsible for maintenance and restocking of spillage kits and when necessary, ordering replacement supplies immediately after equipment has been used and ensuring that there is easy access to the spillage kits at all times.
Build-up of Loose Combustible	Build-up of loose combustible waste, dust and fluff on site could cause an ignition source.	Staff inspect the site daily and conduct litter picks and housekeeping actions throughout the working day. When a build-up of material is identified they are trained to take appropriate action to clean the site. In the event of a containers or filling quicker than expected standby requirements are available.

Potential Ignition Source	Risk	Control Measures / Procedures
Waste, Dust and Fluff		
Tramp Metals	Tramp metal could find its way into moving machinery and causes localised hot spots.	Only metals and plastics are sorted on site. Aerosol cans are manually sorted before metals are mechanically extracted from the mixed metals and plastics stream using an over band magnet and eddy current separator. Equipment is regularly cleaned and maintained to remove any build-up of tramp metals.
Reaction Between Wastes	A reaction between incompatible or unstable wastes could provide an ignition source.	All material streams are stored in bays segregated by material type. If contamination is identified within a bay, the material will be isolated and moved to the quarantine area to await disposal. If contamination is identified within a container it is visually inspected, and only after determining that it is safe to do so, it is removed by hand or by using a bespoke hook. Staff check all bays and containers for contamination at the end of each day.
Self-Combustion	Chemical reactions within a single stream waste pile could lead to self-combustion.	No self-combustible material is stored on site for more than 70 days. Paper, card, garden, sweet sweepings, co-mingled recyclate, AHP, residual materials and occasionally tyres are delivered as separate streams to the site and do not undergo any treatment on site. During exceptional circumstances, senior staff will be responsible for the management of the materials and pile turning when required. Management will include visual observations of materials at risk of self-combustion will be undertaken at regular intervals through the day to identify if moisture levels within the pile are high (piles wet or steaming off). Section 3 provides the procedure for turning and monitoring waste piles.
Deposited Hot Loads	Hot loads being deposited within a bay or container on site could cause an ignition source.	Staff undertake visual checks for fire, hot loads smoke and signs of smouldering of each load deposited. All employees are trained to take action if a positive identification is made. Details on the approach to be followed is set out in the Firefighting Procedure, see Section 5.

Potential Ignition Source	Risk	Control Measures / Procedures
Damaged or Exposed Electrical Cables	Damaged or exposed electrical cables within the building could cause an ignition source.	All electrics onsite have received Building Control Certification. A permit to work protocol is used to prevent unauthorised alterations to electrical installations and plant or works by unqualified engineers. Regular checks, maintenance and servicing of electrical equipment are undertaken and certified by a qualified electrician. The time intervals between the inspection dates are determined by a qualified electrician and take into consideration the type of installation and equipment, its use and operation, any known maintenance and the external influences to which it is subjected.

3 Pile Turning and Monitoring

Senior staff oversee the daily operation of the site including monitoring for adherence to the FPMP. Material is managed on a first in, first out principle – any loose material or bales from the weeks' production is brought to the front of the bay for the next load allocation.

Visual fire and temperature checks are carried out throughout the working day on all loose material piles, baled and containerised materials. This includes looking for the piles 'steaming-off'. Any material which is identified as 'wet' will be moved from the material bay and disposed of as residual waste.

3.1 Loose Material in Bays

Under standard operating conditions, loose materials stored in bays in a building are not kept on site for longer than 12 days. The green waste is unprocessed and stored in its largest form, reducing the risk of self-combustion.

3.2 Bales in Bays

Combustible baled material (plastic and card) is stored for a maximum of 1 week under standard operating conditions and 2 weeks in exceptional circumstances. Combustible bales will be stacked with sufficient overlap between bales to prevent fire vortex forming between bale stacks.

A limited storage time policy is in place where bales are moved off site almost immediately after a full consignment has been produced.

If a bale is identified as hot, either steaming off or hot to touch, it will be moved immediately to the quarantine container and allowed to cool. Once cool the bale will be taken to the loose card or plastic bay, broken up with any excessively wet material removed to the residual skip and the remaining material re-baled.

3.3 Containerised Material

Containerised material is stored for a maximum of 3 weeks under standard operating conditions and 4 weeks in exceptional circumstances.

4 Fire Prevention and Mitigation Infrastructure

4.1 Use and Specification of Fire Walls

The site currently doesn't have firewalls (with at least 120 minutes fire resistance). This is mitigated by low volumes, short storage times, and reduced contamination due to the material being source-segregated. As part of the infrastructure works it is planned to install fire resistant bay walls for combustible waste piles with adequate freeboard space.

4.2 Quarantine area

The site currently doesn't have a dedicated permanent quarantine area. It is proposed that in an event of a small-scale/manageable fire incident burning or smouldering material will be separated from the pile by using onsite mobile plant, and will be placed in the 40yd³ container located in the yard of Building 2 opposite the building. Waste will be placed in the container and doused with water and/or inert material to extinguish a fire. (The container will also act as containment for any water arising.) The container is located more than 6 meters away from any combustible material. If a fire is unmanageable by SV staff and assistance from the FRS is required, the container will be used to accommodate the unburnt waste removed from the burning pile. If required by the FRS, SV are able to increase the

As part of the planned improvement works there will be a permanent dedicated QA erected onsite which will be designed to be able to accommodate 50% of the largest waste pile and will benefit of impermeable surfacing, fire walls and sealed drainage.

Both Building 1 and Building 2 are fitted with an automated detection and fire alarm system. The Loop Fire Alarm Control Panel and manual call points are approved to British Standard EN54 Parts 2, 4 and 13. A control panel is located at the main entrance of each of the buildings. The panels are networked together so in the event of a fire each building will be notified. Weekly checks of fire alarms in all WTS buildings and offices, weekly fire extinguisher checks and monthly emergency lighting tests take place.

Notes:

- H - sand bucket location
- I - inert material location

SIGN DESCRIPTION	SIZE	MATERIAL	LOCATION	MOUNTING SURFACE	No REQ'D (DRAWG REF)	PICTURE
Luminous PVC Fire Exit Running Man(Arrow Down)	100mm x 300mm	Rigid PVC	Baler	Hanging From Trunking	1(A)	
Luminous PVC Fire Exit Running Man(Arrow Down)	100mm x 300mm	Rigid PVC	Baler Platform	(i)Screwed To Top Of Access Ladder; (ii) Fixed To Tubular Door Frame;	2(B)	
Luminous PVC Fire Exit Right Running Man	100mm x 300mm	Rigid PVC	(Baler Bottom Of Stairs; (i) Baler Bottom Of Ladder	(i)Screwed To Wall (i)Screwed To Wall	2(C)	
Luminous Exit Keep Clear(Man & Mandatory Symbol)	100mm x 250mm	Rigid PVC	(i)Front Access Doors-Building 2 (i)Front Access Doors-Building 2	Screwed To Top Of Door Frame	4(D)	
Fire Assembly Point Signs	(A)20mm x 297mm (B)20mm x 300mm	(i)Rigid PVC (i) Aluminium	(i)Pod Wash Down Area(RZ) (i) In Verge Near To Toilet Block Building 1	(i)Screwed To Barrier Post (i)Clipped To New Post	1(E) 1(F)	
No Parking Sign	600mm x 450mm	Aluminium	(i)Pod Wash Down Area(RZ) (i)Water Water Tank M/F Open Area'	(i)Screwed To Barrier Post (i)Clipped To New Post	1(F) 1(F)	

Sign Register

4.4 Fire Suppression System

There is no fire suppression system installed in the WTS buildings. As there are no unmanned automated processes within the WTS building, under standard operations the material will be stored for a maximum period of 12 days within the building and removed from site on a FIFO basis and piles will be monitored on daily basis.

Site staff is trained in the company's stock rotation procedure to ensure that stock is rotated using the first in / first out principle. The procedure for stock rotation provides a method for recording and managing all waste on site and is provided in Section 3.

4.5 Water supply and Fire Water Containment

The volume of the largest waste pile on site is 404m³. This means the site water requirement is 2,700 litres of water per minute, or 486,000 litres for three hours. Silent Valley WTS is located at the top of a valley and Welsh Water and unable, without significant investment to install a pump house to supply water to the site. Water will be provided in the event of a fire from three 45,000L underground storage tanks. SV are able to utilise onsite inert material to extinguish a small-scale fire.

For a large fire the site is currently reliant on the FRS using a fire engine to draw water directly from the in-situ underground tanks at a high enough flow rate. In the event that these three tanks together are not large enough to meet the water supply requirements the FRS is able to utilise the adjacent pond for firefighting. (As part of the infrastructure upgrades there will be onsite hydrants installed in the future.)

A topographic modelling exercise has been undertaken to examine where firewater runoff water will settle on site during a fire incident. Figure 4 & 5 provide an estimation on where the water will 'sit' in the yard area of site- please note this is for illustration purposes only. In an event of a fire temporary bunds will be used to create a perimeter bund to prevent water leaving the confines of the site or fire water entering the drainage system. Following the fire incident all contained firewater will be tankered offsite for disposal using a suitably licensed contractor.

NOTES	
1.	ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED OTHERWISE.
2.	ALL LEVELS ARE IN METRES RELATIVE TO ORDNANCE DATUM NEWLYN UNLESS NOTED OTHERWISE.
3.	ALL COORDINATES ARE IN METRES RELATIVE TO ORDNANCE SURVEY NATIONAL GRID.
4.	IT IS ASSUMED THAT IN A FIRE FIGHTING INCIDENT, ALL SURFACE WATER DRAINAGE SHOULD BE SEALED OR DAMMED AS PART OF THE EMERGENCY PROCEDURE IN ORDER TO CONTAIN ALL CONTAMINATED WATER ON SITE.
5.	BOUNDARIES OF PROPOSED WATER STORAGE CONTAINMENT SHOULD BE VERIFIED BY ADDITIONAL SURVEY.
6.	WATER STORAGE AREAS MODELLED BASED ON TOPOGRAPHICAL SURVEY UNDERTAKEN BY JOHN JONES LAND & MINING SURVEYORS, DRAWING NUMBER BS077, DATED JULY 2017.
7.	CONTAINMENT LEVELS PROPOSED ALLOW MINIMUM 5% FREEBOARD.
8.	DETAILS OF RAISED CONTAINMENT FEATURES, BUNDLES, KERBS OR BARRIERS TO BE DETERMINED AT DETAIL DESIGN STAGE. PERMANENT CONTAINMENT TO MAINTAIN FLOW PATH OF SURFACE WATER RUN-OFF.

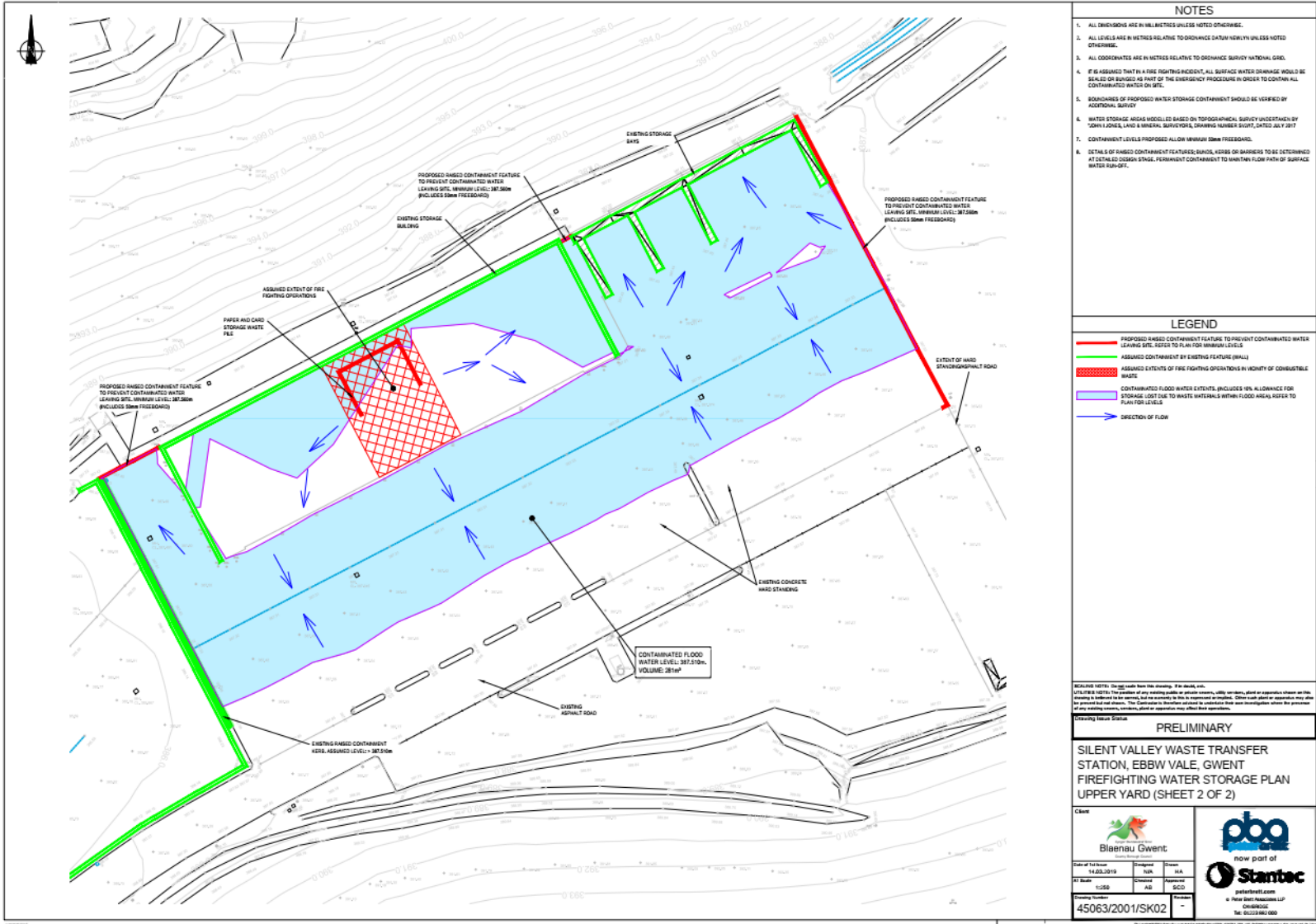
LEGEND	
[Red Line]	PROPOSED RAISED CONTAINMENT FEATURE TO PREVENT CONTAMINATED WATER LEAVING SITE. REFER TO PLAN FOR MINIMUM LEVELS
[Green Line]	ASSUMED CONTAINMENT BY EXISTING FEATURE (BULK)
[Red Hatched Area]	ASSUMED EXTENTS OF FIRE FIGHTING OPERATIONS IN VICINITY OF COMBUSTIBLE WASTE
[Blue Shaded Area]	CONTAMINATED FLOOD WATER EXTENTS, INCLUDES 10% ALLOWANCE FOR STORAGE LOST DUE TO WASTE MATERIALS WITHIN FLOOD AREA. REFER TO PLAN FOR LEVELS
[Blue Arrow]	DIRECTION OF FLOW

(DRAWING NOTE: On egg scale from the drawing, it is stated, viz:
 1/4" = 10' (NOTE: The position of any existing building or other structure, utility, road, etc., shall be as shown on the map. It is intended that the drawing shall be used as a guide only and that the contractor shall be responsible for all details of construction. The Contractor is further advised to undertake their own investigation unless the presence of the existing means, services, plant or apparatus may affect their operation.)

Drawing Issue Status

PRELIMINARY			
SILENT VALLEY WASTE TRANSFER STATION, EBBW VALE, GWENT			
FIREFIGHTING WATER STORAGE PLAN LOWER YARD (SHEET 1 OF 2)			
Client			
Bluenau Gwent			
Date of Release	Designed	Drawn	RA
14.03.2019	NAN	AB	SCD
A1 Scale	1:250	Project	CD
Drawing Number			
45063/2001/SK01			
now part of Stantec			
© Power Waste Management LLP CHICKENHILL Tel: 01223 962 080			

Figure 9: Firewater Storage area and Mitigation Measures – Upper Yard (illustration only)



5. Procedure in the Event of a Fire

This section details the procedures to be followed on site in the event of a fire.

5.1 Firefighting Strategy

In the event of fire in a material bay or container, the person who discovers the fire shall raise the alarm immediately by the appropriate method (such as operation of a break glass alarm or manual call point).

Safety of life shall override all other considerations.

Small Fire

A small fire or area of smouldering waste will be dealt with as follows:

1. Inform the management team of the situation.
2. Do not attack the fire in-situ! Mobilise the required mobile plant to pull the affected waste into the open and away from any further waste that could become a light on contact
3. Depending on the size / nature of the fire the waste should either be:
 - Extinguished immediately utilising the fire extinguishers or hose reels; or
 - Moved to the quarantine container and extinguished there.
4. Once a small fire is dealt with the remaining area must be visually inspected immediately for any signs of remaining fire / smouldering waste
5. Should any material still be smouldering/showing visible signs of a fire developing the same procedure detailed in this section must be implemented.

Uncontainable Small Fire or Large Fire

As a guide, all fires larger than a waste paper bin should be dealt with by the Fire Service.

1. Evacuate the site immediately.
2. Ensure that all personnel (i.e. visitors) should also be evacuated and if necessary direct them to the fire assembly point. All doors and windows in the vicinity of the fire should be closed.
3. Trained site staff (i.e. the Fire Marshals) will call the Fire Service and carry out roll calls at the assembly point.
4. For a larger fire incident (e.g. fire posing any threat to employees or contractors of the company or company premises or a company vehicle) the following procedure will be followed:
 6. Inform the management team of the situation.
 7. Await arrival of fire service.
 8. Deploy firewater containment devices.

9. Alert neighbouring facilities and sensitive receptors to the risk/impact of the fire and provide updates as the situation develops, allowing them the opportunity to instigate any emergency plans they may have in place.
10. If required and only if it is safe to do so, and under direction of the Fire Service, assist in the relocation of un-ignited combustible materials (including material stored within containers up to 40yd³) to the quarantine area to reduce the fuel inventory, using the plant equipment which is available on site (non-fire resistant telehandler etc.).
11. Following arrival of the FRS, all site staff will take instructions from them.
12. The local sewerage service and NRW should be notified at the first opportune moment.

Figure 10: Fire Action Plan

FIRE ACTION PLAN		
Silent Valley Waste Transfer Station Beechwood House Cwm NP23 6PZ		
Telephone nrs : Site	Head Office 01495 370125 019920	Manager 07971 019919 / 07971
If You Discover a Fire ☒ Shut any doors and raise the alarm ☒ Leave buildings by the nearest available Fire Exit ☒ Telephone 999 and request the attendance of the Fire Service, provide the site details as above and any other mobile telephone number you may be ringing from ☒ Vacate the site and report to the designated Assembly Point which is outside the SITE ENTRANCE GATES		
On hearing the fire alarm ☒ On hearing the alarm stop what you are doing and leave any building by the nearest available Fire Exit closing doors behind you ☒ Vacate the site and report to the designated Assembly Point which is outside the SITE ENTRANCE GATES		

Fire Marshals and Supervisors

- ☑ Sweep the site (including back areas) to ensure all persons including staff, members of the public, contractors and other visitors are evacuated promptly and safely
- ☑ Ensure the Fire Service has been dialled on 999
- ☑ If safe to do so turn off mains electricity before leaving any building
- ☑ Shut off any drainage penstock valves to ensure fire water containment on site
- ☑ Meet at the Assembly Point and check all individuals are accounted for
- ☑ Liaise with Fire Service on their arrival and ensure their unhindered access to site
- ☑ Ensure nobody re-enters the site until confirmed safe to do so by the Fire Service

- ⊗ DO NOT PANIC – DO NOT RUN
- ⊗ DO NOT attempt to fight the fire unless you have been trained in the use of extinguishers and you are confident the fire can be dealt with safely
- ⊗ DO NOT put yourself at risk e.g. DO NOT stop to collect personal belongings
- ☑ DO shut doors behind you
- ☑ DO report missing persons at the Assembly Point

5.2 Contingency Plan

In the event of a fire on site, the WTS will be evacuated and closed. All WTS deliveries will be redirected to their appropriate contingency destination- BGCBC have agreement with neighbouring authorities for this. All collections from the site will be postponed. This alternative service provision will remain in place until the WTS site has been signed off by Natural Resource Wales to recommence operations.

5.3 Emergency Access to Site

The main access route to the site is by Cemetery Rd, Cwm, Ebbw Vale NP23 6PZ. There is vehicular access to the front and sides of Building 1 and Building 2. There is limited vehicular access to the back of the buildings, as they back onto a steep grass slope.

5.4 Disposal of Contaminated Material

Once the fire has been extinguished, working alongside with the regulatory authorities, the contaminated material and firewater will be removed from site by an approved service provider for disposal at a suitable, registered site. Any drainage interceptors that received firewater will be emptied and cleaned by an approved service provider.

5.5 After a Fire Incident

Following any incident of fire on site, the details will be recorded and the fire risk assessment and Fire Prevention and Mitigation Plan reviewed by the Operations Manager to ensure ongoing applicability and effectiveness of the measures contained within these documents. The cause of the fire will be investigated and the FPMP will be reviewed and amended; the necessary measures will be implemented to prevent such incident from happening again. Staff will be updated and re-trained.

6. Impact Reduction

An assessment has been made of the potential impacts that could occur as a result of a fire incident on the WTS, these are detailed in Table 4:.

Table 4: Impacts of Fire and Approach to Minimising Impacts

Impact	Who the Impact Affects	How Impacts will be Minimised
Air pollution by carbon emissions and toxic chemicals in smoke plume	Local people and employees at nearby workplaces.	Reduce the spread and duration of fire as swiftly as feasible.
Contamination of soil and water from items deposited by the smoke plume	Environment	Storing the majority of the material within the building will limit the quantity of material that will leave the site via a smoke plume. If the fire is in an external waste pile or container the dispersion of materials via the smoke plume will be monitored with preventative action taken if it is safe to do so.
Contamination of soil and waste from firefighting water runoff	Environment	Firewater will be contained within the impermeable areas of the site. Drains will be sealed prior to firefighting commencing.
Temporary closure of nearby sites	Local businesses and services	Establish a communication plan with sensitive receptors so they are aware of the situation and can implement contingency plans.

APPENDICES

Appendix 1 – Sensitive Receptor Contact Details

Table 5: Sensitive Receptor Contact Details

Sensitive Receptor Type	Contact Name	Contact Number	Location/Address
Commercial	RJE Automotive Ltd	01495 367217	Cwm Road Garage, School Terrace, Cwm, Ebbw Vale NP23 7QY
Commercial	The Bailey Arms	01495 651867	The Baileys Arms, School Terrace, Cwm, Ebbw Vale NP23 7QY
Place of Worship	Caersalem United Church URC / Bapt	01495 302440	Park View St, Ebbw Vale NP23 6UD
Commercial	Smiling Valley	01495 371192	7 Park Pl, Waun-Lwyd, Ebbw Vale NP23 6TP
Leisure	Garden Festival Angling Headquarters		Cwm, Ebbw Vale NP23 6NF
Commercial	Trusting Hands	01495 370723	The Old Surgery, 79 Excelsior Street, Waunllwyd, Ebbw Vale NP23 6TT
Commercial	Ebbw Vale Parkway		Ebbw Vale NP23 8AP
Commercial	The Ambala	01495 370053	Waun-Lwyd, Ebbw Vale NP23 6TN
Education	Cwm Primary School	01495 370437	Canning St, Cwm, Ebbw Vale NP23 7RD
Commercial	Cwm Store	01495 371229	1 Canning St, Cwm, Ebbw Vale NP23 7RN
Commercial	Cwm National Working Men's Club	01495 370223	117 Canning St, Cwm, Ebbw Vale NP23 7RH
Education	Cwm Community Education Centre	01495 371117	Canning St, Cwm, Ebbw Vale NP23 7RD
Healthcare	Augusta House Respite Service	01495 305805	68 Augusta Park, Victoria, Ebbw Vale NP23 8DN

Sensitive Receptor Type	Contact Name	Contact Number	Location/Address
Place of Worship	Festival Church	01495 352223	Beech Grove, Victoria, Ebbw Vale NP23 8WQ
Education	Festival Park Owl Sanctuary	07805 677473	Festival Park, Victoria, Ebbw Vale NP23 8FP
Leisure	Supertubing	01495 304035	Festival Park Outlet Shopping Centre, Victoria, Ebbw Vale NP23 8FP
Commercial	Festival Park Shopping Centre	01495 350010	Victoria, Ebbw Vale NP23 8FP

Appendix 2 – Permit to Work Procedure

SILENT VALLEY WASTE SERVICES LTD

PERMIT TO WORK

Site Location	Description of Work	
Date	Valid From (HH/mm)	To (HH/mm)
Name of Contractor		

NOTE: Permit Valid For Day of Issue Only unless stated

SECTION A: WORK ACTIVITIES (Note: All Relevant Parts to be Completed)

A1: GENERAL TO BE COMPLETED IN ALL INSTANCES

	Y	N	N/A		Y	N	N/A
Can works be done off site	☐	☐	☐	Works area made safe and secured from unauthorised personnel	☐	☐	☐
Method Statement Accepted	☐	☐	☐	Equipment maintenance certificates	☐	☐	☐
Regular Radio Contact maintained	☐	☐	☐	Persons competent to carry out works	☐	☐	☐
Suitable PPE proposed	☐	☐	☐	Details of UG/OH services available	☐	☐	☐

A2: CONFINED SPACE

	Y	N	N/A		Y	N	N/A
Test Atmosphere prior to and during works for oxygen level / flammable / toxic gases	☐	☐	☐	Safety lines and winch equipment in place	☐	☐	☐
Continual ventilation / purging of atmosphere	☐	☐	☐	Rescue procedure in place	☐	☐	☐
Sludges/liquids removed prior works	☐	☐	☐	Electrical equipment suitable for use in flammable atmosphere	☐	☐	☐
Competent person to remain outside	☐	☐	☐	Self-contained BA available	☐	☐	☐
Harnesses worn for rescue purposes	☐	☐	☐	Electrical / Mechanical hazards made safe	☐	☐	☐

A3: ELECTRICAL/HOT WORKS

	Y	N	N/A		Y	N	N/A
Complete 3.1/3.2/3.8/3.10 above	☐	☐	☐	All power sources removed	☐	☐	☐
The plant or item of equipment made safe from all known dangers	☐	☐	☐	Relevant fuses have been withdrawn	☐	☐	☐
Fire precautions in place	☐	☐	☐	Atmosphere test carried out for flammable gases and conditions are suitable	☐	☐	☐

A4: WORKING AT HEIGHT (Note: does not include scaffolding or any works involving demolition)

	Y	N	N/A		Y	N	N/A
Lifting equipment/ladders suitable for intended use and checked for defects	☐	☐	☐	Ladder secured at upper or lower end	☐	☐	☐
Area of falling secured from unauthorised personnel	☐	☐	☐	Ladder extended min. 1.05m above landing platform or highest rung used as foothold	☐	☐	☐
Ladder positioned on sound level base	☐	☐	☐				

A5: EXCAVATION WORKS (Note: To be applied to excavations deeper than 1.2m)

	Y	N	N/A		Y	N	N/A
Ground conditions established?	☐	☐	☐	Method of dewatering available	☐	☐	☐
Excavation battered back or suitable supports positioned	☐	☐	☐	Spoil material placed min. 1.5m from excavation	☐	☐	☐
Daily inspection of excavation and supports	☐	☐	☐	If excavation deeper than foundations of adjacent buildings / structures then stabilise using interlocking sheet piles or underpinning together with raking shore support to building	☐	☐	☐
Banksman in attendance at all times	☐	☐	☐	UG services traced on site	☐	☐	☐
Excavation secured with suitable barrier	☐	☐	☐				

PERMIT TO WORK

SECTION B: PRELIMINARY SAFETY REQUIREMENTS	
(Contractor's Agent or SVS Manager/Supervisor of Work Activity)	
Note: Ensure activity in compliance with Sections A1/A2/A3/A4/A5	
B1 Tools to be used:	
B2 Safety Attendants instructions:	
B3 Protective Clothing:	
Signature of work activity supervisor(s):	
SECTION C: WORK ACTIVITY DECLARATION (Person Undertaking Work)	
I understand the safety conditions detailed in Sections A and B, and agree to observe these permit to work requirements throughout the work.	
Signature of person undertaking work activity:	
Signature of second person (if in attendance):	
SECTION D: HANDBACK/COMPLETION (All Supervisors of Work Activity and SVWS Controller)	
To be filled in on completion of the works and Plant/equipment/area safe for normal use.	
Comments:	
Signature of work activity supervisor(s):	
Comments:	
Signature of SVWS Controller:	

Appendix 3 – FPMP Improvement Program

Provided as separate document.

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