Fire Prevention & Mitigation Plan

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INTRODUCTION

BACKGROUND

Environmental Focus Ltd has been commissioned by Recover Blaenavon Ltd to prepare a Fire Prevention and Mitigation Plan (FPMP) to support an application for a new bespoke Environmental Permit, which authorises activities that allow the storage and treatment of plastic packaging material only, to produce a product plastic granulate.

The application refers to operations that take place at Kays and Kears Industrial Estate, Blaenavon, Torfaen, NP4 9AZ **(*the Site)*.** The operations are to be 24/7 except for a shutdown period across Christmas and New Year as well as any planned/routine maintenance of plant.

This FPMP has been prepared in accordance with Natural Resources Wales Fire Prevention and Mitigation Plan Guidance-Waste Management New Guidance Note 16 version 2 August 2017.

THE SITE

The Site Located on the perimeter the Gilchrist Thomas Industrial Estate, the smaller Kays and Kears industrial Estate lies c.550m directly Northwest of the town of Blaenavon and approximately 8km North of Pontypool. These are the closest bulk residential areas to the proposed site.

The H1 Risk Assessment includes full consideration of any impacts from the site on local environmental designations/receptors and as such they are identified here.

- Site of Special Scientific Interest (SSSI) the Blorenge, 900m to the Northeast.
- Site of Special Scientific Interest (SSSI) the Siambre Ddu, 1.9km to the North.
- Local Nature Reserve (LNR) The Garn Lakes, 200m to the West.
- Local Nature Reserve (LNR) The Cwmavon Corridor starts at 1.8km to the Southeast.
- The site is also located within a Source Protection Zone.
- The Afon Llwyd flows within 400m of the site boundary.
- The site is located within an area deemed high risk when considering flooding from surface waters/small watercourses.
- There are several Historic Monuments in and around the site (the main protected/listed ones are within the areas below) such as the Blaenavon Viaduct and The Dog Stone would also need to be considered within an emergency.
- There are several scheduled monuments within proximity of the site including Old Coal Pits to the North, Garn Road Powder House to the North east, Pwll du Tramroad tunnel to the north east, Blaenavon Engine Pit to the South, Blaenavon Upper brick yard to the North east and the Coity Quarry and Inclines to the South West.
- There are approximately 40-50 listed buildings within 1km of the site. These are split across 3 main areas such as the Big Pit Museum to the South West, the heritage railway to the South and the Blaenavon ironworks to the East. Additionally, the entire area that surrounds the site forms part of the Blaenavon Industrial landscape as a World Heritage Site. Contact details for these sites are held within the site offices in case of emergency.

FIRE PREVENTION OBJECTIVES – OUTLINE METHODOLOGY

The purpose of this FPMP is to ensure that all reasonable measures are undertaken to prevent a fire.

The FPMP has been prepared in accordance with Natural Resources Wales issued Fire Prevention and Mitigation Plan (FPMP) Guidance version 2, issued August 2017. It provides a plan to minimise the likelihood of fire breaking out, a means of extinguishing fire if it broke out, and a statement of methods designed to minimise the spread

of fire.

MANAGEMENT RESPONSIBILITY

The Site Manager has the responsibility for ensuring that the potential for a fire outbreak arising from operations on the Site is minimised. Adequate staffing levels is always maintained to ensure the effective operation of the facilities.

In line with current industry best practice, the fire prevention controls set out in the sections below are used as the 'appropriate measures' to minimise the risk of and, wherever possible, prevent outbreak of fire associated with Site operations.

Regular reviews will be undertaken by the operational management of the site and are the content etc are detailed below.

METHODS AND PROCEDURES TO MAINTAIN COMPLIANCE

Site meetings are held regularly, i.e. during monthly Health and Safety meetings, for Site management to discuss current and planned Site operations with respect to their potential for generating fire and accordingly the FPMP is updated as necessary. Identified actions arising from the meetings and responsibilities for their completion is recorded within the meeting minutes prior to circulation within the company to the relevant personnel.

Additional and more frequent reviews of the FPMP will be carried out to reflect any changes to operations on-Site and in circumstances that warrant the requirement. Such instances include but are not limited to: an increase in waste quantities accepted on-Site, specifically combustible materials; after any fire incidents in order to make improvements if required; any development made on-Site such as modifications to existing buildings or the incorporation of new infrastructure and/or the installation of new equipment or plant.

The FPMP is a live, working document which is made readily available and clearly identified on Site and all staff are aware of the location of the plan. It is referenced in the Environmental Management System (EMS) and there is a requirement that all contractors working on Site and all visitors are briefed on the contents of the FPMP.

Briefing for visitors and contractors will include the provision of the correct safety and fire prevention procedures to be carried out in the event of a fire. This involves ensuring they are aware of the information in Section 8 'Fire incident and Procedures – Emergency Plan'. In addition, the locations of fire extinguishers and the assembly point will be pointed out.

All staff receive training, which includes on-Site fire drills, with regards to the measures and procedures outlined in the FPMP with refresher training conducted quarterly. New employees will receive inductions which will involve the same training with records of all training maintained to ensure refresher courses are carried out as scheduled.

Regular Fire Prevention Plan Exercises are carried out bi-annually. The frequency of exercises will be reviewed and changed depending on the results of exercises, reviews of incidents and near misses and the turnover of staff.

SITE PROCESS DESCRIPTION

WASTE ACCEPTANCE

The current application proposes that the facility accepts up to 20,000 tonnes of plastic packaging wastes in baled form, per year. All waste streams arise from pre-existing contracts currently and are delivered predominantly by curtainside HGVs.

Materials brought to the site are generally processed within 21 days of reception as the company would like to be able to have a continuous supply held as a feed stock for the plant. The Site has the capability of processing up to a maximum of 52 tonnes per day, this ensures a regular turnover of material in the waste reception area. Due to the way in which the site operates and the requirements of government reporting for this facility type, the storage wastes must be held separately and per-customer ensuring minimal stockpile sizes. This operational practice mitigates against the development of hot spots and large waste storage piles.

The attached site plan shows the layout of the Site facilities, operational areas, stockpile dimensions (table below) and Environmental Permit boundary.

SITE ACTIVITIES

The waste reception area incorporates a vehicle entry point and an offloading area. The vehicles are parked in the designated area and unloaded with a forklift truck, all deliveries of waste are pre-segregated and baled. They are unloaded and taken to the relevant storage bay dedicated for the customer. The storage bays are to be constructed with Legato L8 blocks (specification attached confirming A1 fire rating and compliance with the relevant BS) to either side and rear to a height of 4m with opening to the front of the bay for ease of access. Each bay is emptied before more bales are added to ensure the `first in, first out` principle is adhered to.

The storage of bales is undertaken outside of the building and therefore there is no sorting of the materials to be undertaken at this point of the operations.

The plastic wastes are brought to site from selected customers only, the site is not open for public/trade drop off. Each contract has been specifically gained due to the waste type produced and received. The plastic waste is accepted as film material and packaging only. All material is pre-treated on the site of production to ensure the highest quality of plastic received, the material is baled prior to acceptance and is selected due the lack of physical contaminants within the bales.

The baled waste will be delivered and unloaded in designated holding areas pending the feed into the plant. The holding area is fully concreted and benefits from a sealed drainage system that is served by the combined foul sewer network. The site will hold a maximum of 1,000T at any one time when operating normally, this is enough feed supply to ensure that the plant operates at full capacity for a 3-week time frame allowing for maintenance shut down etc. The total capacity of the site is 1,584T, the extra space will be required for when the plant is undergoing maintenance etc.

The plant on site is used to treat approximately 1,500 tonnes of material per month to provide a range of granulated products suitable for re-sale after manufacture. Stockpiling of waste materials will not be done for prolonged periods of time as these materials are readily required for use within the plant at a high turnaround rate.

The process to obtain the manufactured product follows a set of fixed procedures and operations.

The waste is firstly taken into the building where the treatment plant is located (shown on the site plan) one bale at a time. It is placed on a receiving platform ahead of the first conveyor where several operatives manually spilt the bale and check for any items of waste/contamination that shouldn't be there. If found, the items are removed and placed in wheelie bins to be collected and removed from the site each week. The plastic from the bales is now loaded onto the first conveyor of the treatment plant. This section of the plant is custom fitted with both a noise and dust insulation tunnel reducing the likelihood of off-site nuisance. The plastic is then fed into the shredding section of the plant, where the material is reduced in size before being fed across a second conveyer. Several bales will be loaded into the building at the end of the day shift to allow continuous operation throughout the night, this will prevent the doors being opened overnight.

The second conveyer moves the material to a built-in dual magnet and alarm system. The magnet system is designed to remove all metal from the feedstock if found. The alarm system (visual and acoustic) is programmed to stop the feed if the metal detected could not be removed by the magnet system. The metal would then be manually removed before the process is started once more and on to the heat treatment stage.

At the heat treatment stage, the shredded plastic material is spun and heated to a temperature of approximately 200°C. It is then fed via a Corkscrew auger through an internal laser-filter that identifies and removes contamination on a continuous high-performance filtration system for the separation of "soft" contaminants such as paper, wood, aluminium, copper, foreign polymers, etc. from contaminated plastic melt. A scraper disc and scraper ensure high efficiency due to the internal geometry and the directly connected discharge channels. Contaminants are lifted from the screen immediately and forwarded to the coaxial discharge screw. The contaminants are removed under control and with a minimum of melt via this optimised discharge system. The scraper and discharge screw speeds are controlled fully automatically and ensures fast removal of contaminants through a self-cleaning filter system with rotating scraper for screen cleaning (4 screens and 12 scrapers).

The melt on material continues through the machine to a die head that cuts and quickly cools the plastic in water. The Pellet then is shaken dry and blown to a bagging location where the weight is recorded. The final product is removed from the facility and used to create new plastic products at a sister site owned by the company.

All plant that is to be used on site for the treatment of the plastic waste is specifically designed for this process.

The system does have a flue for escape of heat from the plant, this is a separate system to the exhaust outlet and does not emit anything other than latent heat from the process to reduce the condensation levels within the factory itself.

The waste storage area has an impermeable base and is surrounded by a kerbed area, which drains by gravity to the sewer network, however, due to the nature of the waste and quick turnaround of the material no contaminated run-off is anticipated (please see attached REACH documentation), as such the water that flows into the pre-existing combined sewer connection is that of rainfall and what small scale silt etc that would be expected on a yard/road surface. The kerbed area is aligned with the Site boundary, which incorporates the storage bays. The purpose of the design is to ensure that rainwater and any inadvertent liquors or fire water (in the unlikely event of a fire) are fully contained.

No substances that would be classified as 'dangerous' under the Control of Major Accident Hazards (COMAH) Regulations are used at the Site for the operation of the facility. There are no cylinders or gas cylinders in use or stored on the Site as an accepted waste.

ENVIRONMENTAL SETTING

SURFACE WATER / RIVERS

There is one main river, the Afon Lwyd, which generally flows parallel to the south of the perimeter at circa 400m. Surface water run-off from the Site is discharged to the combined sewer network.

There are no surface water abstractions likely to be affected by this Site.

GROUNDWATER

The British Geological Survey (BGS) maps state that the Site solid geology bedrock are sediments comprising mudstones siltstones and sandstones of the South Wales Middle Coal Measures Formation (http://mapapps.bgs.ac.uk/geologyofbritain/home.html).

In hydrogeological terms, the underlying strata is classed as a moderately productive aquifer, within a source protection zone.

There are no groundwater abstractions locally likely to be affected by the Site operations.

DESIGNATED SITES

Although there are no Environmental Designated Sites within 500m of the Site, there are seven areas designated by Torfaen District Council as non-statutory Sites (Local Nature Reserve); details of the LNR and all relevant SSSIs are outlined above in section headed The Site.

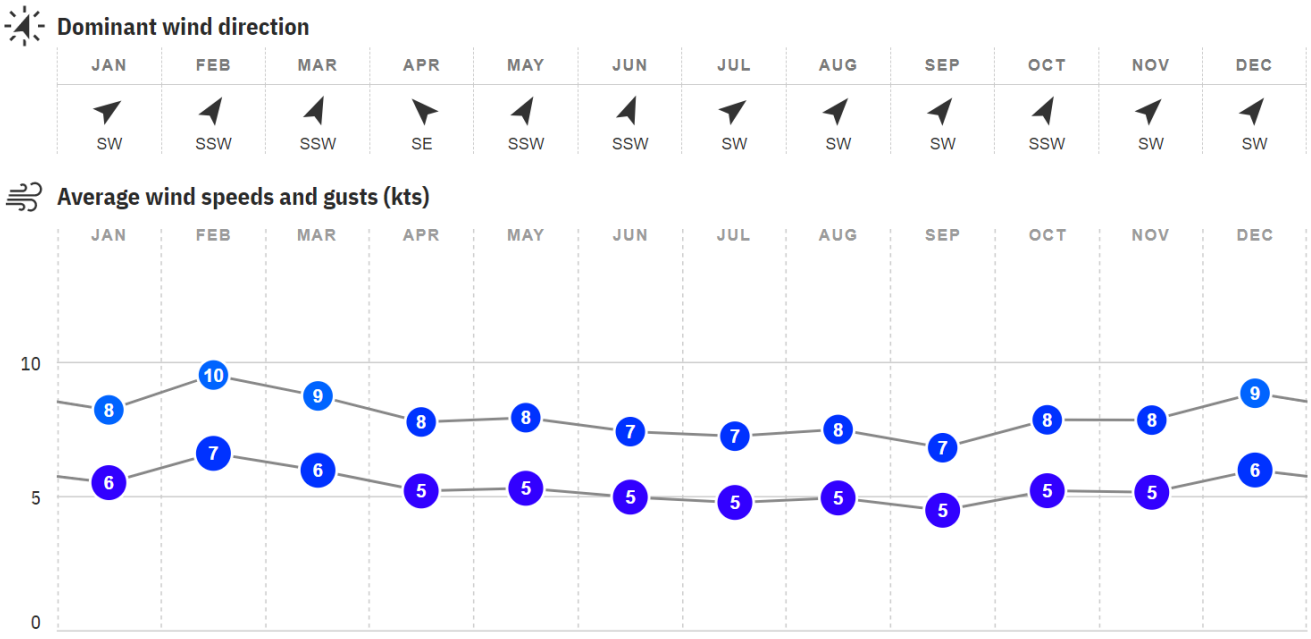
AIR QUALITY AND PREVAILING WINDS

The site does not lie in a designated Air Quality Management Zone.

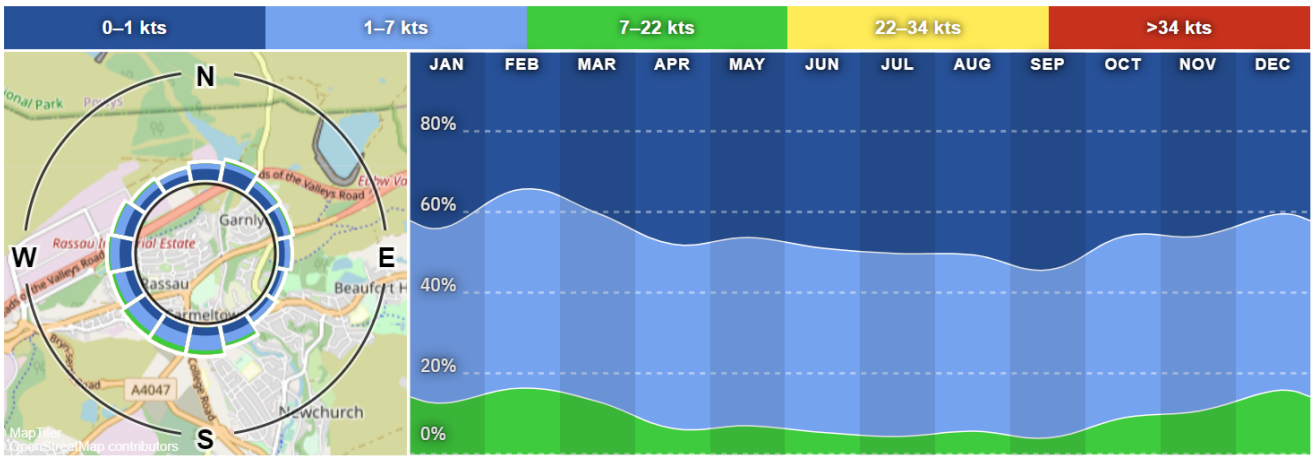
Statistics based on observations taken from the nearest weather station at Ebbw Vale/Rassau, (c. 7km north-west of the site) between April 2013 and September 2022 indicate that, although the prevailing winds are variable, they originate predominantly from the west-south-west with an average speed of 6 knots. The rose diagram is conducive of this showing the wind strength distribution and direction is also chiefly from the W-S-W. (see Diagram 1). Data obtained from Wind & weather statistics Ebbw Vale/Rassau - Windfinder

Diagram 1- Average Prevailing Wind Direction and Speed

Monthly wind speed statistics and directions for Ebbw Vale/Rassau



Monthly wind direction and strength distribution



SENSITIVE RECEPTORS

A review of potentially sensitive receptors within a 1km radius of the Site has been undertaken using the hierarchy of hospitals, schools, childcare facilities, elderly housing and convalescent facilities i.e. areas where inhabitants are more vulnerable to the adverse effects of exposure to smoke. Food manufacturers, major infrastructure and protected sites such as SSSIs, SPAs and SCAs are also considered, see Table 1 and Figure 1. Residential properties are considered separately, and their locations are detailed in Table 2 and Figure 2.

In terms of predicted exposure risk, levels have been determined via a qualitative assessment which evaluates the likelihood of exposure to smoke emissions based on the receptors' proximity to the Site and the location of the sensitive receptors regarding the prevailing wind direction as shown above.

A 1km radius has been applied as it reflects the maximum potential distance that smoke could reasonably be expected to cause affects in extreme meteorological conditions without any mitigation measures in place. A summary of the identified potentially sensitive receptors within this range along with the overall exposure levels and principal receptor features has been tabulated in Table 1. For each receptor within the categories the determination of the overall risk classification has been based on the dominant risk level. Contact details will not be shown in this plan for GDPR reasons, however, a list of contact details for the most likely receptors to impacted severely, is held within the site offices and within the off-site emergency pack, to be used in an emergency if required.

Within a 1km radius of the Site, one protected site such as SSSI`s, SAC, SPA or RAMSAR has been identified.

Table 1 Representative Sensitive Receptors (excluding residential properties). (Reference Point refers to locations on Figure 1)

Receptor Hierarchy	Facility and Reference Point	Distance and Direction from Site (m)	Overall exposure level	Comments
Medical Facilities	Dr Surgery (4)	570 SE	Low	Located away from the prevailing wind and it is considered relatively remote from the site. Pathways are also restricted by intervening infrastructures, topography, trees and hedgerows.
Childcare	Not identified within 1km			n/a
Elderly Housing	Not identified within 1km			n/a
Recreational Areas	Blaenavon Blues FC (16)	370 E	Low-Medium	Downwind of prevailing conditions and reasonably close to source. However, only used sporadically throughout the week.
Places of Worship	Bethel Baptist Church (5)	830 SE	Low	Located away from the prevailing wind direction and a long from the site.
	Sacred Heart Church (6)	880 SE	Low	Located away from the prevailing wind direction and a long from the site.
Food/drink Manufacture	Abergavenny Fine Food Co. (7)	400 S	Low-Medium	Located away from prevailing wind direction but relatively close to site.
	Rhymney Brewery (8)	330 SW	Low-Medium	Located away from prevailing wind direction but considered close to site.
Other	Blaenavon Heritage Railway (1)- *listed buildings group*	620 SW	Low	Located away from the prevailing wind direction and a relatively long from the site.
	Blaenavon Ironworks (3)- *listed buildings group*	460 SE	Low	Relatively distal from the Site with a low frequency of winds from source to receptor.
	Big Pit Mining Museum (2)- *listed buildings group*	750 SW	Low	Located away from the prevailing wind direction and a long from the site.
	B4248 (9)	70 N	High	Directly downwind of the Site and prevailing wind and considered very

				close. Impacts on the road would be greatest.
	B4246 (10)	470 SE	Low	Located away from the prevailing wind direction and a long from the site.
Environmental	Afon Lwyd (13)	450 S (running W-E)	Low	Only direct run-off from the site would impact the River. Numerous barriers are between the site and the watercourse with no direct drains/pathway.
	Garn Lakes (11)	200 W	Low	Only direct run-off from the site would impact the Lakes. Numerous barriers are between the site and the watercourse with no direct drains/pathway.
	Blorenge SSSI (12)	900 NE	Low	Downwind of prevailing conditions but considered very far away from the site. Impacts would be low-non-existent due to dispersal being high.
Commercial or Industrial areas & monuments	Gilchrist Thomas Industrial Estate (14)	100-500 S-SW	High	If the wind were to be blowing towards this area, many of the units are close to the site. Impact would be greatest here.
	Forgeside Industrial Estate (15)	550-830 S-SW	Low-Medium	Located away from the prevailing wind direction and a considered relatively distal from the site.
	Old Coal Pits (17)	80 N	Medium	Directly downwind of the Site and prevailing wind and considered very close. Impacts on the road would be greatest.
	Garn Road Powder House (18)	100 NE	Medium	Directly downwind of the Site and prevailing wind and considered very close. Impacts on the road would be greatest.
	Pwll Ddu Tramroad Tunnel (19)	360 NE	Low	Downwind of prevailing conditions but considered far away from the site. Impacts would be low due to dispersal being high.
	Blaenavon Engine Pit (20)	460 S	Low	Located away from the prevailing wind direction and a considered relatively distal from the site.
	Blaenavon Upper Brick Yard (21)	505 NE	Low	Downwind of prevailing conditions but considered quite far away from the site. Impacts would be low due to dispersal being high.
	Coity Quarry & Inclines (22)	980 SW	Low	Located away from the prevailing wind direction and a considered relatively distal from the site.
	Blaenavon Viaduct (23)	465 E	Low	Downwind of prevailing conditions but considered quite far away from the site. Impacts would be low due to dispersal being high.

Figure 1- Sensitive Receptors within a 1km radius of the Site (to be used as a visual guide only)

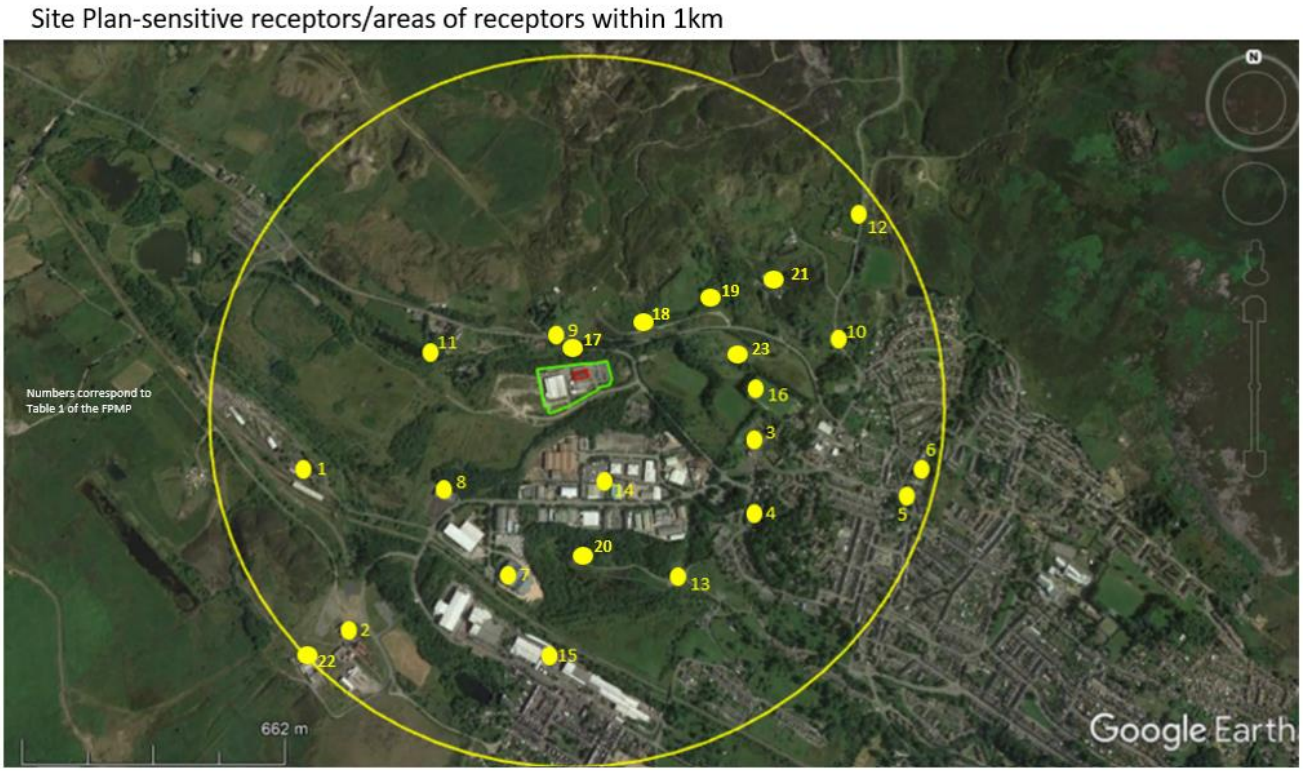


Table 2- Distances to Selected, Representative Residential Properties/ Sensitive Locations (reference point refers to location numbered on figure 2).

Location in relation to the Site	Reference Point	Min/Max Distance(m) from Site Boundary	Overall Exposure Levels
N-NW	Cluster of residential and commercial dwellings (1)	70-400	Medium-High
SE	Residential Housing (2)	70-140	High
NE	Sporadic farms (3)	490-750	Low-Medium
SE-S	Northern edge of Blaenavon (4)	450-1000	Low
S	Forge-side Housing (5)	750-1000	Low
NW	Garn Yr Ew (6)	950-1000	Low

Figure 2-Residential Receptors (areas) within 1km radius of the Site (visual guide only)

FIRE PREVENTION

FIRE PREVENTION PLAN

This FPMP is readily available and clearly identified on Site and all staff are aware of the location of the Plan. It is referenced to in the EMS and there is a requirement that all contractors working on Site are briefed on the contents of the Plan.

Regular FPMP Exercises are carried out as detailed above although frequency will change depending on results of exercises, any incidents and turnover of staff.

The following aspects have been considered to make up this FPMP.

WASTE STORAGE DURATION

The waste processing activities on site have the capacity to treat 52 tonnes/day per as a maximum. The maximum period of storage is 21 days pre-processing. No sorting is undertaken on the deposited material as they bales have been pre-sorted prior to arriving at the site. Minimal picking is undertaken as each bale is loaded into the plant to ensure that any minor contamination is removed before being loaded into the processing plant.

Incoming wastes are typically processed on a first in first out basis to ensure that material is not held on site for periods greater than is required. Any longer-term storage impacts on moisture levels increasing and the plant doesn't operate as effectively. Therefore, the quicker the plastic is loaded and processed through the plant, the more efficient the plant is.

The use of first in first out principles ensures the site operates a rapid turnover of waste materials and that the storage bays are emptied every few days-week at most. All materials are removed, and the bays are totally emptied (including the corners of the bay). This prevents the potential for any build-up of material and ensures that any wastes are rapidly removed.

Site cleaning procedures include handpicking within the bays, including the corners, to ensure all material is removed and potentially combustible residues do not remain in-situ. Operational staff record the housekeeping of the bays on the appropriate checklist, maintained in the Site office, in order to adhere to the maximum emptying and cleaning frequency of 1 week.

Waste streams arrive on site separated per customer (i.e one load accepted is from one customer, mixed loads do not occur). All waste materials are stored in adjacent bays constructed from fire-resistant concrete Legato L8 blocks per customer.

Table 3 below indicates the storage times of the waste streams accepted at the Site along with the duration on-Site for both the processed and un-processed material.

Table 3-Storage parameters for waste plastic held on site

Incoming waste type	Max/day tonnage (approx)	How managed	Form in	Storage total tonnage (pre/post treatment)	Length of storage (pre/post treatment)	How stored (pre/post treatment)	Max. Stockpile size (L x W x H) (m) and volume (m3)
Plastic Packaging-in bays	100	Bulk up only pre-process	Baled	1584/n/a	(21 days/ n/a)	(Baled/ton bags to deliver off site)	4 x 4 x 3 48
Contaminated fractions of plastic waste	*<1*	*Separated to remove*	*In bin*	*No treatment, remove*	*(1 week post picking)*	*Loose in bin*	*Wheelie bin x3*

In the event of closedown, waste will be diverted to alternative site in the area and held at the site of production. The preferred site is a site owned by Capital Valley Plastics Ltd in Pontypool, which currently operates under an exemption and regulatory position statement, consequently, can only hold a limited tonnage on site.

Waste acceptance procedures require that unloading of waste deliveries are undertaken and supervised by Site staff.

All stockpile sizes and separation distances will be monitored daily by the site supervisor, if deviations from the table are noted then emergency measures including the removal of waste will be implemented within 24-48 hours.

QUARANTINE AREA

A main quarantine area is designated on the yard at a size of 10m x 10m, it hold the quarantine skip for non-conforming waste also. The area can safely hold 50% of the largest stockpile on site (24m3) and if required can hold significantly more if being used at a safe full capacity (300m3). It is clearly identified on the Site plan and marked to allow the segregation of identified unsuitable material and separation from incoming waste. Quarantined waste is removed within 24 hours of deposit via the appropriate plant machinery on-Site (forklift truck). It will be transported to an authorised facility that accepts the waste type quarantined in a vehicle suitable for the transportation. Material subjected to a fire incident will be removed immediately in the manner described above for all quarantined waste.

Suitable on-site plant will be used to transfer any material on site that needs to be transferred to the quarantine area such as burnt material or non-conforming waste types that have been inadvertently accepted or detected.

The quarantine area is in accordance with the Fire Prevention Plan Guidance in that it is clearly labelled, it has the capacity to hold at least 50% of the largest pile and it has a separation distance (from Site perimeter and other stored waste) of at least 6 metres around the quarantined waste.

MONITORING OF BAYS

All deliveries of incoming material to the reception area are supervised by operational staff. All stockpiles are subjected to visual monitoring at the start and end of the shift in addition to after lunchtime with results recorded on a log which is retained in the Site office. Operatives also visually inspect the waste piles for any signs of heat build-up or hot spots. Staff are trained in such methods, as detailed below. Additionally, due to the way in which the plant operates, being one bale is taken at a time, the feed to the plant is consistent throughout the day. This means that the forklift operator will be consistently driving back and forth between the plant and the storage area during the daytime and is therefore, able to monitor the piles as he loads another bale. Several bales will be loaded into the building at the end of the day shift to allow continuous operation throughout the night, this will prevent the doors being opened overnight.

Due to the quick turnaround of waste on-site, the probability of self-combustion is extremely unlikely, and the most probable cause of fire within the waste is arson. The presence of the CCTV and afterhours security guards on site will therefore act as a deterrent and minimise the likelihood of a fire occurring.

In view of the fire prevention measures outlined above, the possibility of the fire spreading within the Site itself or to neighbouring locations is minimised as far as possible. There are individual bays for the storage of waste and no near neighbouring units.

Bale core temperatures will not be checked as they are only on site for a maximum of 3 weeks. It is not anticipated that temperatures would increase to the point of stating to self-combust within this time. However, if the bale stack has been on site for longer than the storage times detailed within the fire guidance and therefore spontaneous combustion becomes an increased (in the case of breakdown or similar), turning will be initiated. The entire stack will be pulled out and re-stacked with the outside bales now placed in the middle of the stack

to ensure effective stock rotation.

Staff are trained to look for indicators of hot spots such as steam, smoke, flames or odours associated with heat (i.e. burning and smoke) during the inspections. In addition, inspections include the observation for the presence of dust, fluff and/or loose combustible material. Should any be found during the daily inspections, housekeeping equipment in the form of brushes, shovels, mops and cleaning products will be used to remove the material prior to disposal in the appropriate bin.

The Environment Agency commissioned BRE Global Limited to carry out a review of Fire Prevention Plan document '160527 FPP v3 final draft. The BRE Global report includes the results of isothermal self-heating test data (based on test methodology in BS EN 15188 ''Determination of spontaneous ignition behaviour of dust accumulations') on a range of waste types comprising: wood chip, rubber crumb and secondary recovered fuel (SRF). The time determined during the testing to reach ignition point ranged from 74 to 106 days storage for a 4m high stockpile of waste. The waste piles on site would not be stored for lengths near these and so would not be considered as high-risk waste stockpiles. Waste stockpile heights on site are a maximum of 3m (3 bales), less than the height limit stipulated in the BRE Global review, and as waste stored in the bays are only stored on site for a maximum of 3 weeks (refer to Table 3 for storage durations) it is highly unlikely that spontaneous ignition of waste will occur on site.

Wastes are not burnt at the site and there is no waste incinerator plant on site therefore no direct source of ignition. Any hot works (welding etc) activities are undertaken off site.

CONTINGENCY PLANS AND SEASONALITY

In the event of an un-planned incident on site, the waste delivery drivers will be contacted with instruction to divert their waste loads to the company owned by the previous owners site (if tonnages are low), return to the waste production site (if they are still close enough with enough hours on their driving day) or go to an alternative permitted site (e.g. SL Recycling Ltd in New Inn).

The waste types to be stored at the site and not impacted severely by seasonal changes from an outlet perspective. The market for plastic packaging are buoyant and the material can be readily removed from site. Recover Blaenavon Ltd have been operational for many years and as such have longstanding relationships with the companies they deal with.

Seasonal variations will impact waste storage so far as input volumes are concerned as times such as the summer months would see increases to input level. However, this will not impact upon stockpile storage time as the processes on site are effectively managed and can easily cope with the increase in supply. The site throughput is based on the busier times of the year; therefore, production rate will drop through the quieter months as opposed to increase through the busier months.

When researching market condition, the 'letsrecycle' website has been used for sector relevant data, it is apparent that prices across the plastic market are stable and if anything, are increasing. Additionally, with the increasing focus on a circular economy in Wales, the recycling of materials to bring them back into use is allowing the industry to develop a strong network and maintain outlet feasibility.

OTHER RISK ELEMENTS

There are numerous other causes that could start a fire at any site, these are listed and where relevant detailed below:

ARSON

The Site is surrounded by security fencing and lockable gates and controlled vehicular entry during working hours. The Site is also fitted with CCTV monitoring and has after-hours security services to detect any attempts at unauthorised entry.

LEAKS AND SPILLAGES

Oils/fuels stored on the site are not linked to any waste activity. The fuel store (identified on the FPMP site plan attached) used for maintenance and refilling purposes is stored in a fixed location externally and away from all operational plant and waste storage. The tanks, which have an integral bund to hold at least 110% of capacity are in a locked store which has been fitted with secondary bunding ensuring that if any leakage or tank failure was to occur, then the entire fuel load can be contained. They are inspected twice daily at the beginning and end of the working day for any defects or deterioration of the tank.

To prevent fuels and combustible liquids leaking or trailing from site vehicles, they are inspected twice daily for any leaks. Spill kits are kept in all the facilities trucks, vans and plant. In addition, there are spill kits in the storeroom area on the Site. Reference should be made to the site plan for their locations.

The materials used for cleaning-up any spillages will be placed in the disposable bag provided in the spill kit and secured with the tie. The bag is then transferred to a relevant licenced facility which accepts such wastes.

PLANT AND EQUIPMENT

An Operating and Maintenance Programme is held by site management in line with company procedures for plant and equipment. As a part of these procedures all plant and equipment on site which requires maintenance are assessed for fire risk. Checks are programmed and records retained with a log of maintenance carried out. Many items of the main processing plant have the benefit of ongoing servicing schedules with the manufacturer to ensure that the plant remains efficient and working properly. The servicing is undertaken several times per year.

Vehicles and equipment are regularly inspected for electrical faults, tramp metal, dust, fluff and for any fuel or combustible liquid leakages. Spill kits are readily available on the site in the event of such leaks. When not in use mobile plant are stored away from any combustible waste materials. A log of inspection and maintenance of all plant and equipment will be maintained which will include a record of any spills or leakages and/or the presence of fluff and the action taken.

INFRASTRUCTURE AND SITE INSPECTIONS

A programme of site inspections are scheduled for all operational areas as a part of site operating procedures. Records of these inspections are a standard requirement of each working day. Records are kept of inspections with requirements for maintenance and actions taken.

ELECTRICAL FAULTS

All electrical work on site is carried out by fully certified qualified electricians and it complies with the relevant British Standard for design and installation of electrical equipment. Detailed operational manuals for any equipment requires equipment to be checked and maintained as part of a planned maintenance regime. Vehicles and equipment are regularly inspected daily by site operators for electrical faults and serviced as required for each specific type of equipment or plant

SMOKING POLICY

The site operates a strict no smoking policy. Any employee that wishes to smoke during their shift, must do so outside of the permitted boundary.

HOT WORKS

No hot works such as burning, or welding are undertaken at the site. Any plant that needs repair work of this nature is taken off site to an approved contractor to undertake the work.

INDUSTRIAL HEATERS

There are no industrial heaters installed at the facility. The plant itself contains heat treatment but this deal with within the operation procedure and within the EMS.

FIRE WATCH

At the beginning and end of each working shift a Fire Watch is carried out by suitably trained staff. In addition to CCTV, visual inspections to detect any evidence of fire or hot spots is carried out. Results are recorded on the housekeeping and inspection log and assessed to see if any improved operational procedures can be invoked to reduce risks. Fire watch reviews are also undertaken out of hours to check for post operational heating issues and procedures are reviewed after assessment.

All waste storage areas and the internal processing area on site are subject to the Fire Watch checks. Inspections, carried out at a minimum of 30 minutes after plant, machinery and vehicles have been switched off, also check for dust build up or fluff settled onto hot exhausts and engines on plant. Should there be any dust, fluff or debris deposited thereof or at any location across the site, it will be removed via the use of housekeeping equipment such as brushes, cloths, sponges and cleaning products where appropriate and transferred to a dedicated bin, container or the quarantine area as applicable.

MANAGEMENT AND STORAGE OF WASTE

WASTE ACCEPTANCE PROCEDURES

All vehicles delivering wastes to the Site stop at the gate to be signed into the site. Site staff are suitably trained and follow documented procedures. The operator examines waste descriptions at this point and the information is checked against the six figure European Waste Catalogue Code(s) and other details on the Waste Transfer Note or Season Ticket as well as against the waste types permitted by the Environmental Permit.

A banksman instructs the drivers to reverse into the appropriate area within the facility, for off-loading according to the waste from the customer being delivered to ensure materials are stored and processed separately. This helps to ensure the cleanliness of recyclable materials is maintained and materials are correctly stored and handled.

A visual inspection of the contents of all waste loads, is made during deposit.

Any discrepancies found because of the checks detailed above results in the vehicle being detained whilst some, or all, of the following supplementary management decisions are taken:

*Referral to a Technically Competent Person (TCP) on site;

*Referral to the waste producer to confirm the nature of the waste load;

*Refusal and return to the waste carrier's base;

*Referral to Natural Resources Wales;

*Redirection of delivery vehicle off Site, to a suitably authorised facility; and

*If the waste has been discharged on the floor, removal of the waste to the secure quarantine area, prior to off-Site removal either to the waste producer or suitably authorised facility.

Any wastes discovered to be a hot load or have the potential to be a hot load are identified and removed from the Site as a matter of urgency, or temporarily stored in the designated quarantine area. In the quarantine area, wastes are kept segregated from other wastes which are or are likely to be incompatible. Such wastes will be dampened down using a hose.

Wastes are not accepted if for any reason there is insufficient storage capacity available or if the site is inadequately manned. This is to ensure that all waste is managed effectively to prevent pollution or loss of amenity.

IDENTIFICATION OF POTENTIAL SOURCES OF FIRE

In constructing robust risk-based management protocols for the Site, it is recognised that there are a number of potential sources of fire associated with the storage and processing from:

* Vehicles and plant delivering and processing wastes to/at the facility; and

* Waste storage, bulking up, storage and dispatch.

These matters are addressed further in the relevant sections below.

WASTE FEEDSTOCK INVENTORY AND SOURCE MATERIALS

With due regard to the potential for waste feedstock material to be an inherent fire risk, all waste streams received at the facility are detailed in Appendix 1. Assessment of the associated fire potential under 'normal' operational conditions are provided.

WASTE STORAGE AND PROCESSING-BALED MATERIAL

The only waste to be stored and processed on site is baled, there is no loose waste stored on site at any time.

The waste storage area comprises of individual bays measuring 5m x 5m internally and are made up of walls to either side and the rear, the walls are constructed of Legato L8 blocks. There is no roof or covering to the bays. The size of the bale stacks will vary as customers delivering to site use different baling plant, though typically the bale stacks within the bays will be 4m x 4m x 3 high. The maximum storage is three weeks which also includes the processing time. For material brought to the Site there is the capability for up to 52 tonnes/day to be processed, once processed the material is now at end of waste status and is removed from site within 24hrs.

Waste delivery vehicles are directed to reverse into the appropriate storage area. Waste loads are not tipped onto the floor, they are unloaded by a forklift truck and placed into the relevant storage bay. Wastes are sorted and separated within the bays by customer, this needs to be done to ensure an accurate paper trail is maintained for PRN purposes. All waste acceptance, deposit, bulking up, storage and loading for off-site transfer to a manufacturing facility takes place externally. Bales are to be stacked in an interlacing way and not on top of each other, as the bales are plastic, this will reduce the chimney effect if a fire was to occur.

The bales are taken one at a time into the processing plant sited within the building on site. There are several operatives that receive the bale, split it open and check the contents for small scale physical contamination

(paper, cardboard, plastic strapping) that gets removed and placed in a wheelie bin before the packaging gets fed into the processing plant. The plastic then follows the procedures identified within the 'Site Activities' section above. The wheelie bins are removed from site each week, or sooner if required.

The walls of the storage bays are 4m high and all material stored inside do not exceed 3m as defined by a counting the bales stored, each bale is a maximum of 1m high and they will only be stored to a height of 3 bales (3m). If required, the site will paint a line around the concrete wall to mark out the 3m mark to ensure that all stored wastes do not exceed this height. This height therefore provides a minimum freeboard of 1m to the top and sides of the walls. The bays are isolated from other storage and processing areas on site, the closest being the processing building itself and is identified on the FPMP site plan.

The bales are not stored on site for long periods of time, the guidance outlines that bales become a risk of spontaneous combustion if store for longer than 6 months, the site only requires bales to be stored for 3 weeks so well within the timeframe of low risk.

Bale core temperatures will not be checked as they are only on site for a maximum of 3 weeks. It is not anticipated that temperatures would increase to the point of stating to self-combust within this time. However, if the bale stack has been on site for longer than the storage times detailed within the fire guidance and therefore spontaneous combustion becomes an increased (in the case of breakdown or similar), turning will be initiated with firefighting equipment on hand. The entire stack will be pulled out and re-stacked with the outside bales now placed in the middle of the stack to ensure effective stock rotation. To allow for any potential cooling of the middle bales, they will be left out of the stack of an hour before being re-stacked. It is extremely unlikely that temperature monitoring and splitting of bales will be required as the bales will not be stored for anything like 6 months on site, this would have catastrophic financial implications to the company and any breakdown etc will be dealt with as an emergency to ensure the plant becomes operational as quickly as possible.

FIRE DETECTION AND SUPPRESSION

Waste materials stored throughout the site are routinely inspected during the operating times of the site. Bales are both delivered regularly to site and are taken from the bays routinely to feed the plant throughout the operating period; therefore, the bays can be always seen. If anything were to happen, it would be noticed quickly. Additionally, routine inspections for heat and hot spots are undertaken during each day (when staffing levels are higher), at the beginning (8am approx.,), middle (1pm approx.,) and end (6pm approx.) of the shift changes. They are all visually inspected and checked for signs of heating. The inside of the building and the storage yard is covered by the CCTV system that is monitored 24-7 by both operational staff throughout the operating period (mainly overnight due to lower staffing) and site security officers when closed. If any issues are noticed, they alert both the FRS and site staff to the incident ensuring a rapid response. The CCTV system covers all working areas of the yard where waste materials are either stored or treated and is subject to annual maintenance and servicing by an approved contractor.

Any evidence of a hot spot, reference should be made to paragraphs above for details of how hot spots are identified and how inspections of all the bays on-Site are conducted, triggers an assessment of the most appropriate action which may be the pulling apart of the bales to dissipate heat by the on-Site equipment, the transferal of material to the quarantine area or the application of cooling water.

Portable fire extinguishers are available at the Site and staff are trained in their use. Records of training testing and maintenance of fire extinguishers are kept in the Site`s office. Fire extinguishers meet the requirements of

BS 5036.

The site is also fitted with a fire detection and CO2 suppression system that has been specifically designed for the plant on site used for processing. This system only covers the internal sections of the facility and so will not cover the bale storage, suppression here will be required by the FRS and on site staff if safe to do so. The installation conforms to the following recognised standards:

The Fire Protection System proposed for this project has generally been designed in accordance with the following standards, where applicable: -

BS 5839 Part 1 – 2017 (Cat P1)	Fire Detection and Fire Alarm Systems for Buildings.
BS 7273 Part 1 – 2006	The Operation of Fire Protection Measures.
BS 5306 Part 4 – 2012	Fixed Carbon Dioxide Extinguishing Systems
BS EN 54	Fire Detection and Alarm System Components
BS EN 12094	Gas Extinguishing System Components

The suppression system design allows for all areas of processing plant to be engulfed by Co2 within 90seconds of the release being activated.

SYSTEM DESCRIPTION

The system will be managed by an extinguishant control panel located adjacent to the risk and alongside the machine. The cylinders will be on the other side of the adjacent wall (shown on the FPMP site plan). The system will, for now, be manually operated via manual call points. There will be a manual release unit on the control panel as well as 3 others located around the building.

There is a single set of 12xCO2 cylinders installed to give a 90 second discharge time, as this is the run-down time of the machine. The CO2 system manifold will incorporate a three-way isolation valve which will allow the agent to vent to atmosphere through a branch off the valve in the event of an activation when the system is placed in the isolated position. The valve will have the facility to be padlocked in either position. There is an install pipe work to atmosphere, going up through the roof, where it is sealed within the roof structure. Placing the valve in the isolated position has the option to cause a fault indication on the control panel and will also activate a local amber beacon to provide a reminder to personnel to de-isolate the system once they have exited the protected space.

INTERFACING

Upon system activation, the following signalling is initiated from the CO2 fire protection system.

To site Fire Alarm System: a.) Fire Alarm on CO2 system

b.) Fault on CO2 system

All outputs stated are volt free contacts provided adjacent to the extinguishant control panels. Once the system has been manually operated, the system will go straight into second stage and a delay time is programmed prior to discharge into the area to ensure safe evacuation of personnel.

The CO2 fire suppression system covers the following parts of the operational plant:

- Main Motor Drive – local application by volume via a single nozzle
- Gasser Units – local application by area via a single nozzle
- Control / Power Main Cabinets – total flood deep-seated for dry electrical wiring via a single nozzle per cabinet (x2)
- Screw Enclosure – local application by volume, as there is no direct access to the enclosure, two nozzles are used to direct agent into the enclosure via the vents over it
- Small Motor – local application by volume via a single nozzle
- The hopper is not included in the system as material cannot flow backwards from the screw back into the hopper itself
- The system is designed to have a discharge time of 90 seconds (1.5 minutes)
- The system design is made to the requirements of BS5306:Part 4
- The CO2 system is installed in the corner of the adjacent stores area, however the lock-out valve and nitrogen pilot cylinder will be installed the other side of the adjoining wall so they face the machine to allow manual operation in the locality of the machine (shown on the FPMP site plan)
- The system is designed as part-total flood (screw chamber), the rest is local application.

PROVISION AND MANAGEMENT OF FIREWATER

At maximum pile size of 48m^3 based on the largest pile on the site with the dimensions of 4m x 4m and a height of 3m and, applying the Guidance rate of 2m^3 /min for a minimum of 3hrs, a 48m^3 pile of waste would require 58m^3 (57,629l) of water. The site has easy access to several fire hydrants (2 of within the site boundary and a third just outside the front gate) are supplemented by water from the on-site hose reel (mains fed at approximately 2m³ over 3 hours), an above ground storage tank (10m³) and numerous fire extinguishers of varying types. The hydrant and tank locations are shown on the FPMP site plan.

It is important to note that the Fire Service are no longer permitted to test the flow rates of fire hydrants due to the discolouration it causes and the potential to taint water supplies. As such, the exact details regarding the flow rate of the hydrants are unavailable although typically, the average flow rate of fire hydrants in the UK is 8 litres/sec equating to 28.8m^3/hr or 86.4m^3 over the course of 3 hours. Only one hydrant has been factored in as they may be off the same supply feed. However, due to the stockholding processes, separation of bays using fire walls, the use of floodgates to potentially re-use the water, it is not foreseen that the site will require more water than the 3 hydrants can supply.

The total available water during an incident is more than that stated within the guidance for a worst-case fire. This requires that 58m³ of water will be needed and the site have provision/access to a minimum of 96.4m³ (made up of 86.4m³ from the hydrant and 10m³ from the above ground tank).

It is considered that the fire service would be able to attend an incident extremely quickly (the closest Fire Station is in the town of Blaenavon at just 650m southeast of the Site) and that upon arrival there would be a readily accessible supply of water available for use from the site storage tank (this would be used for on-site initial firefighting) and the hydrant. Due to the scale of the site and the storage bays, the recirculating of firefighting water is unlikely to be required.

All surface run-off from the external yard area currently discharges via a combined sewer network. To assist in the containment of fire water, to prevent it discharging to the network and prevent it leaving the site footprint, drainage mats will be installed on all the drains on the side of the site impacted by the fire as well as those immediately adjacent to the perimeter, if required. The mats are held in the site stores located within the main

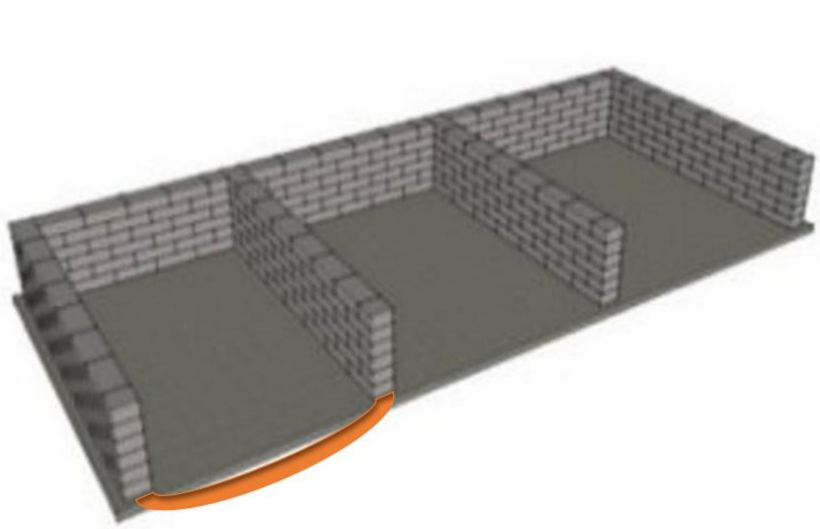
building (shown on the FPMP site plan).

The waste storage area has a concrete floor, with sealed concrete bays constructed within. The wider site perimeter is enclosed by a kerb (150mm minimum), which directs retained firewater into the site and therefore into the drainage system. The only area that doesn't benefit from the kerb is the site gateway, this will be blocked off by sandbags that are double layered for added assurance. These will be held next to the gateway (shown on FPMP site plan) for rapid response if required. The sandbag installation will still allow access to the site for the FRS.

The bays are constructed using concrete blocks described above, the site have available 3 sets of NOAQ Boxwall floodgates (specification attached) that are held within the site stores, to be deployed in the event of a fire. The floodgates will cover the width of a bay in an arc formation to allow the water to pool within the impacted area (as shown in the diagram below). Not only will this aid the firefighting operation but will also contain the runoff to within the footprint of the impacted bay. If required, firewater is then potentially available for reuse by the fire service or removed by tanker and transferred to an appropriately licensed wastewater treatment facility by an approved tankering contractor (Wales Environmental or similar). This will also be the case if the site floor is flooding due to the drain blocks being in place. Due to the size of the site (flat in nature), the kerbs will allow for an approximate holding capacity of 502m³, when taking into consideration the frontside of the processing building. When in use, the rear storage area of the site could hold approximately 998m³. However, due to the bay directed layout scheme and the application of the flood gates, it is very unlikely that this area will be used for mass water storage and so reducing the risk of made ground/grass verge contamination.

The flood gate construction will be initiated immediately upon the fire alarm being sounded or a fire being noticed. A dedicated operative will be trained and tasked with the installation of the flood gates (as detailed below) and application should take no longer than 10 minutes per bay from the alarm being raised, the simple 'click and slot' method of implementation is designed for quick and effective installation in emergency situations. All bays are likely to be in use on the site, however, 3 bays will be isolated with the floodgates. The waste removal processes detailed within this plan on the adjacent bays (emptied with plant available), the fire will not be able to spread beyond 1 bay either side in a worst case scenario.

Image showing the construction style of the flood gate- (for descriptive purposes only)



The above ground storage tank (shown on the FPMP site plan), is designed to be used for on-site reactive

firefighting only as 10m³ would be insufficient for the FRS. However, it could prove crucial in extinguishing a fire its early stages. The water level is topped up throughout the year by rainwater, where this isn't possible (through drought etc), the hose connected to mains supply is used. The water level is checked weekly as part of the site infrastructure checks, these are logged on the sheet within the EMS. The water in this tank will be used by on site staff with the hose attachment fitted at the base of the tank, this will allow for maximum pressure to be gained when operating and aiming at a fire. The tank is fully insulated to prevent both evaporation and freezing during the differing seasons. The tank is to be used for any dust suppression also, if required.

FIRE INCIDENT PROCEDURES-emergency plan

Staff operatives who will be engaging in firefighting activities and those who operate the plant complete a basic training that ensures that they are competent in the use of on site firefighting equipment.

Plant that would be utilised in the event of a fire are all fitted out with fire and heat protected hydraulic systems, and fire extinguishers. Those to be deployed are those available day to day for site operations, at present the site has access to 2 x forklift trucks that move the baled waste around the site.

The internal access road is designed as a one-way system and provides straightforward and rapid access to all areas of the site for the plant that will be designated to assist in firefighting or fire prevention. The storage areas and internal roads, are also compliant with the guidance documents and allow the following space around the site:

Table 4-showing the parameters required for FRS vehicles

Type of FRS appliance	Min width of road (metres)	Min width of gangway (metres)	Min clearance height (metres)	Min weight restriction (tonnes)
Water Tender	3.7	3.2	3.7	12.5
High reach vehicle	3.7	3.2	4.0	24

Should there be any unburnt material in or in an adjacent bay to the fire, the on-site plant will be used to relocate it to a safe section of the site. Operators on-Site who have trained as Fire Marshalls will douse any unburned material or hazards in the vicinity of the fire with water supplied from one the onsite hose or water tank to prevent the fire from spreading.

Emergency procedures for the site have been developed and is the subject of training and exercising for all staff engaged at the site. The procedures are to follow the below key points:

The active firefighting techniques that are adopted on site will include (some will be done simultaneously):

- Raising the alarm on site by using a bell or verbal communication. A dedicated person will be tasked with calling the FRS and ensuring all staff are accounted for.
- Initiate the activation of on-site firefighting equipment if safe to do so. This would be aimed at firstly, the fire and secondly by another staff member, towards the closest waste to the fire to cool the unburned material to prevent initial spread if required. A nominated fire marshal will ensure that a safe

distance is maintained from the fire and that clear escape routes are maintained.

- If required, water can be aimed at other buildings or non-waste materials if it looked likely that the fie could spread.
- By using the plant available (forklift trucks), remove the closest unburned waste, preventing the spread. The material will be taken to either the quarantine area or an empty bay located a safe distance (over 15m away if available).
- Separating burning material from the stack on fire, this can only be done when all other waste is removed from the area to prevent the spread. The material will be taken to Quarantine where it will be placed thinly.
- Douse the burning/smouldering waste within the quarantine area to ensure that it is fully extinguished by using either the hose reel or fire extinguishers on site.
- Initiate close monitoring of waste material in quarantine to ensure no flare up occurs within the material.
- Initiate the construction of the Boxwall flood gate to contain firewater around the impacted bay.
- Once the Site is cleared of burnt material and firewater, the yard area will be washed down before replacing or repairing damaged equipment and/or infrastructure as necessary.
- Electrical checks and the re-evaluation of contingency plans will also be carried out prior to the Site becoming operational again.
- A dedicated person (office staff due to operational staff being involved with the above steps) will be responsible for liaison with the FRS commanding officer and showing them this plan. This person will also stop all waste movements into site and turn them away to either go back to the waste producer or to another waste facility. Office staff will also be responsible for informing both local residents and businesses as well those involved in the running of local environmental receptors where possible.

If a fire were to occur on site, then the impacts on the surrounding community would be significant even if the fire were to be controlled at an early stage. The materials being held on site for storage and treatment are plastics, this alone would cause noxious smoke and emissions to air locally. In addition to this, if the fire were to occur within the building, the building fabric (metal sheeting) would also create additional emissions to air locally. There is a small fuel store and cooling tank area located within the permit boundary, although stored away from waste products, this material is a fire risk on its own and if it were to become engulfed would cause significant air pollution. The smoke could also impact on the effective running of the local roads and industrial areas, however this would be dependant on wind direction and speed.

The control of emissions to air is far more difficult for staff at Recover Blaenavon to control personally. The most effective way to control air emissions during a fire is to put the fire out as quickly and as effectively as possible. Fire curtains can be used to try to limit smoke within the area and so may be an option if appropriate; this is done through discussion with both the FRS and NRW. A fire curtain is a technique used by the FRS when they open their hose ends to full spray and at maximum flow. The water creates a fan or curtain that spreads out

sideways and vertically from the hose nozzle to create a barrier that can both reduce smoke leaving site and also protect adjacent waste piles/buildings etc.

Once the fire has been supressed/extinguished the contaminated materials will need to be carefully excavated with water supplies ready in case of a flare up within the material. Once the site management, NRW and the FRS are happy that the waste poses no further threat of re-ignition the material will be assessed for its recoverability potential and treated accordingly. If the waste is deemed as being too contaminated/damaged for recovery to be a valid option, the waste will be taken to an appropriate landfill for disposal.

In all cases and eventualities, the amount of water being used will be minimised where possible. Any unburned material will be excavated and removed from the fire to prevent any further spreading. If some material is too close for this to be practical, some small volumes of water will be sprayed onto the areas to cool them sufficiently. Water jets are to be used as little as possible.

In addition to the pollution to air, the fire water (and any other associated run-off) created could, if not adequately controlled, cause significant pollution to both local surface waters and groundwater zones.

The open fronted bays and general layout of the site allows the material to be approached easily and from more than one side enabling effective early firefighting.

REVIEWING AND MONITORING THE FPMP

This FPMP is a live working document which is reviewed quarterly or more frequently to reflect any changes to the facility such as the acceptance of additional waste streams (specifically those that are combustible), the modification of infrastructure, the inclusion of additional infrastructure or buildings, the installation of additional plant, machinery or equipment, following a fire incident and/or increasing or decreasing waste volumes.

All staff are made aware of the contents and the location of this FPMP during inductions and following a review. It is kept in the Site office and is accessible to all staff, visitors and contractors.

TRAINING, MONITORING SITE AND SITE INSPECTIONS

All Site supervisors, of which at least one will be on Site at any one time, are familiar with the requirements of the FPMP and are trained in the use of appropriate fire extinguishers and CO2 system.

Fire Marshalls will induct new starters and conduct annual refresher courses for all staff to include on-Site drills and exercises. This is to ensure all staff are competent to carry out the measures and procedures outlined within this FPMP.

Records of training, exercise drills and refresher course will be kept in a designated folder and maintained in the office on-Site.

Site inspections are carried out at the start and the end of the working day as well as after lunchtime. This will include the visual inspection of all of the stockpiles for hot spots and the recording on the appropriate logging sheet which is retained in the Site office. This allows for the identification of any signs or patterns of a constant temperature increase in a particular waste stack.

During the Site inspections, all equipment and plant are checked to ensure they are either operating or turned off correctly and that there are no identifiable ignition sources. All plant, equipment and fire prevention and mitigation equipment are maintained and serviced as per manufacturers recommendations and by qualified

personnel as appropriate. Records of all inspections and servicing are maintained in a designated folder which is kept in the Site office.

Each month an external environmental consultancy will attend site and review compliance across the site. This will not only form part of general permit compliance but will focus specifically on FPMP compliance, any non-compliance noted will be logged and a report sent to the site TCM detailing corrective actions.

The review of site FPMP procedures (particularly the end of day check), undertaken by the site supervisor or TCM, will maintain a compliance log in the office of the following information:

*Stockpile sizes and separation distances.

*Maintain residence times by checking when the bays were last emptied.

*At the required intervals (daily, weekly, monthly), the relevant checks and reviews are undertaken, and actions implemented where required.

*Periodic testing of relevant equipment will be done at this point when required (fire extinguishers are annual etc).

DURING AND AFTER AN INCIDENT

DEALING WITH ISSUES DURING A FIRE

During a fire, the material inputs to the site will be cancelled as detailed above.

Any lorries in transit, will be diverted to another local transfer station, or where possible, be returned to the producer to hold there until business can operate normally again.

To avoid congestion at the site during a major incident, any collections of waste that are booked in for that day will be cancelled. The company director or office manager will arrange for this to be done.

NOTIFYING RESIDENTS AND BUSINESSES

During a major incident the site will notify local businesses and residents via use of social media, local news networks, phone calls to those businesses closest and if required using load speaker. Unfortunately, the list of residential areas in the locality is high and so to contact each of them would not be possible outside of the techniques listed above. As mentioned, a detailed contact list for all local businesses, museums and local reserves etc is held in the site offices to be used as a notification tool during an incident.

Information regarding closing of windows and doors along with the likely timeframe of the incident will be communicated after consultation with the Chief Fire Officer for the incident.

CLEARING AND DECONTAMINATION AFTER A FIRE

There are several elements to clearing and decontaminating the site post fire incident. The first to is ensure that the fire water is tankered off site and taken to an appropriately permitted facility. The site will have to firstly identify whether, and to what extent, the water is contaminated. Part of this assessment will be to identify if POPs are present in the water. This will be done using an MCERTS and UKAS accredited laboratory for the testing of water chemistry. A full range of contaminants (heavy metals, TPHs, PAHs, POPs) will be tested for as ascertain the most appropriate treatment or disposal route.

The waste that has been impacted by the fire will need to be taken from site. The material will be assessed by

the company director and TCM to determine whether any of the waste is recoverable. If not, the material will be sent to landfill as soon as possible.

If required, once the water and waste have been removed from the site, specialist steam cleaning or pressure washing company will be employed to ensure that the concrete surfaces are free from any chemical contamination resultant from the fire. This would ensure that any residue from the water have been cleaned and would pose no risk to the environment post-incident.

MAKING THE SITE OPERATIONAL POST FIRE

Once the points above have been undertaken in full, the site can focus on re-opening the business. For this to happen, full agreement would be sought from NRW and hopefully a site inspection can be carried out with the local regulatory officer.

Full inspection of the sites critical infrastructure will need to be undertaken prior to the reopening of the facility. The bays (those impacted by the fire) will need to be checked for integrity by a suitably qualified engineer before any waste storage or treatment will be permitted once more. The infrastructure will need to be serviced and flushed by a professional company that is qualified to both clean the area and remove any water resultant from the fire or created by the cleaning flush. Other key infrastructure such as the CCTV, fire extinguishers and the building (if impacted) will need to be checked, although it is not anticipated that these will have been negatively impacted by either the fire or the pooling firewater across the site.

Further equipment checks will also need to be undertaken. Items such as the spill kits (if used) will need to be recharged/signed off as being serviced and the drain mats will need to be replaced. The floodgates will need to be integrity checked and neatly stored away in the designated holding area.

An updated and fully reviewed Fire Prevention and Mitigation Plan would be completed and submitted to NRW for approval.

APPENDIX 1

WASTE FEEDSTOCK INVENTORY AND SOURCE MATERIAL RISK

EWC Code	Description	Fire Risk Posed
15	**WASTE PACKAGING, ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED**	
15 01	packaging (including separately collected municipal packaging waste)	
15 01 02	plastic packaging	Low
20	**MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS**	
20 01	separately collected fractions (except 15 01)	

20 01 39	plastics	Low