ENVIRONMENTAL FOCUS

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Fire Prevention & Mitigation Plan[i]

Llantrisant Recycling Centre Ltd

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Customer:	Tom Prichard	Llantrisant Recycling Centre Ltd
Requirement:	Fire Prevention & Mitigation Plan	New application (variation)
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Introduction

The purpose of this report is to provide an assessment of the risk from fire on site and how the storage measures impact upon the risk. In addition to this where appropriate, recommendations will be made to ensure compliance with recommended fire guidance. Compliance with the recommendations will greatly reduce the risk to business continuity and the environment associated with large fires on sites of this nature.

The requirement for this document to be produced has come from NRW and a change to the permitting regime in an attempt to manage fire risk across waste facilities.

This document will be reviewed every 12 months against the latest version of the published guidance. It will review on site procedures and activities routinely and will be updated proactivity to suit operations and guidance should it be required. The document and its procedures will be reviewed outside of the routine review period if firstly, an incident occurs on site or secondly, if conditions are witnessed that may have resulted in a fire on site. For example, if steam or condensation is noticed or even if signs of melting or charred material is seen within the waste, this would initiate a review of the policies and procedures set out within this FPMP. The sections of the plan that would be reviewed in this type of situation would be stack sizes and separation distances, the waste storage time, frequency of monitoring, the type of monitoring being undertaken (i.e. would more extensive equipment be needed) and the preventing fire section to ensure that the measures being taken are still adequate.

Details of the property:

The site comprises a newly constructed building from which a new recycling operation is to occur under an Environmental permit. This application is to alter the processes that are currently occurring on site and to introduce new waste streams to the permit. The site is located on the edge of the Llantrisant Business Park and within a parcel of land that is leased from a local farmer and shared with a local authority CA site. Within the footprint of the site is a weighbridge building and canteen. These buildings are separate from the building used for recycling and are some 50m+ away. The recycling building itself is constructed of a mixture of materials including, concrete and steel frame, with a concrete floors and drainage that leads to a sealed and submerged tank (currently used by the site for contaminated water capture). See **Figure 1 in Appendix A** which details the site layout within the permit boundary and is drawn to scale.

The site is used generally for the receipt, processing and recycling of waste materials from various local authority contracts. The materials are largely soils, aggregates, green waste and glass materials however, the proposed EWC codes within this application are typically mixed municipal type wastes that will be stored, separated outside and bulked up within the new building. The mixed waste materials are to be stored pending processing and awaiting removal off-site for recovery. Relatively small quantities of wastes will be accepted into dedicated bays for sorting manually and mechanically before being bulked up and removed from site.

Site neighbours and local Geography:

Site neighbours located in the vicinity of the site consist of:

- Extensive farm land surrounds the site and is the only industry/residents within a Northerly/North Easterly direction of the site.
- There are several residential and commercial premises that are both lived in properties and properties that are only inhabited within normal working hours. The distances of these properties varies significantly from 50m to over 500m.
- Llantrisant Business Park and the associated businesses are also within 1km of the site.

Contact details for the local receptors etc (within 500m) will not be included within this plan for data protection purposes. Full contact details will be held on site within the site offices and will be used/provided in the event of an emergency only. Please see Figure 2 in Appendix A for a plan showing the locations of the receptors within 1km of the site. During a declared major incident, the receptors will be notified by knocking doors, undertaken by senior members of staff for those within 500m and by use of a loud speaker for those of between 500-1,000m due to the significant numbers involved.

Additional information

Materials accepted at the facility do not vary significantly on a daily and weekly basis and so this plan can provide reasonably accurate figures for the storage of wastes at any one time. However actual input figures over each quarter are made available via quarterly waste return submissions to NRW.

The following estimates are determined using the current situation with the waste at present that is being sent to a third party site under current contractual agreements. As the waste that is going to be

accepted at Llantrisant Recycling Centre Ltd is the waste that makes up this contract; the tonnages will be largely the same as those currently experienced. It is important to note that these tonnages are based on the maximum to be stored at any one time safely and do not breach any of the conditions published in the Fire Prevention & Mitigation Plan Guidance document.

Llantrisant Recycling Centre estimates that a safe maximum of:

*4 stockpiles: measuring 20m x 20m x 4m of unprocessed co-mingled wastes can be stored within the site safely. Each stockpile will be approximately 1,600m³ and will be stored in bays using concrete blocks constructed to the relevant standard (detailed below).

*4 stockpiles each measuring 6m x 8m x 4m will be used for the separately collected fractions and sorted outputs from the unprocessed material i.e. paper, cardboard, metals and plastics. These wastes will be stored within a building, in bays that have concrete walls on 3 sides with roller shutter doors. Each stockpile will only hold approximately 192m³ (If accepted, food waste will be stored separately in a sealed 40yd roll on roll off skip within the building).

In summary, at any one time an approximate maximum of 7,200m³ will be held on site within all of the bays identified above. Using the WRAP (2004) conversion factor of 0.26 (mixed municipal deemed the most appropriate conversion factor), this equates to an approximate tonnage of 1,875. To allow for variations within the waste such as moisture level, density and compaction, Llantrisant Recycling Centre would request that this tonnage maximum for storage at any one time be increased to 3,000T. This increase however would not impact on the maximum stack sizes permitted through this FPMP as it is a tonnage figure and not a volumetric figure.

It is important to remember that due to the nature of the business and economic aspects that influence waste removal from site; these figures may never be stored on site at any one time. The quantities stored on site will both increase and decrease throughout the year but will never exceed the maximum volumes identified above. Llantrisant Recycling Centre Ltd will comply with the published fire guidance where appropriate as detailed within this plan.

The management of waste and throughput should be controlled through an effective Environmental Management System (EMS) that is supported by detailed operational procedures (previously submitted to NRW and also within this application). In summary however, they propose that the FRS will be called if the fire is deemed as being serious and not controllable with the use of on-site equipment. Full cooperation with the FRS and NRW will be provided by any means possible from the site operators to facilitate an effective outcome from firefighting operations should the need arise.

Management responsibilities reside with the director and nominated supervisor at site, however the first-line management of waste control is best carried out where a single individual has overall control or responsibility so that there is little risk of issues becoming neglected through communication problems. This responsibility will be held by the site supervisor Stuart Richards.

The concrete walls used for the construction of the waste storage bays will be made in accordance with the requirements of BS EN 771-3 and will conform with the specifications outlined under EN 13501-1:2007-A1:2009 where the material performs as a class A1 against for fire resistance. The walls themselves would be made from solid concrete ‘lego’ block design where each block measures approximately 1.5m(l)x0.75m(w)x0.75m(h) and weighs circa 2.5T each. The bays themselves will be

constructed so that they are interlinked for maximum strength but to a height that would allow a minimum distance of 1m free board to be achieved from the top of each waste pile to the top of the bay wall (maximum of 5m).

Site processes

The site is operated as a waste recycling plant under an environmental permit*: EPR/AB3092FR*. Material is brought to the site by various means but largely through skips and garbage disposal lorries and is deposited at the applicable receiving area within reception area of the site. At this point, material is unloaded onto the concrete floor and undergoes immediate segregation and sorting using hand picking and mechanical grab methods only. If the materials are source segregated then they will be tipped straight into the building, bulked up and removed for recovery elsewhere.

The building is to be used for the storage of mixed dry recyclables such as plastics, paper, cardboard and metals. There will also be a sealed skip within the building to store any food wastes accepted on to the site.

Wastes from private contracts will need to be sorted on site to ensure that no contamination is within the waste type. The outlets for these wastes are as follows:

*Bayliss Metals for all metal wastes

*Viridor (Cardiff) for any fine material that results from the sorting process

*SiteServ Recycling for any paper, cardboard and plastic wastes

Please refer to the submitted EMS for the onsite procedures for waste acceptance, handling, rejection and treatment.

As mentioned above, the site will hold a maximum volume of waste as detailed; providing that the storage parameters set out within this plan can be complied with. If this cannot be gained, then these figures will reduce to allow for compliance with the guidance.

Site Process –in the event of a major fire incident

It is important to note that due to the relatively small quantities of waste being stored on site at any one time (detailed above) a major incident is unlikely to occur at the site. However, if in the case that a major incident is declared, the first action would be to ensure that all staff and contractors are safely evacuated from the building and offices as well as contacting the FRS.

Contingency arrangements will be made for waste imports so that no more material will be brought on to site until it is deemed acceptable to do so in agreement with the FRS and NRW. Until NRW agree for waste to be accepted on to site once more, all waste will be diverted to another one of Tom Prichard's companies; Project Black Recycling. Additionally, the local authority has agreed to the use of the Bryn Pica waste transfer station and landfill sites if required.

In order for the site to become operational again, all fire damaged waste will be removed from site and the infrastructure inspected for integrity by a suitable qualified engineer. If any of the infrastructure is not suitable, as per the definitions within the permit, it will be repaired before waste is to be imported again.

The agreed plan of action (though this could change in accordance with the FRS requirements as the leading authority on the incident) would be to gain access to the burning materials by whatever means necessary. If required, the waste is to be pulled out from within the building and damped down where it will then be stored on an area of concrete to the front of the building in an emergency only. The damping down of the waste material would be undertaken by the FRS. This area would be enclosed with a clay bund to prevent any leached fire water escaping the immediate area. When there is enough free space within the building itself, this operation will stop and all damping down and waste storage will occur within the footprint of the building, on the internal concrete surface. The building itself will at this point have a clay bund installed to prevent any fire water from leaving the area where the waste is being stored. The clay bund is a temporary fixture that will be used during the fire incident only to contain fire water runoff. The bund will be compacted with a loading shovel to ensure that the material becomes impermeable to the fire water flow. It will be constructed to be approximately 1m thick and 0.5m high; this will allow for additional clay to be added to the height if required.

Controlling fire water will be a priority during a major incident. Tankers will be used to pump any significant pooling/flooding waters away to protect any environmental receptors locally. The FRS will determine that if the re-use of firewater is appropriate on site.

The control of emissions to air is far more difficult for staff at Llantrisant Recycling 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 and limit smoke within the area and so may be an option if appropriate; this is done through discussion with both the FRS and NRW.

If local receptors are being impacted severely by air pollution the operator will seek approval from NRW to use soil or crushed aggregate to suppress the fire and to prevent further air pollution if possible as per the recommendations of the guidance. Both Llantrisant Recycling and other companies within the Prichard's group have easy access to vast quantities of this material if required.

Emissions from a fire to air are extremely difficult for any waste operator to control. Llantrisant Recycling would seek advice and guidance from NRW and the FRS on how to reduce the emissions if a fire was to occur. The operator would be unable to implement measures without this consultation as in doing so may potentially make emissions worse or hinder firefighting operations.

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 will be used as little as possible.

When there is sufficient space within the building and the fire is extinguished, any waste from the external area will be moved to be back onto the concrete pad within the building that benefits from a clay bund.

For the stockpiles located at the rear of the site, outside of a building, the same principles will apply in that a clay bund will be used to enclose the fire water into an area away from other waste types (despite being all concreted and feeding a sealed drainage system). The material will be excavated where required to help the FRS with effective fire-fighting operations. The stockpiles will be suitably stored on site to allow access from more than one side of the fire.

To aid with the firefighting operations the Tom Prichard Group of companies have access to an array of plant and approximately 20 fully qualified personnel that would be available to drive the plant on site 24/7 if required. Across the group there are:

*x 75 machines such as 360 excavators, high reach loading shovels, bull dozers and cutting plant.

*x 8 grab machines of varying sizes

*x 40 8-wheel tipper trucks for waste removal (or soil/aggregate import)

There is a 20,000l water storage tank held at the rear of the building that is fed and topped up by the clean rainwater from the roof of the building. These tanks will be initially filled by water imported in tankers to ensure that a supply is ready for waste acceptance. An overflow system will discharge any excess clean water to the clean water discharge that flows across to the site. There will be a hose attachment fitted to the tank that will enable fire-fighters to use the water if required. The attachment will be determined through discussion with the FRS to ensure that the fitting used is compatible with the hose attachments currently used by the FRS.

Additionally, if required in an emergency, the Nant Mychydd River flows alongside the site and this could be accessed in an emergency. However, only NRW and the FRS can make this decision.

When considering the best actions to take on site, full discussions will be had with both the FRS and NRW to ensure that the environment and human health is protected. The scale of the incident, the types of materials in question and the local area/receptors will all be considered before any decisions are made.

All waste that has been subjected to the fire will be stored in accordance with those guidelines detailed within the published Fire Prevention and Mitigation Plan Guidance.

NRW will be informed immediately if any flare-ups do occur within the waste post incident.

The company has sufficient financial resources available to cope with a major incident on site, the finances can be accessed immediately if required by the company director or financial controller.

Site storage – risk reduction

The storage of material on-site is considered to pose a low risk of fire if managed correctly. Firstly, the quantities of waste being held are relatively low and would not cause a major incident if a fire were to occur and secondly, the time periods of waste storage are also minimal due to space constraints on

site and contractual agreements. If waste is allowed to accumulate then this would severely hinder operations and business continuity. Taking reasonable measures to ensure that storage on site is in accordance with recommended guidance or is based on site specific assessment will assist greatly in reducing the impact of fire at the site. This will improve the situation from both a business continuity perspective whilst at the same time reducing the impact on the FRS resources necessary to fight a large fire. The effect on the environment will also be substantially reduced. Recommendations made in this assessment are made in line with the guidance referred to above.

The current assessment of waste on site is based on how Llantrisant Recycling expect that the storage will be undertaken when waste is accepted on to site. Due to the nature of the business and industry markets, waste movements and quantities will be changing daily in to and out of site. These waste streams have a high turnaround due to a buoyant market and are monitored through weekly checks of the input and output tonnages. This is to be done via visual checks within the storage area and then through further audit of the input and output figures for these wastes. It is not anticipated that wastes are stored for longer than a 4-week period after initial acceptance.

Waste storage area

The storage area for wastes on site are small due to the constraints of the building, the permit and its boundary. The general layout for storage is detailed above. These stockpiles will vary in size but will always maintain an adequate separation in all directions towards other waste (10m). The vehicles will deposit the waste directly into the building where it will be bulked up into individual stockpiles or into the sorting area. The stockpiles will be created from the rear first, allowing for ease of operations.

The waste, when the weekly collections have been all received and appropriately sorted into the separate fractions, will then be taken from site to another facility that is permitted to accept them for onward recovery and recycling operations. The waste stockpiles will be taken from the rear of the building first to ensure that all 'older' wastes are removed and not simply pushed further back. The principle of 'first in first out' will always be maintained when a proportion of the waste is to remain in the building. If the building is to be totally emptied, then there is no need for this principle to be followed.

This FPMP is to be used solely for the mixed wastes listed within this application. A consolidated version to incorporate previous FPMPs will be constructed and submitted to the site officer in due course.

A clear area will be maintained around the perimeter to allow for FRS access if required.

The stack sizes and separation distances appropriate to the materials that are on site will not exceed the following parameters as detailed within the FPMP guidance issued by NRW:

Mixed wastes of a general nature will not exceed stack widths of 20m x 4m high when loose; the separation distance will be in line with that required by using the guidance; this will be approximately 10m between waste stockpiles in all directions that do not have concrete walls between them. Consideration will be given to rear and side access for stock rotation purposes if required. However, it is not considered as being required as the stacks will not be on site for periods of longer than 4 weeks in an unprocessed form. All wastes will be stored in 3 sided concrete bays both within the building and

outside. A minimum of 1m 'free board' will be maintained within the bunkers to prevent fire spread across different bunkers.

Plastic (as well as the other sorted fractions) wastes will not exceed stack widths of 6m x 4m high when loose and will be stored in concrete bunkers; the separation distance will be in line with that required by using the guidance; this will be approximately 5m in the direction of other wastes. Consideration will be given to rear and side access for stock rotation purposes if required. However, it is not considered as being required as the stacks will not be on site for periods of longer than 4 weeks in an unprocessed form. A minimum of 1m 'free board' will be maintained within the bunkers to prevent fire spread across different bunkers.

Preventing Fires

In addition to the above storage arrangements across the site there are several other processes that could be undertaken to reduce the risk of fires starting on waste sites. The first step is to identify the possible causes of a fire on a site such as Llantrisant Recycling Ltd and identify how to implement control measures against the causes identified:

Cause of fire	Control measures
Arson/vandalism	A comprehensive and operational CCTV system is in place at the site that can be remotely controlled by the company employees via mobile phone and head office/security staff via computer. The site is fully enclosed by a fence in all areas where public access can be gained.
Self Combustion	The waste on site is subject to quick turnaround periods and it is not anticipated that the waste will be stored for longer than 3 months (site wide-other than composting windrows). Please refer to the section below for more information regarding self-combustion.
Plant/equipment failure	Regular vehicle and equipment maintenance is carried out on all plant/equipment used at the facility. Daily and weekly checklists are carried out as routine procedure on site to ensure that everything is in full working order. Any problems that are identified are logged and dealt with as soon as possible.
Smoking materials discarded	There is a strict no smoking policy across all areas of the site where there are waste materials processed, stored or treated. There is a designated smoking area that is away from the waste processing/storage areas.
Hot exhaust system/heat sources	All relevant staff that are trained in the use of the machinery are made aware of the risks that the exhaust system poses with relation to causing a fire. The gaps that are implemented between the waste stockpiles are sufficient to allow for all vehicles to turn without the risk of getting too close to the waste mass. Additionally, the mobile plant on site can be fitted with small fire extinguishers in the event of a small fire caused by the exhaust.
Sparks from loading buckets	The risk of this occurring is extremely low. However, the use of rubber sleeves across all tips of the loading shovels could be

	used to ensure that sparks will not occur when the buckets run along the concrete surface.
Electrical Faults	Regular inspections are undertaken of all electrical installations and equipment. Where required, the electrical kit will be PAT tested and certified by a qualified electrician ensuring electrical safety.
Batteries within waste deposit	Due to the short period of time that the wastes are to be stored on site, it is not foreseen that batteries within the waste will pose a significant risk. However, if batteries are noticed within the waste deposit, they will be picked out and stored in a separate container away from the rest of the materials on site.
Visitors & Contractors	All visitors and contractors that enter site will be fully inducted by the site supervisor to ensure that they are aware of the on-site procedures surrounding fire risk. They will not be permitted to enter site without the site induction. All visitors will be accompanied by a member of the site staff at all times.
Leaks and spillages of oils and fuel	When a leak/spillages is identified on site it is cleaned up immediately using the on-site spill kits. The area is isolated and no working vehicles or plant are to be operated near to the spill until the area in question has been adequately cleaned and the risk removed.

There are various safeguards and common sense measures that have be implemented across the site to help in the reduction of risk:

- Ensure that ignition sources such as heat exchanges, lamps, naked flames, incinerators and dedicated smoking areas are away from waste processing areas. It is recommended that a 6m gap is maintained between them and waste materials.
- A fire watch is to be implemented at the beginning and end of each shift to ensure that all areas are inspected this will be a visual inspection.
- All plant and machinery are to be maintained and inspected at regular intervals.
- Inspections of plant are to be undertaken daily to ensure that no build-up of paper/fibre etc is happening around moving parts that could get hot etc.
- Regular training sessions will occur every 6 months (or following an incident) in line current company procedures that will detail FPMP requirements. These are done through toolbox talks which are completed by all employees.
- A dedicated quarantine area has been allocated for emergency waste storage outside of the building should it be required (identified on the site plan).

Spontaneous combustion and storage

Some materials may spontaneously combust under certain conditions. The risk is greater with certain material types and the risk increases when materials are stored for long periods.

The materials stored on site do not present a significant risk from spontaneous combustion or self-heating when stored for periods of time of less than 3 months as per the guidance. The waste to be

accepted on site will not be stored for longer than 4 weeks, therefore, well within the 3-month period highlighted within the guidance as being the key time for spontaneous combustion to become a high risk element. Nevertheless, it is recommended that monitoring of wastes is undertaken on a regular basis. There are methods that can be employed but for stacks and piles that conform to the recommendations and commitments made in this fire plan, equipment such as thermal imaging cameras or thermal lances would not be required. Due to the small quantities of waste being stored on site and for the small amount of time; these requirements are not needed as the waste is removed from site, monthly at worst; consequently, visual monitoring will be undertaken daily. The visual monitoring will look for signs of heating within the waste piles such as accumulations of condensation within plastic materials, steam being produced from the stockpiles and scorch marks on material brought out from within the piles. If any of these signs of heating are noted, then the waste pile will be split into smaller piles, cooled down with clean water sprays (if required) and removed from site. The FRS and NRW will be notified of the recorded sighting within the waste and updated on actions undertaken to prevent a fire occurring.

The following applicable materials should not be stored for longer than 3 months:

- Wood and wood products
- General waste including RDF and fines
- Material that has not been checked for potential hazards before storing e.g. exposed rust that may increase heating (although this is unlikely due to waste acceptance checks on site).

In the unlikely situation where the facility reaches its maximum storage capacity (as detailed above); waste will cease to be accepted onto site and will be diverted to another facility that is appropriately permitted to store and treat the waste types. Levels of waste on site will be monitored by the TCM for site both visually and by use of the weighbridge system. The quantities of waste will then be passed to the directors and decision to cease waste acceptance due to being at maximum storage capacity will be made. Only directors can make this decision as it would have significant financial impacts on the business.

Where appropriate, the following measures need to be implemented on site:

- Minimise stack size wherever possible.
- Manage stock levels to prevent piles being left for long periods of time.
- Use older material first.
- Keep material in its largest form prior to processing for its end market.

Security & Fire Detection/Suppression

The site is very secure as there is only one way in and out of the site. The site has a CCTV system is in operation 24hrs / day. The CCTV system has been installed to allow visual access to the majority of the operational areas on site. The company directors have 24hr remote access to the CCTV cameras and they are checked regularly afterhours as well as security patrols overnight. Throughout the operational area there are water storage tanks that are fitted with a high pressure hose connection. These tanks can be used as an initial fire-fighting method to combat a fire should one occur before the FRS arrive on site to take control.

It will be necessary to continually monitor the effectiveness of the CCTV and the security system to review the provisions as necessary.

There are a number of systems available that can monitor sites of this nature. These include:

- Flame/smoke detectors
- CCTV based flame detection systems
- Infrared and ultraviolet systems

In considering if such a system is appropriate it is necessary to consider what other provisions that are currently in place and can provide an equivalent level of confidence that a fire incident will be detected at an early stage if an automatic detection system is not provided.

Current provisions on site are a CCTV presence when the site is on shut down and is accessible by all directors and security staff for the site. The CCTV system is in operation and provides the ability to monitor the site for both unauthorised access and site conditions including visual monitoring of waste storage conditions. The cameras are internal and external, the areas of waste storage subject to this variation application are directly covered by the CCTV system. Additionally, manned security patrols occur throughout periods of shut down.

The effectiveness of the security measures should be reviewed/tested frequently and should any of these provisions be changed or removed the risk assessment should be immediately reviewed. It should be highlighted that the measures referred to above are considered to be the minimum necessary to provide a degree of confidence that an incident will be either prevented or discovered at an early stage.

The building that is to be constructed will allow for the smoke to escape the building freely as the building has an automated fan system currently installed in each bay. The roller shutter doors can also be opened manually to allow smoke to escape.

Site access

Access to the site is acceptable for FRS purposes. The same access road (through Llantrisant Business Park) is used by large vehicles on a regular basis.

Access within the yard can easily be gained directly off the road that runs along the front of the site. If there were to be a fire at the site; all areas can be easily accessed through the main gates.

Responsibilities

The assembly point controller and fire marshals will undertake the following duties:

<u>Assembly point controller</u>

Once the fire alarm has been raised, the assembly point controller should collect the site signing-in registers from the office and go to the fire assembly point. They should then check all persons off at the fire assembly point and inform the FRS commander of any personnel who are not present. If an

employee is logged in but **not** present at the muster point at the time the register is called, it must then be assumed that the individual is in mortal danger and the fire brigade must be informed immediately so they can negotiate a rescue.

Fire Marshals

In the event of a fire, the Fire Marshals are responsible for checking that their designated area is clear and where possible windows and doors are closed. In addition, they must;

a. Report to the Fire Assembly Controller and confirm "area clear or unable to check area" as applicable.
b. Inform the Deputy Fire Controller of any staff on holiday or on days off.

Risk control

It is considered that the recommendations outlined below should be implemented against the assigned priority in order to reduce the risk to the environment from fire.

Definition of priorities:

1	Serious hazard or deficiency requiring immediate remedial action within **3 months**
2	Hazard or deficiency identified requiring remedial action within **6 months**
3	Recommendations to improve fire safety incorporating changes in standards and best practice within **12 months**

Recommendation	Priority	Insert completion date
Creation of a fire logbook (will become part of site inspection sheets).	**2**	Upon permit issue
Fire controller training, assembly point controller training, fire marshal training & logbook training to be given to nominated personnel.	**1**	Upon permit issue
Prominent 'No Smoking' signs should be displayed on the recycling site. Continual monitoring of staff for smoking activities on the recycling area should be instigated.	**1**	Upon permit issue
Portable appliance testing (PAT) should be undertaken on all appropriate electrical equipment.	**3**	Currently in place
Ensure that fire escapes are clear of all materials and machinery at all times.	**1**	Upon permit issue
All staff should undertake annual refresher training detailing the action to be taken in the event of a fire.	**1**	Will be added to training schedule upon permit issue
Ensure all wastes that are accepted on to the facility have robust waste acceptance procedures in place; so that storage of materials for periods longer than 3 months, does not occur.	**1**	Currently in place

Undertake an up to date fire risk assessment if the materials accepted on to site change in characterisation or composition.	**3**	Ongoing monitoring

If all the above recommendations are implemented in accordance with this FPMP and the guidance published by Natural Resources Wales, the risk to the environment from fire on this site would be considered:

Low	✓	Normal		High	

Other considerations

Water and FRS access

The Fire Prevention and Mitigation Plan Guidance highlights that a 300m³ stack of combustible material will normally require a water supply of 2000 l/min for a minimum of 3 hours.

Based on the proposed waste volumes on site (in a worst case scenario) a maximum of 7,200m3 of waste could be stored at any one time. Therefore, the requirement for water on site will be 8,640,000l for a burn time of 3 hours if all waste stockpiles were to catch fire at the same time. This is the equivalent to just over 3 Olympic sized swimming pools and so is clearly not feasible to be held on site.

Due to the storage arrangements of the stockpile of waste; the above situation is a highly unlikely scenario and the figure would likely be much less to extinguish any fire at the site. However, as previously mentioned, a 20,000l water storage tanks are to be held on site and linked to a high pressure hose system. The tank is checked weekly for water level and are to be topped up if required. However, once full, the sealed system will lose water very slowly through evaporation and so it not anticipated to require to be topped up very frequently. This will be used as an early fire-fighting measure to limit the spread of any fire on site in the time that it takes for the FRS to attend site.

In a worst case scenario, the FRS may need access to the River that flows adjacent to the site. Highlighted within Figure 1 of Appendix A are 2 points of access to the River that are the safest for the FRS. The point that is near to the site entrance can be accessed via the road into the car park. There is a steep banking towards the river bank but this can be walked to place a pump within the river. This point is approximately 50m from the buildings location.

The second point of access is to the rear of the site and is accessed through a farmer's gate in the corner of the site. There is a gentle slope to the river from here and this is easily walked in order to get a pump in the watercourse. This point is approximately 40m from the waste location.

In any event it will be necessary to consider the possibility of a pollution incident where water run-off causes pollution off-site. This would be controlled by measures detailed within the Site Process-in the event of a major fire incident section above.

In order that fire appliances can move safely and effectively around the site, access roads are provided in accordance with the published guidance document.

Appendix A

***Figure 1**—Drawing showing more detailed areas on the drawing.

***Figure 2**—Location of receptors within 1km of site.

[i] No liability will be taken by Environmental Focus for any works undertaken by the client as the service provided is based on recommendations and advice only.

*To be submitted post submission of this application to the permitting department but before permit determination.