

FIRE PREVENTION PLAN

SiteServ Recycling (SW) Limited

Triple Crown House

(off) Llantwit Major Road

Llandow

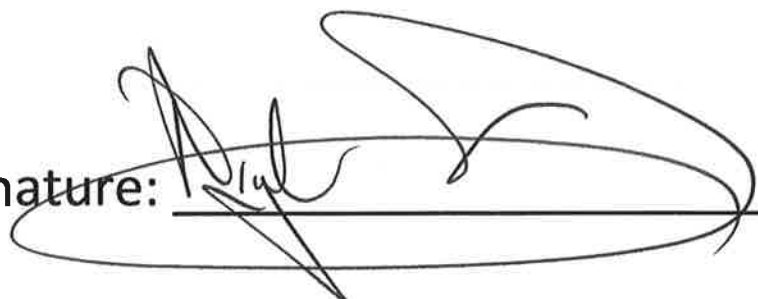
Vale of Glamorgan

CF71 7PB

Dated: 12th February 2018

Authorised By: Nigel England (MD)

Signature:

A handwritten signature in black ink, appearing to be 'Nigel England', is written over a horizontal line. The signature is stylized with large loops and a long horizontal stroke at the end.

Fire Prevention & Mitigation Plan¹

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.

Details of the property:

The site comprises a former RAF WW2 aircraft hanger, with an integrated internal office suite that runs approximately $\frac{3}{4}$ of the total length of the southern side of the building. There's a ground sunk air raid shelter, a weighbridge and porta-office, diesel storage, vehicle wash area and a staff porta-cabin. The hanger is steel framed, have concrete floors with brick walls and steel cladding. See Figure 1 in Appendix A which details the site layout within the permit boundary.

The site is used for the receipt, processing and recycling of waste materials of a general nature and the storage of materials both pre/post processing and awaiting removal off-site for recovery.

External to the hanger is a large above ground double skinned diesel storage tank (38,000ltrs) and refuelling point adjacent to the service road. A smaller red-diesel above ground double skinned tank (10,000ltrs) is also located in this area as well as a double skinned AdBlue above ground storage tank (2,000ltrs). All 3 storage tanks are sited on a concrete base for additional protection. External to hangar A, adjacent to the western side of the building is a biomass burner and wood storage bay.

Site neighbours and local Geography:

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

- Llandow Caravan Park which houses 100 pitches, a shop and reception is adjacent to the northwest of the site. 10 pitches are located within approximately 150m of the site boundary
- South Wales carting centre is located adjacent to the north of the site. The land closest to the site consists of a large outdoor tarmac circuit. No associated buildings or infrastructure are within 500m of the site
- 4 barns belonging to Bryn Sych farm are located beyond Llantwit Major Road on Morfa Lane, approximately 400m south of the site. Bryn Sych farm house is 750m to the south further along Morfa Lane.
- The remainder of the site is surrounded by agricultural land and a network of roads off Llantwit Major Road.

Contact details for the local residents etc 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 in the event of an emergency only.

Additional information

Materials accepted at the facility vary significantly on a daily and weekly basis and so these figures would not be representative or accurate if provided within this plan. It is more appropriate for an average to be used when identifying inputs to site; actual input figures over each quarter are made available via quarterly waste return submissions to NRW.

Materials stored at the facility also vary significantly on a daily and weekly basis and so these figures would not be representative or accurate if provided within this plan. It is more appropriate for an approximation to be used of the safe maximum tonnage when identifying types and quantities of waste stored on site. These approximations are based past and current data of waste flow through the Hangar and do not take into account those wastes associated Hangar B. The estimates below take into account the safe storage of the materials both pre and post processing allowing for the recommended separation distances calculated by using the graphs in the published guidance. The estimates are determined using the current situation where no concrete walls or similar are used; these tonnages may be increased when the bay system is installed.

SiteServ Recycling Ltd estimates that a safe maximum of:

700T of loose material can be stored on site prior to processing and;

1,200T of baled materials can be stored on site at any given time.

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 figures identified above. SiteServ Recycling Ltd will comply with the published fire regulations.

The management of stockpiles and throughput should be controlled through an effective Integrated Management System (IMS) that is supported by detailed operational procedures (individual sections referred to later in this document). The site procedures that will be followed if a fire was to occur on site are detailed within this plan. Management responsibilities reside with a number of managers or staff 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 role is undertaken at present by the Head of Recycling and TCM for site, Carl Jones & report findings to the directors via verbal or email communication.

The Head of Recycling must ensure a fire prevention and mitigation plan (FPMP) is produced and those with specific responsibilities are competent to carry out their role effectively. The management profile for waste reception and storage on site is as follows:



Site processes

The site is operated as a general waste recycling plant under a standard rules permit: *EPR/IB3893HP*. Material is brought to the site by various means including articulated lorry (curtain side), skips and hooks, box bodies and sprinters and deposited at the applicable receiving area within hanger A. At these points, material is unloaded onto the floors and either moved using mobile plant and stored for subsequent processing or undergoes immediate segregation/sorting using hand picking methods or mechanical grabs.

Hanger A is used for processing and storage of recyclables such as paper, plastics, cardboard and aluminium cans. Transport vehicles are tipped and loaded in the reception area of the shed using various pieces of plant. Various mechanical processing operations are undertaken within the building to sort and to create baled materials in 1m³ bales.

The other process undertaken within hangar A is a handpicking operation. This process involves placement of loose paper waste, often mixed with other recoverable materials such as card and plastic, into a hopper. The waste then drops onto a conveyor line which travels through a 'picking' area. At this location, operatives segregate individual grades of material from the conveyor and drop them into dedicated bays from which the material is removed by a front loading shovel for baling. The resulting material is then ready for onward transport.

Please refer to the Operational Procedures OPL2 and OPL3 for the onsite procedures for waste acceptance, handling and treatment (appended to this report).

As mentioned above the site will hold a maximum of 700T of loose and/or 1200T of baled materials on site at any one time; providing that the storage parameters set out within this plan can be complied with. If this cannot be achieved then these figures will be lower.

A recent planning application has been granted and within this application SiteServ Recycling Ltd have committed under planning permissions for the site not to accept mixed general wastes onto the facility permanently.

Site Process –in the event of a major fire incident

In the event of a major incident being declared (similar to that of March 2017), 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. SiteServ Recycling Ltd have 3 screaming alarms and 2 wind-up alarms to be used on site in the event of a fire being identified within Hangar A and a screaming unit within the offices.

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.

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 hard standing to the side of the building. The plant that is to be used to achieve this will be the same as those previously used in March 2017 (Cat 940 loading shovel, Lehbeir 360 grab with high rise cab, further heavy plant to be provided by Prichards if required for demolition purposes). The damping down of the waste material would be undertaken by the FRS. This area of hard standing would be enclosed with a clay bund to prevent any leaked 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 2 acre footprint of Hangar A on the 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. Access for the machinery will be through an area where secondary bunds will be installed to prevent run off of the fire water escaping further, this will allow for fire fighting operations to be maintained.

Controlling fire water will be a priority for SiteServ Recycling during a major incident. Tankers will be used to pump any significant pooling/flooding waters away to protect local watercourses and prevent infiltration occurring on the made ground. The FRS will determine that if the re-use of firewater is appropriate on site. As previously undertaken during an emergency event; 30,000l water tank vehicles were hired in from third party companies to ensure that standing water is kept to a minimum. The tankers will be on a rolling contract until all fire water was removed from site and the waste was re-stored on concrete and banded.

The control of emissions to air is far more difficult for staff at SiteServ Recycling Ltd 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. Any fire fighting activity will be undertaken and controlled by the Fire service.

If local receptors are being impacted severely by air pollution SiteServ Recycling Ltd 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.

Emissions from a fire to air are extremely difficult for any waste operator to control. SiteServ Recycling Ltd would seek advice and guidance from NRW and the FRS on how to reduce the emissions if a fire was to occur. SiteServ Recycling Ltd would be unable to implement measures

without this consultation as in doing so may potentially make emissions worse or hinder fire fighting 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, the waste from the hard standing area will be moved to be back onto the concrete pad that benefits from a clay bund.

A water bowser is permanently located on site so that in the instance of any smoulder or smoke during storage and/or removal of the material, staff have been instructed that if the fire cannot be controlled with a fire extinguisher then no attempt should be made that could endanger human life. If the flare up cannot be controlled by the fire extinguisher on site the FRS will be called in as an emergency response to contain and extinguish the fire.

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.

Please refer to Operational Procedure OPL5 for Emergency and Environmental procedures (appended to this report).

Site storage – risk reduction

Current storage of material stockpiles on-site could be improved by implementing recommended guidelines as set out in the Fire Prevention and Mitigation Plan Guidance, 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 stockpiles on site is based on how storage is being undertaken at present only; due to the nature of the business and industry they will be changing on a daily basis with the movement of materials to and from site. For the smaller more transient stockpiles that are 'in and out', it is not anticipated that the area and volumes will exceed the recommendations within the guidance. These waste streams have a high turnaround due to a buoyant market and are monitored through weekly checks of the weighbridge logs for input and output tonnages. Larger more static

stockpiles will need to be managed more closely to ensure that they do not remain on site for periods of time greater than 3 months nor do they exceed the volume and height constraints detailed in the guidance. This is to be done via visual checks within the hangar and then through further audit of the input and output figures for these particular waste types. The larger piles will be removed from the rear sides of the pile and so ensuring effective stock rotation, in addition a fire safety diary will be completed daily to ensure compliance to regulations.

Please refer to Operational Procedure OPL15 for stock rotation practices on site (appended to this report), under current storage conditions the site does not meet the new regulations, as a company we believe it will take until 31/03/19 to be fully compliant, naturally we will be working towards this daily and will hopefully complete it sooner.

Our short term goal is to provide the fire separation breaks by 31/3/19 and longer term we aim to replace these breaks with concrete panelling which allow us to reduce the separation distances to allow better storage and handling of waste types. It is envisaged we will have concrete panels in place by 31/3/20.

External yard area

Permitted waste stockpiles stored in the external areas of the yard are not appropriate to be covered by this FPMP as the materials allowed to be stored outside are not those listed within the guidance as wastes for concern. The stockpiles will however allow for FRS access to the entire site.

Hangar A

Stockpiles within the Hangar A area of the site are not fixed, they will be changing constantly and therefore it is not appropriate to detail current or forecasted stack sizes. As a general layout for illustration purposes only please see the plan¹ in Figure 2 of Appendix A. A clear area will be maintained around the external perimeter to allow for FRS access if required. The size of this area will vary depending on the stack sizes and design but will always allow for plant/machinery to gain access.

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:

Paper & cardboard will not exceed stack sizes of 10m x 10m x 4m when loose; the separation distance will be in line with that required by using graph 1 of the guidance (7m).

Paper & cardboard will not exceed stack sizes of 10m x 10m x 4m when baled; the separation distance will be in line with that required by using graph 1 of the guidance (9m).

Plastic based materials will not exceed stack sizes of 10m x 10m x 4m when loose; the separation distance will be in line with that required by using graph 2 of the guidance (15m).

Plastic based materials will not exceed stack sizes of 7m x 7m x 4m when baled; the separation distance will be in line with that required by using graph 2 of the guidance (15m).

All staff will be provided training to ensure they understand stack sizes and safe stacking, this will be by means of monthly tool box talks and will also be added to daily site diary to be checked.

These parameters are only to be considered for the short term on site. It is the intention of SiteServ Recycling Ltd to purchase concrete dividing walls in the medium term as a more permanent provision. Consequently, when these walls are purchased and constructed on site the stack sizes and separation distances will be as follows based on the guidance issued by NRW:

Paper & cardboard will not exceed stack width of 10m x 4m high when loose; the separation distance will be in line with that required by using the guidance (1m of 'free board' at the top of the concrete dividing wall to allow for flame height). Consideration will be given to rear access for stock rotation purposes. However, it is not considered as required as the stacks will not be on site for periods of longer than 3 month in an unprocessed form.

Paper & cardboard will not exceed stack width of 10m x 4m when baled; the separation distance will be in line with that required by using the guidance (1m of 'free board' at the top of the concrete dividing wall to allow for flame height). Consideration will be given to rear access for stock rotation purposes. However, it is not considered as required as the bale stacks will not be on site for periods of longer than 3 months.

Plastic based materials will not exceed stack width of 10m x 4m high when loose; the separation distance will be in line with that required by using the guidance (1m of 'free board' at the top of the concrete dividing wall to allow for flame height). Consideration will be given to rear access for stock rotation purposes. However, it is not considered as required as the stacks will not be on site for periods of longer than 3 month in an unprocessed form.

Plastic based materials will not exceed stack width of 10m x 4m when baled; the separation distance will be in line with that required by using the guidance (1m of 'free board' at the top of the concrete dividing wall to allow for flame height). Consideration will be given to rear access for stock rotation purposes. However, it is not considered as required as the bale stacks will not be on site for periods of longer than 3 months.

The length of the bunker will be determined when the concrete walls have been purchased as this would be more appropriate to base on contractual agreements at the time of purchase. If SiteServ Recycling Ltd were to commit to length at present, this information may be inaccurate in several months time; therefore SiteServ Recycling Ltd will determine the length of bunkers with NRW when required and to suit adequate stock rotation and risk reduction.

Hangar B wastes

This material is currently subject to the requirements of a Regulation 36 Notice and will continue to be removed in line with the steps identified within the Notice. For a visual understanding of how the stockpiles are currently stored in the footprint of hangar B see Figure 3 of Appendix A. The stack sizes and separation distances appropriate to the materials that are on site will not exceed the following parameters:

General combustible wastes will not exceed stack lengths of 20m x 5m high when loose; the separation distance will be in line with that previously agreed with NRW on site following the fire in March 2017

(CAR_NRW0031440). This distance is approximately 6m, the guidance stipulates that the separation distance should be approximately 10m and so the increased risk will be managed by implementing the following procedures.

The wastes that are stored here are to be removed in a controlled process that enables both safe excavation and environmental monitoring. A fire watchman is to be used at all times during any excavation, loading and machine movements. The waste has been on site for periods of time in excess of 3 months and so spontaneous combustion is of higher risk. During this time, a tractor and 3,000l bowser will be on site with personnel who are trained to use the equipment should they need to. Additionally, the bowser will remain on site 24/7 to allow FRS full use if the need arise. , there is a working plan to be submitted to NRW for the consideration of Trommelling the waste, in all instances we will plan to carry out turning of the stockpiles every 3 months until such time all waste has been processed / disposed of. We have written to welsh water to secure 300,000ltrs of tankered water in the event of a serious fire to guarantee a supply to assist FRS.

The excavation of the material will only occur at a rate of 1 load at a time ie we will load one trailer with 25 metric tonnes and only when this has been deemed safe and transportable only then will another trailer be loaded, it would be the intention to move as many in a day that the disposal site agrees too, if the trammel process is excepted then the waste would be machine fed into the trammel at a rate of est 10 tonnes per hour. This will reduce the risk of any combustion within the material to a minimal level.

No excavation of wastes will occur on site other than the one load that is to be removed from site for further disposal. As the stockpiles of material on site decrease, the separation distances will increase. The area to be excavated will be the areas of the stockpiles that are the facing walls of the separation gaps. Therefore, by using this approach, each load removed from site will essentially increase the separation distance to be more in line with that required under the new guidance document. Dust and odour monitoring will be continued when this process is being undertaken in line with the procedures of the IMS already agreed with NRW. When daily operations have been completed the security officers will be informed of where excavation has taken place and so will be able to focus their supervision if required.

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 SiteServ 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 within Hanger A will be stored

Plant/equipment failure	for longer than 3 months. Please refer to the section below for more information regarding self combustion. 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. A new maintenance programme has been initiated on site that aims to improve and maintain all infrastructure and plant. The programme covers daily, weekly and monthly checks of all relevant equipment etc on site enabling a lower fire risk through adequate maintenance.
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 will be 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.
Neighbouring site activities	There is a biomass boiler on site that provides heating and hot water to the site offices located on site. This boiler is located within a separate building and would not pose a significant risk to the waste reception/storage building.

There are various safeguards and common sense measures that have been 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 and entered into the daily site diary.
- All mobile plant is stored outside of the hangar and a distance of greater than 10m from the building.
- All plant and machinery is 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 currently stored on site do not present a significant risk from spontaneous combustion or self-heating (Hangar A materials) when stored for periods of time of less than 1 month. Nevertheless, it is recommended that monitoring of stacks and piles is undertaken on a daily bases. We have doubled our broker capacity so baled product will be moved daily, which will greatly assist in the control of stack sizes and indeed volume held on site. Baled wastes will be visually inspected daily to ensure stack sizes and separation distance is in line with guidance, stacked correctly and indeed any signs of combustion. If any sign of fire is a threat then the offending bale / bales will be removed outside onto the hard standing and if safe to do so we will use fire extinguishes to resolve, if deemed more than a fire extinguisher the FRS would be called via 999.

Regular visual monitoring and recording of the results will be put in place in addition to the effective management processes ensuring that recyclate does not stay on site for longer than 1 month; therefore significantly reducing the risk of spontaneous combustion (OPL15 appended to this report). This is an important factor in minimising this risk of stock held on site.

The stacking of baled wastes can also be done in such a way as to reduce the spread of a fire caused by spontaneous combustion. By avoiding 'chimneys' within the baled stacks and promoting the stacking in an interlacing pattern reduces the effect of the chimney within the stack. This is particularly important for plastic bales as it would significantly lower the burn temperature within the stack.

The following applicable materials on site will consist of and in singular streams:

- Cardboard products
- Paper products
- Plastic film products
- Plastic bottle products
- Ferrous and non ferrous cans
- Rigid plastics
- Glass bottles

In the unlikely situation where the facility reaches its maximum storage capacity (as detailed above); Recycling streams 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 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.

Security& Fire Detection/Suppression

The site is very secure as there is only one way in and out of the hangar. The roller shutter doors are always closed and the hangar is locked when daily operations close. 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 and senior managers have 24hr remote access to the CCTV cameras and they are checked regularly afterhours. A security team has been contracted and are based on the site outside of working hours providing a total security solution 7days a week. Throughout the operational area there are numerous fire extinguishers that can be easily accessed by trained operatives should they be required; these are all adequately signed. In addition to this, there are 2 fire hose reels located within the Hangar. The reels when extended can both reach the middle of the building and so can offer early fire fighting options if safe to do so. The facility also has 3 screaming alarms and 2 wind-up alarms to be used in the instance of a fire to raise the alarm and allow for the safe evacuation from the site. NB all staff have been informed that if a fire is larger in scale than that can be extinguished with a fire extinguisher then FRS are to be called via 999, the hose reels can provide additional support for use by FRS.

It will be necessary to continually monitor the effectiveness of the CCTV and onsite security and 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 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 security presence when the site is on shut down periods. There is therefore a presence on site 24 hours a day. Additionally, as mentioned above, a CCTV system is in operation and provides the ability to monitor the site for both unauthorised access and site conditions including visual monitoring of stack and pile conditions.

Given these measures, it is considered that an automatic detection system is not necessary at this time. The effectiveness of the security measures should be reviewed frequently and should any of these provisions be changed or removed the risk assessment should be immediately reviewed. It should be understood 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. Patrols by the security staff are undertaken every hour as well as monitoring of the CCTV system when they return from the monitoring checks, and added to the daily security log.

Site access

Access to the site is acceptable for FRS purposes. The same access road (off Llantwit Major Road) is used by large vehicles on a regular basis.

Access within the external areas has been arranged so that there are no 'dead end' situations. An internal road way (used frequently by articulated lorry and other large transport vehicles) surrounds the entire site ensuring that all areas are easily accessed. Internally within the hangar, there is a concern throughout the site management that due to changes required to combat noise complaints from a neighbouring business, a rear entrance/exit had to be blocked up. This was done upon suggestion by NRW to help alleviate the complaints and amenity issues created by the operations on site. This has resulted in the main entrance and exit doors being on the one side of the building only for vehicles; there is however an exit half way down on the northern wall to aid with escape and access if required.

In the event of a fire incident on site, in the early stages staff will be engaged in first aid Fire Fighting whilst awaiting the arrival of the FRS (if safe and possible to do so). The assembly point controller and fire marshals will undertake the following duties:

Assembly point controller

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

3rd Party collection vehicles – all deliveries / collections are pre booked, in all cases all collections / deliveries are weighed in at the inbound and weighed out on the outbound, at all times we know who is on site.

Contractors – All contractors are required to complete a permit to work, this is only signed off when work has been completed and contractor left site, in the event works are conducted over an amount of days then a permit is raised and closed daily and a new permit is issued each day.

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 IMS inspection sheets).	2	31/12/17.
Fire controller training, assembly point controller training, fire marshal training & logbook training to be given to nominated personnel.	1	TBC.
Daily patrolling by security staff and monitoring of the CCTV system for evidence of stack ignition to be logged in security inspection book.	1	Currently in place.
Undertake monthly testing of fire alarms, smoke detectors and extinguishers. Undertake 6-monthly testing of emergency lighting and 6-monthly fire drills.	2	Currently done on monthly maintenance.

Initiate a waste removal plan in agreement with NRW for the waste fines currently stored outside.	1	Currently in place.
Periodic inspection and testing of the electrical installations on the site should be undertaken by a competent electrical engineer. The recommendations for periods of testing in Guidance Note 3 Inspection and Testing issued by the IET indicate that a 3 monthly frequency of testing would appear appropriate.	1	Currently in place via Milay Electrical Ltd.
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	Currently in place.
A quarantine procedure should be introduced to adequately control any hot work activities that may be necessary on the site.	1	Permit to work currently in place.
Portable appliance testing (PAT) should be undertaken on all appropriate electrical equipment.	3	Currently in place via Milay Electrical Ltd.
The re-arrangement of stored material that is not in accordance with recognised guidance. Stacks and piles need to be provided with adequate separation between adjacent stacks to reduce the risk of fire spread. This needs to be a daily operational focus.	1	Focused daily.
Ensure that fire escapes are clear of all materials and machinery at all times.	1	In place via daily checks.
Ensure that all materials that remain from hangar B are removed from site in accordance with the requirements of the Regulation 36 Notice currently in place.	1	Currently in place.
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 matrix.
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 (see OPLs).
Explore the cost of concrete panelling to be erected as dividing walls between held stockpiles of material.	3	Quotes being obtained.
Undertake a review of waste storage to decide whether or not a thermal lance/temperature probe is required for monitoring purposes.	3	Ongoing.
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	
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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. This equates to approximately 360 000 liters of water that is potentially required per waste stockpile within site. In a worst case scenario, if all of the waste stockpiles across both Hangars A and B were to catch fire, then a total of 2,880,000l of water will be required to be used based on the above figures published within the guidance. This amount of water is clearly not appropriate to be stored on site as a permanent supply (an Olympic sized swimming pool measuring 50m x 25m x 2m hold 2,500,000l) for a 'just in case' scenario; therefore the water will be obtained from implementing the following measures.

There is a fire hydrant on site that FRS are familiar with, however it has been deemed by FRS that the water pressure is poor. The 3,000l water bowser on site is fitted with a hose connector that was used within the March 2017 fire. The bowser was also used to successfully re-circulate the fire water throughout the previous incident in agreement with the FRS.

The fire that occurred previously on site can be used as a direct comparison should another incident occur at SiteServ Recycling. As in March, water tankers (30,000l approximate capacity) will be used on a permanent turnaround. The FRS took control of this acquisition and site staff and directors were ordered to allow the FRS to take control of the situation. This was obviously agreed and the water resources were part of this control over the incident, that said Siteserv have approached Welsh Water / Dwy'r Cymru to set up a contingency for water tankers on a turnaround programme, we are awaiting confirmation of this, however it has been pointed out that FRS will take immediate priority when an emergency situation occurs and it may be deemed that to contingency with welsh water can be offered.

Further means of providing water for firefighting may include the following that are being explored at present by SiteServ Recycling Ltd:

- Providing a fixed holding tank on site
- Providing a fixed main to the site

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.

Dead end roads should be avoided to reduce the possibility of rapid fire spread or a change in the wind direction trapping vehicles. Wherever possible, the site should operate a 'one-way' system of traffic control.

Appendix A

Figure 1—Illustration of the buildings and surrounding area.

Figure 2—Layout of hangar A.

Figure 3—Layout of the hangar B footprint and fines area.

Appendix B

OPL 2 – Waste Acceptance Procedure

OPL 3 – Waste Handling Procedure

OPL 5 – Emergency & Environmental Procedure

OPL 15 – Stock Rotation Procedure

Appendix C

Weekly Fire Diary

Daily Security Log

Letters to Welsh Water

Current site photographs

Current layout of Hangar A









