

The following comments are provided by 4W Environmental Limited in response to questions/concerns raised regarding the proposed combined FPP for the Biomass and MRF under permit reference EPR/CP3698VW. The FPP has been updated, however the FPP remains a Draft document.

A response to the questions raised by the Environment Agency permitting team can be found highlighted below in blue text.

Schedule

Fire Prevention Plan (FPP).

1. (a) Provide details on how gas cylinders, aerosols, combustible liquids and chemicals are used and stored on site.

After reviewing it has been highlighted that the site does store diesel in the generator and associated bunded fuel tank. This is used to power the Biomass building, excluding the lights and alarm systems which are connected to the mains supply. The FPP section 1.2.3 and 1.2.4 has been updated to include the details of this and the location is shown on several drawings including TGE/09/A. The generator has an integral bund, and the diesel storage tank is double skinned, with the outer skin forming the bund or secondary containment. The storage tank and generator are protected from accidental damage (contact with mobile plant and road vehicles) through the provision of a wooden panel fence with concrete posts and gravel boards and with an Armco barrier attached to metal posts which is offset from the wooden panel fence.

Fuel for mobile plant and equipment is delivered either through a mobile bowser or via staff going to the onsite garage.

Gas cylinders are stored within a gas cage as shown on Drawing Number TGE/04/A and in accordance with Sections 1.2.5 and 9.3.3 of the FPP.

(b) Provide a revised site plan which shows the locations of gas cylinders, aerosols, combustible liquids and chemicals.

See Drawing Numbers TGE/04/A and TGE/09/A

2. Provide details of the content and frequency of the regular exercises held on site to test how well the fire prevention plan operates and to ensure that staff understand all its requirements.

The FPP has been updated, please see Section 2.2.2 and 2.2.3

3. Provide details on the content of a documented maintenance and inspection programme for static and mobile plant and equipment (such as - how records are kept and what actions are taken in the event of problems being discovered). Your response must demonstrate that your maintenance and inspection procedures will minimise the risk of fire from this site equipment.

The FPP has been updated, please see Section 4.2

4. (a) Confirm that electricians on site are fully certified by a qualified electrician or provide details of how any alternative system operated on site achieves the same level of electrical protection.

The FPP has been updated, please see Section 4.4 and Appendix 4 and Appendix 5 of the FPP.

(b) Submit a copy of the written procedures in place that set out how regular maintenance of electrical systems and equipment is carried out.

The FPP has been updated, please see Section 4.5.

Section 7.3 of our guidance states "Electricians on site must be fully certified by a qualified electrician and you must have written procedures in place that set out the regular maintenance." Section 1.0 of your plan states that "Electrical testing on site is carried out either, by the manufacturer if a repair is carried out under warranty/ R&M contract or by T&G Electrical qualified electrician.... All fixed and hard wire electrical circuits, including the biomass building, are tested in accordance with the Electricity at Work Regulations 1989. This work is currently undertaken by TG Electrical."

You must provide the written procedures that define how this work is undertaken and how it is ensured a qualified electrician carries it out. 4

5. (a) Provide a description of the safe working practices, such as a permit to work system, for hot works (such as welding and cutting).

Section 4.7 of the FPP has been updated

The exact details of the permit to work system are currently being agreed between the Health & safety Manager for TG Group of which TG Environmental is a part and the insurance company. Once agreed they will be incorporated into the FPP. A draft version is currently available and has been included for now. The basis for the permit to work system is that an additional level of control is required to manage the risks from a higher risk activity and will be valid for a maximum period of 1 working day. The process will involve a formal written procedure which will require agreement by nominated staff and will require agreement of the works to be undertaken including;

- description of the works
- location of the works
- contact details
- site specific hazards
- control measures
- permitted person(s) to enter the work area

For hot works the following safety requirements are mandatory;

- All areas to be checked and combustibles removed or protected before commencement of work
- All areas to be screened, protected, roped off as necessary and warnings signs displayed
- All systems associated with the work to be isolated, inclusive of smoke alarms
- Assistant to standby with fire extinguisher suitable for task. (Competent in use)
- Building Manager notified
- Area to be checked/inspected for combustion 1 Hour after completion of work

Additional guidance for hot works include;

- Sprinklers and hose streams in service/operable. (Where applicable)

- Hot Work Equipment in good condition (e.g., power source, leads, torches, etc. must be inspected prior to use to ensure they are fit for purpose)
- Multi-purpose fire extinguishers (2) readily available.
- Operative must be competent to use the fire extinguisher
- Ensure the fire alarm system is protected / isolated as appropriate

Additional requirements for the work area include;

- Area to be checked for combustible materials which must be removed before work can commence, this can include paper, cardboard, dust, lint, debris, flammable liquids and oily deposits. Floors swept clean.
- Combustible flooring and other combustible surfaces must be protected with heat protection mats, or other suitable materials.
- All wall and floor openings covered.
- Walkways protected beneath hot work.
- Explosive atmosphere in area eliminated.
- Flammable liquids / gas cylinders removed from work area or stored appropriately
- Area to be screened, protected and safety signs displayed

A fire watch must be provided during and for a period of 1 hour after work, including any coffee or lunch breaks, remember that adjacent surfaces need to be checked. (Walls, ceiling voids etc.)

The requirements will be agreed before any works are carried out and will be signed off once the task has been completed in accordance with the permit and any RAMS documentation (supplied prior to undertaking the task).

Section 7.5 of our guidance states "You must ensure staff and contractors follow safe working practices, such as a permit to work system, when carrying out hot works such as welding and cutting. You should carry out a fire watch for a suitable period after hot works have ended, particularly at the end of a working day." Your plan does not reference the permit to work system or demonstrate how such safe working practices operate on site to minimise fire risks.

(b) Demonstrate that a system of cleaning and washing of equipment at the end of a day is satisfactory in replacing a fire watch in delivering equivalent protection against fire particularly for equipment previously subject to hot works.

Section 4.9.3 of the FPP has been updated.

Cleaning log for the shredder, screener, and all metal separators. Staff stop all operations on site at least 30 minutes before the end of the day (16.00 stop, 17.00 finish). Vehicles are parked up in the designated parking areas as shown on Drawing Number TGE/10/A. A requirement of the insurance company is that there needs to be a separation distance of 10 metres between mobile plant and buildings and 10 metres between mobile plant and mobile plant. It is planned to mark out parking bays using demarcation posts.

A mini trial was carried out using a handheld infra-red thermometer to check the temperature of engines whilst in use/ prior to washing off, after washing off and after a further rest period of 40 minutes. A note was made of the length of time taken to wash off the equipment. The objective of the trial was to see how quickly high-risk plant cools down and to use the data to determine when the plant would be safe to leave. The 50 °c figure used is based upon 'Fire prevention plans: case

study examples of alternative measures, updated 11th January 2021'. These results are summarised in the table below;

Item of plant	Initial Temperature (°C)	Length of time taken for wash off	Temperature after wash off (°C)	Temperature after 55 minutes (40 minutes after wash off) (°C)
Shredder	70	15	30	22
Screener	60-63	15	50	37-39
All metal separator	70-73	15	50-53	42-44

The procedure for fire watch including equipment that has previously been subject to hot works is currently being agreed between the H&S Manager for TG Group and the insurance company. The current draft procedure has been written in to the FPP.

(c) Demonstrate that persons carrying out cleaning and washing of equipment at the end of a day are trained to be aware of and detect possible signs of fire that would be detected during a formal fire watch.

This will be achieved through training in the FPP including Sections 5.7.2, 5.7.3 and 9.2. Additionally, the operator is arranging fire safety training with VP Fire Safety for key people. The training will be a full day and will involve ½ day classroom-based training followed by ½ day practical session on how to tackle a fire and using firefighting equipment including the hose reels on the proposed ring main and use of poly booms. Key people have been defined as Managers, Supervisors, and the following key machine operators (high risk plant) – grab and shovel driver for the MRF, tele-handler, shredder, screener, and all metal separator operatives from the Biomass facility.

(d) Include any check list that they must complete to demonstrate this cleaning and washing has been completed and that no risks of fire remain.

See Section 4.9.3 and Appendix 4 of the FPP. A cleaning log is in place for the shredder, screener, and all metal separators, including final temperature checks.

Your plan does note that instead of a fire watch at the end of the working day, mobile plant and equipment is cleaned and washed at the end of the day. It is claimed that, because this removes the linkages in the fuel and source of ignition from the fire triangle, it is not deemed necessary to carry out a formal fire watch at the end of the day. It is not evident in your plan that all equipment that has been subject to hot works would be cleaned or washed at the end of the day (it might remain too hot to clean) and therefore it is not apparent that the alternative system of cleaning/washing equipment satisfactorily replaces a formal fire watch at the end of the day following hot work.

6. (a) Demonstrate how the FPP addresses fully the risk of fire in the biomass drying building and burner housing.

The Biomass building was designed and approved by Building Regulations and designed into 3 separate fire zones, separated by a fire check walls, to slow/ reduce the transmission of fire between zones. The burner housing section has a water fire suppression unit fitted to each burner and spray system to the feed augers to prevent flames from travelling back. As part of Building Regulations process the building was inspected and approved by the Fire Brigade. The building design and operation has been approved by the insurers who look at fire risk.

Wood chip remains in the drying bays for a period of 3 days (2 days active drying and 1 day cooling), wood stored within the Biomass building is stored for less than 3 months and in accordance with the maximum stockpile sizes defined in Table 11 of the FPP.

Wood chip is processed to fulfil orders and a small quantity of stock is held on site.

Processing of wood/ biomass material takes place outside only. The Biomass building drying floor area is used for storage of a small amount of stock and drying only of wood/ biomass only.

See FPP Section 10.1.1 and 10.1.2 for details of fire detection.

(b) In relation to the operation of the biomass plant:

(i) How much waste is stored within the biomass building?

The FPP has been updated, please see Table 11 of the FPP and Drawing Number TGE/28/A

(ii) What distance is between stored wood in the biomass building and sources of heat such as the burners and drying floors?

The FPP has been updated, please see Drawing Number TGE/28/A

(iii) How long does wood remain within the biomass plant during drying?

The FPP has been updated, please see section 3.2.28 (vii) to (x) of FPP – In summary 3 days total with 2 days drying and 1 day cooling.

(iv) What temperature monitoring is carried out on wood within the biomass building?

Currently no temperature monitoring, only moisture. The operator believes that as the wood chip is turned around quickly (normally within 4 weeks - shred to burn/ removal offsite) and the quick drying times (3 days) within the biomass bays, then the risk of temperature increase and autoignition associated with stockpiling material is minimal. The 3-month maximum storage time represents a worst-case scenario rather than routine operations.

(v) What trigger levels are used to indicate an unacceptable rise in temperature of wood within the biomass building?

None at present, emphasis is on moisture content and quick turnaround of wood chip. Wet chip has a moisture content of between 35 to 42% and would therefore not readily ignite. Outgoing material has a moisture content of 20 to 28%. Currently no routine temperature monitoring is carried out, only moisture. The operator believes that as the wood chip is turned around quickly (normally within 2 weeks - shred to burn) and the quick drying times (3 days) within the biomass bays, then the risk of temperature increase and autoignition associated with stockpiling material is minimal.

(vi) What actions are taken should wood exceed trigger temperatures?

As routine monitoring is not undertaken then there are no trigger temperatures.

There is limited information provided in your FPP of the management and control of fire risks within the biomass drying building and the boiler housing area. As these operations are the subject of the current permit variation application, you must demonstrate that their operation and their fire risks have been fully considered within your revised and consolidated FPP.

7. (a) Provide justification for the location of the designated smoking area behind the MRF building. How do you prevent the smoking area from being an ignition source?

The FPP has been updated, please see Section 4.6 of the FPP.

(b) Confirm how frequently this area is checked or cleaned and against what requirements.

The FPP has been updated, please see Section 4.6 of the FPP. Daily checks are carried out and a visual assessment is used to determine cleanliness. This is down to the Supervisor to determine.

(c) Demonstrate that this area can be accessed quickly should a fire start there?

This area can be always accessed by using the separation distances highlighted in Drawing Number TGE/09/A and overnight parking of biomass mobile plant in Drawing Number TGE/10/A. Drawing Number TGE/09/A shows that stockpiles are separated by a distance of 6 metres and that there is a 10-metre standoff from the MRF building, as per the insurance company requirements. The width of a standard fire tender is approximately 2.3 metres and so there is enough room between stockpiles and between the MRF building and stockpiles to allow access.

Ellesmere Fire Station is located 2.3 miles from the site.

During operations, the fire brigade has been consulted and advice sought and implemented. The fire brigade has attended site and are aware of the operations. As part of these consultations the fire brigade have a swipe access card that allows them to enter the site if the site is not manned.

8. (a) Provide detail on how fire watch inspection checks are recorded including:

a. What does the fire watch inspection check consist of? Provide the procedure/summary of the procedure.

The fire watch procedure is currently being agreed between the H&S Manager for the TG Group and Insurance company. A draft procedure is presented. A fire watch must be provided during and for a period of 1 hour after work, including any coffee or lunch breaks, remember that adjacent surfaces need to be checked. (Walls, ceiling voids etc.). The fire watch is undertaken by operatives who are competent to use the fire extinguisher (Trained by VP Fire Safety) and will have access to 2 x multi-purpose fire extinguishers.

b. What is the frequency of fire watch inspections?

The fire watch procedure is after equipment is used and washed off (normally towards the end of the day) and after hot works have been carried out.

c. What staff role is responsible for this process?

Overall responsibility will be with the Divisional Manager. Key people have been defined as Managers, Supervisors, and the following key machine operators (high risk plant) – grab and shovel

driver for the MRF, tele-handler, shredder, screener, and all metal separator operatives from the Biomass facility. These staff members will be trained by VP Fire Safety. The training will be a full day and will involve ½ day classroom-based training followed by ½ day practical session on how to tackle a fire and using firefighting equipment including the hose reels on the proposed ring main and use of poly booms. As they will be trained to use a fire extinguisher then they will also be able to provide a fire watch.

(b) Describe how non-conformances and actions raised in fire watch inspections are reported.

Any non-conformances noted during a fire watch will be reported to the Supervisor (if not a Supervisor) and the Waste & Recycling Manger. A decision and investigation will be made about additional control measures required such as extending the length of the fire watch period or active cooling with water. This will be dependant entirely upon the situation at the time.

Section 1.0 (Hot exhausts) of your FPP notes that “visual observations take place throughout the day by staff operating the equipment, staff from the MRF passing, customer vehicles entering and leaving the MRF, CCTV”. This is not a formal procedure for fire watches as it relies on persons passing and customers entering and leaving your site raising alarm. Your formal system of fire watches must not rely on actions and persons over which you have no official control.

9. (a) Describe how mobile industrial heaters would be used on site to ensure their operation does not increase the risk of fire.

The FPP has been updated, please see section 4.8 of the FPP. No industrial heaters are permitted on site, this is an insurance company requirement.

(b) Demonstrate how the biomass drying building used to dry waste wood is managed to ensure that its operation does not increase the risk of fire on site.

This is through implementation of the FPP, Sections 3.2 and 4.2 to cover the waste acceptance and processing and plant/ equipment/ building maintenance schedules. Training is also carried out for staff based upon that provided by IEC who supplied the boilers. Wood is dried according to demand. Moisture checks carried out daily. If there was a sudden reduction in moisture this would occur at the same time as an increase in temperature.

Section 1.0 (Industrial heaters) of your FPP also states that “the only ‘industrial heating’ is from the purposefully built drying bays, within the biomass building. There is little evidence that the biomass drying building used for drying waste woods has been included within the scope of the fire prevention plan and insufficient information on the management of that plant to reduce its fire risk.

10. (a) Demonstrate how fuels and combustible liquids are prevented from leaking from site plant and equipment.

Section 4.2 of the FPP has been updated and includes references to the maintenance and inspection regimes including checking for leaks and condition of hoses and defect reporting procedure.

(b) Provide a copy of the procedure for clearance of spillages and losses of containment on site.

Attached to this response is a copy of the Spillage Procedure toolbox talk used to train staff.

11. Confirm how regularly the site is inspected and cleaned to prevent the build-up of loose combustible waste, dust, and fluff, particularly in the MRF and biomass drying buildings.

Section 4.2 of the FPP has been updated, reference is given to the maintenance schedules in Appendix 4. The MRF is checked daily and cleaned on weekly basis. For the Biomass building the site inspected daily with cleaning undertaken weekly and monthly depending upon the location.

Section 7.11 of our guidance states "Your plan must state how regularly you'll inspect and clean the site to prevent the build-up of loose combustible waste, dust and fluff." There is no reference in your FPP to inspection and cleaning to prevent the build-up of these combustible materials.

12. (a) Submit a copy of the written procedures for waste acceptance checks on site to prevent incoming hot loads being mixed with wastes stored on site.

The FPP has been updated, please see Sections 3.2.17, 3.2.22, 3.3.18, 3.3.19, 3.4.17, 3.4.19 and 3.4.21.

(b) Provide a description of your procedures for quarantining and rejecting wastes which could have elevated temperatures or contain key ignition sources.

The FPP has been updated, please see Section 5.7.2

(c) Provide a description of how you would identify how a delivery of waste could contain wastes with elevated temperatures.

The FPP has been updated, please see Section 5.7.2

13. (a) Describe how the procedures on site ensure a good stock rotation for all stored materials.

The FPP has been updated, please see Section 5.4. Currently biomass for the biomass building is turned around quickly (normally within 2 weeks - shred to burn). Low volumes of waste stockpiles on site will mean that the waste has a good stock rotation with stockpiles not building up and waste moved on through the process.

(b) Demonstrate how the procedures on site ensure the "first in, first out" principle is followed.

The FPP has been updated, please see Section 5.4. Currently biomass for the biomass building is turned around quickly (normally within 4 weeks - shred to burn).

14. (a) Demonstrate how waste handling and storage ensures that external heating during hot weather is not a potential source of fire.

The FPP has been updated, please see Section 5.9

(b) If required, confirm that waste will be shaded from direct sunlight.

The FPP has been updated, please see Section 5.9

(c) If required, confirm any other techniques that will be used on site to enable heat generated within a waste pile to be released.

Biomass within the drying bays is left for 24 hours after active drying to allow for cooling prior to moving. The quick turnaround times and processing of wood waste means that stockpiles do not need to be turned to release heat. Processed material has been through the all metal separator which removes metal that has the potential to oxidise in an exothermic reaction and reduce the metal fines content that is more likely to self-combust.

15. Provide a description which demonstrates that fire walls and bays are designed and constructed to meet ALL the requirements of Section 11.2 of our guidance including that:

a. They resist fire (both radiative heat and flaming);

See Section 8.3 of the FPP. The building design and construction has been in accordance with Building Regulations, as part of this the building was inspected and approved by the Fire Brigade, operation has been approved by the insurers who look at fire risk.

b. They have a fire resistance period of at least 120 minutes to allow waste to be isolated;

See Section 8.3 of the FPP. The building design and construction has been in accordance with Building Regulations, as part of this the building was inspected and approved by the Fire Brigade, operation has been approved by the insurers who look at fire risk.

c. Joints will be adequately sealed;

The building design and construction has been in accordance with Building Regulations, as part of this the building was inspected and approved by the Fire Brigade, operation has been approved by the insurers who look at fire risk.

d. The calculation of flame height and radiation is considered in preventing the spread of fire between piles;

See Section 8.3 of the FPP. The building design and construction has been in accordance with Building Regulations, as part of this the building was inspected and approved by the Fire Brigade, operation has been approved by the insurers who look at fire risk.

e. Representative checks are taken on the temperatures of all wastes within a bay;

Currently no temperature monitoring, only moisture. The operator believes that as the wood chip is turned around quickly (normally within 2 weeks - shred to burn) and the quick drying times (3 days) within the biomass bays, then the risk of temperature increase associated with stockpiling material is minimal.

f. Wastes can be quickly and effectively removed from bays and isolated during an incident;

The FPP has been updated, please see Section 9.2

g. Brands or lighted materials can be prevented from moving outside of bays and potentially igniting other materials.

The FPP has been updated, please see Section 8.

Submit the specification of the fire walls proposed to demonstrate that construction of the walls offer a thermal barrier.

Fire walls are already in place and not proposed.

The building design and construction has been in accordance with Building Regulations, as part of this the building was inspected and approved by the Fire Brigade, operation has been approved by the insurers who look at fire risk.

16. (a) Confirm that, for the automated fire detection system within the MRF building (heat sensors linked to an off-site alarm company), its design, installation and maintenance are covered by an appropriate UKAS-accredited third-party certification scheme.

The fire alarm system design and installation formed part of the original building specification and has been approved by Building Control and the insurance company. The maintenance of the system will be through RMW Electrical Services Ltd (RMW) who currently look after the fire detection system in the Biomass building. RMW who hold the following accreditations;

- Member of the Marches Health, Safety, and Fire Group
- Registered with NIC EIC No. 017012000
- Registered with Constructionline No. 19279
- Accredited member of CHAS
- British Approvals for Fire Equipment (BAFE) accredited
- Safe Contractor registration No. BR8538

RMW are an NIC EIC accredited company which UKAS accredited status comes as part of that, and they issue NIC EIC electrical certificate. RMW are also a BAFE accredited company for the design, installation, commission, and maintenance of fire detection systems.

(b) Demonstrate that automated fire detection systems are in place within the biomass building and all other buildings within the permitted area where there is a risk of fire and confirm their design, installation and maintenance are covered by an appropriate UKAS-accredited third-party certification scheme.

The FPP has been updated, please see Appendix 5 and Sections 4.4, 4.5 and 10.1 of the FPP

RMW are an NIC EIC accredited company which UKAS accredited status comes as part of that, and they issue NIC EIC electrical certificate. RMW are also a BAFE accredited company for the design, installation, commission, and maintenance of fire detection systems.

A review of the existing system in the MRF has been undertaken by RMW and they are currently providing a proposal to update the fire alarm system in line with those of the Biomass building.

(c) If buildings where there is a risk of fire (such as the biomass building) have not automated fire detection systems installed, provide details of the alternative fire detection methods that are provided for each building and demonstrate why these chosen methods are effective for fire detection considering feasibility, out of hours operations, responsibilities and times taken to respond.

RMW provide fire alarm system maintenance for the Biomass building. A review of the existing system in the MRF has been undertaken by RMW and they are currently providing a proposal to update the fire alarm system in line with those of the Biomass building, to call the fire brigade and East Midlands Monitoring Service upon activation.

Section 13 of our guidance states that “You must have procedures in place to detect a fire in its early stages so you can reduce its impact” and that, where automated systems are used, their design, installation and maintenance of automated detection systems must be covered by an appropriate UKAS-accredited third-party certification scheme.

Section 5.0 (Detecting fires) of your FPP notes there are heat sensors inside the MRF building linked to an off-site alarm company which are tested weekly. You must demonstrate that the design, installation and maintenance of all automated fire detection systems meet the requirement for third party certification.

There is no reference within your FPP that there are automated fire detection systems within the biomass building or, in their absence, there are effective alternative measures for fire detection.

The revised FPP submitted with Application, EPR/CP3698VW/V004, is a consolidated FPP across the entire permitted site including MRF, waste transfer station and biomass plant. You must ensure it adequately addresses the detection of fire in all areas within the permitted boundary.

17. (a) Demonstrate how fire within all buildings within the permitted area in which waste is stored (including MRF and biomass buildings) would be suppressed in order to meet the requirement in our guidance to extinguish a fire within four hours.

See Section 12.1.12 to 12.1.17 and Section 13 of the FPP.

(b) Confirm in which permitted areas there is the dust suppression system that could be used in an event of fire emergency;

Whilst it is acknowledged that the dust suppression systems in place for the outdoor biomass area, and mist air system for MRF would provide some benefit (depending on fire size), in the event of a fire it is not proposed to rely on these as a replacement for a firefighting system. Instead, the proposal highlighted in 12.1.6 and Drawing Number TGE/29/A will be implemented.

i. Demonstrate how the dust suppression system could be operated to suppress fire;

Whilst it is acknowledged that the dust suppression systems in place for the outdoor biomass area, and mist air system for MRF would provide some benefit (depending on fire size), in the event of a fire it is not proposed to rely on these as a replacement for a firefighting system. Instead, the proposal highlighted in 12.1.6 and Drawing Number TGE/29/A will be implemented.

ii. Provide a risk assessment that demonstrates the dust suppression system used for fire emergency would be adequate and proportionate to suppress fires. 8

Whilst it is acknowledged that the dust suppression systems in place for the outdoor biomass area, and mist air system for MRF would provide some benefit (depending on fire size), in the event of a fire it is not proposed to rely on these as a replacement for a firefighting system. Instead, the proposal highlighted in 12.1.6 and Drawing Number TGE/29/A will be implemented.

(c) Demonstrate, in the absence of automated systems, how the fire suppression systems to be implemented across the permitted area are proportionate to the nature and scale of waste management activities you carry out and their associated risks.

The Biomass building has an integral fire suppression system in place fitted to each boiler and an anti-flame travel system to prevent fire from entering the augers and walking floors. This system is

activated when the fire detection system is activated. The Biomass building has been designed into 3 separate fire zones separated by fire check walls, as shown in Drawing Number TGE/28/A. As the boiler room is considered the highest risk zone then this area has been fitted with a fire detection and suppression system. The remaining fire zones have fire detection in place and in the event of a fire will automatically call out the fire brigade and East Midlands Monitoring Service. The nearest fire station is 2.3 miles away and there is easy access to 50 000litres (in place due to consultation with fire brigade) of water immediately. The ring main will allow additional fire fighting equipment to be connected to the two hydrants, as deemed necessary. Mobile plant used in the biomass operation are parked up away from the building (minimum distance of 10 meters to meet Insurance company requirements), implementation of daily checks and biomass maintenance schedule, including cleaning schedule reduces the risk of mobile and static plant being a source of ignition. The site is inspected in person by a security guard 3 times per night and monitored by CCTV 24 hours per day. Therefore, the call out procedure and availability of water will mean that a fire can be extinguished with 4 hours.

The MRF does not have an automated fire suppression system in place. The risk of fire within the MRF is reduced due to the building being empty of residual waste and waste for processing over the weekend/ bank holidays. Mobile plant used in the MRF are parked up away from the building (minimum distance of 10 meters to meet Insurance company requirements), implementation of daily checks and MRF maintenance schedule, including weekly clean of fixed plant and equipment reduces the risk of mobile and static plant as a source of ignition. The site is inspected in person by a security guard 3 times per night and monitored by CCTV 24 hours per day. The fire detection system in the A review of the existing system in the MRF has been undertaken by RMW and they are currently providing a proposal to update the fire alarm system in line with those of the Biomass building to contact the fire brigade and EMMS when activated. The call out procedure and availability of water will mean that a fire can be extinguished with 4 hours.

Section 14 of our guidance states that, in relation to suppression of fires, if you store waste in a building you must install a fire suppression system which must be able to extinguish a fire within four hours. It further notes that the design, installation and maintenance of automated detection systems must be covered by an appropriate UKAS-accredited third-party certification scheme.

Section 6 (Suppressing fires) of your FPP confirms there is no formal fixed fire suppression system in place although there is a dust suppression system which could be used in an emergency. The location(s) of this dust suppression system are not confirmed (which buildings) and neither is there any evidence provided on how this dust suppression system would be used to suppress fires nor whether its design is adequate for this purpose.

There is insufficient information given in the FPP on how fire within the biomass building would be suppressed and the operation of any fire suppression system within the biomass plant despite the high risk of fire within that building.

18. (a) Confirm the capacity and construction of the surface water catchment tank (interceptor), settlement pit and surface water lagoon that are designated for containment of fire water run-off.

After review, the containment of firewater will not be using the surface water catchment tank and surface water lagoon. Section 14 of the FPP has been updated to include the use of poly booms which will now provide the containment required.

(b) Explain how the potential locations to collect and manage fire water on site have sufficient capacity to contain all fire water that might be generated.

See Section 14 of the FPP.

(c) Confirm how fire water generated from fighting a fire in the biomass building would be contained and managed on site.

See Section 14 of the FPP

(d) Demonstrate how you ensure potentially contaminated fire water entering the surface water lagoon on site is managed to prevent its discharge from site.

After review, the surface water lagoon is not proposed to be used as a means of containing firewater. See Section 14 of the FPP.

Section 9.0 (Managing firewater) of your FPP notes that “early intervention would minimise the generation of fire waters”. It also states that surface water from the MRF is channelled to an oil interceptor prior to a settlement pit before being pumped to the surface water lagoon. There is insufficient information on the construction, capacities and operation of these facilities to confirm they would be appropriate for the quantities of fire water that might be generated from a fire on site.

This Section of the FPP appears to be specific to the MRF operation. Further information is required on the management of fire water generated from a fire within the biomass plant.

The surface water catchment tank (interceptor) can be manually opened to allow surface water to enter surface water lagoon on site. If this was to occur and fire water entered the surface water lagoon, it would pollute the lagoon and require the removal of a potentially very large volume of liquid. If road tankers were to be used to remove this liquid, the expense would be significant. You must demonstrate how fire water run-off can be contained on site or demonstrate how it can be realistically removed from site.