Cyfoeth Naturiol Cymru
Natural Resources Wales

Fire prevention and mitigation plan

Site plan

- Access points around the site perimeter to assist firefighting – still not shown how FRS will gain access to these areas.
- The location of plant, protective clothing and pollution control equipment and materials – plant has not been identified on the map. A mobile bailer will be brought in, but it is not shown where it will be located.
- The location of drain covers and any pollution control features such as drain closure valves and fire water containment systems – there is no information as to how any fire water will be prevented from exiting the site or entering the area of hardstanding. The sump cannot, based on our calculation contain all the water required to put out a fire in the largest.

Baled waste storage

It is stated that waste will be baled and stored on site, but the information required in respect of baled wastes as outlined in the guidance has not been addressed in the FPMP – this is still the case.

It is not outlined how the risk of fire is occurring in the bales is being reduced. You have stated that infrared/thermal imagery cameras maybe used but have not actually specified what the site will be doing. Merely relying on a quick turnaround time is not suitable, you should consider the possibility of this not being achievable.

The following have not been addressed:

- sampling and testing protocol, you will use to make sure you assess a representative number of bales (minimum 10%) during monitoring
- that you get representative temperature readings from the centre of the bales; and from bales within the centre of each stack pile
- that you turn the bales to make sure the waste stays cold
- If baled waste may exceed limits in Table 1, have additional measures, such as breaking and rewrapping bales been taken? Have additional fire risks that may be introduced from such measures been addressed e.g. sudden introduction of oxygen
- What is the storage configuration of the bales? Has any fire risk from the configuration been addressed?

Layout of waste stacks on your site

- Location of potential ignition sources on your site – this should include any plant and equipment used on site. The location of the mobile bailer has not been identified.

- Location of occupied buildings and high asset value equipment and plant. The location of the mobile bailer has not been identified.
- Escape and evacuation routes around your site – these must not be compromised by stack layout. There is a directional arrow marking out a route on the site plan but there is no definition as to what this route is.
- Operational practicalities such as movement of vehicles and designated routes- as above the route that has been indicated on the map has not been defined.

Seasonality and waste stack management

- Technical assessment that shows there is confidence in the activity being viable in foreseeable market conditions – this should include the suitability of materials, the resilience of the supply chain and end user outlets. Suitable information regarding this has not been provided. In one section it is stated that there are no contracts in place and in another its states there is
- More detail is required on stock management, how the first in first out principle will be achieved and how it is ensured that waste is stored no longer than outlined in Table 1 of the guidance.

Monitoring and turning of stacks

- Staff must be trained to detect and manage hotspots – the FPMP outlines that staff will look out for hotspot but there is no information as to how they will identify the hotspots and then manage them.
- Monitoring of piles for changes of temperature and moisture content -relying on quick turnaround time. What if this can't be achieved? What if there are adverse weather conditions e.g. extreme sun/temperatures?
- If monitoring is to take place information is required as to what equipment will be used to do the monitoring, what indicators will be used in relation to temperature and moisture content and what actions will be taken as a result of these indicators. Some information has been included as to what equipment may be used but these are suggestion not what will be used. We need to know what will be being undertaken and used on site.

Fire detection and fire suppression systems

Ffôn/Tel 0300 065 3516
Ffacs/Fax 0300 065 3001
Ebost/Email Hannah.loughlin@cyfoethnaturiolcymru.gov.uk
Hannah.loughlin@naturalresourceswales.gov.uk
Gwasanaeth Trwyddedu (Caerdydd), Cyfoeth Naturiol Cymru, Tŷ Cambria, 29 Heol Casnewydd, Caerdydd. CF24 0TP
Permitting Service (Cardiff), Natural Resources Wales, Cambria House, 29 Newport Road, Cardiff. CF24 0TP
Gwefan/Website www.cyfoethnaturiolcymru.gov.uk Croesewir gohebiaeth yn y Gymraeg a'r Saesneg
www.naturalresourceswales.gov.uk Correspondence welcomed in Welsh and English

Deciding what type of detection and suppression system to use on site, the following should be considered when deciding what systems to be used and if discounted information should be provided to show how this decision was made and why the systems are unsuitable for the site.

- The fire and rescue service may not be able to enter the building during a fire
- A suppression system may not extinguish a fire, although it may prevent a fire spreading and then allow the first to be fought effectively.
- The water supply to a fire system is reliable and adequate at all times
- Smoke and heat detectors including temperature probes
- Spark, infrared and ultraviolet detection
- Sprinklers
- Manual open deluge systems
- Deluge/water spray systems – have outlined using IBCs as deluge bombs on small fires – including those involving lithium batteries. Lithium is highly reactive with water and a fire involving these should be extinguished using other means
- Water monitors/cannons/curtains

No specific detection systems have been outlined other than the already existing CCTV system.

Firefighting strategy

- Use of portable water carriers/bowsers – this has not been considered. If it has been considered and deemed unsuitable for this site this should be outlined – see comments above with regards to the IBC.
- Adequately trained staff available – staff training has not been outlined and the availability of the trained staff has not been addressed
- Finances available for additional resources – no information provided on this.

Water supplies

- You must demonstrate that there is a sufficient supply of water to manage a worst-case scenario incident – the FPMP states that 2000 litres of water are required to put out a fire in the largest stack on site. Based on the limited

Ffôn/Tel 0300 065 3516
Ffacs/Fax 0300 065 3001
Ebost/Email Hannah.loughlin@cyfoethnaturiolcymru.gov.uk
Hannah.loughlin@naturalresourceswales.gov.uk
Gwasanaeth Trwyddedu (Caerdydd), Cyfoeth Naturiol Cymru, Tŷ Cambria, 29 Heol Casnewydd, Caerdydd. CF24 0TP
Permitting Service (Cardiff), Natural Resources Wales, Cambria House, 29 Newport Road, Cardiff. CF24 0TP
Gwefan/Website www.cyfoethnaturiolcymru.gov.uk Croesewir gohebiaeth yn y Gymraeg a'r Saesneg
www.naturalresourceswales.gov.uk Correspondence welcomed in Welsh and English

stack information given our calculations show that 360,000 litres are required. Please confirm the size of the largest stack on site and the volume of water required to put this out. This information has still not been provided. The flow rate of the hydrants has been provided, but the amount of water needed to extinguish a fire in the largest stack has not been calculated and we need to be confident that the site has enough water available to put out a fire in the largest stack.

- Alternative water supplies – water bombs are listed but this is only 4000 litres. Other alternative sources should be considered in the event that the hydrants and the IBCs are unable to provide sufficient water.

Managing fire water run-off

- Fire water run-off – this is going to sump however, the volume of water the sump can contain is far less than the amount required to put out a fire in the largest stack. More information is required as to how this run-off will be managed
- No secondary or tertiary containment has been considered – information has been provided in relation to a contractor who could provide booms if needed but no other form of additional containment has been outlined.

Information has not been provided to show that the operator can contain all the fire water sufficiently. The fire and rescue services have commented that during the previous incident on site the fire water was not contained and there was some run off from the site. This needs to be considered and addressed.

Quarantine area

- Based on the stack sizes given the largest stack is 288m3 and would need to hold 144m3. It is stated that the quarantine area can hold 135m3 therefore it cannot hold 50% of the largest stack.

During and after an incident

- Diverting incoming wastes to alternative sites during a fire – not considered
- Having a plan for how you will notify those who may be affected by a fire – FPMP states that the Pembrokeshire County Council Emergency planning department would be directly contacted by the FRS during an incident. Do you have written confirmation of this from both parties?

Ffôn/Tel 0300 065 3516
Ffacs/Fax 0300 065 3001
Ebost/Email Hannah.loughlin@cyfoethnaturiolcymru.gov.uk
Hannah.loughlin@naturalresourceswales.gov.uk
Gwasanaeth Trwyddedu (Caerdydd), Cyfoeth Naturiol Cymru, Tŷ Cambria, 29 Heol Casnewydd, Caerdydd. CF24 0TP
Permitting Service (Cardiff), Natural Resources Wales, Cambria House, 29 Newport Road, Cardiff. CF24 0TP
Gwefan/Website www.cyfoethnaturiolcymru.gov.uk Croesewir gohebiaeth yn y Gymraeg a'r Saesneg
www.naturalresourceswales.gov.uk Correspondence welcomed in Welsh and English