

Environmental Fire Prevention Plan

NWH Waste Services

2-3 Factory Road

Blaydon

NE21 5SA

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Scope

This document provides guidance for the prevention and management of potential waste fires and seeks to minimise their impact on the environment in accordance with draft guidance provided by the Environment Agency and the WISH forum document WASTE 28.

1. Location and activities at our site

Site address	Description of location and activities (Site Introduction)
<p>NWH Waste management 2-3 Factory Road Blaydon NE21 5SA</p>	<p>NWH Waste Services will take advice from the FRS and provide assistance where possible in the event of an emergency to minimise impact on sensitive receptors. The site is located on the East bank of the Tyne and to the North East of Blaydon. The premise occupies an area of approximately 2.97 acres of which circa 2 acres are hardstanding with an excellent fully concrete surfaced compound and is fully contained by a perimeter palisade fence, red facing brick and a block wall. The site was originally a builder's yard and more recently was owned by a civil engineering business. The site will receive an estimated weekly tonnage of 5000 tonnes per week.</p> <p>Surrounding the site there is a scrap yard, waste site and industrial units that border the site in from North East to South West, the nearest residential areas are between approximately 500 to 1000 metres to the North, East, West and South of the site (see Sensitive receptors within a 1km radius of site listed on page 4 and map in appendix doc 1)</p> <p>The site receives contents of Vans, Skips and Trade Waste vehicles that are returned from our customers. The waste is made up of inert from builders skips such as soil, bricks, concrete wood and plastic. In addition, we will accept green waste, metals, packaging and household waste. In accordance with our Waste Management Licence, the facility accepts and processes the following wastes.</p> <p>The Function of the MRF is to separate the various recyclables from a waste stream by the means of mechanical, electrical and human separation processes as follows:</p> <p>Material will be presented to the plant by the means of feed Hoppers. The material will first go onto a conveyor, through a trommel then passes through a re-sort cabin where recyclable material will be removed by Pickers from the process.</p> <p>This operation ensures the maintenance the quality of all recyclable material removed. Material goes through a sort cabin where card, metals, wood, paper and plastic are removed. In addition, all inert e.g. muck, stone and rubble will continue though the sort cabin and drop off the end in a receiving bay.</p> <p>The building and site are occupied with approximately 15 persons during the day and around no persons at night.</p> <p>Approximately 500 tonnes of waste will be delivered daily to the site where it is offloaded prior to separating. The Waste is conformance inspected prior to being introduced into the pile. Non- conforming waste shall be quarantined and removed from site for disposal. No waste of any description shall be burnt on site.</p> <p>The building consists of 2 floor structure consisting of brick, structural steel and tin clad roof. The office forms part of the structure.</p> <p>Various vehicle types access site to deliver and collect material.</p>

	Maintenance and repair of the site is carried out by our facility management team and appointed sub-contractors.
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2. Sensitive receptors

3. Managing common causes of fire.

Ignition source	Where/comments	Controls
Arson or vandalism	No history of arson or vandalism	Perimeter fencing around the site. Secure entrance gate.
Plant or equipment failure	Mobile plant works throughout the yard internally. Mobile plant shall be parked up away from the process / material when not operational.	Regular supervision and site inspections. All equipment is covered with a maintenance schedule and inspected and cleaned at quarterly intervals by trained staff. Mobile plant parked at least 6m away from waste stockpiles at the end of each shift
Damaged or exposed electrical cables	No electrical supply available within the process area. Mobile is diesel powered.	Regular inspections are completed of mobile plant. Near miss and hazard reports are submitted by site staff. Statutory inspections undertaken for all equipment by the contractor.
Electrical equipment faults	Electrical supply is via three transformers with power fed to operational equipment	Maintenance inspections, scheduled maintenance work (including cleaning),. Shredder shall be run through at the end of each shift to ensure it is free from material.
Discarded smoking materials	None on site except for the designated smoking area	Site rules prevent users from smoking except for designated area. Inductions are used to instruct all site users. Supervision and behaviour management systems monitor compliance
Hot works (e.g. welding or cutting)	All areas of the site	Site rules, contractor inductions and work permits prevent hot works adjacent to combustible material. No such works will be permitted within 6m of waste stockpiles
Industrial heaters	No industrial heaters to be used within the process area.	Site rules and inductions are used to instruct all site users. Supervision and behaviour management systems monitor compliance
Hot exhausts and surfaces	Mobile plant exhausts can become hot No other hot surfaces on site	All mobile plant is maintained to manufacturer's standards. Operatives are trained to operate the plant and carry out daily checks and plant parked at least 6m away from waste stockpiles when unattended and at the end of each shift Thermal cameras are installed within bays.
Naked lights	None on site except for the designated smoking area	Site rules prevent users from smoking or using naked lights
Batteries in ELVs	None on site	N/A
Leaks and spillages of oils and fuels		

Build-up of loose combustible waste, dust and fluff		The site is subject to a planned program of maintenance and cleaning, which will reduce the accumulation of debris that could result in a fire starting and assist it in spreading. This includes the use of a mechanical road sweeper as required to clean surfaces; routine maintenance of mobile processing equipment at quarterly intervals under contract with the manufacturer/supplier to include cleaning/removal of dust and fluff.
Reactions between wastes		
Deposited hot loads	(No hot loads to be received) All loads tipped by customers	All loads tipped under inspection and checked for contents
Neighbouring site activities	There are no other known neighbouring activities that provide a fire risk	Access is not available apart from the main site entrance
Incompatible wastes	The site permit only allows the input of non-hazardous waste.	N/A
Open burning	N/A	
Chemical reactions	N/A	
Sparks from loading buckets	Loading shovel bucket scraping along the floor	Operatives trained to inspect waste after use and to minimise scraping action. Operatives are trained to CPCS standards

4. Preventing self-combustion

<p>Self-combustion is prevented by regularly turning stock every 48 hrs maximum, stock rotation and control of stockpile sizes.</p> <p>Stock rotation procedures are in place which include the recording on a spreadsheet of:</p> <ul style="list-style-type: none"> • The date of production of bales and stockpiles • Maximum stockpile size • The location and description of the stockpile • Date of removal of stockpiles <p>The stock rotation record spreadsheet is reviewed by the Site Manager on a weekly basis to ensure that material is moved as soon as practicable and within the 3-month stockpile duration limit. In practice, stockpiles are typically held on site for a maximum of one month, but this may increase from time to time to three months if there are any operational or disposal difficulties. If material cannot be removed from site within 3 months, they will be prioritised for removal before newer material is moved.</p> <p>Waste streams will be monitored with heat detecting cameras 24 hours a day. Any hotspots highlighted will be removed and dowsed with water if required.</p> <p>Any stockpiling of baled waste will be kept to minimum, this will be monitored by thermal cameras, hand heat detection guns and turned regularly.</p>

5. Managing waste piles

Form	Pile size L/W/H	Max volume on site	Maximum storage time	How material is stored	Management arrangements
General waste Cardboard, paper and plastics	10m x 5m H 5m	550 tonnes	4 days	Bays	Material stored in bay when processed
Baled plastics as per permit	10m x 5m H 3m	150m ³	3 weeks	Stacked	Stacked from baling machines prior to dispatch
Hardcore including Bricks Concrete Stones etc.	10m x 5m H m	100 tonnes	14 days	Bays	Material stored in bay when processed
Mixed wood and greenery	5m x 5m H 3m	60 tonnes	7 days	Bays	Material stored in bay when processed
Plasterboard and gypsum products	5m x 5m H 3m	30 tonnes	7 days	Bays	Material stored in bay when processed
Scrap metal	20 Yard skip	10 tonnes	7 days	Skip container	Material stored skip
Soil	10m x 5m H 5m	100 tonnes	14 days	Bay	Material stored in bay when processed
UPVC	40 Yard Skip	5 tonnes	10 days	Skip container	Material stored skip

All external storage is managed within the designated storage areas shown on the Site Plan. The actual layout of stockpiles within the area is fluid to enable efficient operational activities and to provide flexibility of stockpile volumes. The drawing is therefore indicative only to demonstrate that the above volume of material can be stored in stockpiles on site whilst be complying with the EA guidance. Stockpile sizes and spacing's will be in accordance with EA guidance including a 6m spacing between stockpiles and stock rotation managed locally to prevent spontaneous combustion.

Storage of hazardous substances which could cause dangers or adverse environmental effects in a fire

Hazardous Substance (COSHH / MSDS / Waste type)	Quantity	Where	How is it stored and controlled
Diesel fuel	10,000 litres	Diesel tank is located to the rear of the main office	Positioned away from moving vehicles to prevent collision damage. Double skinned tank and bund in use
Diesel fuel	1000 litres	Diesel tank is located to the rear of the main office	Positioned away from moving vehicles to prevent collision damage. Double skinned tank and bund in use
Butane cylinders, Oxygen cylinders and Argon cylinders	Up to ten cylinders of each gas	Gas cages located outside in inbound yard	Locked cages with signage and separation for full and empty cylinders.
Butane cylinders, Oxygen cylinders and Argon cylinders (Found in Waste)	Gas & oxygen cylinders are occasionally hidden in waste containers received onto site	Secure caged quarantine area of the site that is situated at south east area of the site	Placed into the secure caged quarantine area

6. Preventing fire spreading

Separation distances and fire walls and bays

There will be no fire walls between stacks however, concrete bays will be formed by the means of concrete blocks 1.5 metres long by 0.75 metres wide and will form a brickwork storage bay. The concrete block wall/bay will provide an element of fire protection that should withstand fire resistance for the required 120 minutes. All waste piles will be monitored daily and waste turned at least every 24 hours. All combustible waste is segregated from other waste types and stored in individual storage bays made up of concrete blocks.

Flammable waste stockpiles are held on site and will be contained and segregated into appropriate short term storage bays and inert waste such as hardcore, soils and concrete are stockpiled externally in appropriately constructed concrete bays

All flammable liquids & materials are stored in locked containers in areas away from other waste types, liquids & buildings.

Wherever practicably possible, sources of ignition are kept away from combustible materials by simple housekeeping methods and by applying separation distances of a minimum of 6m where appropriate.

Plant is parked away from stockpiles at the end of each shift, leaving a 6m separation from stockpiles to prevent ignition from hot surfaces on the plant or in the event of a plant fire.

7. Quarantine area

The South West area of the site is to be utilised in an emergency as a quarantine area, material will be removed by mobile plant to reduce fire spread and once contained any contaminated material will be placed here. Site map appendix shows the location of the quarantine area and demonstrates that it is possible to maintain a 6m clear perimeter around the area. In the event of a fire, the Fire Service may however specify an alternative location, in order to enable them to deal more efficiently with the incident, dependant on the location of any fire situated well away from all waste stacks. The area can hold at least

50% of the volume of the largest pile (or row of ELVs/containers etc.). There will be a separation distance of at least 6 metres around the quarantine area. This could be used effectively to douse burning material or clear un-burnt material to protect it from combustion.

8. Detecting fires

The main building has installed a hard-wired fire alarm system connected directly to the Fire Service, the building has heat and smoke detectors throughout and thermal cameras installed. The Waste shed will have smoke a detection systems and thermal cameras installed within the waste sorting shed for the prevention of fires and the waste level will be manually checked twice a day with a handheld heat detector.

9. Suppressing fires

A dousing system will be in use constantly to dampen loose product from both a fixed sprinkler system and from mobile sprinkler round the site. All mobile plant is fitted with fire extinguishers. Suitable extinguishers are provided around the site in accordance with the risk assessment and Fire Order requirements. There will be an adequate stockpile of soil kept on site to suffocate a fire and limit oxygen supply, this will be agreed with Environment Agency before being implemented.

10. Firefighting techniques

Site Operatives are trained in the use of fire extinguishers to extinguish very small fires where it is safe to do so. Staff are instructed to evacuate and call emergency services for significant fires which may affect their safety. During a major fire, site operations will cease, and inputs will be diverted to alternative third-party sites until normal operations can be resumed. There are an entry and exit routes for fire service to access the site at the South East of the site and these are checked daily to ensure they are clear from any obstructions to ensure easy access. All entrances & exits to buildings serving as escape routes are checked daily to ensure they are clear from obstructions. Appropriate Firefighting equipment and several sources of running water are available on site All firefighting equipment is checked and serviced periodically and recorded as required Staff receive training in Fire Marshall, warden and fire safety awareness as part of their general health & safety training program We will ensure all water hydrants are easily accessible and identifiable. These will be checked as per guidelines to ensure functionality. Large wheeled shovels and 360 excavators are on site and on hand to move material as required to minimise fire spreading, this would involve moving material as required to a safe area, this will only be carried out by competent operatives under the instruction of Senior Managers and the Commanding Officer of the FRS on site . The mains water supply runs parallel with the site and situated on the main road just in very close proximity to the site.

There will be an adequate stockpile of soil kept on site to suffocate a fire and limit oxygen supply, this will be agreed with Environment Agency before being implemented.
Burnt material will be removed by on site plant machinery and placed in a safe area to be doused before being removed to an appropriate facility.

11. Water supplies

There will be access to an external fire hydrant for use by the Fire and Rescue Service. The River Tyne runs adjacent to the west side of the site and can be used if required. The site has access to fire hydrant which is 8 metres from the main building and 70 metres from the proposed waste handling shed, the hydrant is 100mm in diameter and will provide around 1500 - 2000 litres of water per minute. In addition, there will be a standard 32mm Mains water pipe supplying the site with additional water. The River Tyne runs in very close proximity, around 10 metres from the waste reception shed and there will be an access point with a concrete base to safely place a water pump capable of pumping 1000 litres per minute and the water will be accessed by the use of a fixed pipe, this will be subject to Environment Agency agreement. These water supplies will provide enough water to actively manage a worst-case scenario. We anticipate no waste stack will be larger than 300 cubic metres therefore, the above water systems can supply at least 2,500 litres a minute for a minimum of 3 hours for a 300 cubic metre pile of combustible material.

12. Managing fire water

The site has been designed to prevent fire water emissions leaving the boundary. The site has an impermeable concrete base which covers the whole working area. Firewater will be prevented from leaving the site and will therefore be unable to enter any surface water drain or water course however, as a precaution, in the event of a fire all drain covers on site will be sealed using plastic drain covers (drain mats) and drain shut off valves. These will prevent fire water entering the site drainage system which lead to the River Tyne and foul drains on the exterior of the site boundary. There will be spill stop barriers and industrial flood barriers on site at all times and will be positioned on the surface of all shed/warehouse doors and also positioned at site exit and entry gates (on the surface) to hold all fire water discharge within the site boundary thus preventing fire water exiting the site and entering the drainage system. All excess fire water contained on site will be filtered through a mobile mechanical sediment filtration system which utilises a multi-stage filtration to remove hydrocarbons to almost non-detectable levels. All contaminated water will be removed by vacuum packed vehicle tankers and taken to an appropriately licenced facility for disposal. All firewater containment equipment will be EU approved, ensuring their quality and fitness for purpose. The equipment will be operated in accordance with the manufacturer's guidance.

13. During and after an incident.

Advice will be sought in an emergency from the FRS for the minimisation of potential emissions by using the mobile plant, water and general equipment on site if safe to do so. The preventative actions will depend upon site conditions, weather conditions, available equipment, safety concerns and the size and nature of the fire. Consultation between Site Management and the FRS will be conducted on an ongoing basis. All waste will be diverted to appropriately licensed local Waste Transfer Stations until a full site assessment has taken place and is deemed safe for use. All contaminated waste will be removed to an appropriate facility. This will be loaded by site machinery onto vehicles with appropriate containers for handling such waste. We will communicate with local neighbours via social media a mail drop. All site staff will have access to the FPP, emergency procedures, contact details and site plans, these will be kept in the site office.
All staff will be trained in the Site Fire prevention plan to ensure full understanding.

External References

- Regulatory Reform Order Fire, 2005 (and equivalent legislation in Scotland and NI)
- DCLG: Fire Safety risk assessment: factories and warehouses
- DCLG: Fire safety risk assessment: offices and shop
- WISH Reducing Fire Risk at Waste Management Sites
- EA Fire Guidance: Technical Guidance Note
- EA Fire Guidance: Fire Prevention Plans
- Containment systems for the prevention of pollution C736, Incident Response Planning (PPG21)