FIRE PREVENTION PLAN

Graphite Resources (DEP) Ltd
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Prepared By:
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1 INTRODUCTION

1.1 Introduction

This document has been prepared by Sol Environment Ltd on the behalf of Graphite Resources (DEP) Ltd for the operation of their site located at Derwenthaugh Ecoparc, Gateshead.

The document provides a structured framework approach in effectively preventing potential fires associated with the processing and storage operations at the site.

This Fire Prevention Plan document (referred hereafter as the 'FPP') has been produced in accordance with the updated Environment Agency's Fire Prevention Plan Guidance (published 29th July 2016, updated 4th May 2018 and 9th January 2020).

This Fire Prevention Plan meets the fundamental objective of the FPP Guidance as it demonstrates that the site can:

- Minimise the likelihood of a fire happening;
- Aim for fire to be extinguished within 4 hours; and
- Minimise the spread of fire within the site and to neighbouring sites.

1.2 Structure of the Fire Prevention Plan

This FPP has been structured in accordance with the EA Fire Prevention Plan Guidance and considers the following relevant aspects of the facility:

- Managing Common Causes of Fire;
- Preventing Self Combustion;
- Managing Waste Piles;
- Preventing Fire Spreading;
- Quarantine Area;
- Detecting Fires;
- Supressing Fires;
- Firefighting Techniques;
- Water Supplies;
- Managing Fire Water; and
- During and after an Incident.

1.3 Status of the Fire Prevention Plan

The FPP is a "live" document and will form part of the key environmental management system for the facility. All monitoring procedures, responsibilities and compliance actions will be updated as and when required.

2 SITE BACKGROUND

2.1 Site Setting

The Graphite Resources facility site is located at Derwenthaugh Ecoparc, Derwenthaugh Road, Blaydon, Gateshead, NE16 3BJ.

The location of the subject Site is shown on Figure A1, Annex A, centred at approximate National Grid Reference NZ 19926 63203. The proposed site layout is shown in Figure A2.

The site accepts predominantly clinical waste onto site for processing and treatment through the mechanical heat treatment plant (autoclaves), drier, metal separation unit and zig zag separator. Treated autoclaved wastes are then processed through the onsite pyrolysis plant to produce syngas which is combusted within gas engines to produce electricity for export.

Other non-hazardous wastes or RDF, which have been pre-sterilised at offsite autoclave facilities, are also accepted for use as fuel for the pyrolysis units.

The site will be consented to accept up to 100,000 tonnes per annum of pre-treated clinical wastes and RDF feedstocks of which up to 50,000 tonnes per annum may be from untreated clinical waste streams.

The facility is permitted by the Environment Agency as a Part A(1) Installation and is operated in accordance with the Environmental Permitting (England and Wales) Regulations 2018 (as amended).

The facility is located in a predominantly industrial area, with a number of business parks, industrial estates and retails parks in the surrounding area. The site is bound by industrial units to the north, east and west and an unnamed watercourse to the south. A number of hotels associated with Derwenthaugh Marina are located approximately 230m to the east with a Premier Inn located across open ground 200m to the south.

Shibdon Pond Nature Reserve (LNR and SSSI) is located approximately 215m to the west. The River Tyne and the River Derwent are located 230m north and 450m southeast respectively.

The nearest residential properties are located 510m south on the Copse in the Axwell Park residential area. A leisure centre is located 400m to the south and the closest school is located 770m to the southwest (Busy Bees at Blaydon Nursery School).

Within 2km of the site there are a number of locally important sites of ecological importance, the closest of which is Shibdon Pond LNR and SSSI located 215m west. In addition, Lower Derwent Meadows SSSI is located 1.8km to the south. There are no internationally designated sites (SPA's, SAC's or Ramsar sites) within 10km of the installation.

Table 2.1 below provides information regarding the surrounding site.

Table 2.1 Site Setting	
Direction	Description
North	Immediate Vicinity: Industrial Estate (Facelift Access Hire) Within 500m: Industrial Estate, Railway Line, River Tyne, Scotswood Bridge, A695 Beyond 500m: Residential area of Scotswood, Excelsior Academy, Community Garden, Sports Centre, Denton Dene LNR, Hadrian's Wall Path
North East	Immediate Vicinity: Railway Line Within 500m: Industrial Estate, River Tyne, A695, Works (Responsive Engineering Limited), Beyond 500m: Residential area of Delaval & Old Benwell, Unused Ground, Bridgewater School, Hadrian's Wall Path
East	Immediate Vicinity: Industrial Land / Buildings Within 500m: A695, Hotels at Derwenthaugh Marina, River Derwent Beyond 500m: Derwenthaugh Junction, Delta Park (Business Park), Derwenthaugh Industrial Estate, The Metrocentre (Retail park), Bus Depot, River Tyne, Gateshead
South East	Immediate Vicinity: Unnamed drainage ditch Within 500m: Unoccupied Land, Premier Inn, A694, River Derwent Beyond 500m: Allotment Gardens, A1, The Sands Industrial Estate, Swalwell Residential Area
South	Immediate Vicinity: Unnamed drainage ditch Within 500m: Unoccupied Land, A694 / A1 junction Beyond 500m: River Derwent, Leisure Centre, Busy Bees Nursery, Swalwell Residential Area
South West	Immediate Vicinity: Unnamed drainage ditch Within 500m: Unoccupied Land, A1, Shibdon Pond LNR & SSSI Beyond 500m: Residential Area of Blaydon, Axwell Park, Home Farm, Wooded banks of the River Derwent
West	Immediate Vicinity: Industrial Estate Within 500m: A1, Shibdon Pond LNR & SSSI Beyond 500m: Shibdon Business Park, Cemetery, Council Offices, Library & Court, Residential area of Blaydon & Path Head, Shibdon Dene
North West	Immediate Vicinity: Industrial Estate (Dawsongroup vans) Within 500m: Chainbridge Industrial Estate Railway, A695 Beyond 500m: Blaydon Haughs Industrial Estate, A1, River Tyne, Newburn Haugh Business Park, residential area of Lemington

The Environment Agency flood zone database indicates that the site lies mainly within Flood Zone 2 (medium risk) with limited parts of site located within Flood Zone 3 (high risk).

Although the site is not considered to be highly sensitive in terms of proximity, the facility has been designed to prevent and mitigate the offsite impacts associated with fire as far as practically possible.

The wind direction is pre-dominantly from the south west.

2.2 Combustible Waste Streams

At any time there may be the following types of combustible waste present at the Graphite site:

- Incoming RDF comprising non-hazardous waste and pre-treated clinical wastes;
- Bagged clinical waste within bins;
- Shredded clinical waste within interim store;
- Sterilised clinical wastes prior to further processing;
- Dried fully processed clinical wastes (RDF); and
- External clinical waste trailer storage.

2.3 Other Combustible Materials

In addition to the waste streams outlined above, Graphite also stores a number of hydraulic and lubricating oils for use in the onsite plant and equipment. These are stored in small volumes within drums within a bunded area. Red diesel for use in mobile plant is stored within a sealed bunded external tank.

3 FIRE PREVENTION PLAN

This Fire Prevention Plan has been developed to include an assessment of fire risk on site and the measures in place to prevent, detect, suppress, mitigate and contain fires.

This plan forms part of the Graphite Resources (DEP) Ltd management system and sets out the fire prevention measures and procedures that will be put in place and used on site.

All staff and contractors working on site will understand the contents of the Fire Prevention Plan and what they must do during a fire.

The Fire Prevention Plan will be kept in the Site Office and all staff will be aware of where it is kept.

Regular exercises will be carried out to test how well the plan works and that staff understand what to do. These exercises will take place every quarter.

3.1 Control of Potential Causes of Fire

The following table identifies common causes of fire and the measures that Graphite Resources take to reduce the risk.

Table 3.1 Control of Potential Causes of Fire

Source of Fire	Applicability to Site and Proposed Management Controls	Residual Risk
Arson	Arson by intruders is controlled via 24/7 site presence and security, CCTV and an access gate with an emergency code. The site is well lit and secured. Any fire would be immediately identified by the sites visual inspection programme and fire detection equipment.	VERY LOW
Plant and Equipment	The site has a regular inspection and maintenance programme which identifies any electrical or mechanical machinery faults which could result in a machinery fire. Machinery will always be parked in the dedicated mobile plant storage area. This is located externally which limits the potential for fire spread from machinery to material. All machinery is visually inspected as per FPP-E01 – Site Walkover Inspection. Machinery is regularly cleaned to remove any dust, waste etc to ensure that this does not accumulate on moving parts. All machinery on site has fire suppression. Site vehicles are fitted with fire extinguishers with the potential for sparks regularly being monitored by site staff.	VERY LOW

Electrical Faults Including Damaged or Exposed Electrical Cables	The risk of damaged or exposed electrical cables is controlled via the regular inspection and maintenance programme. Any electrics on site are fully certified by a qualified electrician.	VERY LOW
Discarded Smoking Materials	Staff and visitors are only permitted to smoke within the designated smoking area. There is no smoking permitted within the operational area where waste is stored or handled.	VERY LOW
Hot Works	No hot works will be carried out on site without a permit to work being issued and site management being made aware of the work. The hot works will be located at a safe distance from combustible materials. The activity will be very closely managed and with the presence of a fire watchmen. A fire watch will be conducted at the scene of any hot work for at least one hour after hot work has finished as sparks from hot works can smoulder for a significant time period.	VERY LOW
Industrial Heaters	No industrial heaters will be used on site.	N/A
Hot Exhausts	The site has a regular inspection and maintenance programme which identifies any signs of a fire caused by dust settling on any hot exhausts and engine parts. This is carried out via visual checks throughout the day as well as at the end of the working day. All inspections are carried out as per FPP-E01 – Site Walkover Inspection. Machinery is regularly cleaned to remove any dust, waste etc to ensure that this does not accumulate on moving parts.	VERY LOW
Ignition Sources	Any ignition sources on site will be kept at least 6 metres away from the stored waste on site. No aspect of the plant or processes requires the use of any naked flames.	N/A
Leaks and Spillages of Oil and Fuels	The prevention of fuels and oil leaking out from site vehicles will be achieved by the regular inspection and maintenance programme. If there are any leaks, the regular inspections allow this to be dealt with straight away. The programme will specifically ensure that all site vehicles and mobile plant are maintained to an appropriate standard to prevent fuels and combustible liquids leaking or being tracked around the site. Any identified faults will be recorded and repaired by a fully certified mechanic. Spill kits will be provided throughout the site. All staff will be trained on how to use the spill kit as well as the procedures to carry out in the event of a spillage.	VERY LOW

Build-up of Loose Combustible Waste and Dust	The site has a regular inspection and maintenance programme which will identify any build up of wastes and dust. This programme will specifically ensure that all areas of the site are maintained to a sufficient level of cleanliness and housekeeping to ensure that the plant does not present a fire risk. This programme will aim to keep levels of dust, loose RDF and any other combustible materials to a minimum. Machinery is regularly cleaned to remove any dust, waste etc to ensure that it does not accumulate on moving parts. The site is inspected at least twice a day in accordance with the sites inspection procedure (FPP-E01). Any build-up of waste and dust would be identified during the inspection. If any dust, waste etc was identified then the area would be immediately cleaned (swept, dampened down, blown down etc). All inspections are logged on the Site Walkover Inspection Form (Form 1 – Site Walkover Inspection). All forms are stored in the site office.	VERY LOW
Reactions Between Wastes	All waste is accepted on site in accordance with the sites Waste Acceptance Procedures. This ensures that no incompatible or unstable wastes will be accepted on site. In the unlikely event of incompatible wastes being accepted on site, wastes will be transferred to the quarantine area before removed off site.	VERY LOW
Hot Loads	Graphite Resources does not receive hot loads.	N/A

3.2 Preventing Self-Combustion

3.2.1 Managing Storage Time

Incoming Waste Storage

All incoming vehicles will be directed from the weighbridge to the relevant waste Reception Hall of the main building. Clinical and mixed non-hazardous wastes are segregated with two separate reception halls.

Clinical wastes are either loaded directly into one of the twelve bin lifting and shredding systems for processing or temporarily stored within lidded bins in the dedicated bin holding areas. The bin holding area is 236m^2. Wastes will be processed as soon as possible on a *'first in – first out'* basis and are typically processed within 24 hours under normal operation. Wastes will be stored for no longer than a maximum of 7 days in line with EA clinical waste guidance.

Any pre-sterilised non-hazardous wastes accepted into the site are unloaded in the segregated Reception Hall into the reception pile (450 m^3 maximum) prior to processing within the dedicated

shredder. Wastes are typically stored for no longer than 7 days maximum and are manged on a first in first out basis.

This storage time is significantly lower than the stipulated Fire Prevention Plan Guidance maximum storage time of 6 months and therefore presents a significantly lower risk than assumed by the FFP Guidance. This rapid turnover of stock eliminates the risk of self-generated heat within aged materials or bio-degrading materials and practically eliminates the potential for thermal build up and self-combustion.

The plant may be operational 24 hours a day, though typically under normal operation, deliveries and operations are on a 12-hour, 6 day basis.

The site operates a bin monitoring system to record the movement of the waste bins and collected waste material. Following arrival at the site, bins are classified and introduced into the bin monitoring system with the provision of a unique bar code identifier holding information about the source, weight, waste type (hazardous or non-hazardous) and date and time of delivery.

The tracking of all waste through the site via the barcode bin monitoring system ensures that the storage times specified in this plan are adhered to. All material is tracked daily and processed through the site on a *'first in – first out'* principle.

A twice daily review of the clinical waste holding areas is performed as part of the *FPP-E01 – Site Walkover Inspection*.

Clinical waste will be received and accepted in accordance with the established site waste acceptance and rejection procedures which are provided in *Annex C*. The procedures dictate that all clinical waste is required to be stable, non-reactive and solid in nature.

The site also has the ability to temporarily store clinical wastes onsite within external trailers prior to treatment elsewhere. Bagged waste within lidded bins will be stored externally within sealed, leak proof lockable bulk trailer containers within the dedicated trailer storage area on impermeable hardstanding. Storage within the sealed containers will typically be for no longer than 24 hours and at a maximum of 7 days.

Processed Waste Storage

During the onsite processes, materials produced at each stage are stored within the following areas onsite:

- Interim Store 1- 99 m^3. Shredded waste prior to batch loading into the autoclave is stored for a maximum of 2 hours before loading into the autoclave.
- Interim Store 2- 99 m^3. Shredded waste prior to batch loading into the autoclave is stored for a maximum of 2 hours before loading into the autoclave.

- Metering Buffer Bin 1 – 18.7 m^3 Sterilised waste – processed wastes directly from the autoclave will be stored within this metering bin, typically for 1 hour, but for a maximum of 7 days prior to feeding into the downstream processed at a controlled rate.
- Metering Buffer Bin 2 – 18.7 m^3 Sterilised waste – processed wastes directly from the autoclave will be stored within this metering bin, typically for 1 hour, but for a maximum of 7 days prior to feeding into the downstream processed at a controlled rate.
- Fuel Bunker A – 900m^3 RDF – following drying and metals removal, sterilised wastes (or RDF) are stored typically for 3 days (maximum 7 days) prior to use as a fuel within the pyrolysis plant.
- Fuel Bunker B – 900m^3 RDF – following drying and metals removal, sterilised wastes (or RDF) are stored typically for 3 days (maximum 7 days) prior to use as a fuel within the pyrolysis plant.
- Fuel Bunker C – 900m^3 RDF – following drying and metals removal, sterilised wastes (or RDF) are stored typically for 3 days (maximum 7 days) prior to use as a fuel within the pyrolysis plant.

The above storage times are significantly lower than the stipulated Fire Prevention Plan Guidance maximum storage time of 6 months. This rapid turnover of stock significantly reduces the risk of "older" material from self-heating and practically eliminates the potential for thermal build up and self-combustion.

General Management
Graphite Resources will track all material flow through the site to ensure that the storage times specified in this plan are adhered to. All material will be processed through the site on a 'first in – first out' principle.

All storage areas will be managed to ensure full stock rotation is achieved. The Operations Manager will be responsible for managing the rotation of waste.

For all incoming waste, the location on site and the first date when the material is added is recorded on the site electronic bin tracking system.

A twice daily review of all storage areas and process inventory is made by the Operations Manager in accordance with procedure *FPP-E01 – Site Walkover Inspection*.

Waste will be received and accepted in accordance with the established site waste acceptance and rejection procedures which are provided within *Annex C*. The procedures dictate that all wastes are required to be stable, non-reactive and solid in nature.

3.2.2 Monitor and Control Temperature

Waste may arrive at site within bulk load (loose double bags) or in lidded lockable bins. All storage of waste onsite will be within lidded lockable bins within the dedicated Holding Areas. Storage within the holding areas will typically be for no longer than 24 hours and at a maximum 7 days in abnormal situations.

Consequently, monitoring the temperature of clinical waste is not considered necessary due to the contained nature of its storage and rapid turnaround time through the site.

A trained site operative will carry out a visual inspection on site twice daily in accordance with *Procedure FPP-E01 – Site Walkover Inspection* to ensure that all storage areas are being managed correctly and all fire detection and suppression systems are in order.

All of the above measures meet the minimum expectations defined with the EA Fire Prevention Plan Guidance.

3.3 Manage Waste Piles

3.3.1 Maximum Pile Sizes

Incoming Waste
All incoming clinical waste is stored within rigid lockable 700 litre (0.77 m^3) or 1,100 litre (1.1 m^3) wheeled bins.

These bins are then stored within the holding area within the Reception Hall. This holding area is 236 m^2 and can hold the following:

- 167 x 770 litre bins; or
- 117 x 1,100 litre bins.

As such, the maximum amount of incoming clinical waste that may stored onsite at any one time is 12 tonnes (approximately 128 m^3).

Storage of these wastes within containers mean that the pile sizes outlined within the Guidance do not apply. Nevertheless, the dimensions of the holding areas are line with suggested pile sizes stated within the FPP Guidance. In addition, storage within these areas is limited to typically 24 hours, maximum 7 days.

Incoming pre-sterilised wastes and RDF are stored within a reception pile of no larger than 450m^3 within the segregated reception hall. Wastes are managed on a 'first in first out' basis and typically stored for no longer than 7 days prior to processing.

This rapid turnover of stock significantly reduces the risk of "older" material from self-heating and practically eliminates the potential for thermal build up and self-combustion. This is significantly less than the maximum *'allowable'* storage time stipulated by the Fire Prevention Plan Guidance. The risk of self-heating and fires is therefore considered to be practically eliminated.

Clinical waste will be stored in accordance with best practice and measures outlined within Technical Guidance notes EPR 5.01 and EPR 5.07 Guidance documents.

A trained site operative will carry out a visual inspection on site twice daily in accordance with *Procedure FPP-E01 – Site Walkover Inspection* to ensure that the storage areas are being managed correctly and that all detection and suppression equipment is working.

Processed Waste Storage

During the onsite processes, materials produced at each stage are stored within the following areas onsite:

- Interim Store 1: Shredded Waste – (99m^3)
- Interim Store 2: Shredded Waste – (99m^3)
- Metering Buffer Bin 1: Sterilised Waste – 13.9 m (l) x 2.4 m (w) x 2.4 m (h) = 18.7 m^3;
- Metering Buffer Bin 2: Sterilised Waste – 13.9 m (l) x 2.4 m (w) x 2.4 m (h) = 18.7 m^3;
- Fuel Bunker A: RDF – 23 m (l) x 5 m (w) x 10 m (h) = 900m^3;
- Fuel Bunker B: RDF - 23 m (l) x 5 m (w) x 10 m (h) = 900m^3;
- Fuel Bunker C: RDF - 23 m (l) x 5 m (w) x 10 m (h) = 900m^3;

Although the fuel bunkers are larger than the recommended pile sizes stated within the FPP Guidance, they are fully enclosed walking floor bunker systems, fitted with dedicated fire detection and suppression sprinkler systems (See Section 3.6 and 3.7 below) and subject to rapid turnaround times. Each bunker holds one days worth of fuel for the pyrolysis plant. As such under normal operation, waste is typically stored for no longer than 24 hours, and maximum 3 days. It is therefore considered that despite this larger volume, the controls in place ensure that a fire can be extinguished within 4 hours and the objectives of the FPP Guidance are met.

A trained site operative will carry out a visual inspection on site twice daily in accordance with *Procedure FPP-E01 – Site Walkover Inspection* to ensure that all storage areas are managed correctly and that all detection and suppression equipment is working.

3.4 Prevent Fire Spreading

3.4.1 Separation Distances

All plant machinery will be parked within the external plant storage area away from any combustible waste.

The containerised nature of the clinical wastes results in waste not having to have a separation distance of 6m.

Furthermore, as previously stated, the rapid turnaround of the waste stored on site means that the risks of self-combustion and thermal runway conditions are negligible and therefore fire risk is very low.

3.4.2 Fire Walls and Bays

Each fuel bunker is a fully enclosed system including a chain conveyor loading and unloading system. RDF is both loaded and unloaded by a top waking floor conveyor system. Integral fire detection and suppression systems are fitted to each bunker.

All three fuel bunkers will be managed to ensure full stock rotation is achieved. All material will be processed through the pyrolysis unit on a 'first in – first out' principle. The Operations Manager will be responsible for managing the rotation of waste.

A trained site operative will carry out a visual inspection twice daily in accordance with *Procedure FPP-E01 – Site Walkover Inspection* to ensure that all piles are being managed correctly and in line with the Fire Prevention Plan.

3.5 Quarantine Area

The site will have a dedicated quarantine area within the reception hall. This will be large enough to hold over 50% of the largest holding area in accordance with the FPP Guidance and have a separation distance of 6 m on all sides.

In the event of a fire, waste in the affected containers will be safely transferred using a fork lift and extinguished.

The location of the quarantine area is identified on the site plan provided within Annex A.

RDF has a separate quarantine area within the relevant area of the site. This will not be in a fixed but will be in an area kept clear of equipment and wastes and be capable of holding up to 225m^3 of waste with a separation distance of 6m on all sides .

3.6 Detecting Fires

The site has automatic detection system installed across the whole building supplied by Tyco Ltd.

Should the early warnings of a fire be detected, an alarm will be generated alerting everyone on site to a potential fire. Additionally, the detection system will notify the Operations Manager and the Fire Brigade of a fire.

The design, installation and maintenance of the fire detection system is covered by an appropriate accredited third party certification scheme.

A trained site operative will carry out a visual inspection on site twice daily in accordance with *Procedure FPP-E01 – Site Walkover Inspection* to ensure that the storage areas are being managed correctly and that all detection and suppression equipment is working.

Any member of site staff and site security will raise the alarm as soon as they become aware of a fire, including contacting emergency services.

The automatic fire detection system provides 24/7 detection of the building. This allows a fire to be detected and supressed immediately.

Please find relevant details of the system within *Annex D*.

3.7 Suppressing Fires

The site has a fire suppression system installed covering the whole building and dedicated sprinkler systems located on areas of key plant and waste storage supplied by Tyco Ltd.

The suppression system is linked to the detection system. If the detection system identifies a fire then the sprinkler system is activated and the fire will be extinguished.

The system is supplied by the external fire water tank and fire pump facilities to provide the necessary flows and pressures of the suppression systems.

In the event of electricity supply cut off to the site, the back-up diesel generator will ensure the fire suppression system will continue operating.

The design, installation and maintenance of the fire suppression system on site will be covered by an appropriate UKAS accredited third party certification scheme.

Please find relevant details of the system within *Annex D*.

3.8 Fire Fighting Techniques

The site has been designed in order to allow active firefighting.

Upon identifying or being made aware of a fire, the operations manager will raise the alarm and alert all present on site to the fire and its location and alert emergency services.

The site will be evacuated in accordance with the site evacuation plan with exception of those staff involved in active fire fighting.

All staff, contractors and visitors would follow the Fire Evacuation procedure as included in Section 3.9 below.

Staff will only tackle the fire using the fire extinguishers if it is safe to do so.

In the unlikely event of a fire which has unsuccessfully been extinguished by the sites suppression system, staff are to await the Fire and Rescue Service (FRS), who would then take the appropriate actions.

All personnel working on site will be provided training in the Fire Prevention Plan and all associated procedures and controls.

The FPP training will be provided to all new starters and temporary employees working at the site.

FPP refresher training will be carried out to all personnel at least annually.

3.9 Fire Evacuation

Fire evacuation points are located at the main office and are clearly signposted.

Sites rules are reinforced via use of fire drills and planned response scenarios.

All personnel to follow the instructions of the Fire Wardens and the Operations Manager. A list of trained Fire Wardens is maintained and displayed on the site.

The Fire Evacuation Procedure is provided to staff, contractors and visitors which states:

- On discovery of a fire, immediately operate the fire alarm by pressing the nearest break glass call point and / or contact the Operations Manager via a radio to ensure the alarm is raised;
- Fire Wardens and staff must only tackle to fire if they are trained to do so, the equipment is appropriate and if their safety or that of others is not compromised;
- Leave the building / work area by the nearest available exit / safe rote and report directly to the assembly point located at the main office;
- Leave quickly but in a calm and controlled manner. Do not detour to collect personal items;
- Do not re-enter the building / work area for any reason until authorisation has been given by the Operations Manager / Fire Brigade; and
- The Operations Manager will assess the situation and call the FRS if required.

This document is reviewed and updated annually, or sooner if required. The document details all hazards and the control measures that are in place and / or required to prevent fires.

3.10 Water Supplies

The table below provides a summary of the on-site firefighting water supplies:

Table 3.3 Fire Water Supplies

Description	Capacity / Flow	Location
1 x Fire Water Tank	1,250,000 litre supply for the sprinkler suppression system Pumps have a flow rate of 10,215 litres per minute	On site to the west of the building
6 x Hydrants	6 x 1,500 litres per minute Connected to water main therefore supply is unlimited	On site to the west of the building

In the event of a fire, water can be taken from the fire water tank and the six fire hydrants.

The largest pile size on site is 900m^3. Therefore, in accordance with the guidance and a worst-case scenario event of the largest waste pile catching fire, the site requires 6,000 litres a minute for a minimum of 3 hours. This results in the site requiring 1,080,000 litres of fire water to meet the guidance as shown by the calculation in the table below.

Table 3.3 Water Supply Calculation

Maximum Pile Size (m^3)	Water supply rate required (l/min)	Overall water volume required over 3 hours (l)	Total water volume available onsite (l)
900	6,000	1,080,000	Unlimited

This is achieved through the onsite fire water tank and associated pumps which have a flow rate of 10,215 l/min. With the addition of the fire hydrants, the site has more than enough fire water available on site to meet the guidance.

The provision of the above water supplies as well as the automatic detection and suppression systems is considered BAT for site.

3.11 Managing Fire Water

All potentially contaminated water will be contained on site and captured within the building. The sites existing drainage system has a capacity of 321,000 litres (1,000 litre holding tank, 130,000 litre MBBR tank and 190,000 litre settlement tank). Additionally, water will be captured within the extent of the building.

The site has an existing discharge consent from Northumbrian Water and discussions for the routing of firewater to sewer under this consent are currently being undertaken.

Please note, the detection and suppression system will rapidly detect and extinguish any fire within the building, therefore large volumes of fire water will not be required to be discharged off site.

3.12 During and After an Incident

During

During any fire fighting or subsequent clear up operations, any incoming wastes will be diverted to an alternative waste processing site.

All nearby residents, businesses and the Environment Agency will be notified during any fire fighting taking place on site. Telephone numbers will be stored on site.

After

Should there ever be a fire event on site, Graphite Resources will liaise and agree with the Environment Agency the steps to be taken to bring the site back into operational use.

The steps would include:

- Once the fire is extinguished all burnt items will be sorted and removed from site to an appropriately licensed waste disposal facility;
- All potentially contaminated firewater will be disposed of via sewer;
- All firefighting equipment inspected and serviced as necessary;
- All infrastructure to be inspected by appropriately qualified persons with repairs to buildings and equipment to be organised to enable the site to re-open as quickly as possible;
- Determine how and why the fire started and revise Fire Prevention Procedures as necessary to ensure it is not repeated;
- Carry out a full review of the Fire Risk Assessment; and
- Divert all deliveries of waste and materials to alternative sites or cease deliveries if required.

ANNEX A: SITE PLANS

ANNEX B: DRAINAGE PLAN

ANNEX C: PROCEDURES