# Swadlincote Energy Recovery Facility (SERF)

# **Fire Prevention Plan**

on behalf of R&P Clean Power Limited

# **Application for Environmental Permit**

May 2024

Prepared by Stantec

Revision	Author	Date	Quality Check	Date	Review	Date
1	CAB	Sept. 2023	PBD	Nov. 2023	CJB	Nov. 2023

#### Disclaimer

This document is part of the Swadlincote Energy Recovery Facility (SERF) Environmental Permit Application and was prepared by Stantec UK Limited (Stantec) for the account of R&P Clean Power Limited (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment considering the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

## Contents

1		ntroduction				
2		Facility				
	2.1	Activities				
	2.2	Permitted Wastes				
		Permitted Tonnages				
	2.2.2	Storage Capacities				
	2.3	Site Location				
	2.4.1	3				
_	2.4	Facility Access				
3		agement				
	3.1	Managing potential causes of fire				
	3.1.1	Arson / Vandalism				
	3.1.2	Electrical faults including damaged or exposed cables				
	3.1.3	Hot works				
	3.1.4	Hot exhausts				
	3.1.5	Discarding of smoking materials				
	3.1.6	Build-up of loose combustible waste, dust, and fluff				
	3.1.7	Fuel spills and leaks				
	3.1.8	Hot loads				
	3.1.9	Reactions between incompatible wastes				
	3.2	Plant and equipment on-site				
	3.3	Training				
4	Prev	renting self-combustion				
	4.1	Managing storage time				
	4.2	Monitoring and controlling temperature	11			
	4.3	Management of fuel pile size				
5	Prev	venting Fire Spreading				
	5.1	Separation distances	12			
	5.2	Fire walls	12			
	5.3	Quarantine area				
6	Dete	ecting Fire				
	6.1	Fire Alarms				
7	Fire	Suppression	15			
8		er Supplies for Firefighting				
9	Fire	Water Containment	18			
	9.1	Firewater containment in fuel bunker	18			
	9.2	External Storage	18			
10	) Acti	ons to be undertaken following a fire				
	10.1	Actions in the event of a fire				
	10.2	Actions after a fire event	19			

## **Figures**

Figure 1: Site Location	
Tables	
Table 1: Sensitive Receptors	3
Appendices	
Appendix 1 – Site Receptors Plan Appendix 2 – General Plan Layout, Fire Fighting Arrangements	

## 1 Introduction

This Fire Prevention Plan (FPP) has been prepared alongside the Environmental Permit application for Swadlincote Energy Recovery Facility (SERF) (the 'Facility') at Cadley Hill, South Derbyshire, DE11 9EN.

The FPP is written with reference to the guidance provided by the Environment Agency (EA). In line with this guidance, the objectives of the following FPP are to:

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

The FPP has been structured in accordance with the EA guidance and considers the following aspects:

- Managing potential causes of fire;
- Preventing self-combustion;
- Management of fuel in the reception building;
- Preventing fire spreading including barriers and spatial separation;
- Quarantine area:
- Detecting fire;
- Fire suppression;
- Water supplies;
- Managing firewater; and
- Incident procedures.

It is noted that where the provisions in this FPP do not conform to EA guidance, but are designed to meet an alternative, appropriate technical standard, this is explained in the text of the report.

As directed by the EA guidance a FPP is required where operators store any amount of combustible waste.

Once adopted it will form part of the operating management system for the Facility. All staff working on the Facility will understand the content of FPP and the actions they must take in the event of a fire.

A copy of the FPP will be kept in the on-site office and will be accessible to Facility staff.

Regular exercises will be carried out to test the measures within the plan, and the upkeep of these routine exercises will form part of the plan.



## 2 The Facility

#### 2.1 Activities

In summary, the proposal comprises of:

- An Energy Recovery Facility (ERF) with a maximum throughput of 230,000 tonnes per annum (tpa) of non-hazardous residual (post-recycled) waste and a stack of 60 m height above ground level;
- The ERF will comprise of a single-line mass incineration system linked to a dual burner system. The fuel used in the Facility will be sourced and delivered to the Facility by a third party on a contracted basis;
- 2 x diesel oil auxiliary burners are installed at combustion chamber level for plant startup and to maintain flue gas temperature at adequate level for pollution control;
- A steam turbine driven power generation capacity of approximately 20.5 MW of electricity;
- Grid connection cables, plant and equipment including a high voltage power distribution system to enable electricity to be supplied to the public supply network;
- Infrastructure to enable Combined Heat and Power (CHP) which includes the provision of a steam offtake;
- Installation of weighbridge, access and internal roads and parking facilities;
- Collection of bottom ash and Air Pollution Control (APC) residues; and
- Associated office, warehouse, and equipment storage facilities.

The energy recovery operation will run on a 24/7 basis, and the Facility will be permanently staffed. On-site walk downs at regular intervals will be part of standard operational procedures. The acceptance of fuel will be restricted to specified hours.

#### 2.2 Permitted Wastes

The accepted wastes from the List of Wastes (LoW) are the following, hereafter referred to as the 'fuel':

- 19 12 10 Combustible Waste (Refuse Derived Fuel)
- 19 12 12 Other Wastes (Including Mixtures of Materials) from Mechanical Treatment of Wastes other than those mentioned in 19 12 11
- 20 03 01 Mixed Municipal Waste
- Other wastes with EWC codes listed in Table 1b of Form 3B.

#### 2.2.1 Permitted Tonnages

The maximum annual quantity that can be accepted at the Facility is 230,000 tonnes. This is equivalent to an approximate daily quantity of 630 tonnes.

## 2.2.2 Storage Capacities

The maximum volume of waste that can be on-site at any one time will be ca. 8,500m<sup>3</sup>. This is the total volume expected to be available for storage of fuel in the bunker building.



## 2.3 Site Location

The proposed SERF is located in South Derbyshire at Cadley Hill. Approximately 2 km west of Swadlincote, Derbyshire. The Facility is centred at National Grid Reference SK 268 190, with the nearest postcode at DE11 9EN. The surrounding area is characterised by a mix of rural and residential land. Immediately adjacent land uses include; Willshee's Materials Recycling Facility (MRF); Stanton Sewage Works and the A444 (Burton Road) to the north and east respectively; residential properties to the north and south; and arable farmland to the west and south. See Figure 1 for the site location.

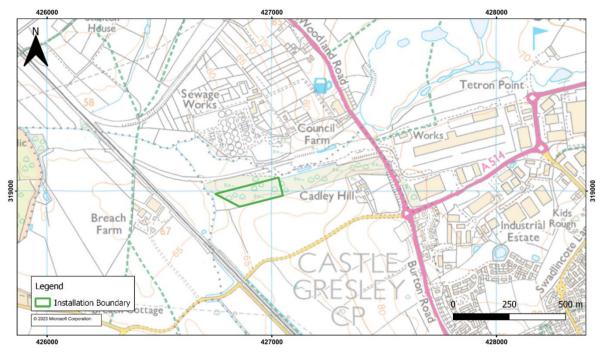


Figure 1: Site Location

The Sensitive Receptors Plan showing sensitive receptors within 1km of the Facility is provided in Appendix 1 to this document. The following receptors are noted:

**Table 1: Sensitive Receptors** 

Number	Name	Direction	Distance (metres)
1	Stanton Water and Sewage Works	North	150 m
2	Railway Line	South-west	300 m
3	Nearest Residential	East	420 m
4	A444 Burton Road	East	550 m



5	A514 Cadley Hill Road	South	330 m
6	Local Business	North-east	470 m
7	Cadley Hill Railway Area Local Wildlife Site	North (within the Facility)	50 m
8	Appleby Glade and Cadley Hill Industrial Estate	South-east	950 m
9	Residential	North-east	570 m
10	Local Business	West	415 m
11	Commercial	East	650 m
12	Badgers Hollow, Coton Park Local Nature Reserve	South	690 m

Distances provided in Table 1 are approximate from the Facility boundary to the nearest point at the receptor boundary.

The proposed SERF is approximately 600m west of the Swadlincote built-up area. The Facility's surroundings are predominantly agricultural, with a small number of residential properties. The SERF adjoins the Willshee's MRF. A wastewater treatment works (WWTW) lies approximately 150m north. Other industrial and commercial areas lie about 600m east.

The Facility sits in the Mease-Sence Lowlands Landscape Character Area (LCA), a very gently undulating and open, arable farmland landscape with hedgerows and woodland blocks which forms the wider context to the west.

The Facility is also influenced by the immediately adjacent Leicestershire and South Derbyshire Coalfields LCA, which occupies the slightly elevated, rising ground to the east, and is influenced by a legacy of coal mining and urban development.

The whole Facility lies within the National Forest designation. The countryside north is designated as Green Belt. The Facility is located within Cadley Hill Local Wildlife Site (LWS).

## 2.4.1 Prevailing Wind Direction

The wind rose for 2021 from the Nottingham East Midlands meteorological station presented in Figure 2 demonstrates that the prevailing wind in the region is from the southwest, with winds less frequently blowing from the northeast. In general, dust will be transported by the wind and will not be detectable at locations upwind of a source. The exception to this is during very light wind conditions when dust may disperse against the wind direction, although typically only for short distances.



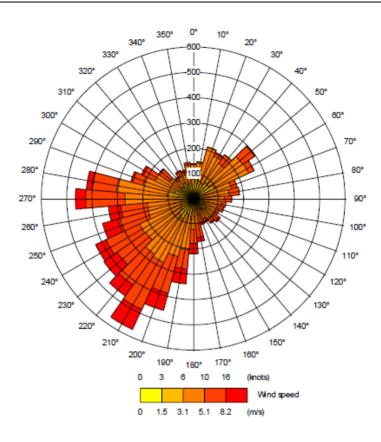


Figure 2: Wind Rose for Nottingham East Midlands, 2021<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> Dust Assessment: Swadlincote Resource Recovery Park (SRRP). Air Quality Consultants Ltd, July 2022



R&P Clean Power Ltd

## 2.4 Facility Access

All access to the Facility is from Cadley Hill Road (A514), then via the industrial area to the east on a hard-surfaced road which travels under the A444, this provides adequate and quick access for the emergency services.

The Facility access has been designed to accommodate a 16.5m long articulated HGV, being the largest vehicle which will visit the Facility. The HGVs will enter via Keith Willshees Way over the weighbridge. They will then proceed to the south of the MRF prior to being diverted into the required operational areas.

An access route for fire vehicles is available around the full perimeter of the building. There is a minimum dimension between kerbs of 4.0m and minimum gateway entrance width of 3.96m.



## 3 Management

## 3.1 Managing potential causes of fire

The following potential causes of fire are considered in this FPP:

- Arson or vandalism:
- Electrical faults;
- Hot works (e.g., welding or cutting);
- Hot exhausts;
- · Discarding of smoking materials;
- Build-up of loose combustible waste, dust, and fluff;
- Fuel spills and leaks;
- · Hot loads; and
- Reactions between incompatible materials.

#### 3.1.1 Arson / Vandalism

The Facility will be fitted with a palisade security fencing and gate at the main entrance. CCTV will be installed around the perimeter of the Facility to provide complete coverage of any potential entry point.

The Facility is staffed 24 hours per day, 7 days per week due to the ongoing nature of the activities on-site.

#### 3.1.2 Electrical faults including damaged or exposed cables

All electrical installations are completed by suitably qualified electrical personnel. All electrical wiring will be checked annually and certified by suitably qualified electrical personnel. Electrical equipment installed at the Facility includes transformers, switchgear and motors that will be installed, maintained, and periodically tested by suitably qualified technicians according to manufacturer's instructions/procedures and common operation standards practice.

The ERF would be connected to the existing National Electrical Transmission System (NETS) via a new 33kV distribution network connection ("the Electrical Connection"). The proposed Electrical Connection would be routed underground via the existing road network to the NETS PoC located on Cadley Lane just west of the Burton-on-rent to Leicester railway line. National Grid will have access to the substation for electrical inspections, maintenance, and upgrades as necessary, in accordance with their own procedures.

## 3.1.3 Hot works

When the Facility is operational, a full contractor management and permit-to-work system will be in place, including a hot work permit system with a fire watch of a duration in-line with good practice and risk assessment.



#### 3.1.4 Hot exhausts

The Facility is manned 24/7. Vehicles are turned off when not in use. All vehicles will be checked for significant deposition of dust on machinery's hot exhausts and engine parts at each change of shift and cleaned if required. Inspection will include fixed plant/machinery such as diesel engine fire pump and emergency diesel generator that will be subject to a regular cleaning and maintenance programme.

#### 3.1.5 Discarding of smoking materials

The Facility will be designated as "no smoking," and therefore there will be no smoking on the premises.

#### 3.1.6 Build-up of loose combustible waste, dust, and fluff

The Facility will be cleaned in accordance with a cleaning schedule. General upkeep and "good housekeeping" measures are carried out daily, and in accordance with an established cleaning schedule.

## 3.1.7 Fuel spills and leaks

All storage tanks and equipment containing oil or fuels (including the diesel oil tank for boiler start-up and the supplementary firing burners, grate hydraulic unit reservoir, steam turbine lubricating oils) will be provided with secondary containment with 110% of the storage volume. Therefore, any spillages or leaks of potentially flammable liquids will be contained.

#### 3.1.8 Hot loads

The fuel may have the potential for self-heating due to biological reactions within the waste. Methods to monitor the temperature of the waste in the bunker and stockpiles in the waste reception hall are described in Section 4.2.

In the event that hot loads are identified, the Facility is provided with a designated quarantine area where those can be transferred and effectively managed depending on the event (see Section 5.3).

## 3.1.9 Reactions between incompatible wastes

No hazardous waste is permitted to be accepted at the Facility. Therefore, no unstable or reactive materials should be brought into the Facility. Should any hazardous material be identified, it will be rejected in accordance with waste rejection procedures. It will be taken to the rejected loads quarantine skip either by hand or using a loading shovel, for collection and disposal / recovery at an appropriately licensed facility.

#### 3.2 Plant and equipment on-site

All mobile and fixed plant is included on an inspection and service schedule. Operatives are required to complete inspection records for all plant on a regular basis. All items of plant and equipment are serviced in line with manufacturer's recommendations and instructions. A service schedule is displayed in the Facility's office (control room), and records of all servicing and maintenance is also stored within the Facility's office. Plant and equipment are visually inspected prior to every use to ensure they are fit for purpose.

## 3.3 Training

Facility operatives are trained on how to prevent fires on-site, how to identify fire risks, and how to spot fires on-site.



All staff and contractors working on-site will be made aware and understand the contents of the FPP and the procedures that are in place in the event of a fire.



## 4 Preventing self-combustion

## 4.1 Managing storage time

All incoming delivery vehicles will be directed from the weighbridge to unload the fuel into the fuel bunker.

Under normal operating conditions fuel will be stored for a maximum of ca. 4 to 5 days prior to combustion (the total material storage on-site of 8,500m³ is equivalent to ca. 4 to 5 days of operation at Maximum Continuous Rating (MCR), depending on the density and calorific value of the ).

During long outages the status of the fuel deposited in the bunker will be regularly visually checked to detect possible signs of self- combustion also with the aid of installed temperature monitoring and controlling devices. Furthermore, the fuel will be regularly moved/mixed with the aid of the bunker overhead cranes to limit risk of self-heating.

Material is loaded into the boiler's feed hopper from the fuel pit using a grab fixed to an overhead crane. The overhead crane has a fully automated function, with distinct modes of automation, to include:

- 1. Semi-automatic control;
- 2. Fully automatic control; and
- 3. Manual control.

Typically, the operation will be in semi-automatic or fully automatic mode. The level of waste inside the bunker is mapped using radar sensors and the grab will have a computerised monitor to know which areas have been grabbed each time. This ensures that material is evenly selected from the fuel bunker, and that storage times do not exceed ca. 4 days. Facility operatives will utilise this information to ascertain if any parts of the bunkers have not been accessed by the grab within four days. In this circumstance any material that has accumulated in a corner of the fuel bunker will be removed by manual operation of the grab.



## **4.2** Monitoring and controlling temperature

No pre-processing of the fuel will take place on-site at the SERF and the fuel will not be subject to any processes that apply heat to the waste pile whilst the material is in storage. Thermal imaging cameras will be installed to detect hot spots in the bunker area. Additionally, infrared flame detection systems are installed, these are detailed in Section 6. Both fuel reception hall and fuel pit will be monitored by an appropriate number of CCTV cameras.

## 4.3 Management of fuel pile size

Fuel will be stored within the bunker. The maximum amount of fuel that will be deposited within the fuel bunker will be clearly established upon final detailed design, and not exceeded. The piles are formed against the back walls of the fuel bunker.



## 5 Preventing Fire Spreading

## 5.1 Separation distances

Storage of any flammable material such as oil and diesel tanks, is far away from the combustible waste materials on-site. All Facility machinery, including loading shovels, will be parked at least 10m from stored fuel when not in use.

#### 5.2 Fire walls

Fire resistant walls will be fitted on-site. The FPP will be updated to include the detailed locations upon operation. The walls will have a fire resistance period of 120 minutes. All other walls are constructed in compliance with Building Regulations.

#### 5.3 Quarantine area

It is anticipated that the quarantine area will be located within the tipping hall. The exact site of the quarantine area will be subject to the final detailed design.

The quarantine area is where burning or overheating material can be moved to. Under normal operation, this area will be used for vehicle manoeuvring and temporary waiting. In the case of an emergency which requires the need for a quarantine area to prevent the spread of fire, this area will be made available within a very short time frame for the transfer and temporary storage of material. Vehicles will not be parked whilst unattended in this area; the driver will remain within the cab of the vehicle if required to temporarily stop in this area. In the event of the quarantine area being required, any vehicles that have temporarily stopped within the quarantine area will be directed to move off-site immediately.

Material that has been identified as at risk of creating a fire within the fuel bunker (identified by the thermal imaging camera or visual inspection), under incident manager guidance, will in the first instance attempt to extinguish the fire using the bunker's fire suppression system water monitors. Alternatively, it can be quickly extracted from the pit by the spider crane (in manual operation mode) and deposited in the unloading bay beside the fuel pit, where it will be quenched using a water monitor (in manual operation mode) and taken to outdoors quarantine area, where additional quenching may be deployed utilising an external hydrant; all operations made as instructed / as trained / as was safe to do so. Otherwise, this area might be used to separate unburned material from the fire with the same procedures described above.

There will be flame detection to detect fire on vehicles. In the event that hot loads are identified upon arrival onto the Facility, the delivery vehicle will be transferred the quarantine area. The suspect constituents would likely be ejected from a vehicle, assessed as it emerges and under incident manager guidance, segregated mechanically using the loading shovel and dampened down using an external hydrant; all operations made as instructed / as trained / as was safe to do so.

Fuel out of specification found within the fuel pit will be extracted from the pit by the spider crane (in manual operation mode) and deposited in a dedicated unloading bay beside the fuel pit from which it will be moved to fuel hall quarantine area by means of heavy plant (i.e., wheeled loader).



## 6 Detecting Fire

#### 6.1 Fire Alarms

A fully automatic addressable Loss Prevention Certification Board approved (and installed by LPS 1014 certified installer) fire alarm system will be installed throughout the Facility to give an audio and visual indication in the event of a fire in the event of operation of manual break glass call point and / or an automatic smoke/heat detector. The system shall be designed for optimum performance in accordance with BS5839 Part 1 type P1L1 standards and zoned to suit the fire compartmentation requirements.

#### This will include:

- Flame detection (video or infrared or a combination of the two) in the reception hall;
- Flame detection (above the feed hopper area) and thermal imaging;
- A Very Early Smoke Detection Apparatus (VESDA) system in the boiler area;
- Flame and smoke detection in the turbine room;
- Smoke detection in the demineralized water production room;
- Smoke detection in the compressed air system room;
- Smoke detection in the auxiliary transformer room;
- Battery room smoke and gas detection and alarm system;
- VESDA system to all electrical rooms and control room;
- Smoke detection in the office;
- Smoke detection and thermal imaging in the sample store;
- Smoke detection in the workshop;
- Smoke detection in the weighbridge office;
- Smoke detection inside the container of emergency diesel generator package (installed outdoors); and
- Interface units in the plant system.

Sounding will be provided throughout all areas and flashing beacons / visual alarm signals will be provided in areas of high background noise as supplementary means of warning. Fire panel will be provided in the control room as well. On detection of a fire this will sound an alarm and indicate on the fire panel where the area in which the alarm has been triggered. The fire alarm system fitted to the Facility will conform to the following:

- The relevant clauses within BS 7671: IEE Wiring Regulation;
- BS 5839 Part 1;
- The relevant parts of EN 54;
- The Health and Safety at Work Act 1974; and
- Building Regulations and Approved Document B.

Due to the nature of the facility, the automatic fire detection and alarm system design will adopt a "double knock" function introduced to mitigate the risk of unnecessary shutdown of operational Facility equipment where it functions as a fire safety system within the building in which case it would continue to operate throughout any fire alarm.



The design, installation and maintenance of fire detection system will be covered by an appropriate UKAS-accredited third-party certification scheme.



## 7 Fire Suppression

A fire suppression system will be provided including the following equipment:

- Fuel reception hall: Roof level sprinklers controlled automatically by one dry control
  valve will be installed along the entire waste reception building to meet with UKAS
  standards.
- Fuel Bunker: Roof level sprinklers controlled automatically by one dry control valve will be installed along the entire pit to meet with UKAS standards. At least two electrically driven oscillating monitors/fire cannons controlled via a deluge control valve will be installed as well. The monitors/fire cannons should operate automatically and move through a predefined arc through the vertical and horizontal axes, designed to provide adequate coverage of the bunker area. The fire service/Facility operators should be able to manually override the monitors from the central control room. There will also be a deluge system to flood the boiler feed hopper in case of fire in the hopper.
- Steam turbine room: Sprinklers over bearings and oil systems will be provided in accordance with NFPA 850.
- Boiler auxiliary burners: Appropriate automated suppression system will be installed over the diesel auxiliary burners.
- Firewater pump house: Equipped with a sprinkler system.
- Automatic gaseous (inert IG-55) extinguishing system for electrical rooms (medium voltage room, battery room, low voltage rooms, CEMS room).

Outside of the building the fire suppression system will comprise a private hydrant ring designed and installed in accordance with BS 9990: 2015. Hydrants will be installed not more than 90m from an entry to any building on the Facility and not more than 90m apart and should be not less than 6m from the building or other risk (Note: the relevant section of NFPA 24 states that hydrants should be placed no less than 12m from the buildings).

In addition, extinguishers (foam, carbon dioxide, powder) will be placed in suitable locations throughout the Facility. The location will be determined before the building is occupied via risk assessment so that a schedule of the provision of hand-held fire appliances throughout the premises will be accurately undertaken. The Operator will be responsible for the regular inspection and maintenance of extinguishers within all common areas.

The design, installation and maintenance of all automated suppression equipment will be covered by an appropriate UKAS-accredited third-party certification scheme.

The Facility's suppression system will provide means to prevent fire spread sufficiently to allow the Local Authority Fire Service to organise themselves into a position to be able to implement adequate system of firefighting accessing to heavy plant and get some specialized resources to Facility, depending on the situation.

The combination of Facility's suppression system with the presence at Facility of:

1. Heavy plant to move waste: wheeled loading shovel within the fuel reception hall and the spider crane over the fuel bunker which can be operated in manual mode to let Facility operators decide which is the best action to undertake in case of an alarm or in coordination with the fire service once they have arrived at Facility. The control room will be 120 minutes fire rating construction enclosure to allow coordination of such operators' actions, with the possibility to also control the water cannons within the bunker and fuel reception hall;



- 2. Quarantine area in the Reception Hall of the Facility to separate (and quench, if necessary) waste; and
- 3. The possibility to evacuate smoke from the building through mechanical ventilation openings and dedicated roller shutter smoke vents installed on fuel reception hall walls to allow fire rescue service to enter into the building.

There is the means for effective firefighting, enabling a fire to be extinguished within four hours, considering that firefighting water in exceedance of the amount stored at Facility shall be provided by Local Authority Fire Service.



## 8 Water Supplies for Firefighting

The supply of firewater to the Facility will be specified in accordance with the ACE Technical Risks – Engineering Information Bulletin Guidance Document.

With regards to the adequacy of firewater supply to the Facility, the EA guidance states that a fire on a 300m³ waste pile will require 2,000l/min of water for a three-hour period to be extinguished; a total volume of water of 360m³. As such, a fire could be extinguished with three hours of active firefighting commencing.

Firewater supply will be clearly established upon final detailed design.



## 9 Fire Water Containment

The engineered containment system on-site will prevent the release of potentially polluting liquids to surface water and groundwater.

The whole of the Facility area is surfaced in a mixture of concrete hardstanding or asphalt.

Following a fire, all firewater will runoff into either the on-site drainage systems or the waste bunker. The firewater will be analysed to establish whether it is safe to discharge. If the firewater unsuitable for discharge, it will be pumped out and disposed of safely by an external waste management company.

#### 9.1 Firewater containment in fuel bunker

The bulk density of the fuel in the bunker is sufficiently low to ensure that a significant volume of the bunker is occupied by air.

The engineered drainage system provides that water within fuel reception hall is discharged towards fuel bunker. Fuel pit overflow is connected to external drainage network via bypass line and isolating valve to be opened in case of fire to take advantage of the full containment capacity.

## 9.2 External Storage

Should the capacity within the drainage systems be exceeded, firewater will overflow into the designated "sacrificial" external areas. These are areas which are designed for shallow flooding. The position of the kerbing will prevent the escape of any water from these areas.

Facility operatives undergo awareness training to ensure a full understanding of the containment engineering which minimises the environmental impact of the Facility in the event of a fire. The engineered containment system is subject to routine visual inspection.

Identified breaches in the engineered containment are remedied to ensure continued integrity of the facility, and to prevent pollution of surface or groundwater. Records of inspection and maintenance are maintained by the Facility manager.



## 10 Actions to be undertaken following a fire

#### 10.1 Actions in the event of a fire

In the event of a major fire event a range of measures will be undertaken to ensure the Facility is ready to recommence full operations. The EA and the Fire Brigades will be notified by Facility management immediately and kept regularly updated thereafter.

Neighbouring businesses will be notified regarding any fire which may affect their operations. A register of contact details will be kept on file for this purpose. If a fire occurs during typical working hours, on-site personnel may contact the neighbouring sites directly. It will be the responsibility of the Facility manager to ensure this is done.

In the event of a fire and as soon as the fire detection procedures have been enacted and it is safe to do so the following actions will be undertaken:

- Close the penstock valves to prevent the escape of firewater;
- Open fuel pit overflow bypass line valve to take advantage of the full Facility containment capacity;
- If possible, unburned material will be separated from the fire using heavy plant and quarantined; and
- The burning area will be isolated, and attempts will be made to extinguish the fire utilising the on-site firefighting equipment if safe to do so.

The Facility will not continue to accept waste if there is a fire event on-site. All ongoing deliveries will be immediately interrupted, and vehicles evacuated.

Should the release of firewater from the Facility boundary be an issue during firefighting or after the fire is extinguished, action will be taken to rectify the situation immediately. Including the use of tankers to be brought to Facility and the contaminated fire water pumped from the bounded areas and treated in an approved manner by a qualified contractor for specialized treatment. All remediation action will be recorded, and advice sought from the EA if necessary.

The Facility building is constructed to the appropriate standards. Should a fire event compromise the buildings stability or integrity, the Facility will be immediately evacuated.

## 10.2 Actions after a fire event

After a fire event, the following procedure will be implemented depending on the severity of the fire:

1. A small and containable fire that can be dealt with in-house using suitably trained staff and firefighting equipment located on-site:

The fire will be recorded in the on-site log, including the causes of the fire and methods used to manage the fire. An assessment will be carried out to determine whether further mitigation measures could have prevented the fire. Any outcomes to be implemented on-site will be incorporated within this FPP and the Facility's EMS as required.

2. A larger fire that requires the presence of the Fire and Rescue Service:

If the Facility has been told to evacuate or cease operations by the EA and/or Fire and Rescue Service, the Facility personnel will wait until told it is safe to re-enter and resume operations. The fire will be recorded in the on-site log, including the causes of the fire and methods used to manage the fire. An assessment will be carried out to determine whether further mitigation



measures could have prevented the fire. Any outcomes to be implemented on-site will be incorporated within this FPP and the Facility's EMS as required.

Should damage be sufficient to prevent the Facility from being able to handle waste and/or produce electricity, the Facility will cease accepting waste.

The Incident Manager will liaise with the EA to determine a plan-of-action to introduce waste treatment and storage operations at the Facility, and the timescales involved to achieve this.

Any waste materials which is no longer suitable for incineration will be taken off-site for disposal / recovery at an appropriately licenced facility.

Once the Facility has been cleared of affected wastes, an inspection will be undertaken by the management, with appropriate technical expertise, with regards to any structural damage, or damage to the drainage network, and internal and external surfacing.

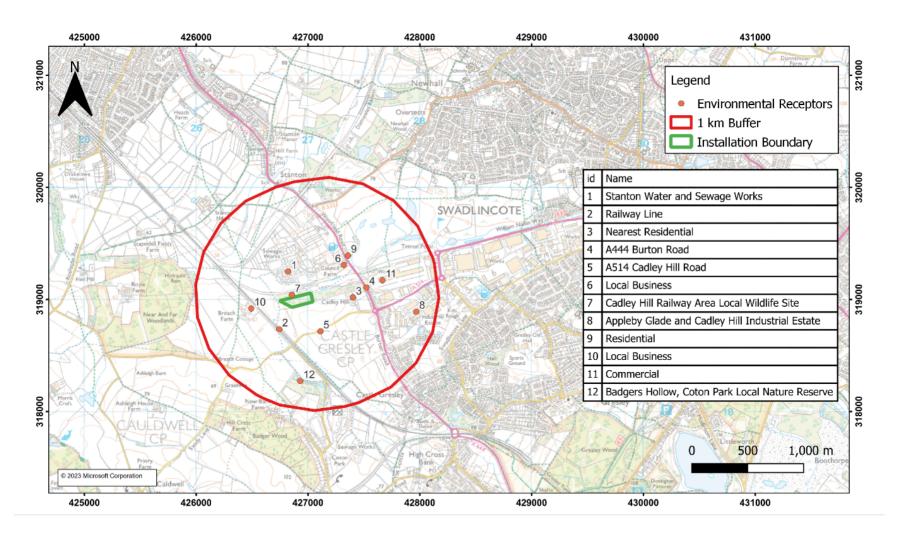
If the fire was contained to particular locality within the Facility, operations at the Facility will be restricted to the unaffected area, providing that the Facility can comply fully with the permit conditions. No Facility operations will recommence in any fire-affected areas until all necessary inspections and repairs have been completed.

The EA will be notified of the inspections and of any repairs undertaken, and of the recommencement of activities on-site.



## **Appendices**

## Appendix 1 - Site Receptors Plan





## Appendix 2 – General Plan Layout, Fire Fighting Arrangements

The FPP will be updated to include detailed firefighting arrangements and containment feature locations upon operation.

