



Fire Prevention Plan

Davis Commercial Services



Helping clients prosper through compliance

SITE DETAILS

Davis Commercial Services Ltd
Baron Avenue
Earls Barton
Northampton
NN6 0JE

OPERATOR DETAILS

Davis Commercial Services Ltd
Baron Avenue
Earls Barton
Northampton
NN6 0JE

PERMIT REFERENCE

EA/EPR/EB3100HN/V002

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Wiser Environment Ltd, Suite 11 Manor Mews, Bridge Street, St Ives, PE27 5UW
94 Xuan Thuy, Thao Dien Ward, District 2, Ho Chi Minh City, 713385
+44 1480 462 232 | www.wiserenvironment.co.uk | info@wisergroup.co.uk

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WHO THIS PLAN IS FOR

This plan is for the Technically Competent Manager, Site staff, contractors and the local Fire and Rescue Service (FRS). A copy of this plan will be kept on site and accessible for site staff, contractors or the FRS to review.

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DRAWINGS

REFERENCE	TITLE	DATE
K256.1~20~030	Permit Boundary Plan	24/11/2023
K256.1~20~028	Site Layout Plans	24/11/2023
K256.1~20~029	Site Layout Plan Process Building and front yard	24/11/2023
K256.1~20~025	A1 Site Layout Plan	24/11/2023
K256.1~20~026	Site layout Plan Storage	24/11/2023
K256.1~20~022	Site Location Plan	24/11/2023
K256.1~20~24	Sensitive Receptors	24/11/2023
K256.1~20~031	Fire Rescue Service	24/11/2023
K256.1~20~032	Fire Hydrants	24/11/2023

FIGURES

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Figure 2	Wind Rose Indicating Prevailing Wind Directions

APPENDICES

APPENDIX	TITLE	DATE
Appendix A	Sensitive Receptors Table	24/11/2023

1. INTRODUCTION

This document is the amended Fire Prevention Plan (FPP) that accompanies the application to vary the Environmental Permit (EA/EPR/EB3100HN/V002) at 12 Baron Avenue, Earls Barton, Northampton, NN6 0JE.

The application has been prepared by Wiser Environment Limited on behalf of the applicant Davis Commercial Services Ltd (DCS).

Recent expansion of the business requires the process to be modernised in order to continue to meet the environmental standards and the technical guidance, as well as increase the process efficiency, which allows to recover more value from the waste and improve the environmental benefit of the process.

To accommodate the new process a building has been added to the permitted area located at the back of the existing main building. The proximity of the new building allows for efficient transport of the waste streams between working areas, with minimal impact on surrounding environment.

DCS receive WEEE comprising of mainly commercial end of life (EoL) refrigeration units, and commercial catering equipment, as well as separated waste stream from the construction and demolition industry, i.e. metals and insulation panels.

The EoL refrigeration units treated at the facility do not contain Ozone Depleting Substances (non-ODS) as refrigerant or blowing agent in the insulating panels.

Of the commercial units received these can be further divided into two distinct types: either a 'remote' or 'integral': an explanation of the difference between the two types is provided in the table below.

EoL unit type	Key features
Integral	Units which contain compressors with oils and refrigerants and are designed to independently cool within the cabinet shell.
Remote	Units which do not contain compressors with oils and refrigerants. The cabinet or shell in which products are placed are the only components received on site. Oils and refrigerants are held in centralized systems within the retail units, providing refrigeration for several cabinets. These are disconnected at the retailer. Therefore, remote units don't contain refrigerant gas when delivered.

This Fire Prevention Plan (FPP) has been produced on behalf of Davis Commercial Services Ltd (the operator and applicant), in line with current guidance and best practice, 'Fire prevention plans: environmental permits' available on Gov.uk, to support a bespoke environmental permit application for an Installation under the Environmental Permitting (England and Wales) Regulations 2016 (as amended).

This document should be read in conjunction with other supporting information contained within the Application pack.

1.1. Permit Variation

The permit variation application proposes the following:

1. Addition of a building, known as the A1 building, to the Permitted area to carry out manual dismantling and 'preparation for re-use' processes.
2. Addition of a point source emission to air

These need to be added to the permitted area to accommodate the new modernised process, which has been implemented in order to continue to meet the environmental standards and the technical guidance, as well as increase the process efficiency.

The proximity of the new building allows for efficient transport of the waste streams between working areas, with minimal impact on surrounding environment.

3. Addition of the following activities to the permit:
 - Size reduction: Shredding and fragmentising
 - Density separation
 - Pelletising
 - Granulation
 - These activity descriptions are introduced to align their description to the treatment process carried out at DCS.
4. Additional EWC codes:
 - 17 04 01 copper, bronze, brass
 - 17 04 02 aluminium
 - 17 04 03 lead
 - 17 04 04 zinc
 - 17 04 05 iron and steel
 - 1704 06 tin
 - 17 04 07 mixed metals
 - 17 04 11 cables other not containing oil, coal tar and other hazardous substances
 - 17 06 04 non ACM insulation materials consisting of or containing hazardous substances
 - 17 06 04 insulation materials other than those mentioned in 17 06 01 and 17 06 03

The treatment process developed at DCs is suited to process these types of wastes, as mixed non-ferrous and ferrous metals as well as insulation panels are routinely processed as part of the EoL fridge units' treatment at the facility. The proposed additional EWC codes would not introduce any additional environmental risk.

5. Increase the storage capacity of WEEE to a maximum of 10,000 tonnes at any one time.
6. Increase the annual throughput at the site activities will be up to 40,000 tonnes.

The proposed increase in storage and throughput is to reflect expansion of the business, increase in process efficiency and to future proof the business and make sure that environmental standards continue to be met.

The increased storage and throughput are comparable to quantities allowed in Standard Rules permits for WEEE ATFs. Therefore DCS's processes and infrastructure are suited to accommodate the increase without introducing any additional environmental risk

7. introduce preparation for re-use as a directly associated activity. This is to make sure that materials are managed according to the waste hierarchy.

2. SCOPE

This Fire Prevention Plan (FPP) is intended as a working procedure document to prevent and limit the causes of fire and to mitigate the impacts of fire should one occur. It applies to everyone on site:

- Site Management;
- Technically Competent Manager (WAMITAB);
- Trained Site Operatives
- Visiting Contractors
- Emergency Services

This document has been prepared using the guidance and template provided by the Environment Agency (EA).

This Fire Prevention Plan relates to DCS's Earls Barton Recycling Facility.

This FPP supports the issued environmental permit Environmental Permit (EA/EPR/EB3100HN/V002) at 12 Baron Avenue, Earls Barton, Northampton, NN6 0JE. A hard copy of this FPP will be displayed in the office on site and all staff shall be made aware of the measures outlined in the FPP. Required training of the related procedures shall take place and in the case of an emergency the FPP shall be presented to the Fire Rescue Service upon arrival to site.

The site, is located within the established industrial estate located on Baron Avenue, Earls Barton, Northampton, NN6 0JE and is shown on K256.1~20~022 Site Location Plan Aerial Image.

The site is located to the north-east of Earls Barton, approximately 5 km south-west of Wellingborough and 11km east north-east of Northampton city centre. The site is centred at National Grid Reference (NGR) 485514, 264571 (SP 85514 64571). The northern site boundary is approximately 255m south of the A4500, Main Road.

The site includes three areas:

- The main building accessed off Baron Avenue
- A second building where the main dismantling (stage 1) process is carried out. This is known as the A1 building. This adjacent to the south of the main building centred at centred at National Grid Reference (NGR) 485483, 264523 (SP 85483 64523) and is accessed off Mallard Close.
- A storage area located approximately 50m to the West, centred at NGR 485364, 264571 (SP 85364 64601).

Figure 1 shows an aerial view of the area with permit boundary in green.

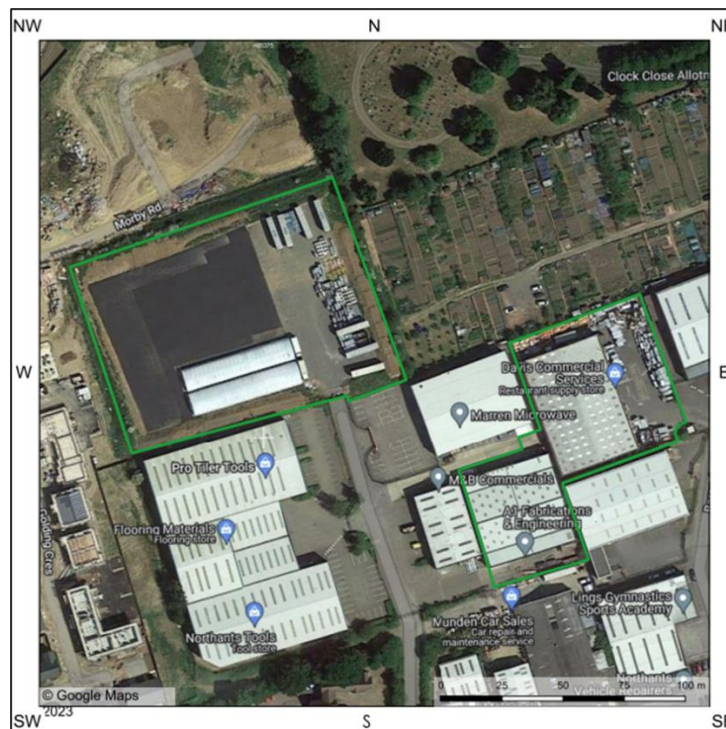


Figure 1. Aerial image of the site, showing the permit boundary in green

3. PROCESS DESCRIPTION

3.1. Process Description

Davis Commercial Services Ltd undertake waste activities including storage and dismantling of WEEE.

The site includes three areas:

- The main building accessed off Baron Avenue
- A second building where the main dismantling (stage 2 preparation) process is carried out. This is known as the A1 building.
- The storage yard

These are represented in drawing K256.1~20~028 Site Layout Plans.

3.2. Main Process Building

The Main process building includes the following features (see K256.1~20~027 Site Layout Plan Process Building and front yard):

- Office and welfare facilities
- Temporary storage area for integral units to be de-gassed and de-oiled
- Integral units de-gassing and de-oiling area
- Small integral units dismantling area
- Temporary storage area for dismantled units prior to treatment
- Treatment system

The yard in front of the main building (accessed via Baron Avenue) includes the following features:

- Non-Ferrous and Ferrous Metals storage area
- Weighbridge
- Quarantine area
- Surface water drainage system

3.3. A1 building

The process area in the A1 building and immediate outside include the following (see K256.1~20~025 A1 Site Layout Plan):

- Unloading area
- Office and welfare facilities
- Temporary storage area for units to be processed
- Dismantling area
- Testing and re-use area

- Electric forklift trucks charging area

3.4. Main storage area

The receipt and main storage areas are illustrated on plan K256.1~20~026 Site layout Plan Storage. This identifies the following key features.

- Access arrangements
- Security – fencing & CCTV
- Receipt, inspection and operational storage area
- Quarantine area
- Site drainage arrangements
- Spill kits
- Fire extinguisher
- Area of impermeable surface.

EoL units will be delivered to site via the entrance to the main storage area (accessed off Mallard Close) where the EoL units undergo acceptance checks and inspections prior to being assigned a unique ID and being stored, awaiting depolluting (de-oiling and degassing, where necessary for integral units only) and dismantling.

Occasionally, loads that contain exclusively integral units may be unloaded in the yard in front of the main building (off Baron Avenue) and stored directly in the main building.

The storage area includes the following features:

- Weighbridge
- Quarantine area
- A polytunnel for weatherproof storage of units if necessary
- Impermeable surface with sealed drainage and interceptor

Following acceptance checks the remote units are transported to the manual dismantling area of building A1. All units are brought into the building ('READY TO PROCESS STOCK AREA' K256.1~20~025 A1 Site Layout Plan).

The integral units that require depolluting are transported to the main building instead.

Roller shutter doors are closed during dismantling to prevent activities noise to reach sensitive receptors.

All treatment activities including depolluting and dismantling are carried out within the process buildings, with doors closed.

During the dismantling process (stage 1) the constituent parts of the EoL fridge are separated. These are:

- Metals – Ferrous & non-ferrous

- Oil – removed from integral units – limited volumes created
- Gas – removed during de-gassing of integral units
- Compressors – removed during dismantling of integral units
- Fluorescent tubes – removed during dismantling of units
- Printed Circuit Boards – removed during dismantling of units
- Plastic & rubber – removed during dismantling of units
- Wood – limited volumes liberated from frames of certain types of units
- Insulating panels – non-hazardous (H₂O & CO₂ blown, polystyrene)
- Insulating panels – hazardous (due to flammability when containing pentane)
- General office waste – limited volumes created

The results of the dismantling process (stage 1) are the EoL fridge carcasses, i.e. insulation foam panel and metals undergo further treatment.

In the automated treatment process the carcasses are fed by conveyor belt in to a crusher and then through a density separator to separate the insulation foam from any non-ferrous material.

The foam then travels along a conveyor into a granulator for further size reduction, this is sent through a cyclone unit and packaged into bags or pelletised.

Given that the panels are hazardous according to their potential flammability the system incorporates an extraction/abatement system: any gas released is captured by the extraction system passes through a fabric filter to capture dust and a granular activated carbon (GAC) filter to neutralise volatile organic compounds (VOCs).

The abatement system encapsulates all process points where the insulation foam is crushed and may release the VOCs, i.e. around the crusher and the granulator.

Following processing, dismantling, and separation, materials are stored, where appropriate in suitable containers, prior to dispatch from site.

4. TYPES OF COMBUSTIBLE MATERIALS

4.1. Combustible Waste

waste will be stored in compliance with the sizes and separation distances stated in the EA's FPP guidance.

Individual stock areas for units will not exceed 450m³.

Table 1 details the maximum dimensions, particle size and capacity of the storage areas in place compared to the maximum capacity allowed by the FPP guidance.

Table 1. Storage Area – Dimensions & Volume

WASTE TYPE	FORM OF STORAGE ¹	APPROXIMATE CAPACITY	PARTICLE SIZE
Refrigeration units (Integral & remote) and other WEEE	Freestanding stockpile	Working volume during day reducing to 450m ³ maximum	>150mm
Metals – ferrous & non-ferrous	Contained –Skip or IBC	14 y ³ (10.7 m ³) per skip 1m ³ per IBC	Approximately 50 to 10cm x 5 to 2cm
Plastic & rubber	Contained –Skip or IBC	14 y ³ (10.7 m ³) per skip 1m ³ per IBC	>30mm
Wood	Contained –Skip or IBC	40 y ³ (23 m ³) per skip 1m ³ per IBC	>30mm
Glass	Contained –Skip or IBC	14 y ³ (10.7 m ³) per skip 1m ³ per IBC	>30mm
Printed circuit boards	Contained –IBC or bag	1m ³ per IBC or bag	<30mm
Compressors	Contained –IBC or skip	40 y ³ (23 m ³) per skip 1m ³ per IBC	>30mm
Fluorescent tubes	Contained – lamp container pallet box	1m ³	>150mm
General Office waste	Contained – 1100l wheelie bin	1m ³	>30mm

The storage of units in the main storage area will be subject to a minimum separation distance of 6m from each stockpile, other combustible materials, the site boundary and other potential ignition sources.

Units will be moved from the storage area to the process buildings on an ‘as required’ basis, these units will be placed in the ‘to be worked’ bay. It is anticipated that the number of units in this area will be sufficient to provide working stock for the dismantling area for the subsequent working days. Whilst numbers of units in this area may vary across the working day, at the end of the working day the volume of units will not exceed 450m³.

¹ Indicative form of storage, alternative options may be utilized to provide similar scale & type of storage.

Other materials are containerised and accessible so any fire inside it can be put out and, where safe to do so, are able to be moved to prevent the fire spreading.

During the meeting with Eddie O'Neil (Northamptonshire FRS) and Bethan Saunders (EA Fire Prevention Plan Area Lead), the fabric of the brick built processing building this was not identified as an issue by either party.

4.2. Persistent Organic Pollutants

The following materials produced by the treatment process are classified as POPs waste:

- Printed circuit boards
- Electrical Cables
- Plastics and rubber

5. USING THIS FIRE PREVENTION PLAN

5.1. Where the Plan is Kept and How Staff Know How to Use it

A hard copy of the plan shall be readily available at the site office during operational hours and is available on request to visitors and contractors. All staff are to read the FPP as part of their induction and sign a training log. Any changes to the plan shall be communicated to staff via training. Visitors and visiting contractors are given a brief overview key fire related measures such as the evacuation muster point and any fire extinguishers in their work area. If their visits extend over considerable length of time or on a regular basis, then they will be encouraged to read the plan in full and sign the training log. Emergency services will be allowed immediate access to the plan and further hard or digital copies can be made available if required.

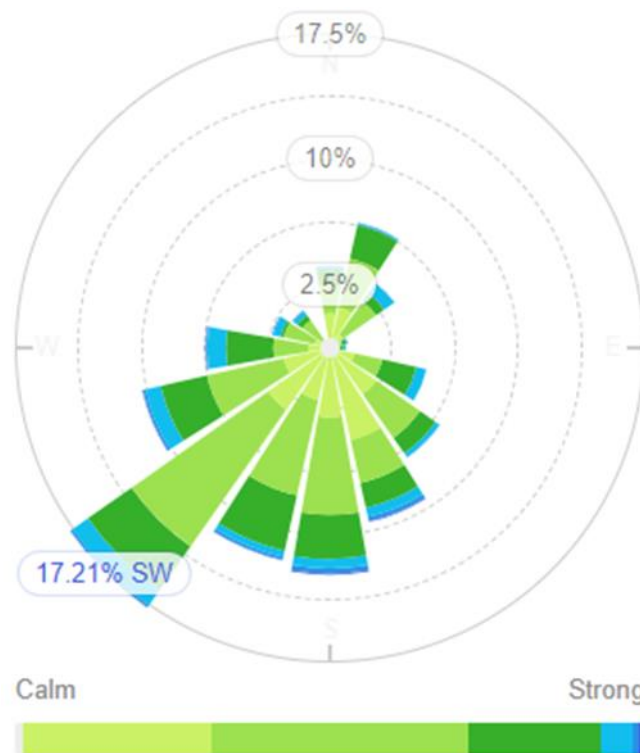
5.2. Testing the Plan and Staff Training

Evacuation drills are conducted monthly at the discretion of the Site Management in accordance with the Fire Drill Procedure and are recorded in the site diary. Any issues addressed through site meetings and further training if necessary.

6. PLAN OF SENSITIVE RECEPTORS NEAR THE SITE

Sensitive Receptors are shown on the Sensitive Receptors Plan K256.1~20~024 and in the Sensitive Receptors Table (Appendix A). The Sensitive Receptors displayed are in all directions. The closest observing station where wind statistic data is available is at Bedford, approximately 20km south east of the permit boundary. Figure 2 presents the wind statistics on a wind rose as an annual average using data from the previous 5 years (2018-2023). The wind rose indicates that the sensitive receptors located towards the North East of the site are potentially at greatest risk from hazards transmitted through the air.

Figure 2. Wind Rose Indicating Prevailing Wind Directions



7. MANAGE COMMON CAUSES OF FIRE

7.1. Arson

The site is accessed by security gates which are secured when the site is unoccupied. Unauthorised persons will be challenged as to the reason for their presence on the site. Live 24-hour recording CCTV cameras are located inside the building and outside yard area, and the storage area these provide surveillance of the entire site (see Site Layout Plans for location of CCTV cameras). Daily Site inspections are carried out including around the boundary of the site. The process building is secured by a lockable shutter door during periods when the site is unmanned. The storage area is secured by lockable palisade security gates.

7.2. Self-combustion

Given the nature of the units this is extremely unlikely to occur. Due to the nature of the business, units are unlikely to be held on site for longer than one month, far less than the 3-month guideline stated in the EA's Fire Prevention Plan guidance. Staff will informally monitor the storage areas throughout the day. Waste volumes will be maintained in accordance with the EA's Fire Prevention Plan guidance. The site will be subject to good housekeeping measures to prevent the accumulation of particles or materials which could pose a fire risk. All working areas are swept and cleared at the end of each day to minimise fire risks.

7.3. Plant and Equipment

All dismantling is undertaken manually. Treatment equipment is in areas at least 6m from storage areas. Equipment will be maintained daily/weekly by the operator in accordance with the manufacturer's guidelines. All breakdowns or faults will be actioned and recorded. Formal inspection of the electrical equipment is completed on a regular basis. Units are predominantly manually dismantled and sorted with the exception of metals and panels which are size reduced/ compacted using the automated treatment system. All forklift trucks will be maintained in accordance with manufacturer's guidelines and best practice to prevent fuels and combustible liquids leaking or trailing from vehicles. Spill kits will be available on site and staff are trained in spillage control should a leakage of fuels occur.

7.4. Electrical Faults Including Damaged or Exposed Electrical Cables

Electrical wiring is fully certified and maintained, no electrical cables or devices are to be kept near units and metal storage areas. Electrical checks are carried out by an in house engineer every 6 months and by an external engineer on an annual basis. All site equipment will be maintained and checked in accordance with the manufacturer's guidelines, all breakdowns or faults will be recorded. In the event of an electrical failure, plant or equipment will be shut down

and removed from the area to await repair. A minimum exclusion zone of 6m will be maintained between combustible materials, forklift trucks and equipment when not transferring loads.

The site has undergone a DSEAR assessment to identify any areas of the site that could be at risk from explosive atmosphere. The assessment has identified three areas of the process where explosive atmospheres may occur. These areas were made intrinsically safe according to the DSEAR regulations.

An 'Harden' automatic fire suppression system is installed around the shredder/crusher/fragmentiser and conveyor belts, which are at higher risk of ignition.

7.5. Electrics Certification

All electrics are certified every five years.

7.6. Electrical Equipment Maintenance Arrangements

Electrics are fully certified by a competent person, every 5 years. All electrical equipment is PAT tested once a year.

7.7. Discarded Smoking Materials

The site operates a strict no smoking policy in all areas other than the designated.

7.8. Smoking on Site Policies

The site operates a strict no smoking policy. Regular housekeeping will be maintained throughout the site.

7.9. Hot Works Safe Working Practices

No hot works will be carried out in proximity to the EoL fridge storage and treatment areas. All hot works undertaken as part of the maintenance and repair of non-waste fridges will be subject to a Permit to Work system.

7.10. Industrial Heaters and Use

Industrial heaters are not used on site.

7.1. Hot Exhausts and Engine Parts

Forklifts used on site are electric. The 360 loader used to transfer waste from the reception/storage area to the storage and dismantling areas in the process building will remain at least 6m from all combustible wastes when not in use. Operators will ensure that at no point are combustible waste subject to prolonged exposure to hot exhausts. No other vehicles are used within the main processing building except for forklifts.

8. FIRE WATCH PROCEDURES

The yard supervisor will conduct start and end of the day checks to the site, fleet and the security of the site. This occurs every day Monday – Saturday. Operating hours are:

- Monday – 06:00 – 18:00
- Saturday – 06:00 – 14:00

9. IGNITION SOURCES

9.1. Batteries

No batteries accepted or treated at the site.

9.2. Leaks and Spillages of Oils and Fuels

All liquid wastes will be held in sealed containers away from vehicular movements. All such containers will be provided with secondary containment and have a spill kit available for deployment in close proximity should a spillage occur. Any leaks or spills will be recorded in the daily site diary.

The Site will utilise a simple 'Stop-Contain-Divert' model for containing spillages and have spill kits or granules available on site to protect the surface water system and to prevent pollutants from entering the site drains. Site staff are trained and familiar with their use in an emergency situation through the use of spill drills. In the event of a spillage entering the surface water drainage system, the penstock valve will be closed to prevent pollution exiting the site drainage system. The penstock valve will remain closed until the spillage has been safely pumped from the drainage system and disposed of at an appropriately permitted facility.

9.3. Build-Up of Loose Combustible Waste, Dust and Fluff

Waste type accepted and methods of processing mean significant levels of loose material, dust or fluff are unlikely to build up. Regular housekeeping and inspection of the site are carried. It is the responsibility of the Warehouse Manager to carry out a fire watch at the start and end of every shift. This includes a visual check to ensure dust has not settled on hot plant and equipment surfaces and that any potential ignition sources are safe and away from combustible materials.

9.4. Reactions Between Wastes

Due to the short periods of time that units are stored and the prompt turnaround periods, the likelihood of an exothermic reaction occurring is unlikely. Despite this, the following measures detailed below will be implemented to ensure risk levels remain low throughout storage periods.

The storage areas volumes will be in accordance with the maximum pile sizes stated in Fire Prevention Plan guidance.

Refrigerators containing ozone depleting substances are not accepted at the site; any unauthorised materials identified during the waste acceptance stage will be rejected or relocated to the quarantine area pending removal from site to a suitably permitted facility.

Staff are trained to visually monitor EoL fridge and metal storage areas and to identify any hot or smouldering materials. In the unlikely event that any self-combustion occurs, smouldering or burning material will be removed by forklift to the quarantine area, located away from combustible materials, and extinguished by a trained member of staff using one of the fire extinguishers located around the facility.

A minimum separation distance of 6m will be kept between different storage areas at all times in accordance with the EA Fire Prevention Plan guidance. Therefore, in the unlikely event that self-combustion does occur, fire should not spread between piles.

Due to the very low risk of self-combustion, the need for monitoring other than regular routine visual inspections is not required.

10. WASTE ACCEPTANCE AND DEPOSITED HOT LOADS

Regardless of the waste, drivers are required to report to site weighbridge office upon arrival so relevant documentation can be verified. Where necessary site staff will visually inspect the waste to be tipped. Where these, random inspections or non-conforming waste is found after it has been accepted they will be placed immediately into the designated quarantine area. The Environment Agency shall be informed immediately.

Quarantined waste shall be removed from site within seven days and appropriate signage shall be used to identify quarantined waste. Records of any non-conforming waste shall be recorded in the site diary.

10.1. Table 2: Pre-Acceptance Procedure

At the Earls Barton facility, no ODS (ozone depleting substances) containing refrigeration units will be accepted for treatment.

DCS accepts commercial EoL fridges, and source segregated insulation panel and metals. The types of wastes to be accepted at the site are detailed in the List of Waste (K256.1~09~009).

A pre-acceptance procedure is followed in accordance with section 3.1 of the EA's appropriate measures guidance for WEEE and WTE.

The only EoL fridge units and insulating panels accepted are the following:

- using hydrofluorocarbons (HFCs), hydrocarbons (HCs) as refrigerants;
- using CO₂, water and HCs as insulating panels blowing agents.

To help determine the type of refrigerant and blowing agent prior to being scheduled for delivery to site, where possible, a pre-acceptance procedure will be used to gather information about the type of units in the load, obtained from the waste producer and assessed for acceptability.

As a minimum, information for each load will include:

- Manufacturer
- Type of unit (remote, integral)
- Information reported on the "appliance rating plate"
- Source of the refrigeration unit
- Type of refrigerant used
- Weight(kg)
- Volume

The following information will also be collected if available:

- Age of the unit
- Blowing agent used in insulating panels

Waste producers are encouraged to send pictures of the units in the load as well as pictures of the rating plates/labels, when available.

The Technical Competent manager (TCM) (or nominated alternative) will review the information provided to determine whether it is sufficient for acceptance of the waste on site.

Where the information provided is deemed insufficient, the Operator will request further information from the waste producer.

Where uncertainties remain on whether the refrigeration units in a load are compliant with the Permit, a precautionary approach will be used, and the operator will decline the load.

For every enquiry, the load is given a unique reference number, contents of the load listed along with the information provided by the waste producer, and whether the load has been accepted or not. The information is recorded.

The load schedule information is transferred daily to a database and will be used to ensure that capacity is available, as part of the site's stock control. Where there is no capacity the load shall be declined at the pre-acceptance check stage.

10.2. Waste acceptance

On receipt at the site the waste acceptance procedure will include review against pre-acceptance information, duty of care paperwork (Hazardous Waste Consignment Notes, HWCN or Waste Transfer Note) and a visual check for unit integrity and compliance. All relevant staff are trained in the waste acceptance procedure, which includes a visual inspection to identify any non-conforming wastes within the load.

- DCS-HSE-08 Waste acceptance
- DCS-SOP-04 Unloading vehicles

DCS will only accept those wastes that comply with the permit. Non-conforming loads will be quarantined or rejected depending on quantity of non-conforming waste.

All deliveries of units for processing arrive at the main storage area or main building front yard and are weighed on the weighbridge.

The duty of care paperwork (Hazardous Waste Consignment Notes (HWCN) or Waste Transfer Note (WTN)) shall be examined to check that it meets the legal requirements and that the information provided at the pre-acceptance stage is consistent.

The load shall then be subject to a visual check: trained operational staff shall check the load to ensure that the load contains only the units described in the schedule and duty of care documents. Non-permitted loads will be rejected at this stage and not allowed to be unloaded.

A detailed check is carried out to ensure the HWCN/WTN number matches the number consigned, and for the presence of units containing Ozone Depleting Substances (ODS) (as refrigerant and panels blowing agent) and Hydrofluorocarbon (HFC) (blowing agent).

Where identified after unloading non-permitted waste will be segregated and stored in a designated quarantine/isolation area prior to removal from site (Quarantine area in Site Layout Plan Storage Area K256.1~20~026).

Contaminated or non-conforming loads identified during the initial inspection will be rejected and details of the rejection along with dates, times and reasons recorded.

Where limited volumes of non-conforming material are identified the technically competent manager (TCM) will be consulted. Where possible and if safe to do so contaminated or non-conforming material will be removed by hand and quarantined pending recycling, recovery or disposal at a suitably permitted facility.

EoL fridges stored on site will be subject to regular inspections to identify any leaks, deteriorating containers and any other potential fire risks. Any faults identified will be reported to the technically competent manager (TCM) and records of preventative or corrective actions taken will be kept in the site diary.

11. HOT AND DRY WEATHER

Some waste is internalised and therefore the impact of hot and dry weather is limited. To limit the impacts on waste that is not covered a date rotate policy is in place on site; oldest waste is cleared first while waste pile sizes are kept to a minimum. Visual inspection during operational hours will also identify hot spots.

11.1. Prevent Self-Combustion

The core strategy is the 'date rotate' procedure, waste first accepted is the waste first removed from site, with continual visual monitoring during operational hours.

12. GENERAL SELF-COMBUSTION MEASURES

The core strategy is the date rotate procedure, waste first accepted is the waste first removed from site. Site staff remain vigilant for any signs of combustion from waste piles on site.

Daily checks are made on the site as part of the fire watch procedure

13. MANAGE STORAGE TIME

During normal operating conditions units are processed continually, most units will be processed within the working week, where more feedstock is held then there will be a typical turnaround time of no longer than one (1) month. Staffing levels can be adjusted on an as required basis to achieve this.

Units will be processed on a 'first in first out' basis with integral units that require degassing or damaged remote units processed first, as far as possible, or necessary from an environmental protection point of view; rapid turnaround will help to ensure short storage periods. Due to the nature of the operation it does not benefit the business to store waste for long periods of time. No units will be stored at the site for longer than 3 months.

No combustible wastes will be stored at the site for longer than 3 months.

13.1. Method Used to Record and Manage the Storage of All Waste on Site

Storage of waste on site is managed through a spreadsheet using data from the weighbridge and quarterly returns from the Environment Agency.

13.2. Stock Rotation Policy

Policy on site follows the date rotate premise with waste received first leaving site first. General waste is stored on site for a maximum of four days whilst food is stored for a maximum of 24 hours. Steel waste in RoRo container is collected every four days. Aluminium is collected monthly.

14. MONITOR AND CONTROL TEMPERATURE

14.1. Reduce the Exposed Metal Content and Proportion of 'Fines'

The site operates a date rotate policy to manage exposed metal content.

14.2. Monitoring Temperature

Visual inspections of the waste happen throughout the working day.

14.3. Controlling Temperature

To help control temperature of waste storage areas the site operates a date rotate policy and attempts to keep storage time to a minimum given the amounts on site. Waste is either stored within a building or within containers to further shade the material. If waste is stored in bays externally it is for less than 24 hours.

14.4. Dealing with Hot Weather and Heating from Sunlight

The date rotate procedure operated on site to reduce storage times on waste whilst staff work to hot weather procedure.

14.5. Waste Bale Storage

No baled storage on site.

15. MANAGE WASTE PILES

15.1. Storing Waste Materials in Their Largest Form

Waste is store in its largest fraction size to reduce reactions between waste.

15.2. Maximum Pile Sizes for the Waste on Your Site

WASTE TYPE	FORM OF STORAGE ²	APPROXIMATE CAPACITY	PARTICLE SIZE
Refrigeration units (Integral & remote) and other WEEE	Freestanding stockpile	Working volume during day reducing to 450m ³ maximum	>150mm
Metals – ferrous & non-ferrous	Contained –Skip or IBC	14 y ³ (10.7 m ³) per skip 1m ³ per IBC	Approximately 50 to 10cm x 5 to 2cm
Plastic & rubber	Contained –Skip or IBC	14 y ³ (10.7 m ³) per skip 1m ³ per IBC	>30mm
Wood	Contained –Skip or IBC	40 y ³ (23 m ³) per skip 1m ³ per IBC	>30mm
Glass	Contained –Skip or IBC	14 y ³ (10.7 m ³) per skip 1m ³ per IBC	>30mm
Printed circuit boards	Contained –IBC or bag	1m ³ per IBC or bag	<30mm
Compressors	Contained –IBC or skip	40 y ³ (23 m ³) per skip 1m ³ per IBC	>30mm
Fluorescent tubes	Contained – lamp container pallet box	1m ³	>150mm
General Office waste	Contained – 1100l wheelie bin	1m ³	>30mm

15.3. Accessibility of Containers

All containers are accessible on at least one side.

15.4. Moving Containers in a Fire

In the event of a fire containers can be manoeuvred using a telescopic handler or hook loader.

² Indicative form of storage, alternative options may be utilized to provide similar scale & type of storage.

16. PREVENT FIRE SPREADING

16.1. Separation Distances

As described above, waste will be stored in compliance with the sizes and separation distances stated in the EA's FPP guidance.

Individual stock areas for units will not exceed 450m³.

The storage of units in the main storage area will be subject to a minimum separation distance of 6m from each stockpile, other combustible materials, the site boundary and other potential ignition sources.

16.2. Fire Walls Construction Standards

Storage is carried out in piles separated by at least 6m distance, no firewall used for waste storage.

17. STORING WASTE IN BAYS

No waste stored in bays

18. QUARANTINE AREA

18.1.1. Quarantine Area Location and Size

Quarantine area and the associated 6 m separation distance is shown on the Site Layout Plans. In accordance with the guidelines set out by the Environment Agency, the quarantine area can hold up to 50% of the largest waste pile.

Quarantine area covers [insert content] which covers more than the required [insert content] as dictated by the largest waste pile.

18.2. How to Use the Quarantine Area if There is a Fire

Quarantine area to be used for both burning and non-burning waste; may also be used as an area for non-conforming, possibly hazardous waste.

18.3. Procedure to Remove Material Stored Temporarily if There is a Fire

The quarantine areas can be utilised in an emergency to isolate burning or smouldering material and prevent spreading. Burning or smouldering material will only be moved to the quarantine areas if safe to do so.

In the event that it is not safe to move such material, then non burning/smouldering material will be relocated instead and the outbreak will be dealt with in-situ.

19. DETECTING FIRES

19.1. Detection Systems in Use

All site staff are trained to regularly observe stored materials and activities for signs of combustion or fire. Employees will be provided with relevant information in relation to regulations and fire prevention measures through regular briefings and training.

A site inspection is carried out at the start and end of each day to inspect the process building and storage areas for dust, smoke, hot spots, litter, ignition sources and general wear and tear around the building. Any preventative or corrective actions identified during these inspections will be recorded along with timescales for instigating any actions and identification of the person responsible for delivery.

All fire exits are unlocked at the start of the day and locked at the end.

The current method of fire detection utilises a combination of manual fire alarm activation (upon human detection of the fire) and smoke activation. This operates a notification system which will alert the Company Director in case the site is unmanned.

A flame vision detector has been installed at site; this utilises an internal CCTV camera to automatically and reliably identify a fire and pinpoint its location by identifying its coordinates. The system will enable remote access to the site to obtain a visual on what is happening without having to enter the building.

The system has been supplied and maintained by Complete Detection Systems, (a UKAS accredited and BAFE SP203-1 registered company) as recommended in the FPP guidance. The detection system is installed at suitable locations in close proximity to unit and metal storage areas to ensure effective detection.

A CCTV system including cameras both inside and outside the building is in place 24/7 to continually monitor the site. Any suspicious activity will be investigated providing it is safe to do so.

The building is equipped with fire alarms which are linked to a central system and will sound in the unlikely event of a fire. If a fire is detected by a member of staff, the fire alarm will be raised straightaway.

Upon detection of a fire, site staff are trained to contact emergency services and follow the evacuation procedure communicated to all staff and contractors during the induction process.

20. SUPPRESSING FIRES

20.1. Suppression Systems in Use

An 'Hardent' automatic fire suppression system is installed around the shredder/crusher/fragmentiser and conveyor belts, which are at higher risk of ignition.

In the unlikely event that a fire does start, the combination of the automatic suppression system, fire extinguishers at strategic locations around the process and easy access for the Fire & Rescue Service(FRS) to allow active firefighting, will ensure the fire is extinguished within the 4-hour time frame, hence minimising the spread to other areas within the facility and neighbouring sites. This accords with core objectives of the FPP guidance.

Checks on all fire suppression and detection systems will be carried out on a regular basis, in accordance with manufacturer's instruction, and records retained along with records of fire drills and annual service inspections.

21. FIREFIGHTING TECHNIQUES

21.1. Active Firefighting

Storage and process areas are visually monitored by staff on a daily basis to identify any smouldering or smoking materials. Should these be, staff will transfer the material by forklift to the quarantine area in order to extinguish as quickly as possible and prevent spread to any other areas within the building. Staff are trained to assess the situation and may attempt to extinguish smoking material in-situ if this is deemed the most appropriate way to extinguish the fire.

If it is considered unsafe for staff to attempt to extinguish the fire, the local FRS will be alerted immediately.

The nearest fire station is located approximately 600m away from the site on High Street and travel time from this station is less than 3 minutes.

The entrance to both areas of the site is very close to the road which provides excellent access for the FRS. The process building can be accessed from two sides.

The yard area in front of the entrance to the building will be cleared immediately of any material to allow FRS staff to manoeuvre easily and actively fight the fire. Access can be gained easily to the process building via roller shutter doors on the eastern side of the building through the yard area, or through roller shutter doors on the western side via Mallard Close.

The external storage area is surrounded on northern, western and southern boundary by earth bunds. The bund will act as a fire barrier to stop the spreading of the fire to the surroundings and can be used by the FRS to gain a higher point from where to attack the fire.

In the unlikely event of a fire which prevents the FRS from gaining access to the building via the roller shutter entrances, it was confirmed during the site visit with Eddie O'Neil and Bethan Saunders that the FRS could use equipment within their fleet to attack the fire through the windows in the roof and eliminate the fire from above the building.

The FRS would also be able to gain access to the building through any of the fire doors located around the building, including those which are located in the south western corner of the building and can be accessed easily off Mallard Close.

The Northamptonshire Fire and Rescue strategy also claims that NFRS are actively working to use new technology in order to enhance firefighting capability. This includes the 'COBRA' extinguishing system which allows the service to fight a fire without entering a compartment by piercing a small hole through solid objects including windows and brick.

22. WATER SUPPLIES

22.1. Available Water Supply

There are a number of Fire Hydrants located on Baron Avenue, Mallard Close and Wellingborough Road within 200m of the site which are available for the FRS to connect to.

Based on the EA’s FPP guidance and given the largest storage area (pre-treated units) of 420m³, approximately 504,000 litres of water may be required to fight the fire for at least 3 hours, as shown in the calculations reported in Table 2.

The three nearby fire hydrants, shown on the Location of Fire Hydrants Plan K256.1~20~032, were tested by Anglian water. The flow rate in l/min was calculated using the water pressure in ‘bar’ and the diameter of the orifice.

Table 2. details the approximate flow rates of each hydrant.

Hydrant	Diameter (inch)	Pressure (bar)	Approx. Flow Rate (L/min)
74800	2.5	2.6	3029.3
74810	2.5	2.4	2910.5
74855	2.5	2.4	2910.5

The use of one of the hydrants will cause a pressure drop in the system .This can be calculated to be approximately 21% (<https://hosemonster.com/resources/hydrant-flow-test-calculator/>).

The pressure in the next fire hydrant would therefore drop to approximately 1.9 bar (27.5 psi). Although the flow drop cannot be reliably calculated without more details about the pipe system, the three fire hydrant are highly likely to provide the required 3,001 l/min required as water supply for the maximum pile volume (see next section 22.2).

22.2. Show the Calculation for Your Required Water Supply

Table 3. Water Supply Calculation

MAXIMUM PILE VOLUME IN CUBIC METRES	WATER SUPPLY NEEDED IN LITRES PER MINUTE	OVERALL WATER SUPPLY NEEDED OVER 3 HOURS IN LITRES	TOTAL WATER AVAILABLE ON SITE IN LITRES
450 m ³	450 x 6.67 = 3,001 l/min	3001 x 180 = 540,270 l	3001 x 180 = 540,270 l

23. MANAGING FIRE WATER

23.1. Containing the Run-Off from Fire Water

23.1.1. Main building and A1 building

On advice from the FRS, fire waters containment barriers will be deployed at the roller shutter doors, rain mats and 'Envirovalve' to seal the drainage system will be deployed in the main building front yard.

The building is constructed of brick and so blocking of the entrances will provide sufficient capacity for containment of fire water.

A temporary barrier using sandbags and sheeting will be erected around the yard and in front of the drains to act as a bund preventing the migration of fire water from the site.

Sandbags and sheets will remain next to the building entrance and site entrance at all times to ensure the barrier can be erected quickly and safely in the event of a fire.

The site is built on an impermeable surface and will be able to provide sufficient containment for the water generated in a worst case scenario as described in section 13.4.

In addition to the temporary barrier, a 'drainblok' tool will also be used to block drains and prevent contaminated fire water from entering the drainage system. This is a manual tool which works by inserting and inflating an expandable bladder in the drain using a telescoping pole and pump. This will remain inflated until the firewater has been removed from the site and it is safe to manually deflate the bladder. The drainblok tool can be used to insert multiple bladders to block all drains off and will ensure contaminated fire water does not enter the drainage system.

As discussed at the meeting on the 1st August 2016 with Eddie O'Neil (NFRS) and Bethan Saunders (EA FPP Area Team Lead), the site falls towards the south east. In the event that a fire occurs, and on instruction by the FRS, the sandbags will be placed in the appropriate location to prevent migration of firewater from the site.

A combination of the building and yard area with 0.5m sandbag barrier at both entrances will provide sufficient fire water containment, as shown in Table 4.

Table 4. Fire Water Containment - Main Building and A1 Building

FIRE WATER CONTAINMENT	
Maximum volume of fire water run-off (based on storage volumes)	540,270 L / 1000 = <u>540 m³</u>

FIRE WATER CONTAINMENT	
Finished Floor Level (FFL)	Main building and front yard: 3,470 m ² A1 Building: 2,040 m ²
Bund Height	0.5 m
Total Internal Catchment volume	Main building and front yard: 1,735 m ³ A1 Building: 1,020 m ³

During discussions with the FRS it was confirmed that using this drainblok tool, a quantity of the water would be able to be recycled and reused to extinguish the fire. The drainblock tool will be placed within the surface water drains marked on the Site Layout Plans.

The site also retains ‘Dammit Emergency Clay Drain Mats’ which can be used in an emergency such as a fire to cover the surface water drains and prevent contaminants and fire water from entering the drainage system. Staff are trained to be able to lay these over drain covers in the event of an emergency.

Once the fire has been extinguished, any remaining fire water will be removed from site and disposed of at a suitably permitted facility.

The drains will only be reopened once the system has been emptied and cleaned and there are no fire residues remaining on site.

1.1 MAIN STORAGE AREA

The external storage area is surrounded by a 250mm kerb and 400 mm high Lego blocks to act as a bund preventing the migration of fire water from the site.

The area is built on an impermeable surface and will be able to provide sufficient containment for the water generated in a worst case scenario as described in section 13.4.

The area falls towards the north east, and water is collected by a drain, directly linked to an interceptor, this is fitted with a sluice gate that is closed under normal conditions

In the event that a fire occurs the outlet of the interceptor will remain closed, using a sluice gate accessible from a manhole on top of the interceptor just outside the north east corner of the external area.

The bunded area will provide sufficient fire water containment, as shown in Table 5.

Table 5. Fire Water Containment - Storage Area

FIRE WATER CONTAINMENT	
Maximum volume of fire water run-off (based on storage volumes)	540,270 L / 1000 = <u>540 m³</u>
Finished Floor Level (FFL)	9,700 m ²
Bund Height	0.25 m
Total Catchment volume	2,425 m³

Once the fire has been extinguished, any remaining fire water will be removed from the area and disposed of at a suitably permitted facility.

The drain will only be reopened once the system has been emptied and cleaned and there are no fire residues remaining on site.

24. During and after an incident

24.1. Dealing With Issues During a Fire

During a fire, operations shall cease, and all incoming waste is diverted from the site. Site staff will only engage in active firefighting if safe to do so. The Fire Rescue Service shall be contacted and presented with FPP on arrival.

24.2. Notifying Residents and Businesses

In the event of smoke emissions becoming an issue the site inform neighbouring residents and businesses through the city council website and their social media channels.

24.3. Clearing and Decontamination After a Fire

After an incident a contractor shall be contacted to empty the drainage and take any waste off site.

24.4. Making the Site Operational After a Fire

After an incident the site shall be inspected fully for any signs of damage to infrastructure and where appropriate fixes made. Site will not reopen until this has taken place.



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Suite 11 Manor Mews, Bridge Street, St Ives, PE27 5UW
01480 462 232 | www.wiserenvironment.co.uk | info@wisergroup.co.uk

