HARCOURT FIBER RECYCLING FACILITY

Fire Prevention Plan

Environmental Permit Application

Prepared for: OSO Fiber UK Limited

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1.0 Introduction

1.1 Report context

OSO Fiber UK Limited (OSO) has instructed SLR Consulting Limited (SLR) to prepare an Environmental Permit (EP) application for the proposed Fiber Recycling Facility in Halesfield under the Environmental Permitting (England and Wales) Regulations 2016 (as amended).

This report follows the Environment Agency (EA) guidance for Fire Prevention Plans (FPPs)[1] and details the required mitigation and management methods to prevent a fire of combustible materials stored on site.

The information contained within this FPP is presented in accordance with the EA's FPP template published January 2020 and is designed to meet the 3 main objectives of the EA FPP Guidance:

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

2.0 Types of Combustible Materials

2.1 Combustible waste

The site will accept up to 250,000 tonnes per annum (tpa) of waste. Up to 3,500 tonnes of waste will be stored on site at any one time and the site will be capable of treating up to 720 tonnes per day.

The activities that will be carried out at the site as defined under Annex II of the Waste Framework Directive can be summarised as follows:

- **R3**: Recycling/reclamation of organic substances which are not used as solvents; and
- **R13**: Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced).

The site layout, including waste storage locations is shown on Drawing 004.

The full list of wastes permitted for acceptance to the site is included within Table 2-1 below.

Table 2-1
List of Permitted EWC Codes

EWC Code	Description
15	WASTE PACKAGING, ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01	Packaging (including separately collected municipal packaging wastes)
15 01 01	paper and cardboard packaging

[1] Fire Prevention Plans, January 2021.

EWC Code	Description
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUPTION AND WATER FOR INDUSTRIAL USE
19 12	Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 01	paper and cardboard
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	Separately collected fractions (except 15 01)
20 01 01	paper and cardboard

2.2 Other combustible waste

The site stores non-waste materials that are not covered by the FPP Guidance but are considered in this FPP due to the potential for them to cause or increase the impact of a fire on the site. The materials and their storage arrangements are shown in Table 2-2 below and illustrated on Drawing 004.

Table 2-2
Non-Waste Materials: Storage Arrangements

Type	Storage Location	Storage Arrangement
Fuel Storage (2x diesel tanks)	- Southwest corner of the site - Outside the southeast corner of the processing building	Containers surrounded by a leakage containment bund capable of containing at least 110% of the volume of the largest container within the bund.

3.0 Using this FPP

3.1 Where the plan is kept and how staff know how to use it

A copy of this FPP is kept in the Site Management's office and the Shift Manager's office.

All staff will be made aware of the contents of the FPP and the procedures that are in place in the event of a fire on Site during their induction and through periodic refresher training. Contractors working on Site will be made aware as part of on-site working procedures.

3.2 Testing the plan and staff training

3.2.1 Staff training and procedures

Staff receive training on the use and selection of fire extinguishers, site evacuation, fire safety and all relevant emergency procedures.

All staff and contractors working on site are made aware of the contents of the FPP and the procedures that are in place in the event of a fire on site during their induction. The staff training is regularly refreshed particularly in the event of non-compliance.

Certain staff members on site are trained as Fire Marshals. There is always at least one Fire Marshal present on site.

The procedures for fires discovered on site are provided both in OSO's EMS and on-site notice boards.

OSO conduct a test of the FPP once a year, or in the event of any significant changes to site operations, to ensure that the contents are still relevant and that all staff members' knowledge is current and up to date.

3.2.2 Testing the FPP

This FPP will be implemented across the Site and all fire management equipment will be maintained in line with schedules set by OSO.

A fire drill is carried out and documented on a 6 monthly basis.

This FPP is implemented across the site and all fire management equipment is tested on an annual basis.

If any issues are found during these fire drills, the FPP will be updated or amended accordingly and site operatives will be re-trained.

Regular checks are made of all escape routes and equipment.

4.0 FPP Contents

4.1 Activities at the site

The proposed activities will comprise the storage and physical treatment of cardboard waste by sorting, separation, shredding and baling to create a feedstock suitable for onward recovery in papermills. The input cardboard waste is obtained from commercial and industrial businesses and will have less than 2% contamination.

Bales of cardboard will be loaded into a de-wiring machine then along a conveyor belt to a trommel. From here material is conveyed to the primary shredder, through a magnetic separator and a Near Infrared (NIR) sorter. Material then passes through a secondary shredder, an eddy current separator and into a tertiary shredder. The treated material is then baled and sent off site for further recovery.

4.2 Site plan

The site is centred on National Grid Reference SJ 71143 04637 on Halesfield 15, Telford, TF7 4LE and lies approximately 3km east of Ironbridge and 5km southeast of Telford. The site is accessed via Halesfield 15 Road, which leads to the A442 south west of the site.

The site location is illustrated on Drawing 001. The permit boundary is shown on Drawing 002, and the local receptors and cultural and natural heritage receptors are illustrated on Drawing 003.

The surrounding land uses and local receptors within 500m are identified on Drawing 03 Environmental Site Setting, in addition to the cultural and natural heritage within 1km.

4.3 Plan of sensitive receptors near the site

The site is located in the Halesfield Industrial Estate and is surrounded on all sides by commercial/industrial premises, deciduous woodland and small areas of open ground. Residential areas located within Telford are located to the west of the site.

A summary of the immediate surrounding land use is provided in Table 4-1.

Table 4-1
Surrounding Land Use

Boundary	Description
North	An area of deciduous woodland, the A4169 beyond which is commercial and industrial units and open ground.
East	Commercial and industrial units. Beyond this lies areas of open ground.
South	Industrial businesses located within Halesfield Industrial Site, Halesfield 13 road and areas of open ground beyond.
West	Commercial businesses lie to the west immediately beyond an area of deciduous woodland. Beyond this lies Brockton Way (A442) and residential areas including John Randall Primary School.

The immediate surrounding land use is described in detail below.

4.3.1 Commercial and Industrial Premises

The site lies within the Halesfield Industrial Estate and is surrounded on all sides by commercial and industrial premises. An AO Recycling site is located adjacent to the southern boundary.

4.3.2 Residential Properties

Residential properties are located along Greenwood Close approximately 400m west and along Cuckoo Oak Green 480m northwest of the Site. An isolated residential property lies approximately 500m east of the Site.

4.3.3 Local Transport Network

The site is accessed via Halesfield 15 which links to the Brockton Way (A442) approximately 330m to the west of the Site.

4.3.4 Educational

John Randall Primary School lies 490m to the west of the Site's boundary.

4.3.5 Surface Water Features

Several surface water drains can be found within 500m of the Site's boundary. The closest of these lies approximately 30m north of the Site.

4.3.6 Areas of Open Ground

Immediately to the east, south and west of the Site lies areas of open ground.

4.3.7 Deciduous Woodland

An area of deciduous woodland lies adjacent to the Site's northern boundary. An additional area lies approximately 60m west of the Site.

4.4 Ecology

A 1km radius was employed in identifying all ecological receptors of importance. A search on MAGIC identified that the following features of ecological importance are within the vicinity of the site:

- Madeley Local Nature Reserve (LNR) is located approximately 560m northwest of the Site. The LNR is known for its naturally and artificially recolonised pit mounds, woodland, grassland and open water including a disused canal.
- There are two areas of unnamed ancient woodland within 1km of the Site's boundary. The closest lies 730m northeast of the Site. An additional area is situated approximately 900m northeast of the Site.

The searches confirmed that there are none of the following within the 1km:

- Sites of Special Scientific Interest (SSSI);
- Special Areas of Conservation (SAC);
- Ramsar's;
- Special Protection Area's (SPA);
- RSPB Reserves;
- Areas of Natural Beauty;
- National Nature Reserves; and
- National Parks.

4.4.1 Cultural Heritage

The search on MAGIC confirmed that the following features do not lie within 1km of the Site:

- World Heritage Sites;
- Scheduled Monuments;
- Listed Buildings;
- Registered Battlefields; and
- Registered Park and Garden.

4.5 Receptors

Local receptors and natural and cultural receptors within 1km of the Site are recorded in Table 4-2.

Table 4-2
Identified Receptors

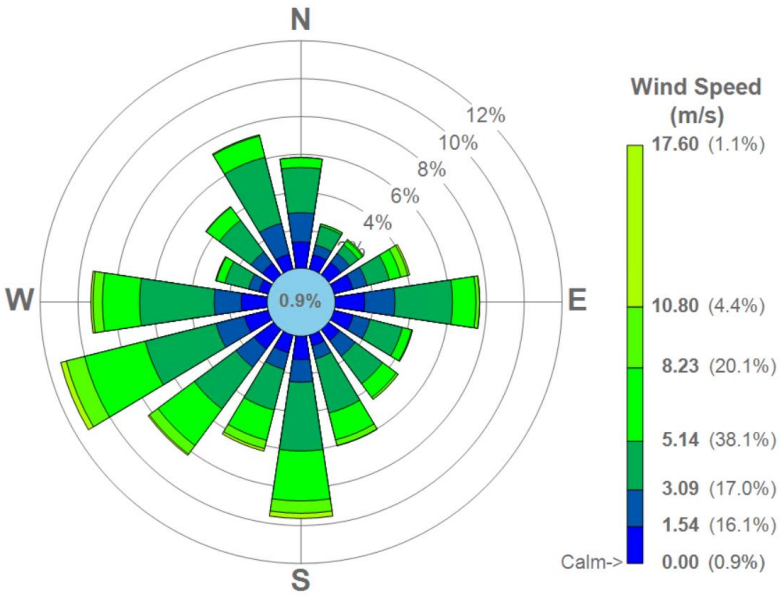
Receptor Name	Receptor Type	Direction from Site	Approximate Distance from Site Boundary at closest point (in metres)
Local receptors located within 1km of the EP boundary as shown on Drawing 003			
Unnamed	Deciduous Woodland	North	Adjacent
AO Recycling	Commercial/Industrial	South	Adjacent
Halesfield 15	Local Transport Network	South	Adjacent

Receptor Name	Receptor Type	Direction from Site	Approximate Distance from Site Boundary at closest point (in metres)
Open Ground	Open Ground	East, South and West	Adjacent
Drain	Surface Water Feature	North	30
Unnamed	Deciduous Woodland	West	60
Brockton Way (A442)	Local Transport Network	West	330
Greenwood Close	Residential	West	400
Cuckoo Oak Green	Residential	Northwest	480
John Randall Primary School	Educational	West	490
Dwelling	Residential	East	500
Ecology and Cultural and Natural Heritage identified within 1km of the EP boundary as shown on Drawing 003			
Madeley	Local Nature Reserve	Northwest	560
Unnamed	Ancient Woodland	Northeast	730
Unnamed	Ancient Woodland	Northeast	900

4.6 Windrose

Figure 4-1 shows a wind rose from Shawbury Meteorological Station, located approximately 24km northwest, providing the frequency of wind speed and direction from 2018. The wind rose shows that winds from the south and west are most frequent. Winds from the north and east are less frequent.

Figure 4-1
Shawbury Meteorological Station, 2018



5.0 Manage Common Causes of Fire

5.1 Arson

The site is enclosed by security fencing and site entrance gates designed to prevent unauthorised access. In addition, the site also benefits from site wide CCTV and security lighting is also located around the site.

The gates and fencing are inspected weekly to identify any weaknesses or defects. Any defects identified are repaired with a temporary solution within 24 hours, with a permanent fix implemented within 7 days, unless a timescale is otherwise agreed with the EA.

The site has a number of additional security measures in place to limit the likelihood of arson or vandalism including:

- All doors to the process areas are locked when not in use;
- Lockable doors on the building and office/welfare facilities;
- Inspection and maintenance procedures; and
- A visitor sign in system.

In the event of a breach of security at the site, the cause will be investigated, and appropriate mitigation measures implemented. This will be recorded in the Daily Site Log. Records maintained will include inspections and maintenance of doors and locks, breaches of security, investigations and actions taken.

5.2 Plant and equipment

Plant and equipment are maintained in accordance with the manufacturer's recommendations. All new plant on site is fitted with telematics, which automatically highlights any faults, and local suppression as part of the minimum design specifications.

Plant and equipment are operated in accordance with the manufacturer's instruction manuals. Instruction manuals for plant and equipment are held either on site or online if a hardcopy is not available from the manufacturer.

Induction training and refresher training is provided to staff in the safe operation of plant and equipment relevant to their role, in accordance with the EMS.

Inspection of plant and equipment is undertaken on a daily basis to check for faults and ensure appropriate safeguards are in place. The procedure also covers general housekeeping and cleaning of plant and all equipment on site.

In the event of a failure or suspected fault with an item of plant or piece of equipment, the operator will ensure that the equipment is shut off in a safe manner and not used until the equipment can be repaired or replaced.

5.2.1 Fixed equipment

The following items of fixed equipment will be on site:

- De-wiring machine;
- Trommel;
- Primary shredder;
- Magnetic separator;
- Near Infrared sorter;
- Secondary shredder;

- Eddy current separator; and
- Tertiary shredder.

All equipment will be maintained in accordance with manufacturer's recommendations.

5.2.2 Mobile plant

The following items of mobile plant will be held on site:

- 8 x fork lift truck; and
- 2 x shunt vehicle.

Additional plant and equipment including, but not limited to, water bowser, spray equipment and road sweeper will be made available as required.

All items of plant and equipment used on site will be maintained in accordance with manufacturer's recommendations.

In summary, the following provisions are implemented:

- Plant maintenance schedules using the manufacturer's recommendations;
- Pre-use checks prior to using any plant or equipment;
- Reporting of defects and actions taken based on priorities;
- Daily cleaning to remove any dust build up from vulnerable areas;
- All vehicles onsite are fitted with portable fire extinguishers; and
- Mobile plant is kept away from combustible waste. This is achieved by allocating areas for mobile plant for storage when not in use.

Any mobile plant not in use or requiring maintenance is temporarily stored in the designated areas illustrated on Drawing 004.

5.3 Electrical faults including damaged or exposed electrical cables

5.3.1 Electrical certification

All electrics on Site will be fully certified by a qualified electrician and a record of the certification will be kept.

5.3.2 Electrical equipment maintenance arrangements

Regular safety inspections will be carried out by a qualified electrician to ensure risks are minimised. Electrical equipment will be visually inspected prior to every use to ensure it is free from obvious damage and that it is fit for purpose. Regular safety checks and daily site inspections are recorded in the site diary. All building electrics are fully certified by a qualified electrician.

Annual PAT testing of any on site portable electrical appliances is carried out.

5.4 Discarded smoking materials

5.4.1 Smoking on site policies

Smoking is not permitted on Site due to the combustible nature of materials stored on Site. Any smoking must be conducted outside of the Site permit boundary.

5.5 Hot works safe working practices

It is unlikely that hot works will take place at the site. In the event that hot works are carried out, OSO operates a permit to work system which includes a 60 minute fire watch by a competent person at the end of the works. No hot works are undertaken by staff unless they are trained and competent and have the relevant permit to work understanding.

Any works take place at least 6m from any combustible wastes. A site operative performs a continuous fire watch during the hot work and for a minimum of 60 minutes after the work is completed.

5.6 Industrial heaters

5.6.1 Use of industrial heaters

No portable heaters are to be utilised on Site. Wall mounted convection heaters will, however, be provided in the office and welfare areas. The Site Management will ensure the heater is switched off when an area is not in use.

5.7 Hot exhausts and engine parts

Vehicles are turned off when not in use. Consideration will be given to the high-risk time for hot exhausts (one hour after switching off when dust can settle on hot surfaces) and wherever possible vehicles are given time to cool down prior to site staff leaving site at the end of a shift.

5.8 Ignition sources

Potential ignition sources include hot exhausts and engine parts, discarded smoking materials, heaters and hot works (all described above). All ignition sources will be kept a minimum of 6m away from the storage of combustible and flammable wastes. No naked lights will be permitted on Site.

5.9 Leaks and spillages of oils and fuels

Inspection of any spillages or leaks from containment will be completed at least once per a shift by the shift supervisor. The results of all daily and weekly monitoring will be recorded in the Site Diary, as well as any remedial actions.

In the event of any potentially polluting leak or spillage occurring on site the protocol found within the 'Liquid spill procedure' will be followed and the following actions will be taken:

- Minor spillages will be cleaned up immediately, using sand or proprietary absorbent. The resultant materials will be placed into containers and will then be removed from site and disposed of at a suitably permitted facility. The incident will be logged in the site diary.
- Any dry wastes spilled on site will be collected and transported to the appropriate area of the site.
- In the event of a major spillage, which is causing or is likely to cause polluting emissions to the environment, immediate action will be taken to contain the spillage and prevent liquid from flowing outside the EP boundary. The spillage will be cleared immediately and placed in containers for offsite disposal, and the EA will be informed.

5.10 Build-up of combustible waste, dust and fluff

The risk of the build-up of combustible waste, dust and fluff is low due to the following measures implemented on site.

- All incoming waste is offloaded in close proximity to the storage areas to minimise unnecessary handling and transport distance therefore minimising the potential for wind-borne dust;
- All plant and equipment will be subject to a programme of planned preventative maintenance which will follow the inspection and maintenance schedule recommended by the manufacturer. This will include corrosion prevention where applicable;
- Storage areas benefit from daily cleaning using brooms and weekly washdowns using hoses;
- Site access roads and operational areas are maintained and swept regularly to reduce dust generation; and
- Daily visual inspection of the Site and Site boundary is carried out by Site personnel.

5.11 Reactions between wastes

The site does not accept waste types which are potentially incompatible with each other. To ensure that incompatible materials are not received on site, waste is offloaded at the site supervised by suitably qualified site operatives. Any non-conforming waste that is received will be put into isolated 'quarantine' storage for removal from the site. Unacceptable waste is returned to the originator or to an authorised disposal company as soon as possible.

Only vehicles that are accompanied by the correct documentation are accepted onto site. Waste undergoes a visual inspection at the point of deposit into the storage area.

Tanks containing fuel are constructed so that any leaks/spillages are contained. Tanks are surrounded by a leakage containment bund capable of containing at least 110% of the volume of the largest tank within the bund. Bunds are impermeable and resistant to stored materials.

5.12 Deposited hot loads

No burning, reactive / reacting or visibly hot (producing steam or heat) loads are accepted on site. In accordance with the Waste Acceptance Procedure, each load is visually inspected as it is unloaded in the building to ensure compatibility with accompanying delivery notes, therefore minimising prohibited wastes and the acceptance of hot loads.

Instructions are given to suppliers to ensure no hot loads are accepted on site.

Should a hot load be deposited on site, it will immediately be removed to the dedicated quarantine area and extinguished immediately. Any fire damaged waste will be removed from site the same day to a suitably licenced facility for disposal.

6.0 Prevent Self-Combustion

6.1 General self-combustion measures

Effective stock management limits the likelihood of the self-combustion of materials stored on site. As such, the site has waste acceptance and stock management procedures which are upheld by all employees at the site.

The controls in place to reduce the risk from fire are summarised as follows:

- All deliveries are checked when unloaded into the building. Checks include both the paperwork and the full contents of the load;
- No loads are removed without an onsite operative in supervision;
- A visual fire watch is performed as the loads are received and unloaded;

- A quarantine area is kept available; and
- Waste is handled in accordance with a safe system of work. On site personnel will be instructed and trained on the safe system of work.

Should the wastes be found not to conform during the visual inspection, then the waste will be removed to the designated quarantine area as appropriate.

Only wastes included in the EP are accepted at the site.

Non-waste materials that pose a risk of self-combustion are stored as indicated in Table 2-2.

6.2 Manage storage time

A summary of the storage times for wastes received is provided in Table 6-1 below.

Table 6-1
Maximum Storage Times

Waste Received	Storage	Maximum Storage Time
Cardboard	9 bays located inside the processing building	1 month

6.2.1 Method used to record and manage the storage of all waste on site

All waste brought onto site is inspected to ensure it has been consigned correctly. The quantity of waste accepted and despatched from the facility will be calculated by recording the volume of waste entering the site and the application of standard EA conversion factors as appropriate or via a weighbridge.

Waste storage inventory is monitored using the Site's bespoke Enterprise Resource Planning system (ERP) which manages all site and management activities.

Suitably qualified Site personnel will carry out daily checks of the Site to identify the risks and inspect storage areas and stack height. This ensures that the Site does not reach a level of overcapacity in respect to storage.

6.2.2 Stock rotation policy

Arrangements on site ensure a 'first in first out' approach is adopted so that storage of waste does not exceed the prescribed duration. The Site Management is responsible for stock rotation on site and ensures that waste with the earliest storage dates are processed first and removed from site first. This is managed via the ERP system.

6.3 Monitor and control temperature

6.3.1 Reduce the exposed metal content and proportion of fines

The waste intended for storage at the site is comprised only of cardboard. The waste stream will contain a small fraction of metal in the form of staples and bale wire which will make up less than 2% of the total input material. There is unlikely to be any waste containing fines accepted on to site. Strict waste acceptance checks are carried out to ensure that only permitted waste is allowed to be accepted on site. Loads are visually inspected during deposit into the storage areas. Any loads found to be contaminated will be moved to the quarantine area and removed from site.

6.3.2 Monitoring temperature

On a daily basis, at least twice per shift, site operatives will inspect the storage areas for any anomalies, such as visual signs of heat, steam or vapour. Anomalies are actioned immediately by investigation and remedial action will be taken such as rotation of the waste within the storage area or removal of heated waste, which will be put in the quarantine area for assessment.

6.3.3 Controlling temperature

The following actions will be taken to control temperature within waste storage areas:

- Waste storage times are minimised by using first-in-first-out basis an all waste is stored for a maximum of 1 month before removal from site;
- The ERP system allows real time management of waste storage times and will be used daily to assess the quantity of waste is awaiting treatment and the amount due to be removed from site; and
- Cardboard bales are regularly moved, processed and removed from site within the 1 month turn around on site. Therefore, due to the nature of the operations on site, waste is routinely turned releasing any heat generated within a pile.

6.3.4 Dealing with hot weather and heating from sunlight

All waste will be stored inside the main processing building and not exposed to direct sunlight. Therefore, it is considered that they pose a low risk of heating from hot weather and sunlight.

6.4 Waste bale storage

All bales of waste cardboard are stored for a maximum of 1 month therefore a sampling and testing protocol for temperature within the bales is not required.

7.0 Manage Waste Piles

7.1 Maximum pile sizes for the waste on site

All incoming waste will consist of baled cardboard. The bale storage area is located within the processing building as illustrated on Drawing 004.

There are 9 separate storage areas of equal sizes and the waste storage volumes for 1 area are shown in Table 7-1 below.

Table 7-1
Storage Areas: Waste Types and Dimensions

Waste Type	Max Storage Time	Length (m)	Width (m)	Height (m)	Max Volume (m^3)
Baled Cardboard	1 month	18	10	4	720

7.2 Residual waste

A residual waste storage area is located within the processing building as illustrated on Drawing 004. The area consists of four storage skips which will store residual material generated from the treatment process undertaken on site. Residual waste will likely consist of any contamination within the incoming waste and wire used to hold bales together. Quantities of residual waste are expected to be very low as the cardboard waste accepted on site will have less than 2% contamination.

7.3 Storing waste materials in their largest form

Waste is stored on site in its largest form before processing. Once processed the treated material is baled and taken off site for recovery.

8.0 Waste Stored in Containers

8.1.1 Types of Container

The residual waste described in Section 7.2 is stored in containers as illustrated on Drawing 004.

8.1.2 Accessibility of Containers

All containers are accessible from more than one side so a fire could be quickly extinguished.

8.1.3 Moving Containers in a Fire

In the event of a fire, the site's ability to move skips quickly would be utilised to reduce the risk of fire spread. The affected skip would be moved immediately by site operatives, qualified in the operation of the mobile plant, to the quarantine area.

9.0 Prevent Fire Spreading

9.1 Separation distances

Waste will be stored within designated storage areas as illustrated on Drawing 004. Separation distances within the storage area will be reduced due to the fire wall construction as detailed below in section 9.2. Where there is no segregation provided by a firewall, the waste will be at least 6m from the perimeter, buildings and other combustible or flammable materials as illustrated on Drawing 002.

9.2 Fire walls construction standards

Waste will be stored up against Legato A1 fire-resistant concrete blocks. These will not burn, crack or give off noxious fumes regardless of the intensity of the fire or time spent being exposed to the fire. The blocks are Class A1 fire resistant in accordance with clause 4.3.4.4 of EN 13369.

The specification is shown in Table 9-1 below.

Table 9-1
Fire Wall Specification

Features	Details
Concrete Specification	RC40/50XF equivalent
	Minimum cement content = 360 kg/m3
	Maximum w:c ratio = 0.45
	Cement type = CEM1 52.5N
	Coarse Aggregate = Aggregate Industries
	Fine Aggregate = Cemex

Features	Details
Durability	The use of an RC40/50XF equivalent concrete ensures suitability for use in XF4 conditions as defined in BS 8500-1:2013
The units are unreinforced and have a design working life of 100 years as defined in BS EN1990:2002+A1:2005	

9.2.1 Storing waste in bays

Waste will be stored to the maximum heights shown in Table 7-1 up against a fire wall. The storage areas are not considered to be bays as they are only enclosed on one side by a fire wall, however the following measures will still be employed to minimise the risk of fire spreading:

- All waste in the storage area will be processed on a first-in-first-out basis.;
- Storage times kept to a maximum of 1 month;
- The specification and construction of the fire walls offers a thermal barrier exceeding 4 hours;
- The fire walls benefit from a freeboard of 1m and open faces are located at least 6m from other sources of combustible materials to minimise the potential risk of lighted material igniting other wastes; and
- In the event of a fire occurring, the quarantine area will be used to segregate non-burning waste in order to isolate and minimise the potential impact of the incident.

10.0 Quarantine Area

10.1 Quarantine area location and size

The site benefits from a quarantine area for fire management and non-compliant waste

The locations of the quarantine area is illustrated on Drawing 004 and detailed in Table 10-1 below.

Table 10-1
Quarantine Area Dimensions

Quarantine Area	Primary Use	Length (m)	Width (m)	Height (m)	Volume (m^3)
Fire Prevention	Dousing of burning/smouldering waste and/or separation of unburnt waste.	9.5	9.5	4	360

10.1.1 Non-Compliant Waste Quarantine Area

In the event of non-compliant waste being identified within the waste load, the waste will be moved to the quarantine area and removed off site within 72 hours.

10.1.2 Fire Management Quarantine Area

The fire management quarantine area benefits from a fire wall and holds at least 50% of the largest waste storage area on site.

The placement of the quarantine area is based on the following factors:

- It allows for the prompt and direct removal of smouldering, burning or fire damaged wastes from the waste storage and to allow access by the Fire & Rescue Service (FRS);
- Proximity to flammable liquids – the quarantine area is situated at least 6m from any potentially flammable liquids on site such as diesel tanks; and
- Firewater containment – the quarantine area is located within the building which is capable of containing any water used to extinguish a fire within waste moved to the area.

10.2 How to use the quarantine area if there is a fire

The Site Management will instruct all site operatives when and how the burnt/burning waste, or any hot loads delivered accidently to site, will be moved to the quarantine area. The following procedure will be implemented on site:

- When it is safe to do so, the waste will be moved by on site plant to the quarantine area;
- The movement of the waste will be overseen at all times by the Site Management to minimise any spillages and ensure the area is not overfilled;
- To limit any spillages, plant will not be overfilled when moving the waste;
- The burning/smouldering waste will be doused using the relevant fire extinguisher, a fire hose located on site connected to the mains, or a fire hose supplied by the FRS connected to the hydrant, mains water point or water pumped from the fire engine; and
- Burnt waste will be taken off site to a suitably permitted facility within 48 hours.

All site operatives will be trained to follow this FPP and all procedures listed in the above sections.

10.3 Procedure to remove material stored temporarily if there is a fire

In the event of a fire, any non-compliant waste will be removed from the area within 1 hour and temporarily stored at least 6m from any other combustible material of ignition sources on site.

11.0 Detecting Fires

11.1 Detection systems in use

Daily visual inspections of the waste storage area take place to ensure the early detection of fires in waste storage areas. The site is operational 24/7 therefore the first signs of a fire will be detected early by site operatives who will manually raise the alarm.

In addition, the site is 24hr monitored using CCTV. The cameras are fitted so that the whole site can be monitored.

Smoke and flame detectors are installed within the switch room and are monitored 24/7 by a third party monitoring centre.

Site boundary checks are completed weekly to ensure site security is maintained and the risk of arson is reduced.

12.0 Suppressing Fires

12.1 Suppression systems in use

There is an automatic suppression system throughout the entire processing building consisting of sprinklers which is linked to the detection system and activated upon fire detection.

The locations of all fire extinguishers and fire hoses are identified on Drawing 004. All extinguishers are inspected annually.

13.0 Firefighting Techniques

13.1 Active firefighting

13.1.1 Fire extinguishers and fire hoses

The closest fire station is Shropshire FRS to the west of the site. Using Google directions and mapping [2], the drive time is approximately 4 minutes and it is approximately 1 mile between the site and the fire station.

See section 12.1 for details on fire extinguishers and fire hoses. Fire extinguishers and/or hoses are to be used in the following circumstances:

- Where operators are trained in use, and if confident to tackle the fire; and
- On very small fires, or to facilitate own escape if trapped by fire.

13.1.2 Small Fire

A small fire or area of smouldering waste will be dealt with as follows:

- A fire or area of smouldering waste will not be dealt with in-situ, mobile plant will be utilised to pull the affected waste into the open and away from any further waste that could become a light on contact; and
- Depending on the size / nature of the fire the waste will either be:
    - Extinguished immediately[3] utilising the fire extinguishers or hoses; or
    - Moved to the appropriate quarantine area and extinguished[4].

Depending on the size, location and nature of the fire the burning waste will be pulled into the dedicated fire prevention quarantine area following the procedures detailed in Section 10.2.

Once a small fire is dealt with the remaining area will be visually inspected immediately by site operatives for any signs that a fire / smouldering waste still remains. The same procedure, detailed in this Section, will be implemented should this be the case.

13.1.3 Uncontainable Small Fire or Large Fire

The following procedure is in place on site that will be followed in the event of a small fire becoming uncontainable or in the event of a major fire onsite;

- The Site Management and FRS will be contacted immediately. The EA will be notified at the first opportune moment.
- Following arrival of the FRS, all site staff will take instructions from the FRS which may include any of the following:
    - If possible, waste that is unburnt will be dampened down to prevent the fire from spreading further;

[2] Google Maps, Accessed in July 2021
[3] Should a single item of the waste stream be alight, and the fire is well contained, then the waste will be doused via use of an extinguisher or fire hose as it is pulled from the waste pile. The burned / fire- damaged portion is then removed to the quarantine area and the remaining waste returned to the pile.
[4] If the fire is not easily contained to a single item, then the obviously alight portion of the waste will be removed to the q uarantine area.

- If possible, unburned material will be separated from the fire using heavy plant;
- The burning area will be isolated, and attempts will be made to extinguish the fire utilising the onsite fire extinguishers if safe to do so; and
- The site and buildings will be evacuated.

14.0 Water Supplies

14.1 Available water supply

Sources of water available onsite are:

- On site fire hydrant (flow rate: 4,500 litres per minute) – located at the site entrance as illustrated on Drawing 004;
- 3 x off site hydrants (flow rate: 1,200 litres per minute) located as follows:
  - Halesfield 13 (east);
  - Halesfield 13 (west); and
  - Halesfield 14 (south).
- Mains water point on site (flow rate: 10 litres per minute); and
- The on-board water supply from FRS vehicles;

Based upon the FPP guidance firewater calculations, it is estimated that approximately 868,320 litres (868m^3) of water would be required to put out the largest combustible stockpile on site[5].

Checks are completed on the hydrants every four years by Shropshire Fire and Rescue and were last checked in 2018. The hydrants were installed throughout the Halesfield Industrial Estate to deal with a range of scenarios. The WISH fire guidance (WASTE 28[6]) states that public hydrants located on industrial estates of more than 3 hectares should have a flow rate of 4,500 litres per minute.

Maximum pile volume (m^3)	Water supply needed (l/min)	Overall water supply needed over 3 hours (litres)	Total water available on site (l/min)
	Pile volume x 6.67	Water supply x 180	
720	4,824	868,320	8,100

15.0 Managing Fire Water

15.1 Containing the run-off from fire water

Waste storage and handling will only happen inside the storage/processing building and all firewater would be contained inside.

[5] Based on a 720m^3 bale stockpile being the largest combustible pile on site and it requiring 6.7 litres of water per cubic metre to extinguish. 6.7 * 720 = 4,824 litres/min. 4,824 * 180 = 868,320 litres/3 hours.

[6] WASTE 28 Reducing fire risk at waste management sites, issue 3, March 2020

The processing building will benefit from roller shutter doors and has an area of approximately 15,300m^2. When contained up to a height of approximately 0.06m, the building is capable of holding 918m^3 of water which is more than the predicted 868m^3 required over 3 hours.

16.0 During and After an Incident

16.1 Dealing with issues during a fire

The site will not continue to accept waste is there is an active fire on site. If possible, waste producers will be notified in advance to prevent delivery vehicles arriving on site during and immediately after a fire.

16.2 Notifying residents and businesses

An emergency contact sheet is included in Appendix FPP01. In the event of a fire the following procedure will be followed:

- The Site Management or individual nominated by the Site Management will locate the emergency contact list included in Appendix FPP01;
- In the event of a large fire, 999 will be dialled first;
- The Site Management or individual nominated by the Site Management will phone each of the local businesses included in Appendix FPP01; and
- Finally the EA incident hotline will be dialled once the situation is under control.

16.3 Clearing and decontamination after a fire

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 safely dealt with in-house using suitably trained staff and firefighting equipment located on site: The fire will be recorded in the site diary, 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 onsite will be incorporated within this FPP and the site's EMS as required.

2. A larger fire that requires the presence of the FRS: If the site operatives have been told to evacuate or cease operations by the FRS, the site will wait until told safe to re-enter site and resume operations. Any closure of the site will be followed by informing customers and the regulatory authorities. The fire will be recorded in the Daily Site Log and in an online incident report and will detail 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 onsite will be incorporated within this FPP and the site's EMS as required.

Should damage be sufficient to prevent the site from being able to store waste, the site will cease accepting waste.

The Site Management will liaise with the EA to determine a plan-of-action to introduce normal operations at the site, and the timescales involved to achieve this.

A visual assessment will be carried out by the Site Management and wherever possible, unburnt wastes will be separated from fire damaged piles. If waste piles have become mixed, then it is likely that the waste will be removed from site to a suitably permitted facility.

The Site Management will determine what decontamination measures will be required to be carried out proportionately to the impact caused by the fire. The period of time taken to restore the site or affected part of the site to operational status will be determined by the nature and extent of the fire. If the affected area does not impact the rest of the site's operation, operations will re-start as and when appropriate.

16.4 Making the site operational after a fire

After a significant incident, an assessment will be undertaken by a suitably qualified individual. Technically competent managers and/or engineers will assess the degree of damage caused by a fire and the residual risk from fire damaged waste, emissions or equipment. Burnt waste material will be kept on site for a short period of time if required for a subsequent internal investigation. Following this, any burnt material will be transferred off site to a suitably permitted disposal facility.

17.0 Conclusion

This FPP is considered to be a 'working' document that is reviewed and updated annually or as required should any of the following occur:

- A fire on site;
- A change or review of legislation;
- A change to operations on site; or
- If the site is instructed to do so by the EA.

It is the responsibility of the Site Management or nominated person to maintain this FPP and to ensure it is adhered to in the event of a fire on site.

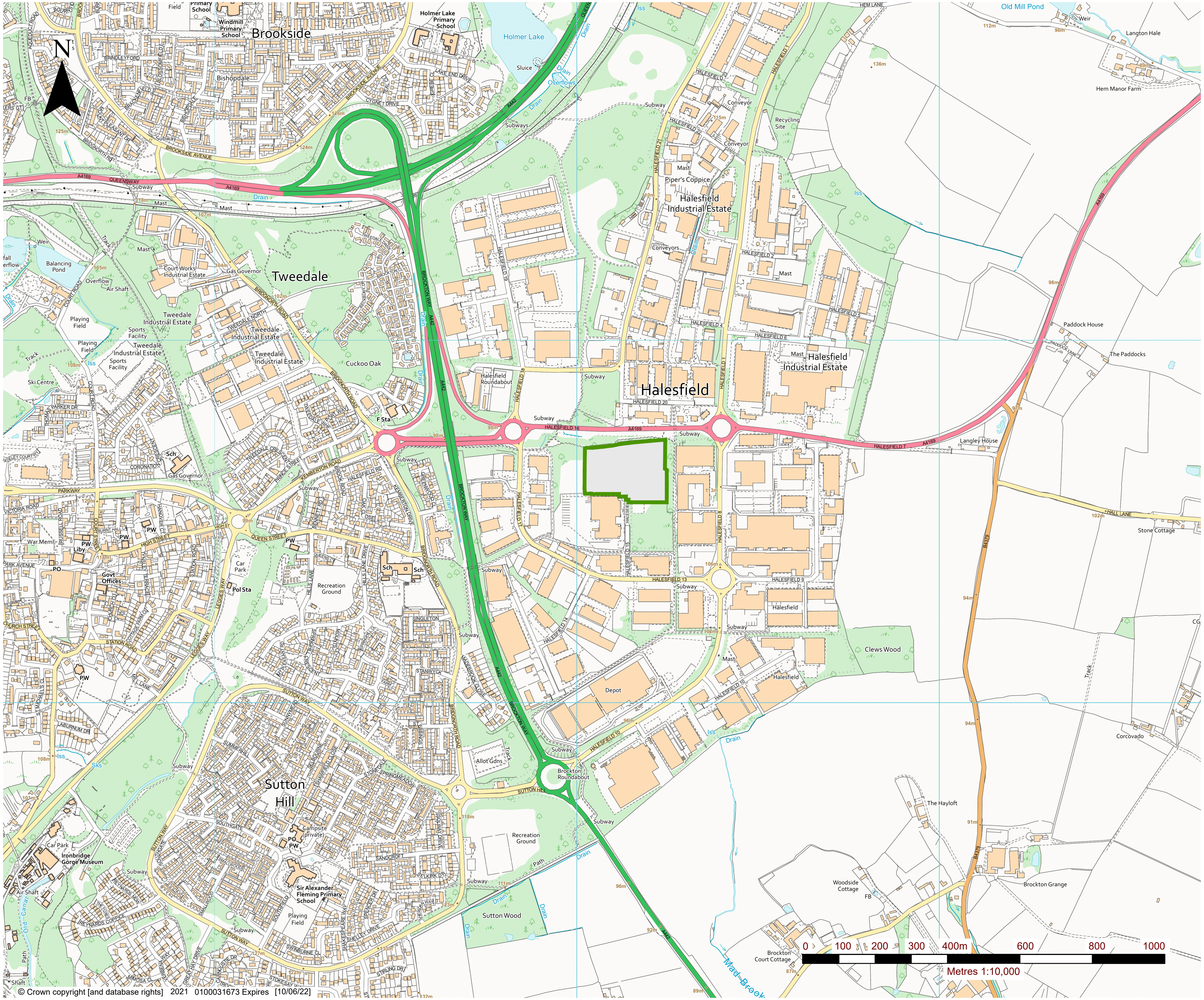
APPENDIX FFP01

Emergency Contact List

Contact	Phone Number
AO Recycling	01952 583666
Tamlex	01952 586689
Telford Fabrications Ltd	01952 581372
West Pennine Trucks Ltd – Scania Telford	01952 587222
RTITB & The RTITB Instructor Academy	01952 520200
Esso Furrows Halesfield	01952 684035
Treadsetters Telford (Truck)	01952 684168
Automotive Addiction	01952 780477

DRAWING 001

Site Location Plan



LEGEND

ENVIRONMENTAL PERMIT BOUNDARY

LLT INVESTMENT LTD

SLR
3RD FLOOR
THE BREW HOUSE
JACOB STREET
BRISTOL, BS2 0EQ
T: 01179 064280
www.slrconsulting.com

HARCOURT FIBER RECYCLING FACILITY

ENVIRONMENTAL PERMIT APPLICATION

SITE LOCATION PLAN

DRAWING 001

Scale	Date
1:10,000 @ A3	JUNE 2021

11821.00001.13.001.0_SITE_LOC_PLAN.dwg

DRAWING 002

Environmental Permit Boundary

N

A4169

Subway

HALESFIELD 15

0 10 20 30 40m 60 80 100

Metres 1:1000

LEGEND

ENVIRONMENTAL PERMIT BOUNDARY

LLT INVESTMENT LTD

SLR

3RD FLOOR
THE BREW HOUSE
JACOB STREET
BRISTOL, BS2 0EQ

T: 01179 064280
www.slrconsulting.com

HARCOURT FIBER RECYCLING FACILITY

ENVIRONMENTAL PERMIT APPLICATION

ENVIRONMENTAL PERMIT BOUNDARY

DRAWING 002

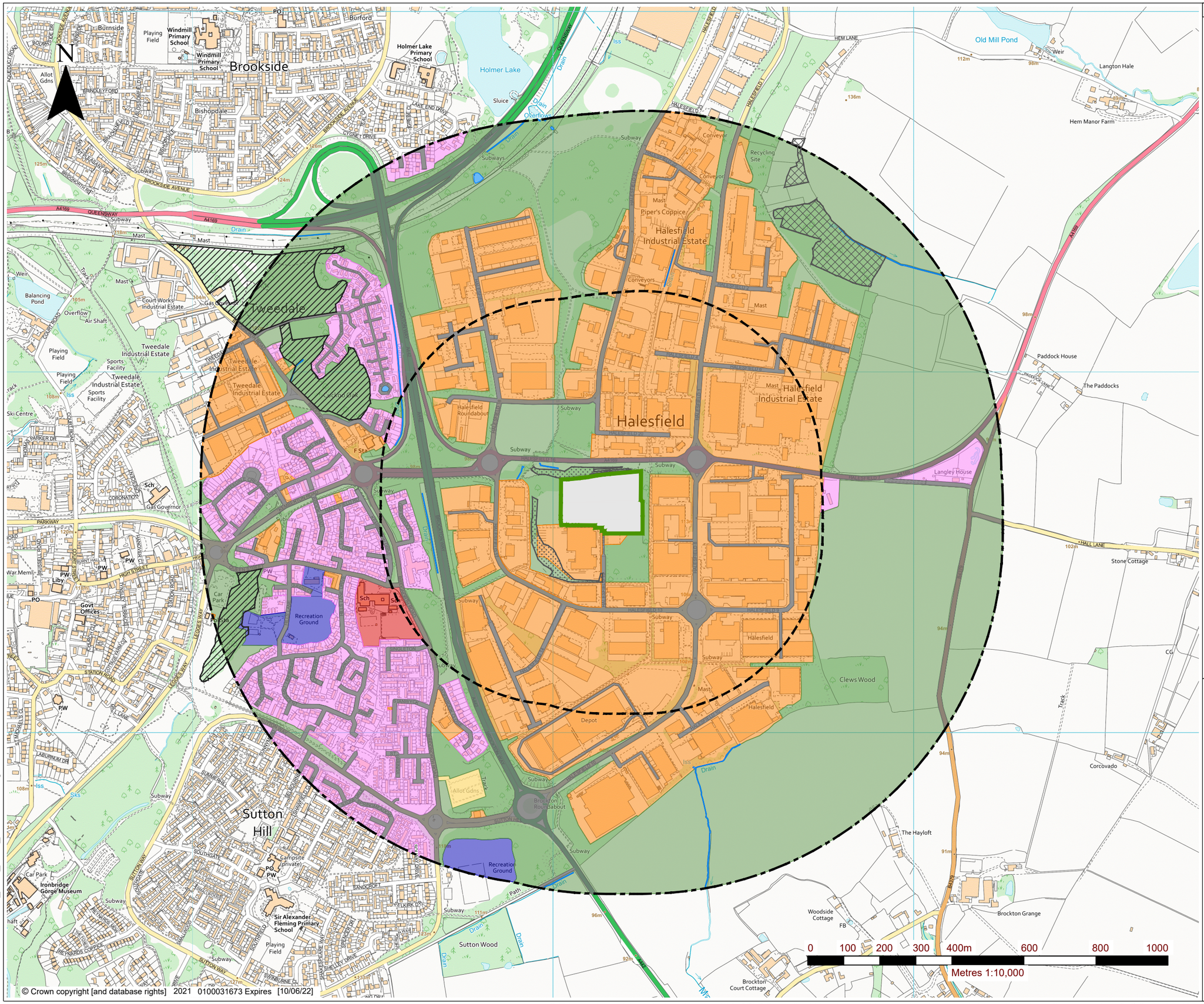
Scale 1:1,000 @ A3

Date JUNE 2021

11821.00001.13.002.0_ENV_PERMIT_BDY.dwg

DRAWING 003

Environmental Site Setting



LEGEND

- ENVIRONMENTAL PERMIT BOUNDARY
- 500m BOUNDARY OFFSET
- 1km BOUNDARY OFFSET
- LOCAL ROAD NETWORK
- RESIDENTIAL
- COMMERCIAL / INDUSTRIAL
- OPEN WATER / DITCHES
- EDUCATIONAL
- OPEN GROUND
- RECREATIONAL
- LOCAL NATURE RESERVE (LNR)
- ANCIENT WOODLAND
- DECIDUOUS WOODLAND

LLT INVESTMENT LTD

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HARCOURT FIBER RECYCLING FACILITY

ENVIRONMENTAL PERMIT APPLICATION

ENVIRONMENTAL SITE SETTING

DRAWING 003

Scale	Date
1:10,000 @ A3	JUNE 2021

11821.00001.13.003.0_ENV_SITE_SETTING.dwg

DRAWING 004

Detailed Site Layout, Fire Management and Prevention

NOTES

1. DRAWING IS BASED ON CLIENT SUPPLIED DRAWINGS, JONO - FINAL LAYOUT AND BHP DESIGN PROPOSED GF PLAN, REF: 19-105-T-11D PROP GF PLAN, DATED JAN 2021.

LEGEND

- ENVIRONMENTAL PERMIT BOUNDARY
- RESIDUAL WASTE
- BALED CARDBOARD WASTE
- DIESEL TANK
- MOBILE PLANT PARKING
- QUARANTINE AREA (9.5m x 9.5m)
- LEGIOBLOCK FIRE WALL
- FIRE EXTINGUISHER
- FIRE HOSE
- FIRE HYDRANT
- SPILL KIT
- FIRE FIGHTING ACCESS

LLT INVESTMENT LTD

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3RD FLOOR
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HARCOURT FIBER RECYCLING FACILITY

ENVIRONMENTAL PERMIT APPLICATION

DETAILED SITE LAYOUT, FIRE MANAGEMENT AND PREVENTION

DRAWING 004

Scale	Date
1:1,000 @ A3	AUGUST 2021

11821.00001.13.004.0b_SITE_LAY&FIRE_MAN.dwg

EUROPEAN OFFICES

United Kingdom

AYLESBURY
T: +44 (0)1844 337380

BELFAST
T: +44 (0)28 9073 2493

BRADFORD-ON-AVON
T: +44 (0)1225 309400

BRISTOL
T: +44 (0)117 906 4280

CAMBRIDGE
T: + 44 (0)1223 813805

CARDIFF
T: +44 (0)29 2049 1010

CHELMSFORD
T: +44 (0)1245 392170

EDINBURGH
T: +44 (0)131 335 6830

EXETER
T: + 44 (0)1392 490152

GLASGOW
T: +44 (0)141 353 5037

GUILDFORD
T: +44 (0)1483 889800

LEEDS
T: +44 (0)113 258 0650

LONDON
T: +44 (0)203 805 6418

MAIDSTONE
T: +44 (0)1622 609242

MANCHESTER
T: +44 (0)161 872 7564

NEWCASTLE UPON TYNE
T: +44 (0)191 261 1966

NOTTINGHAM
T: +44 (0)115 964 7280

SHEFFIELD
T: +44 (0)114 245 5153

SHREWSBURY
T: +44 (0)1743 23 9250

STAFFORD
T: +44 (0)1785 241755

STIRLING
T: +44 (0)1786 239900

WORCESTER
T: +44 (0)1905 751310

Ireland

DUBLIN
T: + 353 (0)1 296 4667

France

GRENOBLE
T: +33 (0)6 23 37 14 14