



AC
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Fire Prevention Plan



Site Clear Solutions

12 – 13 Conduit Road, Norton
Canes, Cannock, WS11 9TJ

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1. INTRODUCTION

1.1 This Fire Prevention Plan has been formulated to satisfy the conditional requirements of the Site Clear Solutions and reflects the guidance detailed within the Environment Agency document Fire Prevention Plans: environmental permits (Published 29th July 2016).

1.2 Site Clear Solutions operates under planning permission Ref: CH.19/01/778 W which allows for the recycling and storage facility for non-hazardous and hazardous waste on site.

1.3 The site is located at 12-13 Conduit Road , Norton Canes, Cannock, WS11 9TJ. Site Clear Solutions offers a variety of commercial recycling services, waste management and site clearance throughout mainland UK, and deals with a range of waste from paper and cardboard to hazardous waste including waste electrical and electronic equipment (WEEE).

1.4 The site also consists of a building to the west which contains the Medicare transfer station and areas for various waste processing including granulation and baling. The building also includes offices, the mobile plant storage area, and several storage areas for the waste accepted on site including WEEE, hazardous waste and baled cardboard and paper. The external yard of the site consists of the quarantine area, 40cyd skips for the storage of waste, and several bays for the storage of waste.

1.5 The operating hours are as follows:

Monday – Friday: 06.00 – 18.00

Saturday: 06.00 – 13.00

Sunday and Bank Holidays: Generally Closed

2. AMOUNT AND TYPE OF WASTE RECEIVED DAILY

Material Type	Form	Amount (Daily in Tonnes)
Construction, demolition, and excavation	Plasterboard, inert, glass	Average: 38
Commercial and industrial	Cardboard, paper, scrap metal, plastic, mixed general waste	Average: 57
Hazardous	WEEE, batteries, fluorescent tubes, paint, resin & solvents, adhesives, aerosols & oil, asbestos, gas bottles	Average: 19

2.1 In accordance with the company's Site Management System, the company shall only accept waste materials in accordance with the waste types permitted in the Environmental Permit.

2.2 The hazardous waste stated above is not covered by the Fire Prevention Plan guidance that the Environment Agency provides, however it is included within this Fire Prevention Plan as it needs to be taken into consideration alongside the non-hazardous waste accepted on site due to them being stored together on the same site.

3. MATERIAL STORAGE QUANTITIES

3.1 All waste material accepted on site is stored in its largest form. The site accepts a variety of waste including hazardous and non-hazardous waste. The hazardous waste includes WEEE, batteries, fluorescent tubes, paint, resin & solvents, adhesives, aerosols & oil, asbestos, clinical waste, and gas bottles. The non-hazardous waste includes plasterboard, paper, wood, plastics, general construction waste and cardboard. The waste is brought onto site using the site's own vehicles and third party contractors. Prior to unloading, the waste deliveries are inspected by site staff for non-conforming waste. If non-conforming waste is identified, it will be removed immediately from the load and transferred to the non-conforming waste bay to the northwest of the external area pending removal to a suitable permitted facility. If the non-conforming waste cannot be removed from the load, the entire load will be rejected, and will be transferred to the non-conforming waste bay pending removal to a suitable permitted facility.

3.2 Non-conforming waste is defined as waste that the site is not permitted to accept under the planning permission and the environmental permit. If non-conforming waste is identified prior to unloading, site management will be alerted immediately. As stated above, the non-conforming waste will be separated from the load and transferred to the non-conforming waste bay pending removal to a suitable permitted facility. If the non-conforming waste cannot be separated from the load, the entire load shall be rejected and transferred to the non-conforming waste bay pending removal to a suitable permitted facility.

3.3 The various waste types stated in the above section will be accepted from different sources and stored in Concrete block or panel bays and skips in the external yard. Material will be weighed at the weighbridge located near the site entrance along the southern side of the unit building. Upon arrival, waste will be transferred to the receiving area which is located to the north of the external yard to be sorted by hand and with the assistance of mobile plant. Once sorted, the waste is transferred to the building for processing according to waste stream. Processing on site includes

granulation, stripping and dismantling of WEEE, and baling. Once processed within the building, the majority of waste is then stored in one of the assigned storage areas in the external yard which include the covered concrete walled bays to the northwest, the bays to the southeast, the covered area in the southeast corner and the 40cyd skips. Copper and plastic from the granulation process is stored within the building and clinical waste is stored within the Medicare transfer station in yellow clinical waste bins and containers.

3.4 Waste will be stored in different stockpiles according to their waste type around the site. The layout of the site allows for flexibility regarding storage of waste. Inside the building there is storage for WEEE and hazardous waste pending processing, and storage of baled cardboard and paper prior to being transferred to the external yard. In the external yard, there are a variety of storage areas for waste in concrete walled bays to the northwest and to the southeast, the covered area in the southeast corner and the 40cyd skips. Each stockpile will either be separated by a fire wall or have a 6m separation distance. All stockpiles will measure no more than 3.5m in height. All waste in the external area is stored on an existing impermeable concrete surface or a proposed concrete surface.

3.5 According to the waste type, some of the Concrete block or panel bays will be covered by a corrugated steel cladding roof as shown in Drawing Ref: SCS.PT.2002FPP. Materials stored in a single area will be clearly separated stockpiles of a maximum size as shown below. The stockpile numbers below are in accordance with the Fire Prevention Plan Drawing Ref: SCS.PT.2002FPP.

Stockpile Number	Material Type/Stockpiles	Form	Location	Maximum amount in each area (m ³)
1	Non-conforming waste	Loose	Covered area in external yard	63
2	Hazardous and flammable waste	Loose	Covered area in external yard	63
3	Hazardous and flammable waste	Loose	Covered area in external yard	126
4	Hazardous and flammable waste	Loose	Covered area in external yard	126

5	Hazardous and flammable waste	Loose	Covered area in external yard	126
6	Hazardous and flammable waste	Loose	Covered area in external yard	73.5
7	Hazardous and flammable waste	Loose	Covered area in external yard	73.5
8	Hazardous and flammable waste	2 x 40cyd skip	External yard	80
9	Hazardous and flammable waste	40cyd skip	External yard	40
10	Hazardous and flammable waste	40cyd skip	External yard	40
11	Lithium store	Fireproof and waterproof steel cabinet.	External yard	5
12	Plasterboard / hazardous and flammable waste	Loose	External yard	735
13	Hazardous and flammable waste	Loose	External yard	175
14	Hazardous and flammable waste	Loose	External yard	140
15	Hazardous and flammable waste	Loose	External yard	140
16	WEEE	2 x 40cyd skip	External yard	80
17	Racking – Haz waste	Racking	Building	60 60 28 Total = 148
18	Racking – Baled cardboard, paper, etc	Racking	Building	36
19	Racking - WEEE	Racking	Building	52

20	Bagged clinical waste	2 x 40cyd skip	External yard	80
21	Racking - WEEE	Racking	Building	40
22	Granulated copper	Bins	Building	10.2
23	Medicare clinical waste	Bins and containers	Building	2

4. OTHER COMBUSTIBLE MATERIALS STORED/PRESENT ON SITE

4.1 The following combustible materials are stored/present on site in the office building or the office which is within the unit building:

Material Type/Stockpiles	Form	Location	Maximum Amount in each area (m ³)
Paper/Cardboard/Plastic (office materials)	Loose	Office	<5m ³
Textiles (PPE)	Loose	Office	<0.5m ³

4.2 The office operation is entirely separate from the waste operation and entirely contained and therefore the fire risk from each operation to the other is low.

4.3 The above materials are not wastes but are used in the management of the business.

5. MATERIAL STORAGE DURATION

5.1 Low risk waste on site will be held on site for no longer than 30 days, and high risk material will be retained for no longer than 14 days, with the site aiming to turnover waste in a shorter period following a First in First Out system. However, on occasion waste will be stored on site for an extended time period of up to 6 months.

5.2 The site accepts hazardous waste in the form of WEEE, batteries, fluorescent tubes, paint, clinical waste, resin & solvents, adhesives, aerosols & oil, asbestos, and gas bottles, and therefore the site receives high risk material. The site will retain the hazardous waste accepted on site for no longer than 14 days. The site also accepts non-hazardous waste including cardboard, paper, scrap metal, plastic, and plasterboard. The non-hazardous waste will be retained on site for no longer than 30 days. However, due to potential exceptional circumstances or changes in legislation, on occasion waste will be stored on site for an extended time period of up to 6 months.

Material Risk Rating	Timescale
Low risk material (non-hazardous waste)	Material will be processed within 30 days.
High risk material (hazardous waste)	Material will be processed within 14 days.

5.3 In the unlikely event that non-conforming waste is accepted on site, it will be removed from site immediately. If it is not possible for the waste to be removed immediately, it will be stored within the non-conforming waste bay for a maximum of 7 days, permitting a suitable disposal route can be found, in which case the waste will be held until disposal is possible.

6. COMBUSTIBLE STORAGE DIMENSIONS (MAXIMUM)

6.1 The various stockpiles of wates and products on site are maintained at certain maximum sizes depending upon the need to maintain separation distances and the availability of space. The table below details the maximum stockpile size for each combustible category of waste.

Material	Length (Meters)	Width (Meters)	Height (Meters)	Maximum Waste Volume (m ³)
Stockpile 1: Non-conforming waste	6	3	3.5	63
Stockpile 2: Hazardous and flammable waste	6	3	3.5	63
Stockpile 3: Hazardous and flammable waste	12	3	3.5	126
Stockpile 4: Hazardous and flammable waste	12	3	3.5	126
Stockpile 5: Hazardous and flammable waste	12	3	3.5	126
Stockpile 6: Hazardous and flammable waste	6	3.5	3.5	73.5
Stockpile 7: Hazardous and flammable waste	6	3.5	3.5	73.5
Stockpile 8: Hazardous and	6.1	2.4	2.6	Combined = 80

flammable waste – 2 x 40 cyd skip – each				
Stockpile 9: Hazardous and flammable waste – 40cyd skip	6.1	2.4	2.6	40
Stockpile 10: Hazardous and flammable waste – 40cyd skip	6.1	2.4	2.6	40
Stockpile 11: Lithium store - Fireproof and waterproof steel cabinet.	1	5	1	5
Stockpile 12: Plasterboard/hazardous and flammable waste	14	15	3.5	735
Stockpile 13: Hazardous and flammable waste	10	5	3.5	175
Stockpile 14: Hazardous and flammable waste	8	5	3.5	140
Stockpile 15: Hazardous and flammable waste	8	5	3.5	140
Stockpile 16: WEEE – 2 x 40cyd skip – each	6.1	2.4	2.6	Combined = 80
Stockpile 17: Racking – Haz waste	15	1	4	60
	15	1	4	60
	7	1	4	28
				Combined = 148
Stockpile 18: Racking – baled cardboard, paper etc	9	1	4	36
Stockpile 19: Racking – WEEE	13	1	4	52
Stockpile 20: Bagged clinical waste – 2 x 40cyd skips – each	6.1	2.4	2.6	Combined = 80
Stockpile 21: Racking WEEE	10	1	4	40
Stockpile 22– Granulated Copper	4.1	1.75	1.8	10.2
Stockpile 23: Medicare clinical waste – bins and containers	2	1	1	2

6.2 Stockpile sizes are dependent on the size of the firewall with all stockpiles being 1 metre below the height of the firewall.

6.3 The volume of waste on site will require measures to rotate stock on site.

6.4 **FIFO** – The stockpiles in the storage areas according to waste stream operate through the first in first out principle. This can only be achieved with extra attention by site management to ensure full removal of waste from the storage areas once they have reached their maximum volume. Site management will inspect each stockpile daily to ensure FIFO is thoroughly implemented on site.

6.5 Stockpile levels will be recorded weekly. The records will be reviewed by site management and action will be taken in the event where stockpiles are not being reduced as planned. This could involve investing in new equipment, hiring new staff, further staff training or changes in the site's current procedures.

7. CONTROL OF SOURCES OF IGNITION

7.1 A Fire Risk Assessment is carried out annually at the site and this identifies potential sources of ignition. As well as the normal sources that every building may have, the site has other that must be controlled. The potential sources of ignition are identified are:

7.2 **Hot Work:** The site operates a variety of Health and Safety systems and part of a Permit to Work system.

- No hot work is required as part of normal site operations. Any hot work which may occasionally be required e.g. any work which may give risk to sparks e.g. grinding, drilling, cutting of metal or stone/concrete, or electrical work will be subject to the permit to work system.
- Each job under the permit to work system is risk assessed prior to work commencing and suitable measures taken to prevent ignition of waste and to deal with any nascent fire promptly before a fire can take hold. This work will not be carried out in areas less than 6m away from any combustible waste.

Precautions taken include:

- Cleaning the area of combustible materials prior to work commencing.
- Have suitable fire extinguishers placed close to the area of work.
- Maintaining a careful watch throughout the work.

- Inspecting the work area after work gas finished and for an hour after, and a permit to work (PTW) system to help manage the risk.

7.3 **Smoking:** The company operates a strict smoking policy in all working areas of the site. Management will bring the rules on smoking to the attention of all workers and visitors to the site and enforce them:

- No smoking is allowed on site, except within the designated smoking shelter by the canteen.

7.4 **Electrical Installations:** Should be of enough capacity for the intended use and designed, installed, inspected, and maintained by competent people.

A maintenance programme is in place to inspect and service equipment in accordance with manufacturers recommendations; attention shall be made to accumulations of dusts/fluff near sources of ignition such as build up on or around electrical equipment, panels etc.

7.5 **Bonfires:** Under no circumstances shall an open fire be allowed on site.

7.6 **Arson:** Measures are in place to prevent unauthorised access to the site.

- Site security is robust with 24/7 CCTV monitoring. The site has 31 CCTV 1.3MP eyeball dome mount cameras including 11 internal cameras that operate on a NCP104 CCTV system. The location of these cameras is shown on Drawing Ref: SCS.PT.2002FPP. Management patrols at the start and end of each day and there is a mixture of 2.1m and 1.8m high palisade fencing surrounding the site perimeter with gates at the site entrance to prevent unauthorised access. There will be concrete panels measuring 4.5m in height around the eastern corners and boundary of the site.
- Out of hours, the security system consists of an intruder alarm and fire alarm.

7.7 **Accumulation of materials:** Whilst not strictly a source of ignition, build-up of dusts/fluff/litter can provide ideal material for a fire to start.

- The site shall be inspected daily by the Site Manager. Any accumulations of dusts, debris, fluff etc., shall be brought to the attention of site management. Any accumulations shall be recorded on the site inspection sheet and cleaned immediately.
- Attention shall be particularly made to accumulations near sources of ignition such as dust/fluff build up on or around electrical equipment, panels etc.

7.8 **Self-combustion:** In certain circumstances certain waste materials can have the ability to generate heat through biodegradation or oxidation, to a point where self-combustion occurs. Such

wastes are stored site with 6m separation distances or separated by firewalls and monitored daily by site management in order to check that self-heating is not occurring. Although none of the waste to be received at site are known to self-combust, routine checks and measures will be taken to reduce this already very low risk. These include covering waste with a tarpaulin and spraying waste with water to reduce temperatures.

7.9 **Hot Exhausts:** Hot exhausts are always kept away from flammable and combustible waste. There is plant used onsite in the form of forklift trucks. All plant is stored in the plant storage area located within the building on the concrete surface.

7.10 **Industrial Heaters:** No industrial heaters, incinerators or braziers will be used on site.

7.11 **Incompatible Wastes:** As the scale of the site's operation is relatively low the issue of incompatible and unstable wastes is possible but unlikely, as the site operates a waste acceptance procedure which aims to deal with this eventuality, and which is described below.

8. WASTE ACCEPTANCE

8.1 The site has procedures designed to ensure that wastes received at site do not present a risk of fire. Checks to ensure the suitability of wastes accepted begin on receipt.

8.2 Wastes are inspected at site by site staff prior to being accepted. Wastes are also supervised so that any issues which were hidden and not identified prior to receipt can be seen. The aim of this is to ensure that a problematic load is not accepted and allowed to stand for a long period, potentially allowing a fire to develop.

8.3 The site is aware that due to the nature of waste accepted on site, non-conforming waste could be in loads delivered to the site, and although these are likely to be in very small quantities, it is theoretically possible that a residual risk from incompatible waste remains. If such a load is identified at collection, it shall be rejected, and site management advised.

8.4 If such an issue is identified at site, the load shall be transferred to the non-conforming waste bay and site management alerted. Action taken may be to segregate and remove the problematic waste to the non-conforming waste bay or to sort the load, removing acceptable waste to recycling and to invite suitable qualified contractors to collect the problematic.

9. QUARANTINE AREA

9.1 The site has a quarantine area of 220m² located in the south of the external yard and includes a 6m buffer zone. The size of the site does allow a 6m distance between the quarantine area and any of the flammable stockpiles on site.

9.2 The location of the quarantine area allows for ease of access from all areas of the site when moving stockpiles and for quick access by the fire service.

9.3 Despite potential storage capacity of the quarantine area, it is intended that waste fires will be tackled in-situ if one should occur on site (with use of fire extinguishers) rather than moving potentially burning waste into other areas of the site. In this instance the site area would be available for use by the Fire and Rescue Service to park fire tenders and allow them to tackle the fire effectively. The quarantine area will then be used to move some of the non-burning wastes from the affected stockpile to reduce the potential scale of the fire.

9.4 Site mobile plant such as the two Forklift Trucks shall be used as directed by site management to move non burning wastes to the quarantine area. Moving non burning waste to the quarantine area helps to stop any fires spreading to other stockpiles around the site and opens areas of access around an incident to aid in firefighting. Burning waste therefore are best being tackled in situ with the use of an extinguisher or left for the fire and rescue service to tackle.

10. FIRE PREVENTION AND DETECTION MEASURES

- Fire risk assessment in place.
- Fire exit and fire safety warning signs displayed.
- Fire awareness raised as part of employee induction training.
- 8 AFFF fire extinguishers on site; distributed throughout the building. The extinguishers are maintained by an external service contractor that is suitably experienced and UKAS accredited.
- Daily check to ensure correct operation of fire-fighting equipment by employees.
- Material inspection procedure.
- Dedicated hot work procedure.
- No naked flames on site and all naked flames or other sources of ignition to be kept at least 6m away from combustible wastes.
- No space heaters, burners, furnaces etc. will be used on site.
- Contractor control program which includes a site induction.

- No smoking anywhere on site except for designated smoking area, enforced by site management.
- Plant that is operated on site consists of Forklift Trucks. However, when not in use they will be kept at a 6m distance from flammable stockpiles and stored on site in the designated plant storage area which is a minimum of 6m away from any flammable stockpiles. All mobile plant and vehicles are fitted with fire extinguishers.
- Ensuring electrical equipment is routinely tested and certified by a qualified electrician.
- Maintaining site security through a 24 hour CCTV security system consisting of many external and internal CCTV cameras. The roller shutter doors of the building are sealed at the end of each day. Site management monitor the security system through a mobile application during operational hours and are alerted out of hours by text if the security system detects an intrusion. The perimeter fencing and site entrance gate is also locked at the end of each working day.
- Inspecting every stockpile on a regular basis which involves fire inspections by the site manager and a nominated member of staff taking the temperature of stockpiles using a hand-held IR non-contact thermometer to ensure the waste has no chance of ignition from the heat.
- Ensuring all equipment is kept in good condition and undergoes routine maintenance.
- The site shall be inspected daily by the Site Manager. Any accumulations of dust, debris, fluff etc., shall be brought to the attention of site management. any accumulations shall be recorded on the site inspection sheet and cleaned immediately.
- Particular attention shall be paid to accumulations near sources of ignition such as dust/fluff build-up on or around electrical equipment, panels etc.
- Ensuring that spill kits are used to clear up any spillages on site immediately. Spill kits will be kept in the building. All site operatives will be trained in the deployment of spill kits. However, the site management will be responsible for ensuring that they have been deployed appropriately.

10.2 Fire Alarm

10.2.1 The fire alarm system has been designed, installed, and maintained by a UKAS accredited installer to BS-5839-1. The system will consist of a fire system that operates 24 hours a day and will alert site staff via phone call both during operational hours and out of hours if a fire is detected;

10.2.2 In addition the company operates a CCTV system with cameras that are UKAS accredited that are fitted on site which are monitored during operational hours via TV screens in the offices, staff computer screens or through a mobile application. Out of operational hours, management can

continue to monitor the CCTV cameras via the mobile application, although there is no specific demand or pattern to this.

10.2.3 Out of hours, site management are alerted by phone call if the fire or intruder alarm system is triggered by an intrusion.

10.2.4 Out of hours, once alerted by the intruder or fire alarm system, site management will immediately contact the FRS to inform them that there is a fire before they travel to the site themselves.

10.3 Fire Watch

10.3.1 Throughout the day the site management will conduct dynamic fire inspections on an ongoing basis. These involve a visual inspection of waste stockpiles and exhausts.

10.3.2 At the end of each working day a documented Fire Watch will be undertaken in accordance with the Fire Watch Procedure and the Fire Watch Form (Appendix 5 and 6). This shall include visual monitoring of stockpiles and equipment.

10.3.3 After any hot work is carried out, an operative will keep the area under observation for an hour to ensure that a fire does not occur.

10.3.4 At management meetings, visual monitoring recordings will be reviewed, and any concerns identified will be addressed at this point. The changes could involve changes in the procedures, resetting trigger temperatures, purchasing of new equipment or re-training staff as deemed necessary.

10.3.5 Temperatures of up to 50°C could be expected in wastes stored outside which are exposed to the sun. It is crucial to note that the majority of flammable stockpiles are stored indoors within the building or undercover in one of the covered bays in the external yard, therefore no stockpiles will be exposed to the sun. Temperatures higher than this may indicate another source of heating such as a hidden fire. Where monitoring shows temperatures above this level a fire watch shall be set up and temperatures will be monitored at 30-minute intervals until such time as temperatures fall below this trigger level in accordance with the Hit / Fire Watch Procedure.

10.3.6 If temperatures increase, or show no signs of decreasing, then action should be taken to reduce the temperature in accordance with Section 10.4 'Inspections & Monitoring' below.

10.4 Inspections & Monitoring

10.4.1 In addition to the Hot / Fire Watch, inspections will be carried out by the site staff throughout the working day with further daily inspections carried out by site management to ensure that stockpile sizes and rotation remain within the limits.

10.4.2 These inspections will all involve perimeter and security inspections, together with a review of Fire Watch records and temperature monitoring.

10.4.3 To avoid hot weather heating wastes, temperatures of stockpiles will be monitored by site management. This will involve checking surface temperatures of all wastes stored both internally and externally. It is crucial to note however, that all stockpiles are stored within the unit building and none of the stockpiles are exposed to the sun.

10.4.4 If surface temperatures appear high and in the opinion of management create a potential for fire, wastes will be rotated by bringing waste from the inside of the pile to the outside. The final procedure used to prevent hot weather heating would be to douse the waste with cold water.

10.5 Site Design

10.5.1 The site layout is designed to ensure freedom of movement. Waste is brought onto site using the site's own vehicles and third party contractors and delivered to the receiving area which is located to the north of the external yard. The site accepts a variety of waste including hazardous and non-hazardous waste. The hazardous waste includes WEEE, batteries, fluorescent tubes, paint, clinical waste, resin & solvents, adhesives, aerosols & oil, asbestos, gas bottles. The non-hazardous waste consists of plasterboard, paper, scrap metal, mixed general waste, and cardboard. Prior to unloading, the waste deliveries are inspected by site staff for non-conforming waste. If non-conforming waste is identified, it will be removed immediately from the load and transferred to the non-conforming waste bay to the northwest of the external area pending removal to a suitable permitted facility. If the non-conforming waste cannot be removed from the load, the entire load will be rejected, and will be transferred to the non-conforming waste bay pending removal to a suitable permitted facility.

10.5.2 The site surface is predominantly concrete. However, the area of the external yard where stockpiles 12-15 and 20 are located currently has a hardcore surface. An impermeable concrete surface will be installed prior to the commencement of operations and any waste being stored in these areas. The concrete walled bays in the external yard are constructed of Concrete block or panels. The firewalls consist of Concrete block or panels which form the dividing walls on site, having a fire resistance period of 240 minutes. A Concrete Fire Resistance Certificate can be found in Appendix 11.

10.5.3 Waste is stored in stockpiles throughout the site that are allocated for hazardous and flammable waste, plasterboard, clinical waste, copper, and WEEE. The external yard includes a covered area to the north consisting of several concrete walled bays for the storage of hazardous and flammable waste. Within the covered area there is also a bay for non-conforming waste. There is an additional covered concrete walled bay in the southeast corner of the external yard, which is assigned for the storage of predominantly plasterboard. However, in the event that there is no plasterboard on site to fill the covered bay, the bay will be used for the additional storage of hazardous and flammable waste. The external yard also consists of 40cyd skips to the east and west, uncovered concrete walled bays to the southeast, a quarantine area and a weighbridge. To the northwest of the external yard there is a canteen, and a hazardous waste processing area with a baler. There is also a gas bottle cage and an empty bin/drum storage area in the external yard. The car park is situated along the western boundary.

10.5.3 The building comprises of several separate areas for both the processing and storage of waste. The main area of the building includes a WEEE processing area, the mobile plant storage area, two balers and the office. This area of the building also consists of storage on racking for hazardous waste, baled cardboard and paper, and WEEE. To the south of the building, there are several separate areas. The granulation and destruction areas are used for the granulation of copper wires. Once processed, the copper is stored in the area and the plastic is transferred to an assigned storage bay in the external yard. The Medicare transfer station is used for the sorting of clinical waste which is then stored in clinical waste bins and containers. The remaining areas of the building to the south consists of mezzanine storage, the traffic office, and the office and headquarters.

10.5.4 There are also AFFF fire extinguishers distributed throughout the site. The site entrance is located to the southwest corner of the external yard which will be used for Fire Service access, and the site perimeter is constructed from palisade fencing measuring 1.8m and 2.1m in height, and concrete panel walls measuring 4.5m in height. There is an ACO drain located across the roller shutter door into the main area of the building. In the event of a fire inside the building, floodsax will be deployed across each roller shutter door for fire water containment. In the event of a fire in the external yard, a water gate barrier will be deployed between stockpile 15 and 20 and between the hazardous waste processing area and building towards the northwest as shown on the drawing, so that the FRS can still access the site whilst also containing fire water.

10.6 Drainage

10.6.1 The site is predominantly surfaced with an impermeable concrete surface as shown on Drawing Ref: SCS.PT.2002FPP. There is currently hardcore surfacing located to the southeast. It is

crucial to note that the proposed concreted area to the southeast will have concrete installed prior to any waste being stored in that area.

10.6.2 The site has a surface water drainage connection and is equipped with surface water manholes. The locations of the manholes are shown on Drawing Ref: SCS.PT.2002FPP. The site also has a foul water drainage connection to the southwest corner of the site. In the event of a fire, contaminated water will be contained on the impermeable concrete surface and will not drain through the manholes as they are sealed.

10.6.3 An ACO drain is situated along the base of the entrance to the unit building in front of the roller shutter doors to ensure water does not collect within the building.

10.6.4 In the event of a fire in the external yard, drains will be covered with clay mats and a water gate barrier will be deployed across the site entrance to stop any firewater leaving the site and containing the water until it can be correctly disposed of as required.

10.6.5 In the event of a fire within the building, hydrosnake barriers will be deployed across each site entrance for the containment of fire water.

10.6.6 Any potential spillages will be dealt with appropriately within the permitted area using the spill kit that is provided on site. The spill kits are located in the building.

10.7 Incoming Waste

10.7.1 Incoming waste is entirely within the control of site management and can be stopped at any time. During the event of a fire, no waste is delivered, and the entrance of the site will be manned by site operatives to stop all visitors at the access road and to ensure that the site is only accessed by the FRS.

10.7.2 Waste is accepted on site in accordance with the waste acceptance criteria detailed within the document Ref: SSOW - Collecting Waste and Waste In V2 Nov 18.

10.8 Security

10.8.1 The site has not experienced any trespass or vandalism. The security system consists of CCTV cameras that operate 24 hours a day that were designed, installed, and are maintained by a UKAS accredited installer. The system is monitored on site by site management during operational hours via TV screens, computer screens and a mobile application. In the event of a fire the site operatives will first inform the FRS and then notify site management. If there is an intrusion or fire out of hours, the security alarm system or fire alarm system alerts staff immediately by phone call. The CCTV system is provided by CCSS Ltd.

10.8.2 A fire alarm (system category L3) has been installed by a UKAS accredited installer to BS 5839-1:2002 on site. The system sensors alert staff during the day and at night and alert site management via phone call.

10.8.3 The detection/security systems used are proportionate to the nature and scale of the waste management activities carried out on site. The design, installation and maintenance of all automated systems are covered by an appropriate UKAS-accredited third-party certification scheme. The detection and fire alarm system installed on site will effectively contact site management in the event of a fire or an intrusion.

10.9 Housekeeping

10.9.1 The site shall be inspected weekly. Any accumulations of dust, debris, fluff etc., shall be brought to the attention of site management. Any accumulations shall be recorded on the site inspection sheet and cleaned immediately.

10.9.2 Attention shall be paid to accumulations near sources of ignition such as dust/fluff build up on or around electrical equipment, panels etc.

10.9.3 The risk of fire is managed by very careful housekeeping, keeping areas clean, free from litter and detritus, especially electrical infrastructure, through inspections and monitoring.

10.9.4 The self-ignition point of wastes is actually very high; plastic typically self-ignites above 260°C, petrol 247°C and diesel 210°C. By ensuring that there are no sources of ignition and no elevated temperatures at the end of a day, management is essentially ensuring that ignition overnight cannot occur.

10.10 Storage of Flammable Materials

10.10.1 Other than office paperwork and cardboard packaging, the only flammable materials held on site are:

- Non-conforming waste (small stockpile in covered bay in external yard).
- Hazardous and flammable waste (numerous stockpiles throughout the external yard in bays or 40cyd skips).
- WEEE (stockpiles in the building and in 40cyd skips in the external yard).
- Lithium store (small stockpile located in external yard within fireproof and waterproof steel cabinet).
- Hazardous waste (stockpiles on racking in the building).
- Baled cardboard and paper (stockpiles on racking in building).

- Bagged clinical waste (stockpile in 40cyd skip in external yard).
- Clinical waste (stockpiles in yellow bins and containers in the building).

10.10.2 All flammable stockpiles are separated by a 6m separation distance or by a firewall. All storage areas are easily accessible from at least two sides to ensure that if a fire occurs inside of them, it can be put out.

10.10.4 There are no other flammable materials held on site other than those stated above.

10.11 Fire Exercises

10.11.1 Routine fire exercises take place at least twice every year. This will take the form of a practice run through of the procedures to be followed on discovering a fire, from raising the alarm to notifying the authorities and evacuating the site. Fire alarm tests are also undertaken weekly.

10.11.2 A fire procedure has been produced and forms part of the site's management plan. Each exercise shall be recorded and any deficiencies in the exercise shall be noted, reviewed by site management and any appropriate corrective action taken.

10.11.3 Corrective action taken may include re-training of staff, amendments to procedures, or purchase of alternative equipment as deemed necessary.

10.12 Plant and Vehicles

10.12.1 The site will have a mix of plant. The plant will consist of a large baler (including conveyor), two compacting and baling machines, cable granulation machine, polystyrene compacting machine, two forklift trucks, a loading shovel, and an industrial jet washer. The forklift trucks are stored in the designated mobile plant storage area in the building as shown on Drawing Ref: SCS.PT.2002FPP.

10.12.2 The site also uses their own lorries and third party contractor vehicles for the transportation of waste. All waste is delivered using these vehicles only which are not stored on site.

12.12.3 Spill kits are retained on site to deal with any spillages which may occur. These are located within the building as shown on Drawing Ref: SCS.PT.2002FPP.

10.13 Plant and Vehicle Maintenance

10.13.1 There is mobile plant used on site including Forklift Trucks which will be stored in the designated plant storage area within the building as shown on Drawing Ref: SCS.PT.2002FPP.

10.13.2 The company also operates their own lorries and third part contractor vehicles for the transportation of waste. Maintenance is required on all site vehicles; this includes a mix of daily checks

by site staff and routine planned maintenance by specialist sub-contractors. A service schedule is maintained to ensure all servicing and statutory testing is undertaken at the specified intervals.

10.13.3 It is crucial to note that even though vehicles are used for daily activities, there is no vehicle maintenance that occurs on site. Therefore, the risks relating to a fire occurring from maintenance activities on site such as sparks, oil and fuel leaks are not present.

10.13.3 If a defect is discovered during the routine daily inspection, this shall be rectified as soon as possible. Generally, this will mean within 48 hours. If the defect is on a part which could give rise to a source of ignition or on a fire suppression system, the equipment will be immediately taken out of service until a repair can be affected.

10.13.4 Part of a daily maintenance is also a detailed clean to prevent the build-up of dusts, waste etc. in parts that may not be readily visible. Attention shall be paid to the vehicles entering the site and the exhaust systems. This is subject to a Site Working Procedure.

10.13.5 Any equipment showing evidence of a leak, either through damage or expansion of fuel within the tank, will be removed from the permitted area to the vehicle storage area and repairs effected immediately. Any spillages will be cleared using Spill-Dri or similar and the residues disposed of to a suitably authorised facility.

10.14 Electrical Safety

10.14.1 The site has a current electrical test certificate and electrical infrastructure is included in the service schedule to ensure that this is maintained. All electrical infrastructure is tested once every 3 years.

10.14.2 All testing and maintenance of electrical equipment and infrastructure is carried out by a suitably qualified and accredited electrician. All records will be kept in the office.

10.15 Training

10.15.1 The requirements of the FPP and the Site Management Plan shall be communicated to all staff and copies made available on site in site welfare facilities. Staff shall be trained by the use of toolbox talks which are reinforced annually or when the FPP is amended. Refresher training will be carried out to ensure that all site staff are up to date on how to tackle the occurrence of fires.

11. INCIDENT MANAGEMENT

11.1 In the event of a fire being reported by a person, site management will immediately investigate. Once a fire is confirmed, several actions will take place (concurrently not sequentially).

- Site management will immediately notify the Fire and Rescue Service (FRS).
- A member of staff will be detailed to guide the FRS on arrival and to provide the senior officer with a copy of the up to date Fire Prevention Plan.
- If deemed safe and practical to do so, before the arrival of the FRS, designated site staff will attempt to extinguish the fire using the site's fire extinguishers.
- Site management will then direct staff to deploy water gate barriers and floodsax.
- Site management will order the evacuation of the site in accordance with the fire drill and for all events of fire will assist in the safe evacuation of all staff, contractors, and visitors.
- A fire however small will be considered an emergency. In addition to this, the Site Manager will immediately cancel all inputs to the site and all vehicles present on site at the time will be sent off site as a precaution until management are assured that the fire is out, and risk of re-ignition has passed.
- Site management will inform the Environment Agency of the incident.
- The site would cease all operations instantly and would direct all its efforts into fighting the fire. The entrance gates would remain open and would be manned to allow access for the FRS. No other vehicles would be allowed to access to the site other than the FRS or Environment Agency. Throughout the duration of the site and the cleaning process afterwards, no wastes will be accepted on site.
- Following a fire, once the FRS deem the site to be safe, an inspection of the site shall be made, and a decontamination plan produced.
- Residual wastes will be sent for recycling or disposal to landfill as appropriate. Once the site is cleared of the products of the products of combustion, an inspection of the site infrastructure shall take place to determine the extent of damage to site surfacing, buildings etc.
- A plan of action shall then be created to repair or replace any elements of site infrastructure damage by fire and such remedial works as are required shall be carried out before the site is re-opened and any wastes are accepted.

12. FIRE SUPPRESSION

The site handles a range of wastes with varying degrees of fire risk. The waste on site consists of both hazardous and non-hazardous and are stored accordingly either in the building, or in the external yard within Concrete block or panel bays in the external yard, some of which are covered, and in 40cyd skips. The stockpiles sizes are below the maximum given in the fire prevention guidance by the Environment Agency.

12.1 AFFF Foam Fire Extinguishers

12.1.1 There are 8 AFFF foam fire extinguishers on site that will be used in the early stages of a fire by staff that are trained in the use of fire extinguishers. The extinguishers are located throughout the building as shown on Drawing Ref: SCS.PT.2002FPP. The storage areas ensure ease of access in the early stages of a fire and the extinguishers will be used to extinguish a fire on stockpiles.

12.1.2 The fire extinguishers on site are at a size of 6 litre 10kg and are maintained in accordance with the manufacturer's recommendations. Further information on the AFFF foam fire extinguishers can be found in Section 15.

12.2 Automatic Fire Suppression

12.2.1 The site does not benefit from an automated fire suppression system due to the site having a low level of risk in regard to a fire occurring due to there being 6m separation distances or fire walls between all flammable stockpiles, as well as numerous alternative measures in place to ensure the risk of the start and spread of a fire is reduced. Alternative measures are detailed below in Section 12.3.

12.2.2 The flammable waste on site will be covered by the AFFF fire extinguishers on site, and each stockpile can be easily accessed from more than one side to be extinguished in the event of a fire.

12.2.4 All waste and products will be subject to temperature monitoring (Hot / Fire Watch) prior to close down each night.

12.2.5 The site is also using alternative measures in addition to the AFFF fire extinguishers which focus on robust fire prevention rather than cure. These are detailed below.

12.3 Alternative Measures

12.3.1 The constraints of the site mean that it is not possible to entirely comply with all aspects of the published Fire Prevention Guidance; the sections of which are detailed below. However, with the alternative measures in place, the site will meet the three main aims of the guidance:

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

Separation Distances and Storage

Due to the nature of the site, it is not possible to have 6m separation distances between all of the flammable stockpiles. The following alternative measures are in place to ensure fire prevention despite there not being 6m separation distances between every flammable stockpile on site:

- All flammable stockpiles that cannot be separated by 6m are separated by a firewall.
- All flammable stockpile volumes are within the maximum stockpile volumes given in the Environment Agency fire prevention plan guidance.
- The central area of the external yard is kept clear, and the roller shutter doors of the building will be kept open which allows ease of access for the FRS in the event of a fire.
- Each stockpile is accessible from more than one side to allow for it to be easily extinguished in the event of a fire.
- The majority of the flammable waste is stored within the building and within the covered bays which removes the risk of flammable material being exposed to the sun.
- Waste acceptance procedures ensure that the risk of waste contamination is effectively reduced through thorough inspection of loads on receipt to secure that non-conforming waste is not accepted on site. The only waste that arrives on site is waste that has been pre-arranged and is delivered by the site's own vehicles and third party vehicles.
- The risk of arson is reduced by the presence of the 24 hour security system.

These alternative measures minimise the likelihood of a fire occurring, will allow for a fire to be extinguished within 4 hours and minimise the spread of fire within the site and to neighbouring sites despite there not being a quarantine area on site.

Fire Suppression

Methods of fire suppression are in place on site and will be used in the event of a fire to ensure that it is extinguished within 4 hours and to prevent a fire from spreading:

- 8 AFFF foam fire extinguishers, which are located as shown on Drawing Ref: SCS.PT.2002FPP, will be used in the early stages of a fire once detected. The staff will be trained in the use of AFFF fire extinguishers and will use them to extinguish a stockpile fire if it is small enough to tackle prior to the arrival of the FRS.

These alternative measures will allow for a fire to be extinguished within 4 hours and minimise the spread of fire within the site and to neighbouring sites in response to an alert from the detection system.

Detection Systems

A fire alarm and CCTV system will be installed before any waste operations occur on site to ensure that a fire is immediately identified. This will work alongside the Fire Watch Procedure provided in Section 10.3. and Appendix 5 and other alternative measures discussed in this section to prevent a fire occurring on site where the plan deviates from the Environment Agency guidance.

- CCTV cameras monitored by site management during operational hours and site management will be alerted by text out of hours if the security system is triggered by an intrusion.
- Heat sensors throughout the warehouse and fire and security systems are monitored 24/7 by CCSS Ltd.

These alternative measures will allow for a fire to be extinguished within 4 hours and minimise the spread of fire within the site and to neighbouring sites in relation to the detection of fire.

Housekeeping

All staff will be trained on induction in the prevention of a fire occurring on site through good housekeeping:

- End of day Hot/ Fire Watch using hand-held thermal imaging device and temperature monitoring and actions.
- Documented call out rota / procedure.
- Daily, weekly, and six-monthly inspection and cleaning schedules in place and implemented.
- Retraining of staff through toolbox talks of the Fire Prevention Plan procedures.

12.3.2 When deviating from the Environment Agency guidelines, all of the above alternative measures operate in unison to minimise the likelihood of a fire occurring, allow for a fire to be extinguished within 4 hours and minimise the spread of fire within the site and to neighbouring sites.

13. STAFFORDSHIRE FIRE & RESCUE SERVICE

13.1 The nearest Fire Station to the site is Chase Terrace Fire Station located at 26 Rugeley Road, Chase Terrace, Burntwood, WS7 1AU.

13.2 The site lies some 3km to the southwest of the Fire Station, which implies a travel time of 11 minutes. However, this is expected to be considerably lower for Emergency Services.

13.3 A second station, Cannock Community Fire Station, lies 4.3km to the northwest of the site and has a similar travel time of 12 minutes. However, this is expected to be considerably lower for Emergency Services.

13.4 A third station, Lichfield Fire Station, is situated approximately 9.9km to the north east of the site.

13.5 In all this means that the Fire Service has 3 units within 10km of the site with the following appliances:

- 2 x PRL
- 1 x RRP
- 1 x HAR
- 2 x PRT
- 1 x TRV

13.6 In the event of a fire these services will be contacted, however it must be understood that the water supply is a maximum and these services may not be available at the required time.

13.7 A fire hydrant lies some 215m to the south of the site entrance, allowing the Fire and Rescue Service to rapidly deploy to fight any fire. Following correspondence with Severn Trent in May 2019, it was confirmed that they do not test the fire hydrants or provide flow and pressure information. This correspondence is provided in Appendix 10.

14. WATER SUPPLY

14.1 The nearest fire hydrant lies approximately 215m to the south of the site entrance.

14.2 For the purpose of this fire prevention plan, the water supply calculations have been completed separately for the levels needed to extinguish a fire in the building and in the external yard.

14.3 The largest flammable stockpile in the external yard is 735m³. Therefore, a flow rate of 4,900l/m (2000l/m / 300m³ x 735m³) and a total supply of 882,000l (4,900l/m x 3 hours) would be required to extinguish a fire in the external yard.

14.4 The largest flammable stockpile in the building is 148m³. Therefore, a flow rate of 986.7l/m (2000l/m / 300m³ x 148m³) and a total supply of 177,606l (986.7l/m x 3 hours) would be required to extinguish a fire in the building.

14.5 The site's fire suppression system does not depend on water, using the AFFF fire extinguishers instead and so no water tanks are provided for firefighting. The close proximity of the three local Fire Stations and the Fire Hydrant also renders the need for onsite tanks of water for firefighting superfluous.

15. FIRE WATER CONTAINMENT

15.1 The site has been built on a sealed impermeable concrete surface. We have therefore assessed the potential effect of water on:

- The local groundwater and surface water bodies.
- Any well, spring or borehole within 50 metres used for the supply of water for human consumption, including private water supplies.

15.2 Fire water will be contained by the concrete surface throughout the central area of the site together with the floodsax and water gate barriers that will be deployed by assigned site staff. If there is an incident out of hours, site management are alerted through the fire alarm/security system by text and will promptly arrive at the site to deploy the floodsax and water gate barriers.

15.3 For the purpose of this fire prevention plan, the fire containment calculations have been completed separately for the external yard and the building.

15.4 The maximum volume of water required to extinguish a fire in the largest stockpile (735m³) in the external yard is calculated to be 882,000l (4,900l x 3 hours). This equates to 882m³ of water.

15.5 The maximum volume of water required to extinguish a fire in the largest stockpile (148m³) in the building is calculated to be 177,606l (986.7l/m x 3 hours). This equates to 177.6m³ of water.

15.6 External Yard Fire Water Containment Calculations

Volume of firewater = 882m³

Area = 3,093m²

Height of containment required = 0.28m (882m³ / 3,093m²)

15.5 Aqueous Film Forming Foam (AFFF) will also be used to tackle fires on site. The foam extinguishes a fire by rapidly cutting the oxygen supply by expanding over the surface of the stockpile. This has an average expansion rate of 5:1 to 7:1. AFFF are considered the most suitable to operate during the early stages of a fire prior to the arrival of the FRS. The foam works in the following ways:

- “The foam blankets the fuel surface smothering the fire”.
 - “The foam blanket separates the flames/ignition source from the fuel surface”.
 - “The foam cools the fuel and any adjacent metal surfaces”.
 - “The foam blanket suppresses the release of flammable vapours that can mix with air”.
- (Chemguard, 2005).

15.6 Based on the worse- case scenario (e.g. 5:1 water to foam solution ratio), 980l/m (4,900l/m /m / 5) of water is all that is required to extinguish a fire in the largest flammable stockpile in the external yard.

15.7 Using AFFF greatly reduces the runoff and potential for pollution which is also a concern for the Fire Service.

15.8 In a worst-case scenario, a fire in all stockpiles, the use of foam would mean that the volume of foam to be retained on site would be $980\text{l/m} / 5 = 196\text{m}^3$. Over an area of $3,093\text{m}^2$ this equates to a foam depth of 0.06m ($196\text{m}^3 / 3,039\text{m}^2$), easily retained by the water gate barrier system. However, whilst it is likely that the FRS will use AFFF as best practice when tackling a fire, the site has been designed assuming that only water is used to extinguish fires and the site is capable of retaining 0.26m of firewater using the water gate barrier system.

15.9 **Water Gate Barrier System**

In the event of a fire, any contaminated water will be held within the site using a Water Gate barrier. The barrier has the advantage of allowing FRS to still gain access to the site as they can drive over the barrier without the contained water being released. No flammable materials are placed outside of the concrete surface of the site; therefore, no contaminated water will escape the site as it will all be contained by use of a Water Gate Barrier. The quantity of firefighting water means that there is minimal time for leaching of contaminants from wastes. All staff are trained in deployment of the barriers, which can be deployed by a single person.

It takes around 1-2 minutes to deploy 50m of barrier. The width of the gap between the southern concrete panel wall and stockpile 20 is 21.7m and the width of the section between the building and the perimeter wall to the north is 0.8m, and therefore it will take a matter of seconds to deploy the water gate barriers at each door. Further detail on the water gate barrier system can be found in Appendix 12.

15.10 Building Fire Water Containment Calculations

Volume of firewater = 177.6m^3

Area = 1267.5m^2

Height of containment required = 0.14m ($177.6\text{m}^3 / 1,267.5\text{m}^2$)

15.11 Aqueous Film Forming Foam (AFFF) will also be used to tackle fires on site. The foam extinguishes a fire by rapidly cutting the oxygen supply by expanding over the surface of the stockpile. This has an average expansion rate of 5:1 to 7:1. The alternative fire suppression method of a water-

based fire extinguishing system would be unsuitable due to AFFF fire extinguishers being present on site. AFFF are considered the most suitable to operate during the early stages of a fire prior to the arrival of the FRS. The foam works in the following ways:

- “The foam blankets the fuel surface smothering the fire”.
 - “The foam blanket separates the flames/ignition source from the fuel surface”.
 - “The foam cools the fuel and any adjacent metal surfaces”.
 - “The foam blanket suppresses the release of flammable vapours that can mix with air”.
- (Chemguard, 2005).

15.12 Based on the worst-case scenario, (e.g. 5:1 water to foam solution ratio), 197.3l/m (986.7l/m / 5) of water is all that is required to extinguish a fire in the largest flammable stockpile.

15.13 Using AFFF greatly reduces the runoff and potential for pollution which is also a concern for the Fire Service.

15.14 In a worst-case scenario, a fire in all stockpiles, the use of foam would mean that the volume of foam to be retained on site would be $197.3\text{l/m} / 5 = 39.5\text{m}^3$. Over an area of 1267.5m^2 this equates to a foam depth of 0.03m ($39.5\text{m}^3 / 1267.5\text{m}^2$), easily retained by the hydrosnake barrier system. However, whilst it is likely that the FRS will use AFFF as best practice when tackling a fire, the site has been designed assuming that only water is used to extinguish fires and the site is capable of retaining 0.14m of firewater using the hydrosnake barrier system.

15.15 Hydrosnake Barrier

15.15.1 A barrier of up to 0.14m high, as calculated in Section 15.10, is needed to contain water at the five roller shutter doors of the building which measure between 5m and 5.5m in width. There are four entrances on the eastern facade of the building. Two of the doors measure 5m and two of the doors measure 5.5m. A single hydrosnake is 1.45m in length when activated. Therefore, a barrier of four hydrosnake barriers in length per entrance would be enough to contain the firewater flooding produced (0.14m) when tackling the largest stockpile in the building with the strongest water flow. A barrier of four hydrosnakes would also be needed at the roller shutter door on the western façade. A total of 20 hydrosnakes would be needed to cover all building entrances. A hydrosnake barrier can therefore be used for the containment of flood water.

15.15.2 This is a temporary flood barrier which forms a seal to hold in water. The barrier has the advantage of allowing the FRS to still gain access to the site without the contained water being released. The barrier takes approximately one minute to deploy meaning that it will take less than 3

minutes to deploy the barriers throughout the site with 4-5 members of staff. The hydrosnake system needs to be wetted on deployment and will therefore be fire resistant.

15.15.3 Site management will be responsible for ensuring that it has been appropriately deployed during any fire event.

15.15.4 The shelf life of this product is 5+ years and they will be immediately replaced once they have been used. Please refer to Drawing Ref: SCS.PT.2002FPP for the storage and deployment locations of the barriers.

15.15.5 A risk assessment has been conducted and the procedures are a reasonable request of all the staff in the event of a fire.

16. SENSITIVE RECEPTORS

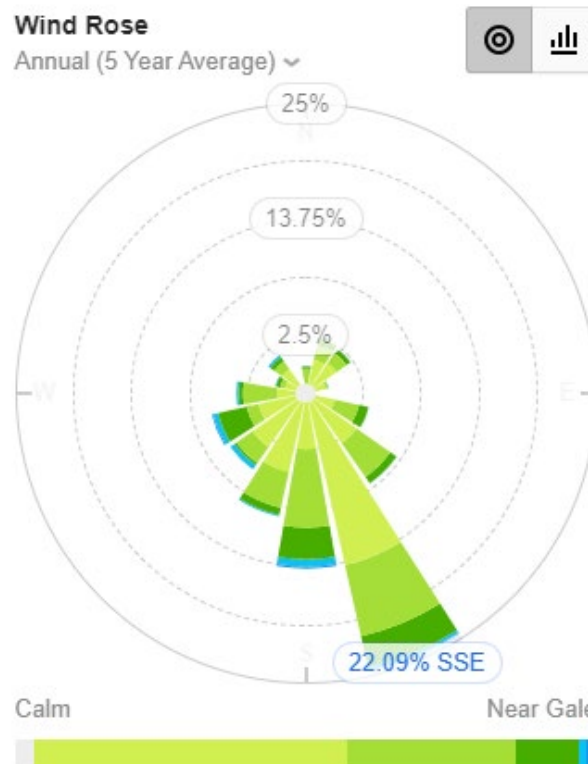
16.1 Current guidance from the Environment Agency on Fire Prevention Plans, states that schools, nursing homes, residential area, workplaces etc are all sensitive receptors. In a fire event, sensitive receptors will be contacted by either knocking on doors or by a phone call. They will be advised to close all doors and windows until the fire has been extinguished. This will be achieved by site management calling where possible and by staff being deployed to knock on doors of neighbouring properties.

16.2 A plan of sensitive receptors has been produced.

17. PRODUCTS OF COMBUSTION

17.1 Smoke Plume / Dispersion

A wind rose for Norton Canes has been produced.



17.1.1 In the case of the site, the topography is flat as it is situated within a purpose built industrial estate. The site is somewhat sheltered by surrounding industrial buildings. Therefore, it is difficult to accurately predict likely direction of smoke travel as winds tend to be lighter in sheltered locations and more unpredictable.

17.1.2 The site is surrounded by sensitive receptors e.g. commercial and industrial businesses and residents. The prevailing south easterly winds will blow in the direction of residential houses and further businesses on the industrial estate, indicating that these will be the most affected by smoke in the event of a fire.

17.2 Storage and Disposals of Residues

17.2.1 Following any fire, an assessment of the products requiring disposal shall be made by site management and a plan produced for the most appropriate means of disposal. Following approval by the fire services, Environment Agency and site manager, the residues from the fire will be disposed of accordingly at a suitably permitted facility.

18. STAFF TRAINING & AWARENESS

18.1 The key to any plan is to ensure that all staff are aware of their duties and act accordingly. This plan and the duties required of staff in accordance with related procedures is communicated to staff through induction training and toolbox talks.

18.2 The Fire Prevention Plan is distributed freely, in full, to all staff. All copies of the FPP, both individual staff members' copies and the Master Copy are kept in the site office. Staff are trained in the requirements of the FPP at induction and at annual toolbox talks. Quarterly exercises shall be recorded in the site diary.

19. FIRE PROCEDURE

19.1 In the event of a fire the following procedures are:

- Site management will immediately be informed, and all operations will cease. All expected vehicles will be notified and unable to enter the site.
- Site staff will all be trained in the use of fire extinguishers. They will attempt to tackle minor fires to extinguish or prevent it from spreading. The FRS and emergency services will be contacted by site management during this time if the fire cannot be dealt with using on site resources.
- Floodsax, water gate barriers and clay mats will be deployed.
- If the fire becomes uncontrollable for site staff, the site shall be completely evacuated until the emergency services arrive.
- A quarantine area is available to store any suspect waste or waste that is already on fire.
- Neighbours and other receptors within a 1km range will be notified of the fire.
- Once fires have been tackled the site will inform the Environment Agency of the fire and make amendments and actions to prevent this from happening again in the future.

19.2 After fires have been extinguished, procedures are taken to decontaminate the site and get the site to an operational use again. Procedures taken are depend on the severity of the fire. These include:

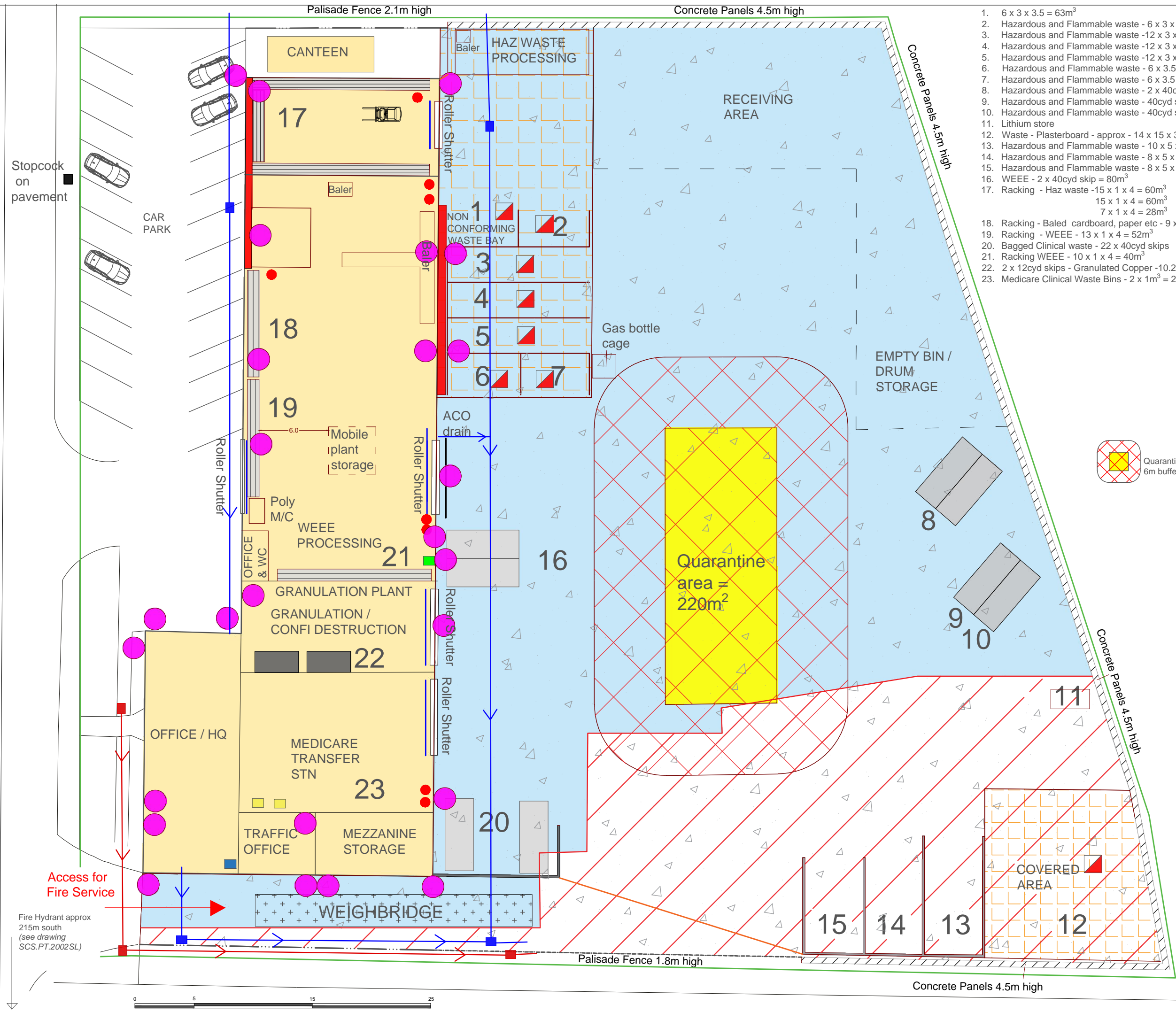
- Informing the Environment Agency of the incident and review of the site management and fire prevention plans.
- Analyse the retained fire water to see if it is contaminated. Once analysed and deemed to be acceptable it will be pumped out and released into the sewer. If the water is contaminated, then it may be removed from site by a tanker and disposed of to a suitable permitted facility.

- PPE will also be removed and disposed of at a suitably permitted facility.
- Certain wastes may need to be disposed of as they may no longer be allowed to be treated and recycled.
- If the fire is severe and large, then the concrete may become damaged. In this event the site may need to be resurfaced prior to re-opening. Any other repairs to removals that are required e.g. buildings will be carried out to manufacturers recommendations.
- Once the contaminated water has been removed, the concrete has been deemed acceptable, other repairs have been made and the quarantined and contaminated waste have been removed, the site will be inspected by the COTC holder. If after the inspection the site is of an acceptable nature, then it can reopen and continue with its usual operations.

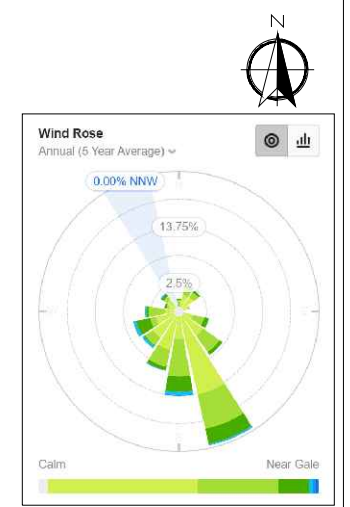
APPENDIX 1 – SENSITIVE RECEPTORS

<u>Sensitive Receptor</u>	<u>Contact Number</u>
Jerome Primary School	01543 278595
Norton Canes Primary Academy	01543 279402
Honeybuns Nursery	01543 274785

APPENDIX 2 – DRAWING REF: SCS.PT.2002FPP



1. 6 x 3 x 3.5 = 63m³
2. Hazardous and Flammable waste - 6 x 3 x 3.5 = 63m³
3. Hazardous and Flammable waste - 12 x 3 x 3.5 = 126m³
4. Hazardous and Flammable waste - 12 x 3 x 3.5 = 126m³
5. Hazardous and Flammable waste - 12 x 3 x 3.5 = 126m³
6. Hazardous and Flammable waste - 6 x 3.5 x 3.5 = 73.5m³
7. Hazardous and Flammable waste - 6 x 3.5 x 3.5 = 73.5m³
8. Hazardous and Flammable waste - 2 x 40cyd skip = 80m³
9. Hazardous and Flammable waste - 40cyd skip
10. Hazardous and Flammable waste - 40cyd skip
11. Lithium store
12. Waste - Plasterboard - approx - 14 x 15 x 3.5 = 735m³
13. Hazardous and Flammable waste - 10 x 5 x 3.5 = 175m³
14. Hazardous and Flammable waste - 8 x 5 x 3.5 = 140m³
15. Hazardous and Flammable waste - 8 x 5 x 3.5 = 140m³
16. WEEE - 2 x 40cyd skip = 80m³
17. Racking - Haz waste - 15 x 1 x 4 = 60m³
15 x 1 x 4 = 60m³
7 x 1 x 4 = 28m³
18. Racking - Baled cardboard, paper etc - 9 x 1 x 4 = 36m³
19. Racking - WEEE - 13 x 1 x 4 = 52m³
20. Bagged Clinical waste - 22 x 40cyd skips
21. Racking WEEE - 10 x 1 x 4 = 40m³
22. 2 x 12cyd skips - Granulated Copper - 10.2m³
23. Medicare Clinical Waste Bins - 2 x 1m³ = 2m³



- Permit Boundary
- Fire Wall
- Hydrosnake
- Watergate Barrier
- Spill Kit
- PPE Storage
- Fire Extinguisher
- Automatic Fire Extinguisher
- Surface Water Drainage
- Surface Water Manhole
- Foul Water Drainage
- Foul Water Manhole
- Quarantine area (showing 6m buffer radius)
- Covered area
- Covered buildings
- Concreted area
- Proposed Concreted area
- Hardcore
- CCTV Camera
- Clinical Waste in Yellow wheelie bins

AC ENVIRONMENTAL
Environment House
Werrington Road
Stoke-on-Trent
ST2 9AF

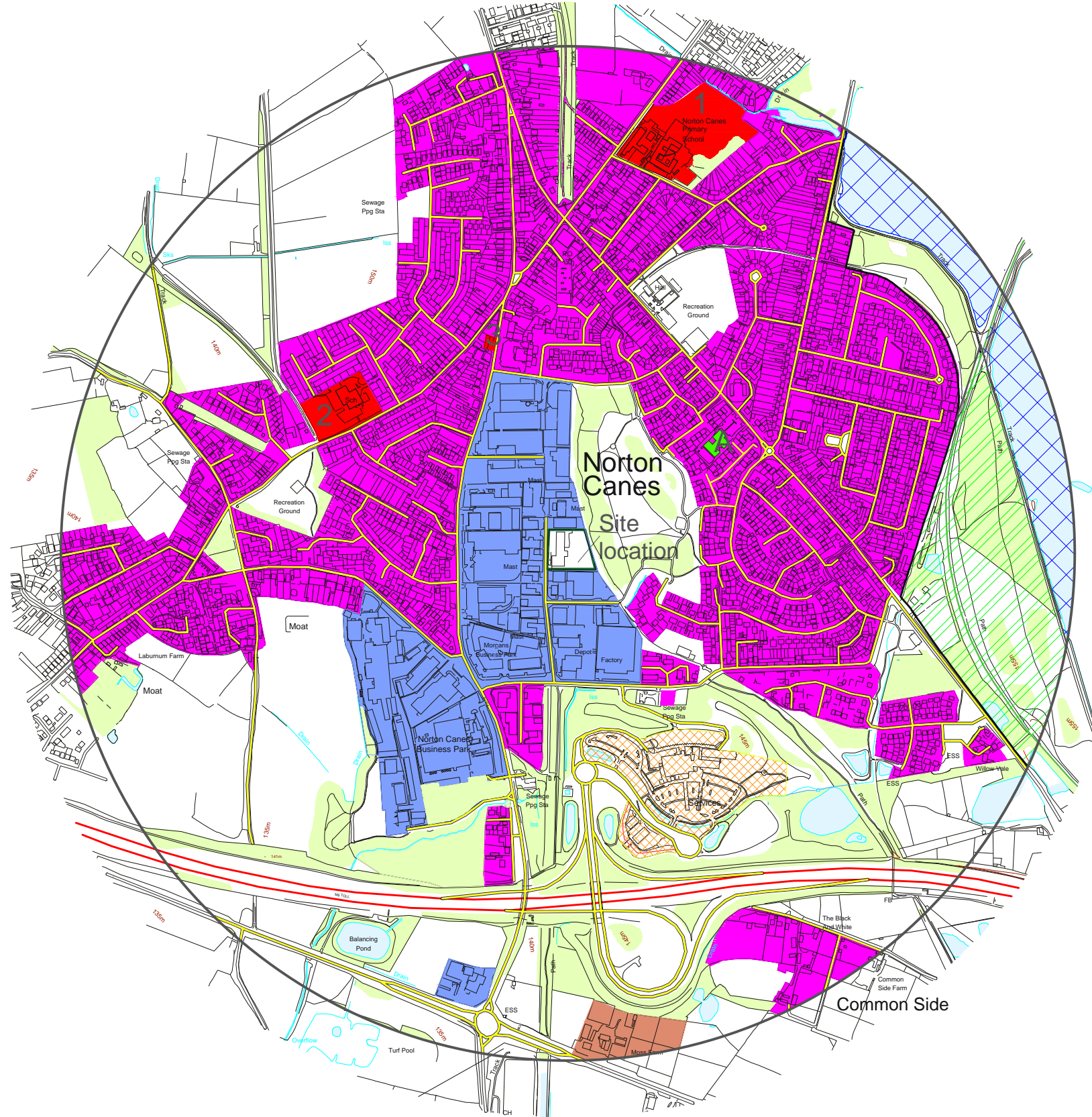
CLIENT: **SITE CLEAR SOLUTIONS**

PROJECT: **PERMIT APPLICATION**

TITLE: **FIRE PREVENTION PLAN**

SCALE @A3	DATE	DRAWN BY	CHECKED BY
1:300	Feb 2020	T Kearns	D Alcock
	DRAWING NO	REVISION	
	SCS.PT.2002FPP	2.0	

APPENDIX 3 – SENSITIVE RECEPTOR DRAWING

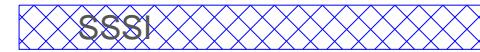


SCHOOLS

1. Norton Canes Primary school
2. Jerome Primary School
3. Honeybuns Nursery

Medical Facilities











- A. Norton Canes Medical Centre



- A. Chase Water



- A. Chase Water

-  Local Nature Reserve
-  SSSI
-  Motorway service station
-  Educational Facilities
-  Industrial/ Commercial
-  Motorway Service Station
-  Residential
-  Medical Facilities
-  Motorway
-  Roads

 **AC**
ENVIRONMENTAL
CONSULTING

Environment House
Werrington Road
Stoke-on-Trent
ST2 9AF

CLIENT
SITE CLEAR SOLUTIONS

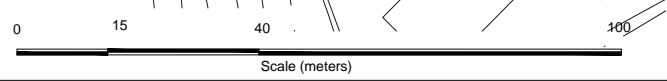
SITE

PROJECT
PERMIT APPLICATION

TITLE
FIRE PREVENTION PLAN

SCALE @A3	DATE	DRAWN BY	CHECKED BY
1:10000	Feb 2020	T Kearns	D Alcock
	DRAWING NO		REVISION
	SCS.PT.2002FPP		1.0

APPENDIX 4 – SITE LOCATION PLAN



CLIENT			
SITE CLEAR SOLUTIONS			
SITE			
PROJECT			
PERMIT APPLICATION			
TITLE			
SITE LOCATION PLAN			
SCALE @A3	DATE	DRAWN BY	CHECKED BY
1:1250	Feb 2020	T Kearns	D Alcock
DRAWING NO		REVISION	
SCS.PT.2002SL			

REVI	DATE	DETAIL
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APPENDIX 5 – FIRE WATCH FORM

Fire Watch Form			
To be completed every day by the Operations Manager or nominated person. Keep completed forms in file in Site Office. This is in addition to the Daily Diary			
Fire Watch Inspection	Checked by (initial)	Time	State condition & action taken
Mobile and fixed plant and equipment - Hot exhausts and engines			
<ul style="list-style-type: none"> • Check for signs of fire, smoke, heat, and dust settling on hot exhausts & engines. • Ensure parked in correct overnight area at least 6m from waste or other combustible materials • Check for leaking fuels and oils from fixed and mobile plant and vehicles • Check all waste at least 6m from shear and barrel screener • Ensure that all WEEE and other portable electrical equipment is unplugged 			
Forklift Trucks			
Balers			
Compactors			
Wire stripping machine			
All waste stockpiles and containers of waste			
<ul style="list-style-type: none"> • Check for signs of fire, smoke, heat, and dust settling on piles / containers • Check all containers are accessible on one side at all times • Check all stockpiles are accessible on one side 			
Wastes			
Hazardous and flammable waste			
Plasterboard			
External containers			
N/A			

APPENDIX 6 – FIRE WATCH PROCEDURE

Site Working Procedure - Fire Watch Procedure			
Issue:	1	Date:	09/09/2021
Written/Revised By:	Lauren Stanger	Approved By:	Chris Price

1. Purpose

1.1 To identify situations that may lead to fire and to discover fire early to minimise the impact of any fire and to ensure that the safety of site staff, visitors, and neighbours and to ensure that actions comply with the Fire Prevention Plan, Environmental Permit and the planning permission.

2. Responsibility

2.1 It is the responsibility of all staff to follow this procedure and the site manager to ensure this procedure is implemented & followed.

2.2 Failure to follow this procedure will be considered a disciplinary matter and may lead to dismissal.

3. Fire Watch

3.1 A fire watch is a formal inspection of all stockpiles of waste held on site.

3.2 The fire watch shall be carried out by the nominated person, usually the Site Manager or supervisor.

3.3 The fire watch shall take place daily at the end of the day and after the event of any hot works occurring on site.

3.4 The fire watch shall be a visual inspection of all stockpiles to identify steam, vapours, smoke or charring, the precursors of a fire. In addition to the visual inspection, temperature monitoring shall be undertaken to identify heating within stockpiles.

4. Actions in the event of discovering an issue

4.1 If one of the precursors to fire (smoke, charring etc.) is discovered, site management shall immediately investigate further. Investigations shall include excavation of suspicious materials to

identify the extent of the issue discovered. If localised heating of materials is discovered, then this can be dealt with by smothering with inert waste or turning to allow cooling in the air.

4.2 Any stockpile which has been identified as having the potential to ignite due to evidence of smoke charring etc., once the immediate issue has been dealt with, shall be prioritised for removal from site for disposal at the earliest opportunity.

5. Actions to be taken

5.1 The site gates shall be closed to prevent unauthorised access but shall be manned to allow access for emergency services.

5.2 Site staff trained in the use of extinguishers and firefighting shall tackle the fire to attempt to extinguish it or to prevent the fire spreading. The fire may be fought with extinguishers and pumped water from a fire hydrant. Site management shall direct efforts to fight the fire until the emergency services arrive.

5.3 At all times full consideration shall be given to staff safety and if there is any doubt as to the ability of site staff to extinguish the fire, the site shall be fully evacuated until the emergency services arrive.

5.4 If the fire is large enough to warrant attendance of the emergency services then neighbours shall be visited by site staff and advised to close windows and doors until such time as the Fire Service declare the site is over and there are no lingering effects from smoke.

6. Reporting

6.1 The immediate actions of staff shall be to ensure the safety of staff and visitors. The secondary actions shall be to minimise the effect of the fire by attempting to extinguish it using the extinguishers provided on site.

6.2 When it is safe to do so, site management shall next notify the Environment Agency of the fire, providing details of the incident and the actions being undertaken.

APPENDIX 7 – SITE INSPECTION PROCEDURE

Site Working Procedure – Site Inspections			
Issue:	1	Date:	09/09/2021
Written/Revised By:	Lauren Stanger	Approved By:	Chris Price

1. Purpose

1.1 To ensure the efficient operation of the site, mitigation of risk and to fulfil the requirements of the environmental permitting regulations.

2. Responsibility

2.1 It is the responsibility of the site manager to ensure this procedure is implemented and followed.

2.2 It is the responsibility of the site manager of duty of the COTC holder to carry out supporting inspections and monitor the operation of the site.

3. Daily and Weekly Inspections

3.1 The site manager will undertake a daily inspection of the site and record their findings in the Site Diary.

3.2 The COTC holder shall carry out regular visual checks of the site and to check for procedural integrity.

3.3 Either the Site Manager or the COTC holder shall undertake a formal weekly inspection and record findings on the Site Inspection Sheet.

3.4 In the event that the Site Manager conducts the Inspection, the COTC holder shall review this and countersign the Site Inspection Sheet as evidence of such review being carried out.

3.5 All issues to be reported to the site manager, who will allocate responsibilities to action any remedies that can be completed.

3.6 Complaints or reports of problems from neighbours or visitors shall be investigated in accordance with the Complaints Procedure.

4. Reporting & Records

- 4.1 Any problems to be noted in the site diary and incident logbook.
- 4.2 Any incident or breach of this procedure must be reported immediately to the site manager.
- 4.3 Records must be kept for 3 years.

APPENDIX 8 – FIRE PROCEDURE

Site Working Procedure - Fire Procedure			
SWP020			
Issue:	1	Date:	09/09/2021
Written/Revised By:	Lauren Stanger	Approved By:	Chris Price

1. Purpose

- 1.1 To minimise the impact of any fire and to ensure that the safety of site staff, visitors and neighbours and to ensure that actions comply with the Fire Prevention Plan, Environmental Permit and planning permission.

2. Responsibility

- 2.1 It is the responsibility of all staff to follow this procedure and the site manager to ensure this procedure is implemented and followed.
- 2.2 Failure to follow this procedure will be considered a disciplinary matter and may lead to dismissal.

3. Discovering a Fire

- 3.1 A fire may begin in any stockpile of flammable waste or may be brought into site in a load of waste.
- 3.2 Fires may also be discovered through the routine daily fire watch, seeing smoke, charring or flame in flammable waste stockpiles.
- 3.3 Any sign of fire, however small, such as smoke or charring shall be treated as if it is a fire until proven otherwise.

4. Discovering a Fire

4.1 The person discovering the fire shall raise the alarm on site by shouting “FIRE” and shall then immediately notify site management in the site office.

4.2 Site management shall then assess the fire and if any doubt as to the ability of site staff and resources to effectively extinguish the fire immediately, shall call the Fire Service on 999.

5. Actions to be taken

5.1 The site entrance gate shall be closed to prevent unauthorised access but shall be manned to allow access for emergency services.

5.2 Site staff trained in the use of extinguishers and firefighting shall tackle the fire to attempt to extinguish it or prevent the fire spreading. The fire may be fought with extinguishers and pumped water from the water tank. Site management shall direct efforts to fight the fire until the emergency services arrive.

5.3 At all times full considerations shall be given to staff safety and if there is any doubt as to the ability of site staff to extinguish the fire, the site shall be fully evacuated until the emergency services arrive.

5.4 Due to the small scale of the site, the quarantine area is in a suitable location to move burning objects into to be extinguished.

5.5 If the fire is large enough to warrant attendance of the emergency services, then neighbours shall be visited by site staff and advised to close windows and doors until such time as the Fire Service declare the fire is over and there are no lingering effects from smoke.

5.6 All actions will be taken in accordance with the approved Fire Prevention Plan.

6. Reporting

6.1 The immediate actions of staff shall be to ensure the safety of staff and visitors. The secondary actions shall be to minimise the effect of the site by attempting to extinguish to prevent it from spreading.

6.2 When it is safe to do so, site management shall next notify the Environment Agency of the fire, providing details of the incident and the actions being undertaken.

APPENDIX 9 – HOT WORKS

Hot Work Permit-to-Work		
Department or Project:		Permit Number:
Contractor / Person/s involved:		
Location:		
Description of Work:		Equipment:
Date of Permit (Supervisor in charge of work to sign permit on day specified for single shifts)	Day and Date:	Time: Between And
<p>Precautions to be taken:</p> <ul style="list-style-type: none"> • Hot works must cease one hour before the end of shift • Hot works must be carried out more than 6m way from any flammable/combustible materials or liquids. • All gas cylinders must be transported and kept upright • Valves and hoses must be in good condition and all gas cylinders must be fitted with back arresters • When not in use, gas cylinders must be shut off • Gas cylinders must not be left in the building overnight without formal approval • Minimum radius of hot works from other workers must be 1.5m (screens should be erected where necessary) • Work areas to be kept tidy and free from combustible materials • Services affected must be isolated before work commences • A suitable fire extinguisher should be available • The supervisor must ensure that suitable personal protective equipment is provided and worn, and that there is a good working platform • Isolate smoke detectors in the vicinity of hot works • Spent welding rods must be immersed in a bucket of water <p>Employees Must:</p> <ul style="list-style-type: none"> • Understand the fire and safety precautions and be in possession of a permit • Stop work if required to do so by an authorised person • Report immediately any hazard likely to affect the fire and safety precautions • Remain in the area for 15 minutes following completion of work to check that no fire starts 		
<p>Confirmation by Contractor or Supervisor I can confirm that the precautions specified above will be maintained and I will ensure that the persons carrying out the work will comply with these precautions.</p>		
Signed:	Print Name:	Date:
<p>Authorisation by Manager I certify that the above work can commence with the precautions listed above.</p>		
Signed:	Print Name:	Date:
<p>Cancellation by Contractor or Supervisor I can confirm that the work has been completed / stopped and I have checked the area which is safe.</p>		
Signed:	Print Name:	Date:
<p>Cancellation by Manager I confirm that the work has been completed / stopped, and that I have checked the area which is safe.</p>		
Signed:	Print Name:	Date:

APPENDIX 10 – SEVERN TRENT WATER CORRESPONDENCE

General Info	
Chat start time	Wed, 22 May 2019 11:07:19 +0100 GMT
Chat end time	Wed, 22 May 2019 11:19:18 +0100 GMT
Duration (actual chatting time)	00:11:59
Operator	Becky
Chat Transcript	
<p>Info: Welcome to our live chat, you are number 1 in the queue. We'll be with you shortly, thanks for waiting :-)</p> <p>Info: You're now chatting to Becky</p> <p>Info:</p> <p>Becky:</p> <p>Hi Sam, my name's Becky, how can I help?</p> <p>Sam Miles: Hello, I'm enquiring about a fire hydrant flow rate for the address Sunbeam St, Wolverhampton WV2 4LX. I'm after this as part of an application for an Environmental Permit to the Environment Agency</p> <p>Becky:</p> <p>Ah okay - whereabouts on Sunbeam Street is the fire hydrant located?</p> <p>Sam Miles: This is the Grid reference on google maps: 52°34'22.0"N 2°07'54.9"W. It's next to a place called "East end cash and carry" on google maps</p> <p>Becky:</p> <p>Thank you - I have just checked with the team and we do not test fire hydrants or provide flow and pressure queries to our customers, nor do we allow third party companies to test our hydrants either. If the Environment Agency have requested this information then they will need to contact us directly.</p> <p>Sam Miles: That's not a problem. Is it possible to get a transcript of this conversation?</p> <p>Sam Miles: Oh sorry I've just seen I can do that on the + symbol. Thanks for your help</p> <p>Becky:</p> <p>No problem Sam, sorry I couldn't assist further with this one</p> <p>Info: Your chat transcript will be sent to sam.miles@ac-environmental.co.uk at the end of your chat.</p> <p>Sam Miles: Not a problem thanks bye</p>	

APPENDIX 11 – CONCRETE FIRE CERTIFICATE



Consulting engineers in:
– Acoustics
– Building physics

Kees Rijk BV
Watertorenweg 24
6571 CB Berg en Dal
The Netherlands
info@keesrijk.nl

Fire resistance REI 240 Legioblock



Kees Rijk BV confirms that Legioblock walls with a separating function have a fire resistance of 240 minutes, in accordance with the standards NEN 6069:2011 and EN 13501-2:2016.

This summary is based on the report 171404 “Legioblock concrete retaining walls; Fire resistance study“. In the report, the application area and the limiting conditions are described.

Ir. C.A.E. (Kees) Rijk
17 April 2017

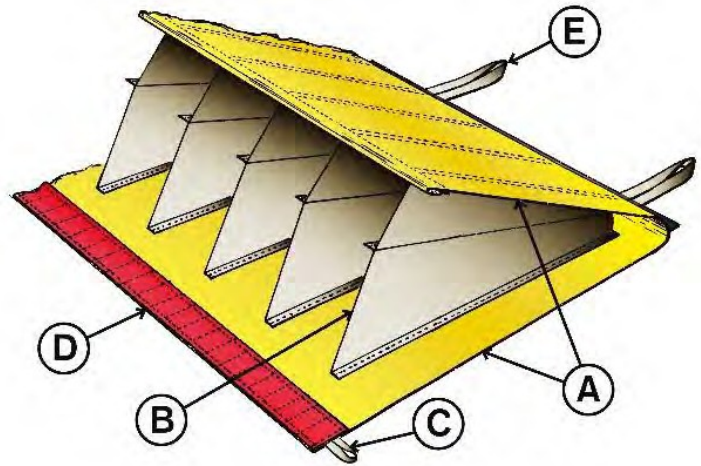
APPENDIX 12 – WATER GATE BARRIER

Appendix.15: Water Gate Barrier

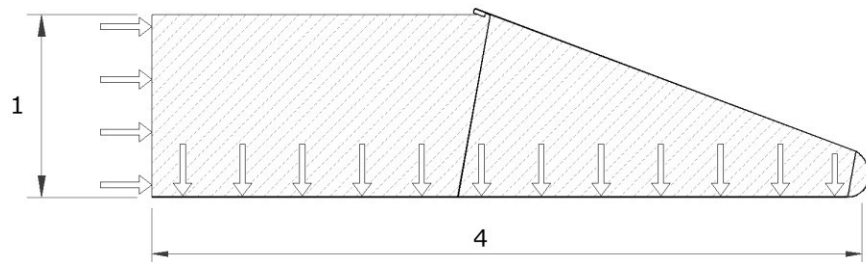
MAIN FEATURES OF THE WL SERIES

Designed for flood control (industrial use)

- A. UV protected polyester fabric coated with super heavy-duty, abrasion-resistant PVC and suitable for use on all types of surfaces.
- B. Stretched partitions providing better adherence to smooth surfaces.
- C. Polypropylene straps to lift up the ends during specific installations.
- D. Galvanized metal plate ballast weights held in polyester netting and sewn to the water barrier.
- E. Extra resistant polypropylene straps to facilitate handling.



In order to receive the FM Certification, quality control was performed by FM Global on all components



Water holding back Water: The concept of the **Water-Gate** is simple: it's the weight of the water that stops and contains the water. Its unique design allows the liquid to enter the fabric barrier and instantly stabilise it onto the ground.

First, unroll the barrier to the proper position and correct configuration. Second, unfold the front bib equipped with integrated ballasts (WL Series). If using the WP or WA Series barrier, you will need to fill and place the supplied ballasting bags or a uniform weight on the front bottom bib's edge. Just like a parachute deploys with incoming air, the barrier will deploy itself as water enters and unfolds it.

The Water-Gate is 4 times wider than its height, giving it a lot of retaining power as it can withstand 4 times more vertical than horizontal water pressure. The **Water-Gate** will remain stable on any surface.



Installation location: The **Water-Gate** can be installed anywhere and will fit snugly on all types of surfaces. In some areas, a summary preparation of the area may be beneficial. If a large obstacle is behind the **Water-Gate** (tree, rock, etc.), you may rest the water barrier against the obstacle as this will not affect its efficiency. In some configuration, a few sandbags may be necessary to prevent water infiltration through the 90^o inside corners. The barrier should never be fixed onto the ground. All **Water-Gate** barriers dispose of strong handles for easy handling.

Manufactured entirely with resistant, corrosion proof components and capable of withstanding the majority of toxic products, the **Water-Gate** barrier is built 3 times stronger than required.



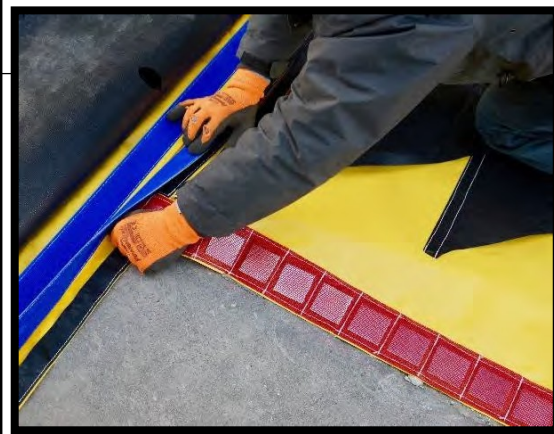
MegaSecur Environmental Security Inc. has developed several **Water-Gate** series, but our most popular and well-known is our yellow PVC Water-Gate barrier which can be seen on [YouTube](#). Different height size barriers can be attached together.

❖ **WL Series** - The heavy-duty **Water-Gate** barrier made of yellow PVC fabric with integrated ballast weights. Specifically designed for emergency flood applications with a protection height of 6" to 78" (15,24cm to 2m) and lengths of 30' or 50' (9,15m to 15.24m). All barrier size can be attached to each other. **Mainly used for Flood Control.**

Water-Gate - WL Series			
Item #	Retention level	Length	Weight
WL-0630	15cm / 6"	9.1m / 30'	19 kg / 41.8 lb
WL-1430	35cm / 14"	9.1m / 30'	24 kg / 53 lb
WL-1450	35cm / 14"	15.2m / 50'	39.7 kg / 87.5 lb
WL-2030	50cm / 20"	9.1m / 30'	30.4 kg / 67 lb
WL-2050	50cm / 20"	15.2m / 50'	50.2 kg / 110.6 lb
WL-2630	67cm / 26½"	9.1m / 30'	38.6 kg / 85.2 lb
WL-2650	67cm / 26½"	15.2m / 50'	62.9 kg / 138.6 lb
WL-3230	81cm / 32"	9.1m / 30'	62.9 kg / 138.6 lb
WL-3250	81cm / 32"	15.2m / 50'	103.9kg / 229 lb
WL-3930	1m / 39"	9.1m / 30'	76.8 kg / 169.4 lb
WL-3950	1m / 39"	15.2m / 50'	126.8 kg / 279.6 lb
WL-5030	1,3m / 50"	9.1m / 30'	117.5 kg / 259 lb
WL-5050	1,3m / 50"	15.2m / 50'	187.7 kg / 413.8 lb
WL-6030	1,5m / 60"	9.1m / 30'	123.8 kg / 273 lb
WL-6050	1,5m / 60"	15.2m / 50'	204.8 kg / 451 lb

Letters = Series / First 2 digits = Height / Last 2 digits = Length

FM approved



❖ **WA Series** - The standard heavy-duty **Water-Gate** made of strong yellow PVC fabric for damming streams, containment and diverting. Can also be used to control floods. **Mainly used for operations in streams or ditches, spill response, fire protection water supply (natural drafting points).**

Water-Gate – WA Series			
Item #	Retention Level	Length	Weight
WA-1525	38cm / 15"	7,6m / 25'	12,7 kg / 28.2 lb
WA-1550	38cm / 15"	15,2m / 50'	24,6 kg / 54.2 lb
WA-2125	53cm / 21"	7,6m / 25'	17,5 kg / 38.6 lb
WA-2130	53cm / 21"	9,1m / 30'	20,6 kg / 45.4 lb
WA-2150	53cm / 21"	15,2m / 50'	33,5 kg / 73.8 lb
WA-2825	71cm / 28"	7,6m / 25'	24,1 kg / 53.2 lb

WA-2835	71cm / 28"	10,7m / 35'	34,1 kg / 75.2 lb
WA-2850	71cm / 28"	15,2m / 50'	46,7 kg / 103 lb
WA-3915	1m / 39"	4,6m / 15'	33 kg / 71.8 lb
WA-3930	1m / 39"	9,1m / 30'	65,1 kg / 143.6 lb
WA-3950	1m / 39"	15,2m / 50'	108,7 kg / 239.6 lb
WA-6030	1,5m / 60"	9,1m / 30'	106 kg / 233.6 lb
WA-6050	1,5m / 60"	15,2m / 50'	174,3 kg / 384.2 lb
Letters = Series / First two digits = Height / Last two digits = Length			



❖ *WT Series- Spill Response Dam equipped with bottom release holes*

This series is used as an underflow dam for HAZMAT containment. In order to have full control of the water flow, each hole is equipped with an individual flap. The first responders using the barrier may open or keep close as many flaps as needed to adjust the water or substance flow. The holes have a 4.5" (11.4 cm) diameter.

❖ **Absorbents booms** can be set under the dam floater or adjacent to the top edge tarp. The dam can be propped open with dowels. Sorbent booms, blankets or filter clothes can be attached to these dowels. With the deep recovery zone created by the dam, skimmers are conveniently introduced in a stream or ditch initially a few inches deep.

Mainly used for HAZMAT containment.

Water-Gate – WT Series				
Item #	Retention Level	Length	*Weight	Release Holes
WT-2115	53cm / 21"	4,6m / 15'	14,74 kg / 32,5 lb	11
WT-2125	53cm / 21"	7,6m / 25'	21,87 kg / 48,1 lb	19
WT-2130	53cm / 21"	9,1m / 30'	25,89 kg / 56,9 lb	23
WT-2150	53cm / 21"	15,2m / 50'	42,47 kg / 93,3 lb	39
WT-2815	71cm / 28"	4,6m / 15'	18,33 kg / 40,4 lb	14
WT-2825	71cm / 28"	7,6m / 25'	29,62 kg / 65,2 lb	24
WT-2835	71cm / 28"	10,7m / 35'	41,92 kg / 92,2 lb	34
WT-2850	71cm / 28"	15,2m / 50'	57,97 kg / 127,5 lb	49
WT-3915	1m / 39"	4,6m / 15'	37,2 kg / 82 lb	14
WT-3930	1m / 39"	9,1m / 30'	71,97 kg / 158,1 lb	29
WT-3950	1m / 39"	15,2m / 50'	119,97 kg / 264,1 lb	49

Letters = Series / First two digits = Height / Last two digits = Length

Release Holes are for Underflow Damming



Carrying bags: the strong and sturdy handles contour the bag for easy handling and a top pocket keeps the instructions' manual handy. The bottom of the bag is made from polyethylene and PVC fabrics for maximum resistance to abrasions. Each barrier is labeled with the series/size/length code and a pictogram shows proper set-up and direction of the incoming waterflow.



Rolled Water-Gate / Storage Bag

