AC ENVIRONMENTAL CONSULTING

Fire Prevention Plan

CATS AND DUST LTD
UNIT 12 TWIN LAKES INDUSTRIAL ESTATE
BRETHERTON ROAD,
LEYLAND,
PR26 9RF

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1.Introduction

1.1 This Fire Prevention Plan has been formulated to satisfy the conditional requirements of a Bespoke Permit for Cats and Dust Ltd and reflects the guidance detailed within the Environment Agency document Fire Prevention Plans: environmental permits, (Published 29th July 2016).

1.2 Cats and Dust Ltd is a Catalytic Converter recycling centre and scrap metal recycling operation located at Unit 12, Twin Lakes Industrial Estate, Bretherton Road, Leyland, PR26 9RF. The permitted area is a small-scale operation and has a very small throughput of around 1 tonne per day.

1.3 The site is a standard small industrial unit constructed of 200mm thick concrete block with a 4-hour fire rating with steel roofing and steel doors.

2.Amount and Type of Waste Received Daily

Material Type	Form	Amount (Daily in Tonnes)
Metal (batteries, catalytic converters, alloy wheels)	Catalytic converters Scrap Metal	Average: 1.0 tonnes Range: 0-2.0 tonnes

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

3.Material Storage Quantities

3.1 Scrap metal is accepted from customers and are brought straight to the site building for sorting and storing. Catalytic converters are sorted through use of an app which takes the part number of the CAT and determines whether the matrix is steel or RCF. Where the part number cannot be distinguished a visual inspection of the matrix is carried out to determine if they are steel or RCF.

3.2 Steel CATs are stored in polypropylene bulk bags prior to despatch off-site to permitted recycling facility.

3.3 CATs containing RCF are moved into the cutting area and the steel surround removed by shear. The RCF matting falls through a grate into a polypropylene bulk bag directly underneath which is sealed onto the funnel of the grate to ensure that no RCF dust can escape.

3.4 Once full, bags are removed from the funnel, sealed and taken from underneath the cutting area to storage.

3.5 The bags that the ceramic falls into are approx. 1 cubic metre and hold roughly 500kg of crushed ceramic. These bags are put on pallets, wrapped, and sent out intact (not milled).

3.6 Under normal circumstances there would be only 2 bags full at any one time. So, 500-1000Kg or around 2m3 of ceramic would be usual.

3.7 The mill is only for smaller quantities (a max capacity is around 4Kg) that need testing, for example, a single cat, or bag of dust. When milling is necessary, the CAT is placed into a box directly under the shear, RCF material removed and then the ceramic monolith would be put into the mill directly from the box. Once milled, a small sample is taken (perhaps 20 grams) to be tested, and the remainder of the ceramic is put into a sealed bag, which is then added to the larger bag containing the rest of the crushed ceramic.

3.8 Bags of RCF are then palleted and shrink wrapped ready for collection. Dust which is non-flammable due to being from ceramics from hoovers and extraction filters are added to the bags of RCF. Dust management is discussed further in the Environmental Management System.

3.9 Non-Ferrous metals are also received such as aluminium wheels and lead acid batteries, and these are stored in the areas shown on the site layout plan ref: 210719RF101

3.10 Materials stored in a single area will be stored in clearly separated stockpiles of a maximum size as shown below. Where a 6m gap does not occur between stockpiles, the different wastes are considered as a single stockpile for the purposes of this FPP and will be calculated as a single stockpile for fire water calculations.

3.11 However, of the wastes held on site, as these are mainly dry, clean metallic wastes, only the lead acid batteries in Stockpile 3 could be considered flammable.

3.12 All bags and boxes are less than 1100l in capacity.

Stockpile Number	Material Type/Stockpiles	Form	Location	Maximum Amount in each area (m^3)
1	Un-processed Catalytic converters	Box (max 5)	Building	$5m^3$
2	Aluminium wheels	Box	Building	$1m^3$
3	Lead Acid Batteries	Box	Building	$0.5m^3$
4	RCF Matrix (Ceramic)	Bags	Building	$2m^3$
5	Catalytic converters	Box	Building	$1m^3$
6	RCF Matrix (Ceramic)	Bag	Building	$1m^3$
7	CAT Shells (metal)	Skip	Building	$12m^3$ (16 cu yd)

3.12 The tools and equipment stored within the building are non-flammable.

3.13 Whilst stockpile sizes are identified for each discrete stockpile in the table above, for the purposes of firefighting and calculation of water requirements, these have been considered as a single stockpile.

4.Other Combustible Materials Stored/Present On-site

4.1 The following combustible materials are stored/present on-site at site in the office or the office which is part of the workshop:

Material Type/Stockpiles	Form	Location	Maximum Amount in each area (m^3)
Paper/Cardboard/Plastic (Office materials)	Loose	Office	$<1m^3$
Textiles (PPE)	Loose	Office	$<0.5m^3$

4.2 The nature of the materials stored on-site potentially increases the risk of fire, but the extremely low flammability of wastes stored coupled with the very low level of activity on site mitigates this. The company therefore considers itself to be a low risk operational site, with regards to fire risk.

4.3 The above materials are not wastes but are used in the management of the business and for car repairs which are occasionally carried out within the workshop.

5. Material Storage Duration

5.1 Waste is brought straight to the permitted area and processed and then stored ready for further recycling through transportation off site. The stockpiles consist of boxes, bags, battery boxes, and a single 16 cu yd skip in which waste is stored in.

5.2 All wastes will be processed within 7 days and stored for a maximum of 30 days.

6.Combustible Storage Dimensions (maximum)

6.1 The wastes held on site are mainly dry metallic wastes and non-flammable. The plastic of lead acid batteries is in theory flammable, however the risk of ignition of these wastes is extremely low. Nevertheless, we have considered all wastes on site as if they were flammable for the purposes of this FPP.

6.2 The various stockpiles of wastes 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. For the purposes of firefighting and water calculations, these have been considered as a single stockpile.

Material	Length (Metres)	Width (Metres)	Height (Metres)	Maximum Waste Volume (m^3)
Stockpile 1 Un-processed Catalytic converters	5	1	1	$5m^3$
Stockpile 2 Aluminium Wheels	1	1	1	$1m^3$
Stockpile 3 Lead Acid Batteries	0.8	0.8	0.8	$0.5m^3$
Stockpile 4 RCF Matrix	2	1	1	$2m^3$
Stockpile 5 Catalytic converters	1	1	1	$1m^3$
Stockpile 6 RCF Matrix		1	1	$1m^3$
Stockpile 7 CAT Shells	4.3	1.75	2	$12m^3$

6.2 Stock rotation is extremely unlikely to be a problem with this volume of waste. Due to small stockpiles the operators will be looking to have a quick turnover of waste.

6.4 **FIFO –** Due to how wastes are contained in battery boxes and bags the first in first out principle is automatically achieved. This is due to the waste being removed as boxes and bags and therefore all waste is removed from the site entirety.

6.5 Stockpile levels will be recorded by the COTC holder weekly. The records will be reviewed by site management and action will be taken in the event where stockpiles aren't 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 others that must be controlled. The potential sources of ignition identified are:

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

7.2.1 No hot work is required as part of normal site operations. Any hot work which may be required e.g. welding of plant, containers, and any work which may give rise to sparks, e.g. drilling, grinding, cutting of metal or stone/concrete, or electrical work will be subject to the Permit to Work system.

7.2.2 Each job under this 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 be carried out more than 6m away from any combustible wastes.

7.2.3 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 has finished and for an hour after, and
- a permit to work (PTW) system to help manage the risk

7.3 **Smoking:** The permitted area operates a no-smoking policy in all 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

7.4 **Electrical installations:** should be of sufficient 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 site access.

- Site Security is robust with the permitted area being located in a building and therefore has doors and roller shutters to get through to get to the inside of the building. There are management patrols at the end of each day around the site. The site has CCTV and alarms which alert the directors of the site through text message after smoke or IR sensors are activated.

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

- Managed cleaning is in place to ensure that dusts/fluff/litter is not allowed to build up.

- The site shall be inspected daily by the CoTC holder. 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.
- 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. However, none of the wastes to be received at site are known to self-combust.

7.9 **Hot Exhausts -** Hot exhausts are kept away from flammable and combustible waste at all times. No engine driven mobile plant is used on site.

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

7.11 **Incompatible wastes** - As the site is a low-level waste site whose primary business is catalytic converters the issue of incompatible and unstable wastes, whilst possible is very unlikely to arise. However, 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 consist of catalytic converters and small non-ferrous metals. All wastes are manually handled and are inspected at the customers site by site staff prior to being accepted, so the risk of incompatible wastes being accepted onto site are minimal. 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 accepts hazardous wastes in the form of lead acid batteries and catalytic converters which are all assumed to be hazardous, however it is only RCF catalytic converters which are actually hazardous. The catalytic converters are inspected with steel catalytic converters being sent straight for storage as they are non-hazardous and RCF catalytic converters being sent for processing to remove the RCF from the non-hazardous steel shell. The potential for fire arising from mixtures of wastes or incompatible wastes is extremely limited. It is also recognised that some waste may be contaminated by other wastes and although these are likely to be in very small quantities, it is theoretically possible that a residual risk from incompatible wastes 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 site management will be alerted. Action taken may be to segregate and remove the problematic waste to a secure area or to sort the load, removing acceptable waste to recycling and to invite suitable qualified contractors to collect the problematic waste.

8.5 If any wastes accepted on-site are found to contain incompatible materials, these shall be segregated and stored temporarily within the mobile plant area pending removal to a suitably permitted site. No such wastes shall be stored on site overnight.

8.6 The inspection procedures in place ensure that no gas bottles, combustible liquids or other hazardous materials could be accepted on site.

9. Quarantine Areas

9.1 Due to the scale and nature of the site and the amount of waste stored onsite, a quarantine area the size of the largest stockpile would not fit within the sites dimensions and is therefore not viable.

9.2 It is intended that, rather than use a quarantine area waste fires may be tackled in situ meaning that a quarantine area for firefighting is not necessary.

9.3 If a fire were to occur in any of the stockpiles in the building this would be best tackled in situ 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.

9.4 Given that it is intended that, rather than use a quarantine area, waste fires are best to be tackled in-situ, the site not having a quarantine area for firefighting is deemed acceptable.

10. Fire Prevention and Detection Measures

10.1 Several measures are taken to prevent fire, these include:

- Fire risk assessment in place
- Fire exit and fire safety warning signs displayed
- Fire awareness raised as part of employee induction training
- Fire extinguishers in the operational area and in the office maintained by external service contractor
- 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 programme which includes a site induction
- Designated smoking area outside, away from combustible material storage.
- Plant is stored in a specific area 6 metres away from waste
- Spill kits will be used to prevent any combustible liquids leaking or trailing from waste.
- All naked flames, and other sources of ignition will be kept more than 6m away from combustible/flammable wastes.
- Ensuring electrical equipment is routinely tested and certified by a qualified electrician.
- Maintaining site security such as 24-hour CCTV and alarms
- Inspecting every stockpile on a regular basis which involves taking the temperature to ensure the waste has no chance of ignition from the heat.
- Ensuring all plant equipment is kept in good condition and undergoes routine maintenance.
- The site shall be inspected daily by the CoTC holder. 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. Attention shall be made to accumulations near sources of ignition such as dust/fluff build up on or around electrical equipment, panels etc.

10.2 **Fire alarm**

10.2.1 All wastes are stored internally within the building and a fire alarm system has been fitted to the building. The system is a combined security and fire alarm system with CCTV consisting of 4 PIR sensors, sensors on all 3 external doors, 3 smoke detectors, one in the office, and two in the main unit. All of these

are installed and maintained by Black Box Fire and Security Ltd. The system is also monitored 24/7 by the ADT alarm centre, with key holder notification in the event of any alert.

10.2.2 The system also includes CCTV, consisting of 5 cameras, 1 front and rear, 1 within the office, and two covering the main unit. Out of working hours the CCTV system alerts site management via text of any alarm.

10.3 **Fire Watch**

10.3.1 Throughout the day the site manager 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. This shall include visual monitoring of stockpiles, plant and equipment. The nominated member of staff shall inspect the site and record any findings. Any signs of smouldering/fire shall immediately be reported to site management.

10.3.3 If any "hotspots" are identified, then measures described in the Fire watch procedure and in Section 11 shall be undertaken to manage the stockpile.

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

10.3.5 At management meetings, monitoring reports will be reviewed, and any concerns identified will be addressed at this point. The changes could involve changes in procedures or re-training staff as deemed necessary.

10.4 **Inspections & Monitoring**

10.4.1 In addition to the Hot /Fire Watch, dynamic inspections will be carried out by the site staff throughout the working day with further daily inspections carried out by the COTC holder 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 **Site Design**

10.4.1 The site layout is designed to ensure freedom of movement. The site is fully concreted with an impermeable concrete surface. The site is secured with being located inside building with a roller shutter door.

10.5 **Drainage**

10.5.1 There is no drainage located in the permitted area.

10.5.2 The site has spill kits to deal with any spillages of liquid and hydrosnakes which can be deployed to block the building entrance and therefore maintaining any liquids on site.

10.6 **Incoming Waste**

10.6.1 Incoming waste is down to customers however the client has control over incoming waste and the frequency in which it comes to the site through whether they want to buy from their customers.

10.6.2 Incoming loads during the event of a fire will be diverted to other sites around the country; the location of which will be up to and determined by the person delivering the load.

10.7 **Security**

10.7.1 The permitted area is a building. To gain access to the permitted area you must pass through roller shutter doors. The site has CCTV and alarms which alert the directors of the site through text message after smoke or IR sensors are activated.

10.7.2 The site has not experienced any trespass or vandalism. The permitted area has a CCTV system and alarm to monitor the site 24/7. Throughout the working day the site is monitored by site operatives. In the event of a fire the site operatives will first inform the FRS and then notify site management. Site will only attempt to extinguish a fire if it is a very minor nature and can safely be tackled with a fire extinguisher.

10.7.3 Outside of working hours, the site will remain secure through a CCTV system and alarms which will notify site management immediately if anything is detected. The alarm system has been installed and is maintained by Black Box Security Alarms Ltd. The system is also monitored 24/7 by ADT and alerts site management in the event of an activation.

10.7.4 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.

10.8 **Housekeeping**

10.8.1 The site shall be inspected weekly by the CoTC holder. 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.

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

10.9 **Storage of flammable materials**

10.9.1 The flammable materials kept on site are lead acid batteries stored in battery boxes.

10.9.2 Non-waste flammable materials includes office paperwork and PPE however these are only in very small amounts.

10.9.3 No gas cylinders are stored on-site.

10.9.4 All stockpiles are easily accessible from at least one side to ensure that if a fire occurs inside of them; it can be put out.

10.9.5 There are no other flammable materials other than those stated above.

10.10 **Fire Exercises**

10.10.1 Routine fire exercises will take place 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 to evacuating the site and notifying residents.

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

10.11 **Plant and Vehicles**

10.11.1 The only plant on site is a single electric Linde forklift truck, which is stored within the building by the roller shutter door. No other vehicles will be stored on site. This reduces the risk of fire by keeping hot exhausts away from any waste when the site is unmanned. In addition, any act of vandalism is much less likely to result in a waste fire.

10.11.2 Any other vehicles which access the site will be fitted with fire extinguishers.

10.12 **Plant and Vehicle Maintenance**

10.12.1 The company only operates a single plant vehicle which is an electric Linde forklift truck. The only maintenance required is 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.

10.12.2 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, the equipment will be immediately taken out of service until a repair can be affected.

10.12.3 Part of daily maintenance is also a detailed clean to prevent the build-up of dusts, waste etc in parts that may not be readily visible. This is subject to a Site Working Procedure.

10.12.4 As no liquids are held on site it is highly unlikely that any flammable liquids would ever by present for this to be an issue.

10.12.5 A documented maintenance and inspection programme is held on site for the forklift. Maintenance of all other equipment will be carried out weekly and recorded in a file. If there is a problem discovered site management will seek to resolve it immediately by replacing or hiring new equipment. Equipment will be serviced and repaired in accordance to the manufacturer's requirements.

10.12.6 Where any new plant is procured, any metallic surfaces which may come in to contact with the concrete floor will have an anti-spark coating applied.

10.12.7 All maintenance will be carried out by certified contractors.

10.13 **Electrical Safety**

10.13.1 The site has a current electrical test certificate and electrical infrastructure is included in the service schedule to ensure that this is maintained. All plug-in equipment is tested annually, and all electrical infrastructure is tested once every 3 years.

10.13.2 All testing and maintenance of electrical equipment and infrastructure is carried out by a suitable qualified and accredited electrician.

10.14. **Training**

10.14.1 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 use of toolbox talks, 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 staff will attempt to extinguish the fire using the site's fire extinguishers.
- Site management will then direct staff to deploy the Hydro-snake water barriers.
- Site management will order the evacuation of the site in accordance with the fire drill 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 gates would remain open and would be manned to allow access to the fire hydrant located at the entrance to the estate. No other vehicles would be allowed access to the site other than the FRS or Environment Agency. Throughout the duration of the fire and the cleaning process afterwards, no wastes will be accepted on site.

11.2 Following a fire, once the Fire and Rescue service deem the site to be safe an inspection of the site shall be made, and a decontamination plan produced.

11.3 Residual wastes will be sent for recycling or disposal to landfill as appropriate. Once the site is cleared 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.

11.4 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. (See section 17 for detailed fire procedure).

12. Fire Suppression

12.1 The site handles a range of wastes all with exceedingly low degrees of fire risk. The majority of the material held on site is catalytic converters which are dry metallic items with almost zero risk of fire.

12.2 Wastes which do present a marginally higher risk of fire are car batteries. Batteries are stored separately to other wastes within battery boxes and the likelihood of fire within the batteries is also very low as the acid component would act as an integral suppressant in the event of a battery fire.

12.4 Automatic Fire suppression

12.4.1 The site does not have the benefit of an automatic water suppression system. This is justified on the very low level of risk associated with the very small scale of the operation at the site and the low flammability of the wastes being handled. In addition, all waste storage on in bags or in boxes are stored in a manner and at a maximum volume that is significantly below the maximum quantities cited in the FPP guidance.

12.4.2 The majority of the materials on site are stored within bags or battery boxes. Individual containers are all less than 1100 litres in capacity. These materials are catalytic converters destined for transportation for further treatment.

12.4.4 Consequently, the site is using **alternative measures** which focus on robust fire prevention rather than cure.

12.4.5 These comprise the following:

Alternative Measures:

- Smoke detection system throughout all areas of the building;
- End of day documented Hot / fire watch using handheld IR thermal imaging device and temperature monitoring and actions;
- Numerous CCTV cameras and 24-hour monitoring via on site staff during operational hours and remote security company detection;
- Documented Call out rota /procedure
- Daily, weekly and six-monthly inspection and cleaning schedules in place and implemented;
- AFFF foam extinguishers available for use in all areas of site
- ALL staff trained in use of AFFF foam extinguishers.
- Automatic dry powder fire extinguisher system

12.4.6 The risk of fire is managed by very careful attention to housekeeping, keeping areas clean, free from litter and detritus, especially electrical infrastructure, through inspections and monitoring, including temperature monitoring throughout the day and in particular as part of the end of day fire watch.

12.4.7 The self-ignition point of wastes is actually very high; plastics typically self-ignite above 260°C, petrol 247°C and diesel 210°C4. 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.

13 Lancashire Fire & Rescue

13.1 The nearest Fire Station to the site is Tarleton Fire Station at Hesketh Lane Tarleton PR4 6UB.

13.2. The site lies some 4 miles east of the Station, which implies a travel time of 10 minutes. However, this is expected to be considerably lower for Emergency Services.

13.3 A second station, Leyland Fire Station Located at Broadfield Drive Leyland PR25 1LB. The site lies some 5 miles south-west of the Station, which implies a travel time of 13 minutes.

13.4 A third station, Snaith Fire Station, Chorley Fire Station, lies 6 miles away to the east of the site, which implies a travel time of 14 minutes to the site.

13.5 Between them the stations have the following appliances:

- 4 fire engines
- 1 urban search & rescue vehicle

13.6 In all this means that the Fire Service has 4 units within 6 miles of the site which between them are capable of carrying 8000 litres of water, together with AFFF foam.

13.7 A fire hydrant lies some 93m north-west of the site within the industrial estate allowing the Fire and Rescue Service to rapidly deploy to fight any fire.

14. Water Supply

14.1 The site has mains water to the office and a fire hydrant located around 93m north-west of the site within the industrial estate. The wastes on site are mainly dry metallic wastes and are not flammable. The largest potentially flammable stockpile on site is the lead acid battery box 0.5m^3. Therefore, a flow rate of 3.3l/m (2000l/m/ 300m^3 x 0.5m^3) and a total supply of 603l (3.3l/m x 3 hours) would be required to extinguish a fire. This volume and flow rate of water can be provided by the mains water supply within the office.

14.2 The close proximity of the three local Fire Stations and the fire extinguishers on-site also renders the need for on-site 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 fire 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 concrete surfacing within the building and with hydrosnake flood barriers[1] at the doors.

15.3 All site staff are trained in the use and deployment of hydrosnakes. Hydrosnakes will be deployed to cover all entrances to the building by site staff immediately upon the alarm being raised. Out of working hours, the hydrosnakes will be deployed by the first member of staff to arrive at the site.

15.5 The volume of water required to extinguish a fire in the largest stockpile within the building is calculated to be 603l (3 hours x 2000l/min x 0.5/300). This equates to 0.6m^3 of water.

15.6 Fire Water Containment Calculations:

Building
Volume of firewater = 0.6m^3.
Building area = 135m^2.
Height of containment required = 0.004m (0.6/ 135m^2)

15.7 Aqueous Film Forming Foam (AFFF) may also be used to tackle fires on site. Fire Services throughout the UK do not utilise water on scrap metal or vehicle fires but instead use AFFF Foam to supress such fires. 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 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 supresses the release of flammable vapours that can mix with air". *(Chemguard, 2005)*

15.8 Based on the worst-case scenario (e.g. 5:1 water to foam solution ratio), 34.66l/m (173.3l/m ÷ 5) of water is all that is required to extinguish a fire in the largest stockpile.

15.9 This method has been used previously by Fire Services around the country on scrap metal fires and it is deemed the most viable and effective method of extinguishing any fires that occur on site.

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

15.11 Over an area of 135m^2 this equates to a foam depth of less than 1mm, easily retained by the building and Hydro-snake system.

16. Sensitive Receptors

16.1 Current guidance from the Environment Agency on Fire Prevention Plans, states that schools, nursing homes, residential areas, workplaces etc are all sensitive receptors. In fire event, sensitive receptors will be contacted by either knocking on doors or by a phone call. They will be advised to close

[1] http://gravitasint.com/products/hydrosnake/

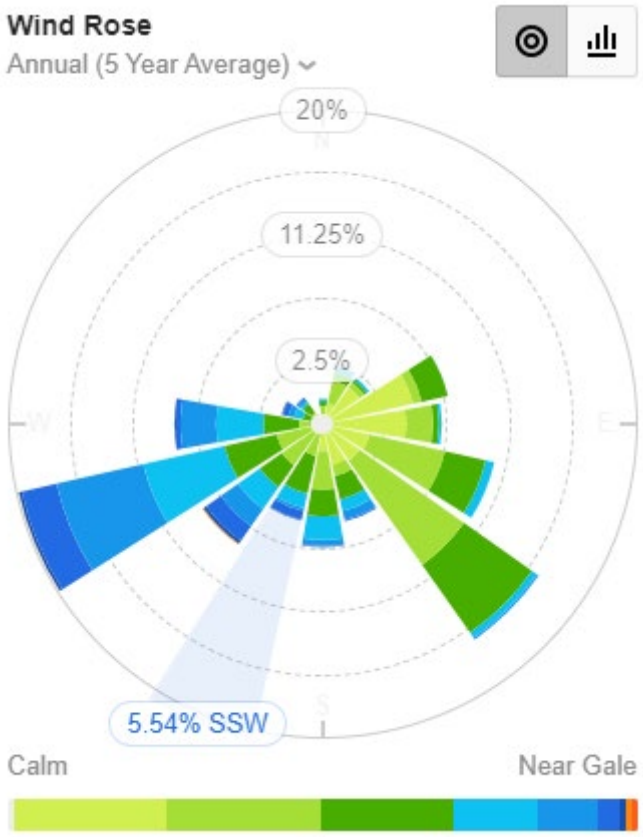
all doors and windows until the fire has been extinguished. This will be achieved by site management calling where possible and by staff being deployed to knock on doors of neighbouring properties.

16.2 A plan of sensitive receptors has been produced.

17. Products of Combustion

17.1 Smoke Plume/Dispersion

A wind rose for Croston.



17.2 In the case of the permitted area, it is on relatively flat ground with a slight gradient. The site is somewhat sheltered by surrounding industrial buildings. It is difficult therefore to accurately predict likely direction of smoke travel as winds tend to be lighter in sheltered locations and more unpredictable.

17.3 The site is surrounded by sensitive receptors e.g. Industrial/ Commercial businesses and Residents. The nearest sensitive receptor downwind of the prevailing wind are the business units located directly to the west and housing to the east across the railway line.

17.4 Storage and disposal of residues

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 tool box 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 portacabin. Staff are trained in the requirements of the FPP at induction and at annual toolbox talks. Quarterly exercises are held to test the response to an incidence of fire. All such 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 onsite resources.
- If the fire becomes uncontrollable for site staff, the site shall be completely evacuated until the emergency services arrive.
- Hydrosnake will be deployed across the building entrance by site staff.
- Neighbours and other receptors within a 1km range will be notified of the fire by telephone where possible.
- 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 and get the site to an operational use again. Procedures taken are dependent on the severity of the fire. These may 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 this 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 suitable facility.
- Certain wastes may need to be disposed of as they may no longer be allowed to be treated and recycled.
- In the unlikely event that 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 or 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 Receptor

Sensitive Receptor	**Contact Number**
Bishops Rawstorne Church of England Academy	01772 600349
Trinity and St Michael's Methodist Primary School	01772 600379
Croston Park Care Home	01772 601431
Croston Medical Centre	01772 600081
Croston Village Surgery	01772 214680

Appendix 2 Permit to Work – 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

Precautions to be taken:

- Hot works must cease one hour before the end ofshift
- 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

Employees Must:

- 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

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.

Signed:	Print Name:	Date:

Authorisation by Manager

I certify that the above work can commence with the precautions listed above.

Signed:	Print Name:	Date:

Cancellation by Contractor or Supervisor

I can confirm that the work has been completed / stopped and I have checked the area which is safe.

Signed:	Print Name:	Date:

Cancellation by Manager

I confirm that the work has been completed / stopped, and that I have checked the area which is safe.

Signed:	Print Name:	Date:

Appendix 3 Fire watch procedure

Site Working Procedure - Fire Watch Procedure SWP021			
Issue:	1	Date:	13/08/2021
Written/Revised By:	David Alcock	Approved By:	Steve Bryce

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 at the start and end of each day with one further inspection in the middle of the operating day.

3.4 The fire watch shall be a visual inspection of all stockpiles to identify 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 a fire is discovered, the Fire Procedure (SWP020) shall be implemented immediately.

4.2 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.

4.3 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 shall be closed to prevent unauthorized 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, pumped water from the fire water tank or 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 neighbors 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.

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 and 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 4 Site Inspection Procedure

Site Working Procedure – Site Inspections SWP016			
Issue:	1	Date:	13/08/2021
Written/Revised By:	Sam Miles	Approved By:	Steve Bryce

1. Purpose

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

2. Responsibility

2.3. It is the responsibility of site manager to ensure this procedure is implemented & followed.

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

3. Daily & 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 carryout 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 log book.

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 5 Fire Procedure

Site Working Procedure - Fire Procedure SWP020			
Issue:	1	Date:	13/08/2021
Written/Revised By:	Sam Miles	Approved By:	Steve Bryce

1. Purpose

1.3 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

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

2.6. 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, temperature monitoring, 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. Reporting the 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 gates shall be closed to prevent unauthorized 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 shall be fought with extinguishers. 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 The site will not be required to have a Quarantine Area meaning that any fire which occurs should be dealt with in situ.

5.5 If the fire is large enough to warrant attendance of the emergency services then neighbours shall be telephoned or 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.

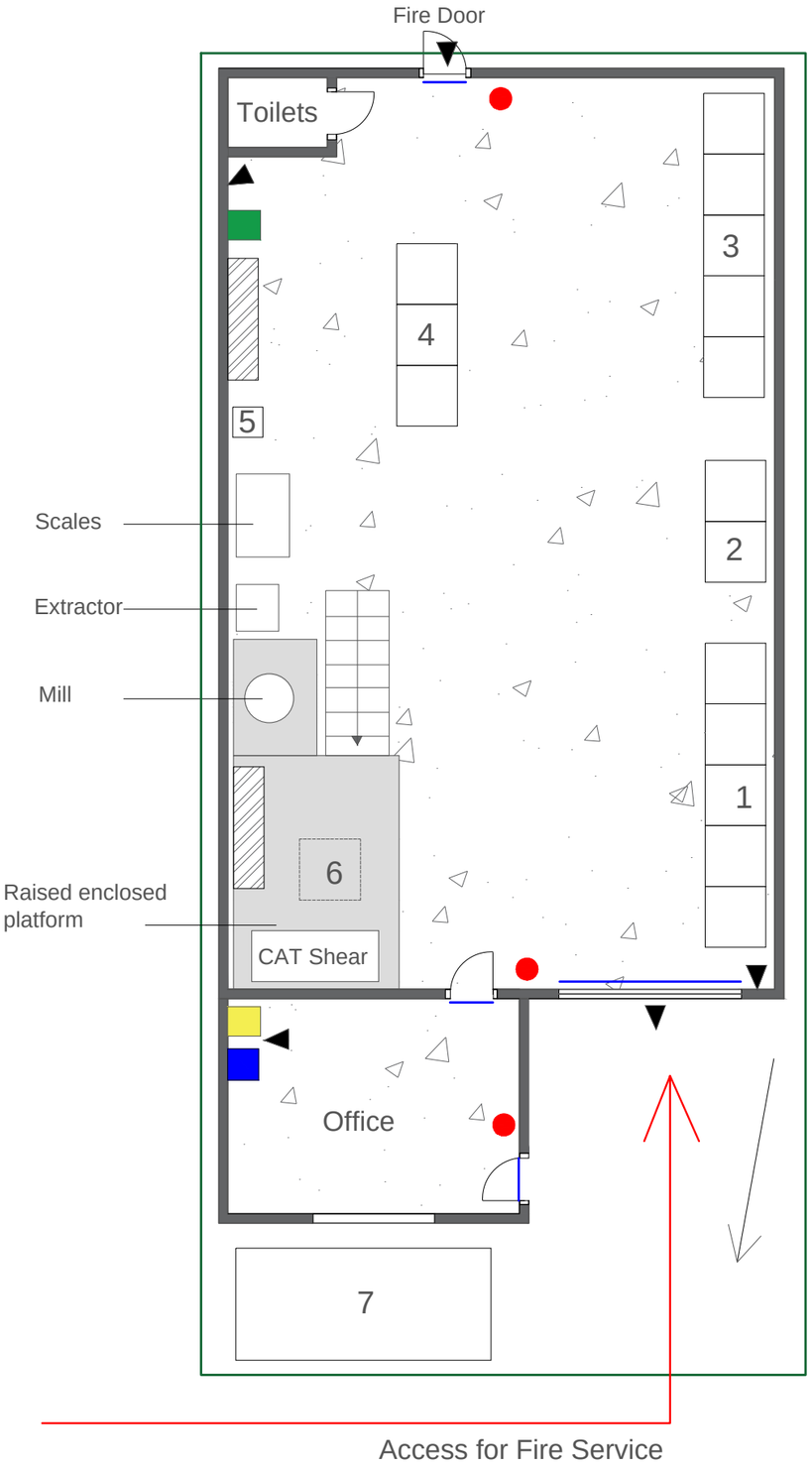
5.6 All actions will be taken in accordance with the approved Fire Prevention Plan.

6. Reporting

6.3 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 the fire and to prevent it from spreading.

6.4 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 6 Fire Prevention Plan

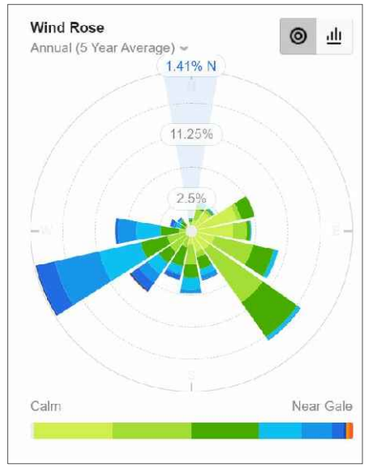


1. CAT's (incoming) - 5 x 1m^3 box = 5m^3
2. Ceramic from CAT's - 2 x 1m3 bags = 2m^3
3. Ali wheels - 5 x 1m^3 box = 5m^3
4. CAT's (sorted prior to treatment) - 5 x 1m^3 box = 5m^3
5. Batteries - 0.5m^3 box
6. RCF - 1m3 bag under platform
7. CAT Shells - 16 cyd skip

Fire Hydrant approx 85m
(see drawing number 210719RF102)

0 1 2.5 5
scale (meters)

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



- Permit Boundary
- Spill Kit
- PPE Storage
- Hydrosnake Storage
- Hydrosnake Deployment
- Work Bench
- Fire Extinguisher
- Concrete Surface
- CCTV

CLIENT
CATS AND DUST LTD

SITE
Unit 12, Twin Lakes
Industrial Estate,
Croston,
PR26 9RF

REV	DATE	DETAIL

PROJECT
PERMIT APPLICATION

TITLE
FIRE PREVENTION PLAN

SCALE @A3	DATE	DRAWN BY	CHECKED BY
1:100	July 2021	T Kearns	D Alcock

DRAWING NO	REVISION
210719RF101	

Appendix 7 Site layout

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

BRICKCROFT LANE

B5274

BRICKCROFT LANE

Twin Lakes
Industrial Estate

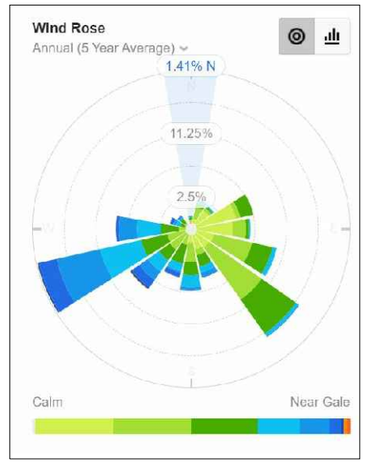
FH

JUBILEE WY

DE TRAFFORD PLACE

B5274

LANGDALE AVE



SITE LOCATION

RAILWAY

REV	DATE	DETAIL

CLIENT
CATS AND DUST LTD

SITE
Unit 12, Twin Lakes
Industrial Estate,
Croston,
PR26 9RF

PROJECT
PERMIT APPLICATION

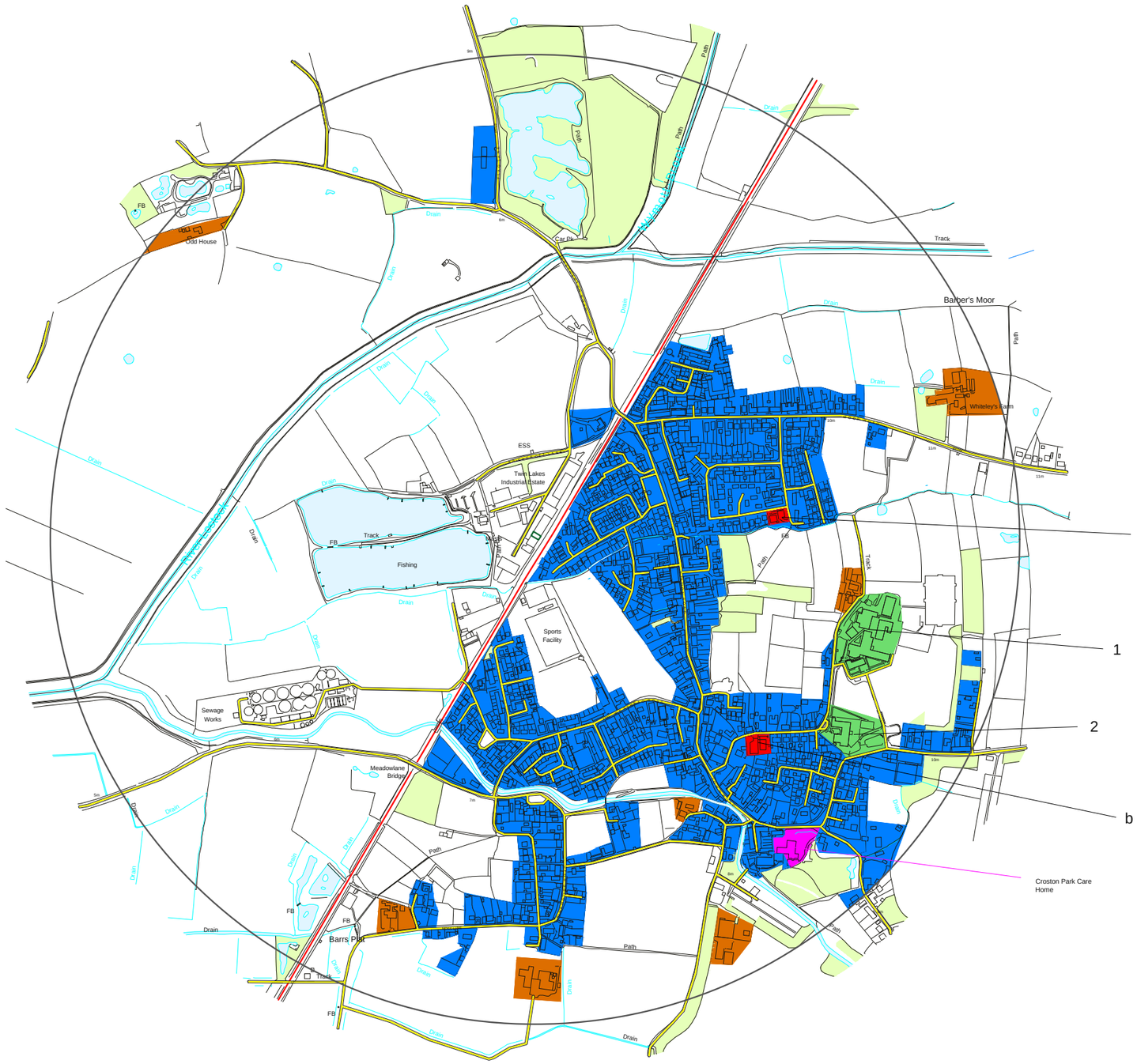
TITLE
SITE LOCATION PLAN

SCALE @A3	DATE	DRAWN BY	CHECKED BY
1:1250	July 2021	T Kearns	D Alcock

DRAWING NO
210719RF102

REVISION

Appendix 8 Key receptors



0 100 250 500

Scale (meters)

EDUCATIONAL

1. Bishops Rawstorne Church of England Academy
2. Trinity and St Michael's Methodist Primary School

CARE HOMES

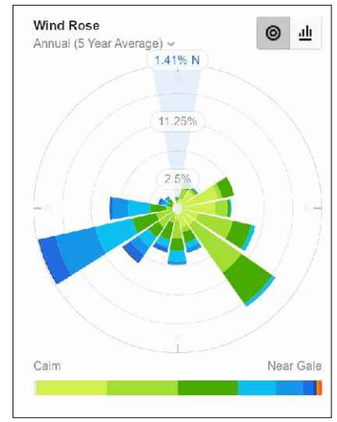
A. Croston Park Care Home

MEDICAL

a. Croston Medical Centre
b. Croston Village Surgery

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

3.



- Residential
- Commercial / Industrial
- Educational
- Medical
- Care homes
- Railway
- Road
- 1000m Radius Boundary

CLIENT
CATS AND DUST LTD

SITE
Unit 12, Twin Lakes
Industrial Estate,
Croston,
PR26 9RF

REV	DATE	DETAIL

PROJECT
PERMIT APPLICATION

TITLE
KEY RECEPTOR

SCALE @A3	DATE	DRAWN BY	CHECKED BY
1:10000	July 2021	T Kearns	D Alcock

DRAWING NO
210719RF103

REVISION