



# Fire Prevention Plan

TeleCycle Europe Ltd



*Helping clients prosper through compliance*

## SITE DETAILS

TeleCycle Europe Ltd  
Unit 15 Drome Road  
Deeside Industrial Park  
Sealand Garden City  
Flintshire  
CH5 2NY

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## OPERATOR DETAILS

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## APPLICATION REFERENCE

PPN-00750

## DOCUMENT REFERENCE

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## DOCUMENT CONTROL

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ACTION	DATE	NAME
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## DRAWINGS

REFERENCE	TITLE
K419.1~20~001	Permit Boundary Plan
K419.1~20~002	Sensitive Receptors Plan (1km)
K419.1~20~003	Site Setting Plan (2km)
K419.1~20~004	Site Layout Plan
K419.1~20~005	FRS Access Route Plan
K419.1~20~006	Containment Plan

## FIGURES

FIGURE	TITLE
Figure 1	Wind Rose Shotwick

## APPENDICES

APPENDIX	REFERENCE	TITLE
Appendix A	K419.1~09~006	Sensitive Receptors Table
Appendix B	N/A	Waste Acceptance Procedure

## 1. SCOPE

This Fire Prevention Plan (FPP) relates to TeleCycle Europe Ltd and their proposed operation at Unit 15 Drome Road, Deeside Industrial Park, Sealand Garden City, CH5 2NY. This FPP forms a part of the Bespoke Permit Application (Ref: PPN-00750) to be submitted to Natural Resources Wales (NRW) for the:

- Physical treatment (including temporary storage) of <10 tonnes/day hazardous and non-hazardous waste, consisting of:
  - Sorting, separation, grading and shearing of catalytic converters into different components and milling of catalytic converters ceramic cores (non-hazardous).
  - Sorting, separation, grading of WEEE, mainly printed circuit boards.

The activities on site are for the purpose of recovery and recycling of precious metals.

The site location is shown on the Sensitive Receptors Plan K419.1~20~002 whilst the permitted boundary is shown on plan K419.1~20~001. The Site Layout Plan shows the arrangement of key areas and processes (see K419.1~20~004). Waste activities are undertaken within an area of approximately 0.07 ha within a contained industrial unit, upon a sealed impermeable surface (see Containment Plan K419.1~20~006).

The national grid reference for the site is SJ 33521 70505. The site lies in an industrial estate off the A494 a short distance from the England/Wales border; for a full breakdown of surrounding land use please see the Sensitive Receptors Plan (K419.1~20~002) and the Site Setting Plan (K419.1~09~003) and the Sensitive Receptors table (Appendix A).

TeleCycle Europe operate a small-scale metal recycling operation dealing with catalytic converters and WEEE and conduct activities in line with activity codes R4 and R13. Catalytic converters are sorted, separated, graded, and sheared into different components followed by milling of catalytic converts ceramic cores.

Catalytic convertors are removed from the rest of the exhaust system by hydraulic shearing in line with the 'top and tailing' method, a recognised industry standard treatment method. The convertors are subject to the same hydraulic shearing to open the metal casing and extract the ceramic monolith within as well as the metal or refractory ceramic fibre (RCF) matting. To extract and collect any dust fibres released the equipment is allied to a certified Local Exhaust Ventilation (LEV) system. RCF matting is removed from the precious metal catalyst by hand.

## 2. TYPES OF COMBUSTIBLE MATERIALS

Combustible materials on site are limited given the nature of the wastes accepted. All wastes relating to the recycling and reuse of catalytic convertors are classified as non-combustible; this is the majority of the wastes accepted on site.

Operations relating to printed circuit boards (PCBs) represent the combustible material on site.

### **Persistent Organic Pollutants (POPs)**

It is likely that PCBs accepted will contain POPs. As with all wastes these will be segregated and stored individually within a container. Should a fire occur on site the FRS shall be notified that POPs are present on site.

A full List of Wastes (LoW) will be submitted as part of the application pack, see Section 09.

### 3. USING THE FIRE PREVENTION PLAN

#### Location

A hard copy of this FPP shall be displayed in the office on site and all staff made aware of the measures outlined within the FPP. Required training of the related procedures discussed within this FPP shall be conducted and in the case of an emergency the FPP shall be presented to the Fire Rescue Service (FRS) upon arrival to site.

#### Training

Evacuation drills are conducted annually at the discretion of the Site Management and are recorded in the site diary, and any issues addressed through site meetings and further training if necessary.

#### Activities on site

TeleCycle Europe operate a small-scale metal recycling operation dealing with catalytic convertors and WEEE and conduct activities in line with activity codes R4 and R13. Catalytic convertors are sorted, separated, graded, sheared and milled.

Catalytic convertors are removed from the rest of the exhaust system by hydraulic shearing in line with the 'top and tailing' method, a recognised industry standard treatment method. The convertors are subject to the same hydraulic shearing to open the metal casing and extract the ceramic monolith within as well as the metal or refractory ceramic fibre (RCF) matting. To extract and collect any dust fibres released the equipment is allied to a certified Local Exhaust Ventilation (LEV) system. RCF matting is removed from the precious metal catalyst by hand.

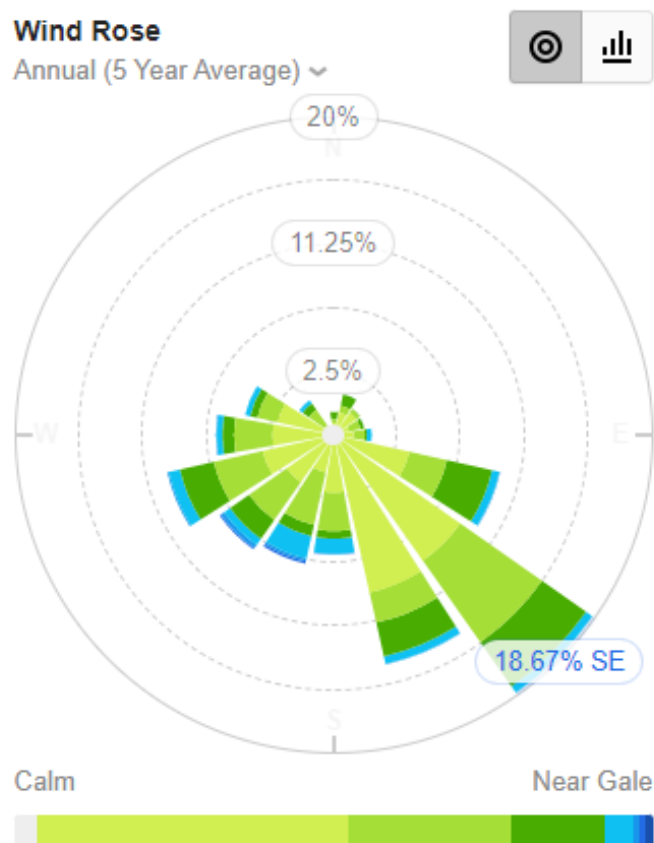
#### Site Layout Plan

The Site Layout Plan (K419.1~30~004) depicts the working layout of the site and shall be reviewed on a regular basis to ensure that it reflects operations accurately.

#### Sensitive Receptors

Sensitive Receptors are shown on the Sensitive Receptors Plan (1km buffer) and also within the Sensitive Receptors Table (Appendix A). A Site Setting Plan also shows receptors up to 2 km (K419.1~20~003). Sensitive receptors are displayed in all directions. The closest observing weather station where weather data is available is Shotwick situated approximately 1.3 km North of site. Figure 1 shows the wind rose for Shotwick weather station which indicates that the prevailing wind originates from the Southeast, transporting any fire emissions to the Northeast across commercial and agricultural areas. Emissions will also be transported across the A548.





**Figure 1** Wind Rose from Shotwick (Willy Weather, 2022)

## 4. WASTE ACCEPTANCE

On arrival, vehicle details will be recorded in the site diary or similar document. The driver must also present copies of the waste carrier's licence appertaining to the transport company concerned and the relevant Waste Transfer/Consignment Note.

All loads are inspected for non-permitted wastes, quality, and conformance with Environmental Permit requirements. Non-conforming loads are refused entry and details are recorded.

All drivers must be wearing appropriate PPE, prior to commencing the unloading process.

Waste loads will be unloaded using a forklift truck or pallet truck. Smaller packaged items may be unloaded manually.

Wastes are stored in individual storage containers, e.g. bulk bags, crates and drums. All wastes are accepted as pre-booked orders and are allocated a job number specific to the client and instruction. All wastes are stored and processed as batches, passing through the processes consecutively, which removes the risk of long-term waste storage and ensures turnover of waste.

Waste acceptance is also appendicised as an individual procedure (see Appendix B) and detailed as part of the Management System Summary within Section 06 of the application pack.

## 5. MANAGING COMMON CAUSES OF FIRE

### **Arson and Vandalism**

The risk of arson is low given the scale of the site and proximity of neighbouring businesses. Any unsolicited activities would be detected. The site is covered by CCTV cameras (see Site Layout Plan K419.1~20~004) and outside of operational hours locked and secured.

### **Plant & Equipment**

A forklift is used on site. Forklifts are equipped with fire extinguishers and parked away from combustible wastes when not being used.

### **Discarded Smoking Materials**

Any waste that is found to be smouldering, smoking or alight upon arrival into site or during storage on site will be isolated within the quarantine area if safe to do so and subsequently extinguished. If the smoking material cannot be moved safely then any non-smoking waste stored nearby shall be relocated to isolate smoking waste to be extinguished in-situ. If not safe to do so the FRS will be contacted.

### **Hot Works**

Any hot works that are carried out on site are done so in accordance with a permit to work procedure.

### **Industrial Heaters**

No industrial heaters are used on site.

### **Ignition Sources**

There are no notable or consistent sources of ignition on site. Staff shall remain vigilant when using mobile plant and equipment for any signs of combustion and will carry out checks at the start and end of the working day to ensure there is no ignition risk. All plant and equipment shall be maintained in line with manufacturer's guidelines.

When not in use the mobile plant is stored away from any combustible material.

Operators shall actively monitor for hot spots physically and using the CCTV system.

Smoking is not permitted within operational areas on site.

## **Build-up of Loose Combustible Waste & Dust**

Any fibres or dust created through the shearing and milling processes are managed by the LEV system installed. All RCF matting once removed from the ceramic monolith are bagged using 400-gauge polyethylene and stored within a designated storage area prior to removal (see Site Layout Plan K419.1~20~004). Dust and fibres extracted from the LEV system are added to bulk bags for each batch/consignment.

## **Reactions Between Wastes**

All wastes stored internally are done so within segregated containers (bulk bags, crates and drums). Wastes are stored and processed in batches, moving through the process consecutively reducing the likelihood of any long-term waste storage and ensuring frequent turnover of waste.

## 6. PREVENTING SELF COMBUSTION

### General Self Combustion Measures

All wastes are stored within individual storage containers within the building. Owing to the nature of the permitted waste accepted and the limited periods they are stored on site the risk of self-combustion is very low.

Despite the low risk all staff will remain vigilant and implement an informal fire watch throughout the day to supplement the daily site inspections undertaken both at the beginning and end of the working day.

During site inspections the integrity of containers are checked for any signs of leaks or spillages.

Given wastes are stored internally this negates any impact from hot or dry weather. Any waste stored outside is done so within a sheeted container to provide shade cover and is only stored externally during loading/unloading operations hours.

## 7. WASTE PILE MANAGEMENT

**Table 1:** Maximum Pile Sizes

Storage Area	Location	Max Length / m	Max width / m	Max height / m	Volume m <sup>3</sup>
Bulk Bag Storage	1	5	1	3	15
IBC Storage	2	5	1	3	15
PCB Storage	3	5	1	3	15
Scrap Metal (uncontaminated)	4	6.1	2.4	2.6	30.58

### Waste Stored in Containers

All wastes are containerised and located on a sealed impermeable surface. All containers are accessible from at least one side to enable movement to quarantine area in the event of a fire.

Bulk bags and IBCs are used for storage containers (1 m x 1 m x 1 m) and will be stacked no more than three high in the designated storage areas.

## 8. PREVENTING FIRE SPREADING

All wastes are segregated within containers and accessible from at least one side. Containerising the waste reduces the need for separation distances between wastes. The nature of the wastes accepted on site mean the amount of combustible material on site is limited.

## 9. QUARANTINE AREA

The quarantine area is identified on the Site Layout Plan (K419.1~20~004) and covers an area of 16.87 m<sup>3</sup> to hold up to 50% of the largest waste storage area (30.58 m<sup>3</sup>) at any one time in line with the relevant guidance. A minimum separation distance of 6 metres is provided around the quarantine area.



## 10. DETECTING FIRES

Staff are trained to be vigilant for any signs of combustion whilst the daily site checks at the beginning and end of the day incorporate fire checks.

The site is monitored 24 hours a day, 7 days a week by CCTV and accessible remotely by site management so any incident that occurs outside of operational hours would be detected and appropriate action could be taken.

## 11. SUPPRESSING FIRES

The site benefits from both manual and automatic fire extinguishers. Manual fire extinguishers are located strategically around site and are marked on the Site Layout Plan (K419.1~20~004). All site staff have been trained on their use and where they are located. Automatic fire extinguishers are positioned in higher risk locations such as above the printed circuit boards (see Site Layout Plan K419.1~20~004).

## 12. ALTERNATIVE MEASURES

Alternative Measure	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
Automatic fire extinguisher	N/A	Located in the highest risk area i.e. above the PCBs.  Triggered by temperature which will deploy dry powder to smother fire.	Extinguisher covers in excess of the waste pile below.
All waste is containerised in IBCs, containers or bulk bags	Only a small volume of waste is contained within an IBC, decreases likelihood of fire starting	IBCs can easily be moved to the QA with on-site plant to be extinguished away from other waste.	Burning or non-burning waste can be moved quickly.
Increased monitoring frequency with daily site checks at the start and end of every working day. Two checks in 24hrs with handheld Thermal Imaging Camera (TIC)	Allows detection of smouldering/hotspots/fire at their earliest stage.  Shorter windows of risk given frequency of inspections.	Early detection allows early intervention before fire can grow out of control.	Shorter risk windows

### 13. FIREFIGHTING TECHNIQUES

Fire will be fought *in situ* where safe to do so using manual fire extinguishers, otherwise the Fire Rescue Service shall be contacted. Although staff will have been trained on the measures within this FPP, the FPP shall be available for reference during an incident.

The manual extinguishers should be sufficient in extinguishing but in the event the fire cannot be halted at this point the FRS shall be contacted. To restrict any firewater that may be used from entering the drainage channel, a firewater barrier will be erected across the entrance to the industrial unit and sandbags used as a seal. Once extinguished the site manager will arrange the collection of the contaminated firewater for disposal at a suitably permitted facility.

If the FRS are called the FPP shall be made available upon their arrival to site.

## 14. WATER SUPPLIES

A hydrant could not be located nearby although given the industrial location of the site it would be reasonable to assume that a fire hydrant would be accessible nearby.

Largest waste storage area	Water volume needed in m <sup>3</sup>	Water supply needed in litres per minute	Delivery rate from fire hydrant (estimated)
30.58 m <sup>3</sup>	36.7 m <sup>3</sup>	203 ltrs/min	1200 ltrs/min

Indicative flow rates of fire hydrants in industrial areas from an 150mm main provides flow rates provided below dependant on the size of industrial area:

- <1 hectare 1200 l/min
- 1 – 2 hectares 2100 l/min
- 2 - 3 hectares 3000 l/min
- >3 hectares 4500 l/min

Based on available information the closest Fire Hydrant is likely to provide at least 1200 l/min flow.

As the hydrant pressure and delivery rate are unknow, alternative measures to water are proposed in this FPP as the main method of fire suppression for the waste stored on site. To address the details of the alternative measures, see **Section 12**.

## 15. MANAGING FIRE WATER

The site benefits from a sealed impermeable surface where all waste activities take place. A drainage channel runs through the concreted area to the north of the site outside of the industrial unit (see Containment Plan K419.1~20~006) which all surface water would drain to. The fall of the site moves towards the drainage channel.

Apart from a solitary 40 yrd skip all waste is stored internally within the industrial unit. To restrict contaminated fire water from entering the drainage channel a firewater barrier would be erected across the roller shutter entrance to contain fire water within the industrial unit (see Containment Plan K419.1~20~006). Sandbags would also be used to prevent the discharge of any contaminated firewater.

The Sealed internal area would provide approximately 400 m<sup>2</sup> area, which with the firewater barrier erected (around 0.2 m tall) would provide a volume of approximately 80 m<sup>3</sup>. Containment capacity provides sufficient capacity

## 16. DURING OR AFTER AN INCIDENT

Site operations will cease, and operatives will be informed to clear the site, or not attend. Any collections will be cancelled, and any deliveries will be diverted to another suitably permitted site. Site Management will be present on the site during the fire, or as close as is deemed safe, and available to emergency services and responding to any issues that arise.

### **Notifying residents and businesses**

In the event of smoke emissions all neighbouring units will be notified whether physically or through telephone contact.

Natural Resources Wales shall be contacted as per permit requirements on the Environment Agency Incident Hot line: 0300 065 3000

### **Clearing and decontamination after a fire**

A third-party contractor will be instructed to clear and decontaminate areas of the site impacted by a fire.

### **Making the site operational after a fire**

It is unlikely that a fire event will impact operations significantly, however the site will be cleaned and inspected post fire. Also, structural damage will be repaired as soon as possible prior to operations re-commencing.

The root cause of the fire will be established, and all site procedures and this document reviewed, and staff updated with any changes.



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