Table of Contents

1.0 Key Information

SITE DETAILS			
Location: Rover Way, Cardiff			
Postcode: **CF24 2RX**			
SITE CONTACTS			
Name	Position	Office Hours (Mon-Fri 6am-6pm / Sat 6am-2pm)	Out of Hours
Chris Griffiths	Shredder Operations Manager	07841 497541	07841 497541
Ryan Connick	Scrap Processing Centre Supervisor	07483 018945	07483 018945
EMERGENCY SERVICES			
Ambulance, Fire & Police		999	999
REGULATORS			
Natural Resources Wales (NRW)		0300 065 3000	0300 065 3000
Local Authority Environmental Health: Cardiff Council, Shared Regulatory Services (SRS)		0300 123 6696	-
OTHER KEY CONTACTS			
Name	Position	Office Hours (Mon-Fri 8am-4pm)	Out of Hours
Hannah Powell	Environmental Manager	07483 062878	07483 062878
Isabel Vazquez	Health & Safety Manager	07483 045682	07483 045682
SENSITIVE RECEPTORS WITHIN 1KM			
Tesco Stores		0345 677 9129	
Willows High School		029 2041 4243	
Baden Powell Primary School		02920 461894	

St. Albans Primary School	029 2046 2915
Moorland Primary School	029 2046 2170
Elin Burgess (Traveller site contact)	029 2048 9602
Councillor Jane Henshaw (Local residents contact)	07779 975527
Welsh Water	0800 052 0130
PHS Group	029 2080 9098
Speedy Hire Centre	029 2049 5944
Bluebay Building Products	029 2049 5555
SWSSMINI	029 2047 3040
SIG Roofing Cardiff	029 2048 3939
Moorland Environmental	029 2048 5528
SA Brain & Co Ltd	029 2040 2060
Huntleigh Healthcare	029 2048 5885
Print Partnership Reprographics	029 2047 4010
TOTM	029 2009 8822
GAP Plant & Tools Hire Cardiff	029 2047 2088
Miss Lulu Bags	029 2049 7898
ZCC Garage	029 2115 7800
Gremer Chemicals UK	029 2046 5564
Seawall Mot Ltd	029 2048 8660
Topline Tyres Ltd	07855 276360
Dragon Taxis	029 2033 3333
1st Choice Vehicle Dismantlers	029 2047 0444
Cardiff Reclamation	029 2045 8995

Ace Tyre Services	029 2048 8819
Horan Construction	029 2048 2048
Sealmasters	029 2049 0711
Parfitt Tyre Co Ltd	029 2048 1218
G W Taxi Meter Services	029 2047 2464
Body & Soul AutoWorks	029 2045 5682
Bayliss Metals Cardiff	029 2010 8866
EngineCentre.com	029 2045 1919
Bill Way & Co Ltd	029 2046 4621
A & M Energy Solutions	029 2046 1802
Star Name Registry	0800 23 54 52 / 02921 672 998
South West Wood Products	029 2052 3440
Semaphore Display limited	029 2022 4111
Enfys	029 2049 9988
Voluntary Emergency Service Transport	029 2049 0325
Cleverchefs	0345 521 0123
Dynniq	029 2048 0517
Monks & Crane	029 2043 6400
NK Motors	07939 549477
CGs Accident Repairs	029 2045 6844
BSP Sales Centre	029 2046 5451
Torque Motors	029 2049 2700
Bay productions	029 2048 7330
Argent Associates	029 2046 2875

Sanders Design	029 2046 4661
BMI Redland	0370 560 1000
Deltec International Courier	029 2049 0700
Certas Energy	029 2048 0210
C2J Architects & Town Planners	029 2045 2100

2.0 Introduction

The purpose of this fire prevention management plan (FPMP) is to ensure adequate control measures are in place to:

- minimise the likelihood of a fire occurring
- aim for a fire to be extinguished within 4 hours
- minimise the spread of fire within the site and to neighbouring sites'
- minimise environmental health and safety (EHS) impacts both on-site and off-site

The FPMP has been written to comply with current Natural Resources Wales (NRW) guidance i.e. Fire Prevention & Mitigation Plan Guidance – Waste Management, Guidance Note 16 (Version 2.0, August 2017). The FPMP should be read in conjunction with other Celsa systems designed to ensure compliance with by *The Regulatory Reform (Fire Safety) Order 2005*.

Celsa will ensure that the FPMP is maintained in-line with prevailing legislation and associated guidance.

2.1 Risk of fire

It is recognised that fires involving wastes can cause significant harm to people and the environment:

- there is the risk of death and/or serious injury and health damage from high thermal energy and smoke inhalation
- combustion products, even those from non-toxic materials, release airborne pollutants which can cause short/long term effects on human health and the environment
- firewater run-off can transport pollutants into drainage systems, rivers and lakes, groundwater and soil, threatening water supplies, public health, wildlife and recreational use
- explosions, sparks and projectiles can harm people and spread any fire
- substantial property damage and subsequent financial losses

Examples of less direct sources of harm include:

- the significant burden for the Fire and Rescue Services (FRS) and other public agencies when responding to a fire may be both immediate and/or long lasting
- civil claims from third parties relating to nuisance or potential health effects and fines and/or costs levied by environmental, fire and health and safety regulators
- costs of clean-up, both on and off-site under the principle of the polluter pays.
- damage to property and interruption to business and third party/neighbouring businesses
- increased insurance premiums
- costs to reputational
- impact to environmental permit/licence/exemption

2.2 Site Waste activities

Waste activities to which this fire plan applies:

- Stockpiles of unprocessed incoming material (clean ferrous scrap, mixed non-ferrous scrap and undepolluted ELVs)
- Stockpiles of processed materials (shredded ferrous, shredded mixed non-ferrous, fluff and ELV components)
- Operation of the fixed scrap metal shear
- Operation of a fixed scrap metal shredder
- Operation of a scrap metal cutting area
- Operation of End of Life (ELV) depollution station

Types of combustible waste include:

- Stockpiles of unprocessed materials
- Stockpiles of processed materials including fragmentiser fluff
- Stockpiles of processed ELVs including tyres, oils, and other hydrocarbons

3.0 Shredder and Shear Materials Inventory

The amount and type of stored wastes and the storage arrangements are outlined within *Table 1*. The **LOCATION** references within *Table 1* relate the Permitting Layout Plan provided within the Appendix.

Table 1 – *Site Materials Inventory*

On-site Stockpiles and Storage	Maximum (tonnes unless stated)	Comments
Clean ferrous scrap metal (shredder feed material)	1,100 t/day 2,000 t max	**LOCATION A (Pile)** Solid (unprocessed) material stored on impermeable concrete hardstanding. Pile size approximately 30 m x 20 m. Minimum of 6 metres separation.
Clean ferrous scrap metal (Shear feed material)	200 t/day 1,000 t max	**LOCATION B (Pile)** Solid (unprocessed) material stored on impermeable concrete hardstanding. Pile size approximately 35 m x 15 m. Minimum of 6 metres separation.
Mixed non-ferrous metals	200 t/day 500 t max	**LOCATION C (Pile)** Solid (unprocessed) material stored on impermeable concrete hardstanding. Pile size 15 m x 10 m. Minimum of 6 metres separation.
Shredded ferrous metals	900 t/day 3,000 t max	**LOCATION D (Pile)** Solid/granular (processed) material stored on impermeable concrete hardstanding. Pile size approximately 25 m x 12 m. Minimum of 6 metres separation.
Sheared metals	200 t/day 2,000 t max	**LOCATION E (Pile)** Solid (processed) material stored on impermeable concrete hardstanding. Pile size approximately 35 m x 15 m. Minimum of 6 metres separation.

On-site Stockpiles and Storage	Maximum (tonnes unless stated)	Comments
Shredded mixed non-ferrous metals	65 t/day 550 t max	**LOCATION F1 (Pile)** Solid/granular (processed) material stored on impermeable concrete hardstanding. Pile size approximately 10 m x 6 m. Minimum of 6 metres separation. **LOCATION F2 (Storage Bay)** Solid/granular (processed) material stored on impermeable concrete hardstanding. Pile size (in bay) approximately 10 m x 6 m. **LOCATION F3 (Storage Bay)** Solid/granular (processed) material stored on impermeable concrete hardstanding. Pile size (in bay) approximately 10 m x 6 m.
Fragmentiser fluff	320 t/day 200 t max	**LOCATION G1 (Pile)** Solid granular waste (processed) stored within a single loose pile on impermeable concrete hardstanding. Pile size approximately 10 m x 6 m. Minimum of 6 metres separation. **LOCATION G2 (Bay)** Solid granular waste (processed) stored within an engineered bay on impermeable concrete hardstanding. Pile size (in bay) approximately 10 m x 6 m. **LOCATION G3 (Bay)** Solid granular waste (processed) stored within an engineered bay on impermeable concrete hardstanding. Pile size (in bay) approximately 10 m x 6 m.
ELV (undepolluted)	5-10 day 10 max	**LOCATION H (Stack)** Whole cars (unprocessed) stored on impermeable concrete hardstanding. Stack no greater than 3 high. Minimum of 6 metres separation.

On-site Stockpiles and Storage	Maximum (tonnes unless stated)	Comments
ELV (depolluted)	200 day 300 max	**LOCATION I (Stack)** Whole cars (processed) with required pollutants removed stored on impermeable concrete hardstanding. Stack no greater than 3 high or placed on scrap metal pile prior to processing. Minimum of 6 metres separation.
Tyres	10 produced on-site a day 50 max	**LOCATION J (Container)** Solid (stored in suitable 30 cu yd open container) on impermeable concrete hardstanding.
Batteries	1-2 produced on-site a day 25 max	**LOCATION K (Battery Box)** Mixed solid and liquid (stored in suitable battery boxes) on impermeable concrete hardstanding in building, appropriate battery boxes 1.2 W x 1.2 L x 0.8 H, 610 Litres capacity.
Engine, gear, and lubricating oils	>1 litre day 2,000 l max	**LOCATION L (Bunded Containers)** Liquid, unprocessed material stored within drums or tanks on impermeable concrete hardstanding. All materials stored within secondary containment.
Diesel and fuel oil	1,500 litres day 5,000 l max	**LOCATION M (Bunded Containers)** Liquid, unprocessed material stored within drums or tanks on impermeable concrete hardstanding. All materials stored within secondary containment.
Petrol	>0.5 litres day 1,000 l max storage	**LOCATION N (Bunded Containers)** Liquid, unprocessed material stored within drums or tanks on impermeable concrete hardstanding. All materials stored within secondary containment.

3.1 Receipt and Storage of Waste

All deliveries are weighed in at the site weighbridge by the Scrap Yard Supervisor.

The Scrap Yard Supervisor conducts an initial check of the load which, if found to be satisfactory, is allowed to be tipped and whereupon a thorough inspection is then made. The load will be checked to ensure that metal is not contaminated with oils, cutting fluid, plastics or food scraps etc. In the event of any non-conforming items of waste being identified, these are either returned to the source facility or are stored in a clearly marked quarantine area for authorised disposal. See procedures 'Reloading a lorry' and 'Scrap Classification'.

4.0 Whole Site Considerations

4.1 Protection of human life

To ensure suitable control measures are in place to protect personnel on site there are arrangements in place for adequate mean of fire escape that is clearly marked, lit where required, not blocked, and kept unlocked during operational hours. There are effective evacuation procedures in place to which all staff are trained, and visitors inducted.

4.2 Location and neighbouring sites/ businesses/ environment

The site is located approximately 3-km east of Cardiff City centre at National Grid Reference (NGR) ST 21444 76235. The site is located south of the existing permitted installation that is located on the northern side of Rover Way. The following current activities have been identified surrounding the Site:

- **NORTH** – Rover Way beyond which is the main Celsa Manufacturing (UK) site and permitted installation. A Western Power 132 kV substation is located adjacent to the northern edge of the site. A Travellers' site is located 370 metres north northeast (beyond the Western Power Distribution 33 kV/132 kV substation) located immediately adjacent to a Welsh Water compound. Other residential receptors to the site are located approximately 470 metres north (Willow Avenue) across the main steel works site (that forms the main part of the permitted installation). Willows mixed High School is in the same area approximately 450 metres north of the site.

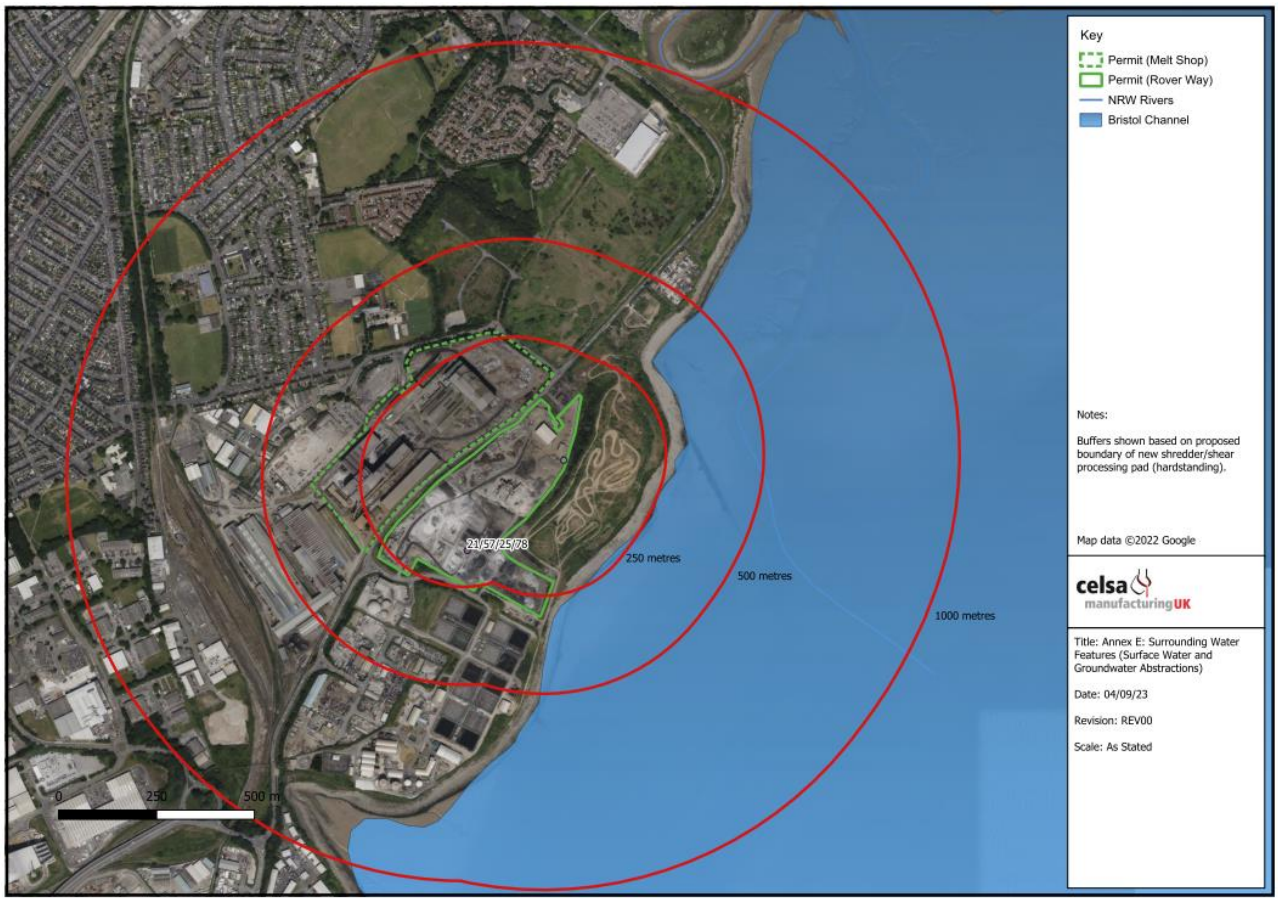
- **EAST** – Disused Cardiff Motocross Centre MX and Minibike Track (Foreshore MXC track) beyond which is the Severn Estuary (200 metres).

- **SOUTH** – Tide Fields Road beyond which a Welsh Water wastewater treatment works, and other light industrial activities associated with Tremorfa Industrial Estate.

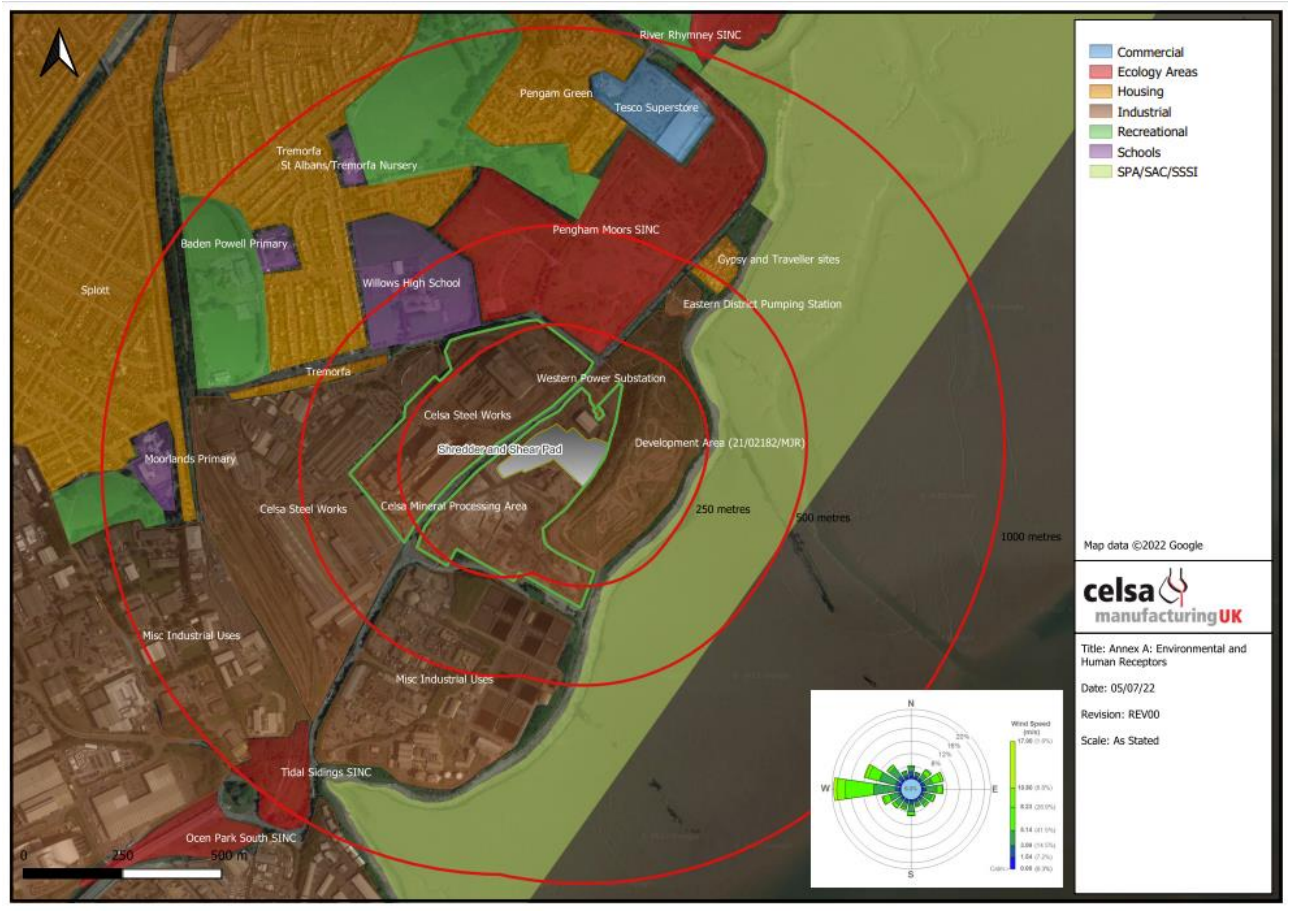
- **WEST** – Rover Way beyond which is the main Celsa Manufacturing (UK) Ltd site.

The site is adjacent (within 250 metres) of the Severn Estuary, which is designated a Ramsar Site, Special Area of Conservation (SAC), Special Protection Area (SPA) and a Site of Special Scientific Interest (SSSI).

Access to the site is via Rover Way and Tide Fields Road.



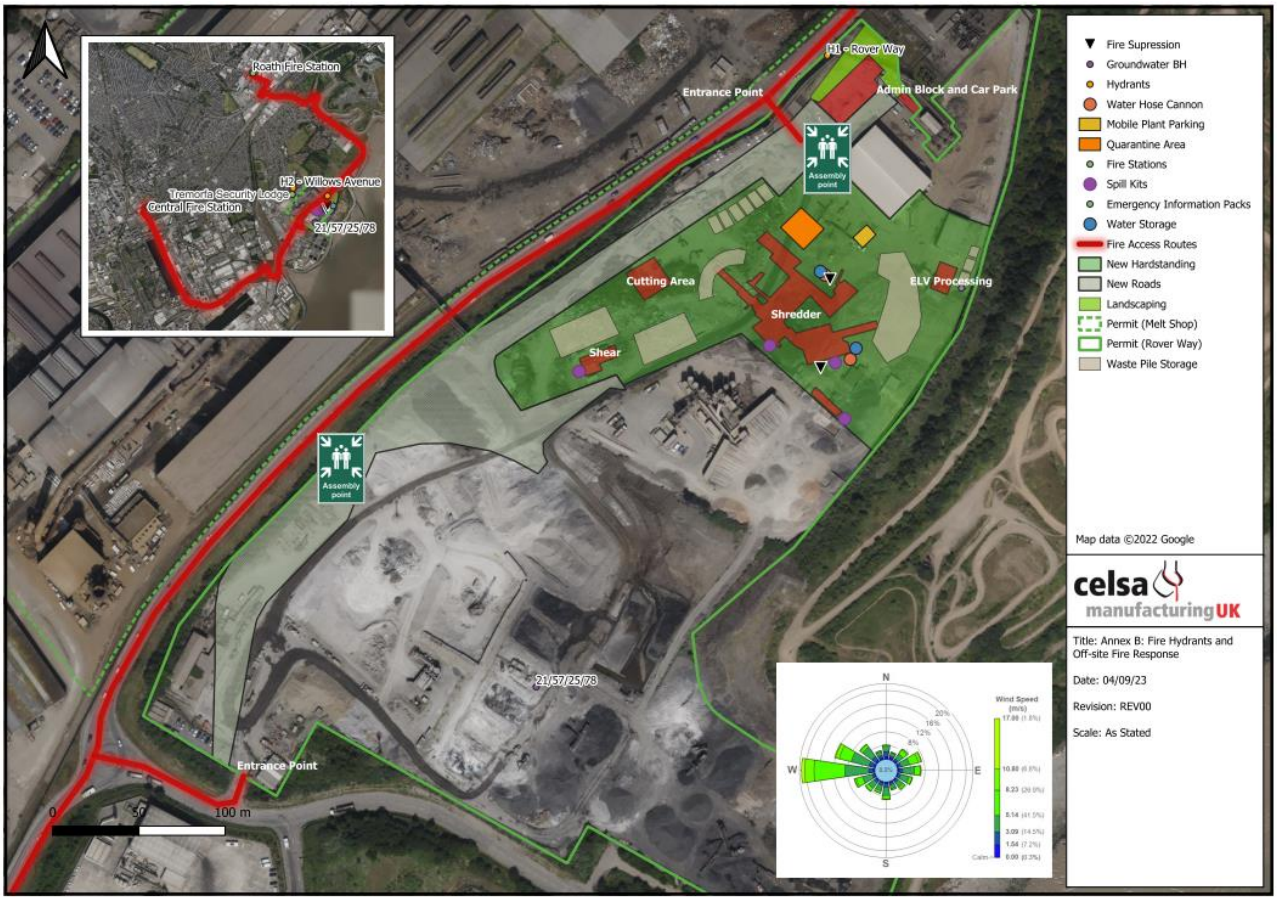
4.3 Risk to sensitive receptors



The fire risk to sensitive receptors from the impact of our operations is low.

The nearest local fire service station is Roath Fire Station, Colchester Avenue, Cardiff, CF23 9AN– approx. 7 minutes from site (2.2 miles dependent on route). Cardiff Central Fire Station, Adam Street, Cardiff, CF24 2FL – approx. 8 minutes from site (2.7 miles dependent on route). The likely access routes are outlined within the Appendix.

The nearest fire hydrant is located on Rover Way E321541 N176462. The next one is located on Willows Avenue E321075 N176574. The location of the nearest hydrants is outlined within the Appendix.



5.0 Managing common causes of fire/ sources of ignition

5.1 Arson

To minimise the risk from vandalism and arson the site is secured with perimeter fencing and CCTV; these arrangements include working and outside working hours. The site has 24-hour manned security.

5.2 Plant and Equipment

All plant and equipment will be maintained and be fitted with fire extinguishers. Mobile plant that isn't being used will be kept away from combustible material. Other controls include:

- Operators are instructed of the importance of ensuring materials are kept clear from around exhausts and igniting.
- In the event of fire, heavy plant may be used to relocate wastes on fire to designated (quarantine) area where the fire can be tackled and away from sensitive areas where it could spread more easily. Plant may also be used to move waste away from a fire to prevent spread. All relevant plant operators will be trained as part of the emergency

response plan. The training will include ensuring:

- Making operatives aware that such action must only be done without risk to the health and safety of themselves or others.
- Only suitable plant be used i.e. completely enclosed cabs, fire and heat protected hydraulic systems etc.

The shredder uses a water injection system to control internal mill temperatures and to supress dust and vapour. This system also minimises the risk of generating potentially flammable conditions within the chamber. The water injection system also reduces the likelihood and severity of fires within the mill. The water injection system shall be operational at all times when the mill is running. In the event of a fire within the shredder (mill) the installation is fitted with a manual deluge system that is controlled and operated by the operator overseeing the process (located within the control room). Upon activation the shredder is deluged which then transfers water up the outfeed conveyor onto the cleaning cascade. The shredder also includes two water canons that can provide local fire suppression (as required).

5.3 Electrical faults including damaged or exposed electrical cables

General electrical systems, such as lighting and heating are regular inspected this includes portable and fixed electrical equipment.

5.4 Discarded smoking materials

No smoking policy inside premises and provision of designated smoking areas situated away from combustible materials. All designated smoking areas are signed and supplied with receptacle for discarded smoking materials.

5.5 Hot works

The shear and shredder compound includes a dedicated over-size scrap metal cutting area

Where oversized material arrives within a load this shall be separated for processing using a hand-held oxypropane cutting kit. The oversize material shall be processed using a competent Celsa operator in an area located away from the main unprocessed and processed stockpiles. A fire watch would be undertaken for a minimum of 30 minutes after the completion of hot work. This is the minimum time recommended by the Health and Safety Executive (HSE). Hot works would be controlled in-line with SCP17 Hot Work Procedure.

All works will be undertaken in compliance with the FPMP and the current Health and Safety Executive (HSE) guidance on Safety in gas welding, cutting and similar processes (indg 297 – rev1 – published 05/12).

No routine hot works will be undertaken in any other area. If hot works are to be undertaken in any other area a formal permit to work will be required.

5.6 Industrial heaters

Not applicable – currently there are no industrial heaters on site.

5.7 Hot exhausts

Operatives to be instructed to clear material from around exhausts at end of each shift; this will be included in induction training, relative procedures, and routine inspections.

5.8 Leaks and spillages of oils and fuels

Fuels and combustible liquids will be prevented from leaking or trailing from site vehicles. Fuel storage will be within flammable cabinets and be located at least 10 metres away from other sources of ignition i.e. naked flames. Spill kit stations will be provided around the site and available to clear up leaks/spillages and appropriate disposal of absorbent material will be arranged.

5.9 Build-up of loose combustible material, dust and fluff

General dust (i.e. dusts and small particle size combustible wastes, loose wastes etc.) will be controlled by ensuring:

- Regular housekeeping and cleaning is maintained for all site areas including site machinery and buildings to keep dust and other combustible materials to a minimum
- Flammable materials, such as oils, greases, fuels, paints etc, are always stored correctly and put back in store after use.
- Routine site inspections are conducted to ensure good housekeeping is being maintained

5.10 Reactions between waste

Waste acceptance checks are in place to prevent unsuitable wastes being received; this is documented within internal management system procedures. These procedures aim to prevent unauthorised waste being accepted and where accidentally accepted limiting the impact, they include:

- a fire-watch at the end of each working day;
- not accepting high risk loads near the end of an operational shift or ensuring they are processed promptly and not left overnight;

- where possible, empty reception areas of waste at the end of each working day, or minimise the amount of waste left in reception overnight;
- employees in reception areas must be trained and instructed to look for fires, hot loads, hazardous materials and items, smoke and signs of smoulders – and know what action to take if they see one i.e. use of heavy mobile plant to move suspect loads to quarantine area, dousing suspect loads with water from a fire canon;
- ensure mobile plant operators spread wastes out when received to make identification of smoulders and hazardous items easier;
- provision of an 'emergency/quarantine area' for suspect loads

5.11 Deposited hot loads – quarantine area

A designated quarantine area will be located on site to act as somewhere to place hot loads/ burning wastes to extinguish or move unburnt wastes to isolate and prevent catching fire. The quarantine area is located within the boundary of the site, large enough to hold at least 50% of the volume of the largest pile or containers and have a separation distance of at least 6 meters around the quarantined waste. Any material stored in the quarantine area will be categorised and removed within 14 days.

The quarantine area will be always kept clear – unless it's being used for emergency purposes.

5.12 Site/plant shutdown

To reduce fires occurring outside of normal working hours the close-down procedures includes:

- Shut-off and lock-off of electrical power to plant
- Shut-off of other electrical items such as heaters
- Clearance of waste which have accumulated under equipment
- Ensuring that any flammable materials such as fuels are secured
- A fire-watch at least one hour after the end of operations
- Spread out any waste loads awaiting processing to ensure no undetected hot items or other materials which could start a fire
- Check that mobile plant has been moved to a safe distance
- Check that fire detection & security systems have been activated; gates secure etc

5.13 Waste reception

The reception facilities and temporary storage of wastes for short periods prior to treatment and/or transfer to another site will have:

- Tipping/reception area where scrap metal is discharged prior to processing
- Designated areas, where waste may be processed

Any other wastes and hazardous materials will not be accepted; if discovered attempts will be made to trace it back to the supplier and appropriate action taken to reduce the risk occurring again. Where required this will be reported to Natural Resources Wales. Waste reception will be in external areas only.

5.14 Visitors & Contractors

Control of visitors and contractors will be in line with SCP53 'Visitors System' and CP/B0129 'Contractor Control Procedure'. All visitors will be required to report to security upon arrival at the site and be issued a visitor's pass. Visitors must be escorted by an employee at all times. In the event of an emergency, it is the sponsoring employee's responsibility to ensure that the visitor adheres to the correct safety and fire prevention procedures.

Visitors attending site regularly for more than 3 days per week, shall be subject to control under procedure CP/B0129 'Contractor Control Procedure'.

At the entry point visitors will be individually issued with a visitor's folded leaflet which contains the environmental, health and safety main instructions relevant to them. Visitors must read this document and keep their copy with them at all times during their visit. Contractors will be subject to EHS training which includes safety and fire prevention procedures.

5.15 Tramp Metal

To reduce the risk of tramp metal finding its way into moving machinery and causing localised 'hotspots' metal will be extracted using an eddy current separator.

5.16 Batteries within waste deposits

As part of our reception procedures, every effort is made to remove any form of battery unit from within the waste prior to processing through visual inspections. See 3.1 'Receipt and Storage of Waste'. A scrap classification procedure will be in place.

5.17 Gas Cylinders

As part of our reception procedures, every effort is made to remove any form of cylinder from within the waste prior to processing through visual inspections. A scrap classification procedure See 3.1 'Receipt and Storage of Waste'.

No gas cylinders will be stored in the scrap processing area.

5.18 Preventing self-combustion

It is recognised that many wastes can self-combust under certain conditions i.e. when a material

which self generates heat at a faster rate than it can be lost to the environment. The temperature continues to rise in the material speeding up the rate of reaction and releasing even more heat. Eventually the material reaches auto-ignition and then self-combusts.

To prevent self-combustion storage times, pile volumes and height, and the temperature of the wastes are carefully managed. Potential ignition sources of material stored onsite include the following:

- Tyres
- Rusty scrap metal material
- Treated piles of scrap metal material
- Cylinders of compressed gas

All material piles will be stored a minimum of 6m away from any ignition sources (such as flames) in order to minimise the risk of combustion. Cylinders will be stored adjacent to the "OA burning area" on the site plan for ease of access for use. Cylinders will be stored a minimum of 6m from the closest ignition source or waste stack when not in active use (see Appendix 1 for site plan details).

5.19 Management of storage periods

The maximum storage time of all scrap metal will be no longer than 3 months and stock will be regularly rotated. In general stocks will be processed and transferred from site well within a 3-month period i.e. 'first in, first out'. Stockpiles are managed in line with scrap SWP

The materials being stored on site are not subject to seasonal variation as they will be only supplied to our steelwork site in Cardiff (end user) which is a 24/7 operation, consuming over 1,000,000 tonnes of scrap metal per year which is received daily.

5.20 Monitoring and controlling temperature

Measures to control heat to prevent self-combustion include:

- visually inspecting stored wastes frequently (at least once a week as a minimum) and recording any significant findings within the site diary
- separate and segregate combustible content from within scrap metal
- staff are trained to detect and manage hotspots and in stock management
- routinely turning of piles to ensure the waste remains cold and any localised warming is dissipated quickly
- CCTV will be installed to monitor the yard remotely
- materials will be processed and transferred from site well within a 3-month period i.e. 'first in, first out';

- materials segregated through the yard will be processed and transported off site for treatment therefore eliminating the need to store for periods longer than 2-3 weeks.
- Implementing additional control measures such as increased stock rotation in summer months when the weather is warm and self-heating is more prevalent'
- Thermal imaging detecting utilising handheld cameras and visual checks by the Technically Competent Person or Yard Manager (this will include wastes stored under cover).

6.0 Managing waste piles

Where possible our policy aims to keep a continuous movement of waste to reduce the storage times, which will in turn help prevent the risk of self-combustion and limit the scale of a fire if one breaks out. The piles will be monitored, moved, and turned on a daily basis to minimise internal heating.

Waste scrap metal piles will be managed to reduce the risk of self-combustion and to limit the scale of a fire if one breaks out; this will be done through minimising pile sizes and where possible, storing material in their largest form. For end-of-life vehicles, stacks will be accessible from both sides to enable effective firefighting. In the event of a fire breaking out, burning material will be isolated from the rest of the pile using machinery on site where safe to do so and transferred to the isolation area where possible. Upon the arrival of the fire department onsite, machinery and plant will be made available to assist in the firefighting efforts under the fire department's direction and supervision (see also paragraphs 10.1 and 10.2).

For all waste piles/stacks, the maximum length or width will be no more than 20 metres with a Cumulative Maximum Storage Time of 12 weeks. All waste stacks will be stored a minimum of 4m apart and shall be a maximum of 4m high. Table 1 describes the size of each stockpile onsite in conjunction with Appendix 1. Site layout plan.

Table 1. Pile locations and sizes (all sizes approximate)

Shear and Shredder Waste Storage (Processed and Unprocessed)		
Site plan reference	Dimensions	EWC reference
Location A (Pile) Clean ferrous scrap metal (shredder feed)	30m x 20m	16 01 06, 16 01 17, 19 12 02. 19 10 01, 19 10 04, 20 01 40
Location B (Pile) Clean ferrous scrap metal (shear feed)	35m x 15m	17 04 05, 17 04 07, 19 12 02, 19 12 03, 20 01 40
Location C (Pile) Mixed non-ferrous metals	15m x 10m	17 04 07, 19 10 02, 19 12 03, 16 01 18
Location D (Pile) Shredded ferrous metals	25m x 12m	19 10 01, 19 10 02, 19 10 04
Location E (Pile) Sheared materials	35m x 15m	19 12 02, 19 12 03, 17 04 05
Location F1 – F3 (Pile and bays) Shredded (mixed non-ferrous materials)	Location F1 (Pile): 10m x 6m Location F2 (Storage Bay): 10m x 6m Location F3 (Storage Bay): 10m x 6m	F1 -3 – 19 10 02
Location G1 – G3 (Pile and 2 Bays) Fragmentiser fluff	Location G1 (Pile): 10m x 6m Location G2 (Storage Bay): 10m x 6m Location G3 (Storage Bay): 10m x 6m	19 10 04, 19 10 03*, 19 10 05*, 19 12 07, 19 12 08, 19 12 09, 19 12 12
Location H (Stack) End-of-life vehicles (undepolluted)	Stack no greater than 3 cars high, 2 cars deep and 3 cars long (must be accessible from both sides for firefighting access)	16 01 04*
Location I (Stack) End-of-life vehicles (depolluted)		16 01 06
Location J (Container) Tyres	Stored in 30 yard open container.	16 01 03
Location K (Battery box) Car batteries	Stored in appropriate battery boxes 1.2m x 1.2m x 0.8m (610L capacity)	16 06 01*, 16 06 02*, 16 05 05*
Location L (Bunded containers) Engine, gear and lubricating oils	Stored within secondary containment	16 01 07*, 16 01 14*, 16 01 15,

Location M (Bunded containers) Diesel and fuel oil	Stored within secondary containment	13 07 03*
Location N (Bunded containers) Petrol	Stored within secondary containment	13 07 02*

7.0 Prevent fire spreading

7.1 Separation distances

A separation distance of between 6 and 10 metres between loose waste pile to loose waste pile and at least 13 metres between loose waste piles and any buildings, or other combustible or flammable materials will be maintained. A clear area is established around the perimeter of the site allowing at least 13 metres separation distance from any waste piles. Where waste is stored in bays separated by concrete blocks, the concrete blocks will be of Class A1 Fire Resistance in accordance with clause 4.3.4.4 of EN13369. This classification meets the guidance in the NRW document "Guidance No.16 Fire prevention and mitigation plan – waste management" in "Section 11. Enclosing stacks using bays and walls" which stipulates a fire resistance period of at least 120 minutes. A minimum 1m clearance will also be maintained between the top of the waste piles and the top of the bay wall to prevent fire spreading in the event a waste pile igniting.

7.2 Storage inside buildings

The only buildings associated with the operations covered in this document is the amenity block and enclosed area of the control room. These will not be used to store combustible waste. End-of-life vehicle depollution stations are situated undercover to protect waste and operations from the elements but are not considered as buildings. To mitigate any residual fire risk, general housekeeping standards will be maintained as in other areas of the site.

8.0 Quarantine Area

A dedicated quarantine area has been provided near to the entrance of the shredder/shear compound. The quarantine area can be used as a designated area to place fire affected waste to ensure that it is fully extinguished or unburnt wastes can be moved into the quarantine area for isolation and to help prevent it catching fire.

The quarantine area shall be always kept clear and available for use. The area has been designated to store a maximum of 1,000 tonnes (i.e. 50% of the clean ferrous metal shredder feed, the largest waste stream present on-site).

9.0 Detecting fires

9.1 Fire Alert Procedures

- Regular visual inspections will be completed by the Yard Supervisor to check waste stock management and to quickly identify any issues.
- All fire detection on site is manual. The shredder operation has its own fire suppression system, but this is not automated as the operation will always be manned when it is running. Automated detection is not used as any fire breaking out will be picked up quickly by operatives in the area when it is manned. The CELSA security team will be able to attend and deal with any fires detected outside of operational areas where the site is not manned. The Tremorfa site operated by CELSA in which the shredder operation will sit has security in attendance and contactable 24/7 on the internal extension 444, or by entering the security lodges at the main gates.
- CCTV system equipped with thermal detection will be used to monitor the site remotely.
- There must be no hesitation in raising the alarm. Any person discovering a fire must immediately shout 'FIRE' to warn others in the vicinity. Fire alarms must not be used for any purpose other than as a signal for fire action or pre-arranged fire drills.
- Everyone must immediately leave the site and proceed directly to the designated assembly area upon hearing the alarm.
- The mobile plant/machine operators are, if possible, to remove their machines from the vicinity of the fire; park and turn off their machines at a safe distance from the fire without blocking any emergency access routes.
- No-one is to return to the affected part of the site until it is confirmed safe to do so by the person in charge of the premises (Yard Supervisor).
- During normal operational hours, the person in control of the site must notify Fire and Rescue Service, and Natural Resources Wales immediately and delegate a member of staff to direct the Fire Service. In addition, the person in control must check that occupants of adjacent sites have been notified.
- During out of hours the senior security officer conducts notification.
- The person in control of the site must ensure that the site has been evacuated and in particular:-
    - Supervise the evacuation of visitors and staff.
    - Supervise roll calls and collate information e.g. persons not at the assembly point, information about the fire location and source.
    - Ensure first aid is given if required.
- On arrival the Fire Service will take charge and the person in charge must co-operate with the Fire and Rescue Service Officers. (*Fire Service Act 2004* Sect. 45 for Fire Service Powers of entry).

9.2 Non-waste facilities on site

The main building (including mess room and toilets) will have a fire/smoke detection system, in line with the building regulations. Fire extinguishers will be provided with training for personnel likely to use them.

9.3 Procedure in Event of Fire on Neighbouring Sites

In the event of a fire on a neighbouring site, sound the alarm immediately and initiate safe evacuation of all staff to the assembly area. Ensure the adjacent operators are notified of the outbreak if not already aware. The procedure on the displayed fire notices to be followed when an alarm is raised.

10.0 Emergency Fire Procedures

The following process shall be followed during a fire related event.

10.1 Prior to Fire & Rescue Service (FRS) Arrival

- Raise the alarm and initiate evacuation of people on site to the assembly area.
- Dial 999 and call for assistance from Fire & Rescue Service. Notify CELSA Security using internal phone extension 444.
- Close all penstock valves onsite to allow firewater to be contained. Valves should be closed off immediately upon detection of a fire, prior to use of water to fight the fire (see Appendix 2 for location of penstock water valves on site map). All site operatives will be trained in operations of the penstock valves.
- Ensure appropriate machinery is standing by to help assist the Fire & Rescue Service to create appropriate breaks as instructed.
- Firefighting Strategy - If safe to do so, use plant machinery to remove hot/burning materials to the fire quarantine area (isolate the source at least 6m away from any potentially flammable materials).
- Management will delegate a person responsible to liaise with the emergency services and an operative to notify the neighbouring operations of the fire risk (for nearby human receptors – contact details to be contained within site diary).
- Where practicable deploy sandbags to form barrier to prevent the uncontrolled discharge of firewater either to ground, sewer or soakaway.
- Ensure access to site is clear for Fire & Rescue Service to gain easy access by liaising Celsa gatehouse.
- Divert any incoming waste to an alternative Celsa facility if it cannot be returned to source.
- Notify Senior Celsa Management and Natural Resources Wales (contact numbers in section 1.0 Key Information, on page 1 of FPMP).

10.2 Emergency Fire Procedures (FRS Arrival)

- On arrival of the Fire & Rescue Services (FRS) the responsible person will provide this Fire Prevention Plan to assist in combating the fire.
- The off-site emergency information pack is in the security lodge at the Tremorfa site.
- The responsible person must inform the FRS about what measures have been taken to tackle the blaze.
- The responsible person must inform the FRS of any potential sensitive receptors.

- To minimise the potential for fire water run off the use sprays and fogs rather than jets will be considered by the FRS. Water run-off will be managed through the use of sand bags and the existing drainage system to provide containment and prevent pollution.
- Instigate a controlled burn; the final decision to do this will rest with the FRS's Incident Commander.
- Under FRS instruction, Celsa personnel will separate the burning material for the FRS to quench it with hoses or in pools of water. Hence reducing the amount of firewater produced.
- Where practicable, isolate and recycle firewater.
- Where safe to do so, Celsa Personnel will assist in the removal of unaffected material using mechanical equipment as instructed by the FRS.

10.3 Water Supplies

The water for fighting fires will be sourced from Fire Rescue Service tenders (typically, a tender will contain approximately 1,800 litres of water), on-site and off-site hydrants, on-site borehole and (as a last result) recycling of fire water (if deemed acceptable by the FRS).

The location of the nearest fire hydrants and ground water borehole are shown in Appendix 1. Groundwater pump tests undertaken in 2014 found that groundwater levels across the site respond extremely quickly to pumping operations, recovering almost immediately to steady state conditions following pumping cessation. Operating the on-site groundwater abstraction pump for a 4.5-hour period resulted in a daily abstraction rate of approximately 400m³/day. The increased abstraction generated a total groundwater drawdown of 0.33m over this period followed by a recovery to steady state conditions in less than 2 hours. Groundwater drawdown is not significant during pumping and when abstraction is increased, drawdown does not drastically increase. The supply of water from the on-site borehole is fully available for use during a fire-fighting situation if hydrant supplies were compromised. The investigation showed that an increase in groundwater abstraction to the desired daily abstraction rate of 614 m³/d would result in negligible additional groundwater drawdown. Fire hydrants located on the main Celsa site are available in the event of a fire. These have a peak flow rate of 200m³ per hour. The shredder installation has adjacently situated water cannons that can be used in the event of a fire. The minimum flowrate for these is 4,400 litres per minute.

WATER SUPPLY CALCUATION

Government document "Guidance No. 16 Fire prevention and mitigation plan – waste management" states that "a 300m3 stack of combustible material will normally require an average water supply of at least 2,000 litres a minute for a minimum of 3 hours." Using this estimate the following has been calculated:

2,000 litres x 180 minutes = 360,000 litres to extinguish 300m³ stockpile in 3 hours

= 1,200 litres per 1m³ of combustible waste

Largest stockpile onsite = 30m x 20m
= 600m3

Total water to extinguish = 1,200 litres x 600m3
in 3 hours = 720,000 litres or 4,000 litres/minute

The combined minimum flowrate of all firefighting water onsite exceeds the minimum requirements for extinguishing a fire within 3 hours in line with the guidance provided.

10.4 Managing Fire Water

Water generated from the fighting of fire (within the shear and shredder compound) will be contained on a sealed impermeable concrete surface that would (in the event of an incident) be isolated from the SuDS drainage system. Upon closure of the bund wall devices, it is not possible for fire water to discharge to ground.

The system has been designed to create one area of fire water containment (minimum of 900 m^3 of storage). All fire water storage areas are outlined within Appendix 2: Firewater containment plan (full detail copy saved in FPMP folder).

10.5 Post-Incident Procedures

- stop any incoming waste from entering the site until it is deemed safe to do so.
- remove all burnt material using appropriate methods for off-site disposal
- contact approved clean up contractors, where required this includes the analysis, tankering away and disposal of firewater.
- post incident reports and enquiries. Ensure any incidents are recorded on ProSafety. Initiate a thorough investigation to establish the root cause of any incident and provide sufficient control measures/actions to prevent re-occurrence. As part of this investigation an assessment must be made as to whether the site can be reinstated.
- notify Natural Resources Wales, Local EHO and the FRS when the site has been reinstated. In the event of a fire this FPMP will be reviewed and improved as required and updated copies provided to the relevant authorities.

10.6 Response to fire outside of working hours

In the unlikely event that a fire breaks out in the shredder and shear operational area outside of

normal working hours when the site is not manned, then procedure "CPB032 Emergency Plan" will be followed using method 10.9 "Metal fire in the scrap bay/yards". This document details information such as first aiders, fire marshals, security lodge personnel and procedure for calling out security and contacting the emergency services. As the site will not be manned by operatives outside of operating hours, operatives will not be available to assist with firefighting efforts. The CELSA Tremorfa manufacturing operations and security team operate 24/7 and will always be contactable in the event of a fire being detected. Procedure CPB032 is reviewed, at minimum, on an annual basis to ensure all details are up to date.

11.0 Communication, training and drills

This FPMP, including any relevant records, will be always readily available to access, including during an incident. All records will be stored in the site office and will be communicated during the company site induction.

All employees, new starters and visitors will be inducted into the emergency arrangements to ensure they know how to prevent a fire occurring and what to do in the event of a fire. Any changes will be communicated though toolbox talks.

Drill and exercises will be undertaken at regular intervals to test how well the plan works and to make sure that site personnel understand what to do. These will be recorded and received to identify any improvements and fed back to relevant persons.

Operational staff will be trained in the fire systems, firefighting techniques and importance of prioritising the protection of the health and safety of people on site before fighting the fire.

12.0 Review and Monitoring of FPMP

The FPMP will be reviewed on an annual basis unless one of the following circumstances occurs:

- a fire incident – full review required following actions from any investigation
- new waste streams are added to the permitted activity
- changes to the amount of waste received on-site and pile sizes
- installation of new infrastructure e.g. new buildings, plant or equipment
- variation to current environmental permit
- change to current NRW FPMP Guidance

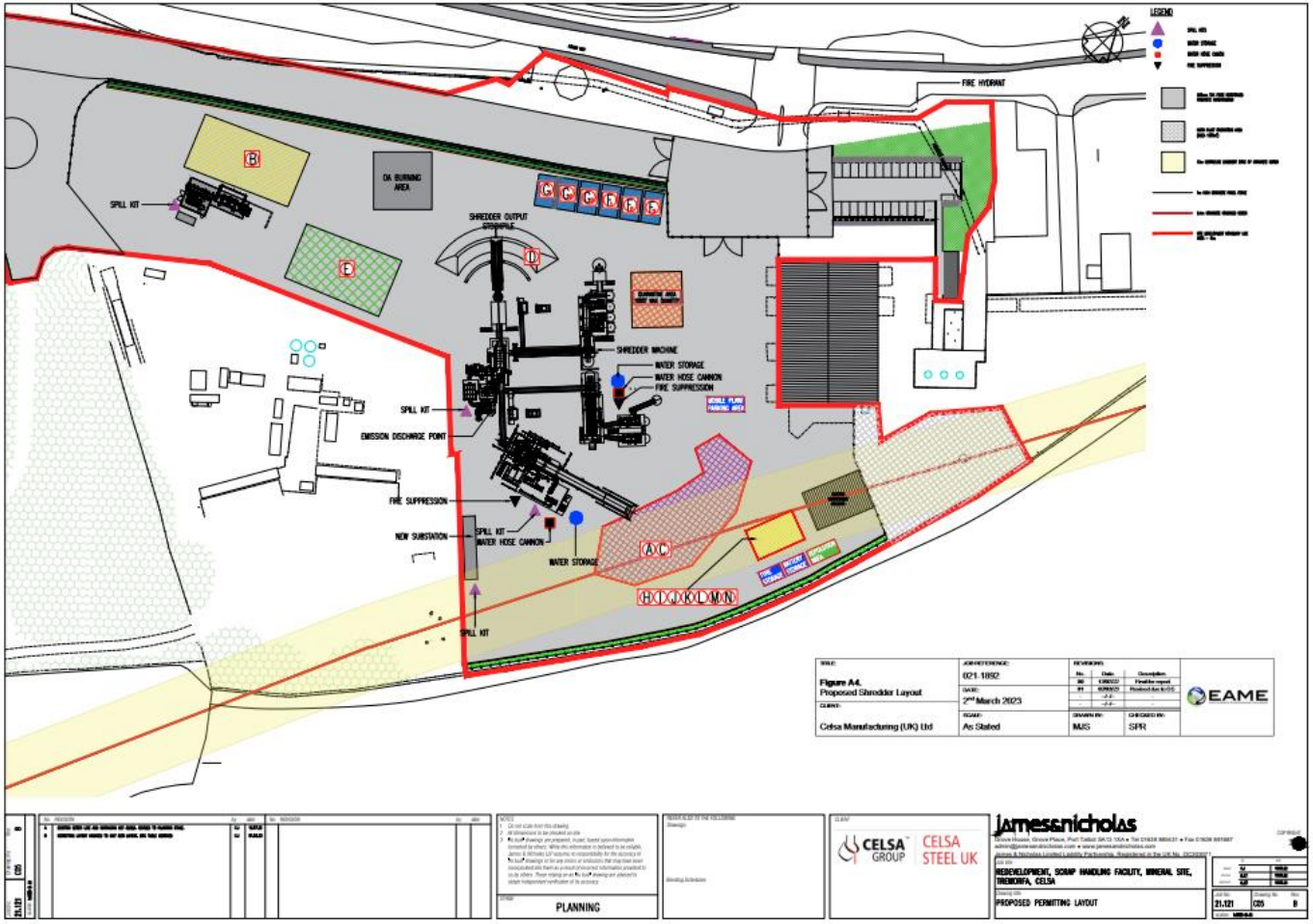
13.0 Fire Risk Assessment

Table 2 – *Potential Causes of Fire and Prevention Measures*

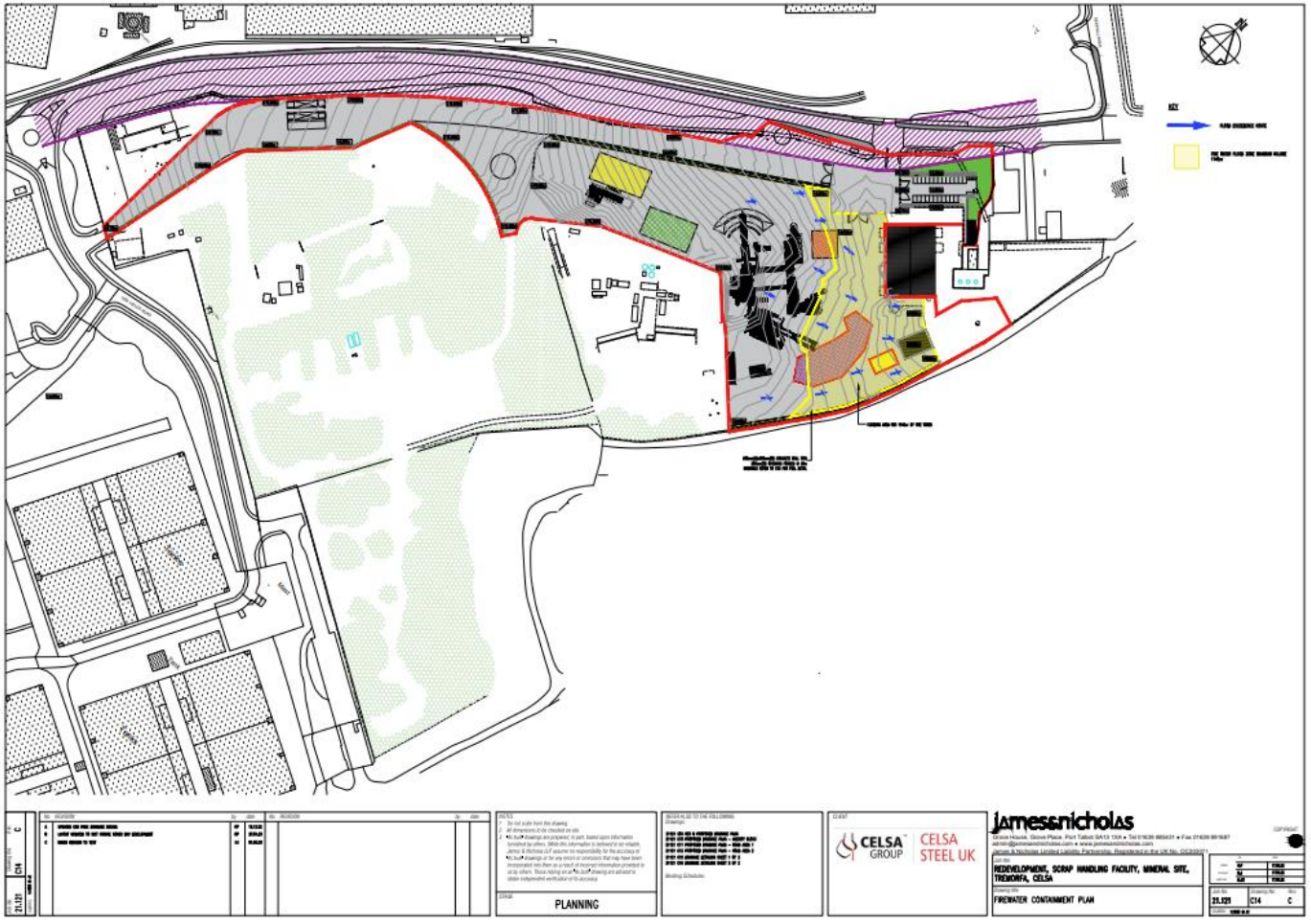
Possible Cause	Applicable	Reason	Control Measures
Self-combustion	Y	Potential for scrap metal to be contaminated with combustible material e.g. oils, paints, grease etc.	Scrap metal is purchased to grades that should be free from such contaminants. Upon arrival at site the scrap is inspected for cleanliness and rejected if it is deemed heavily contaminated.
Incompatible wastes	X	Only scrap metal is stored onsite.	Separation of material not required as all scrap receipts will be processed in the same way.
Arson	X	The site has 24-hour manned security entrance, and the site has CCTV in place.	Site security and CCTV.
Plant or equipment failure	Y	Electrical failure from mobile plant could present sparking risk. Spills from failure of machinery hydraulics might provide fuel.	Mobile plant is regularly inspected and maintained to prevent electrical failure. Spill kits are available on site to contain and clean up any spillages.
Electrical faults or damaged/exposed electrical cables	Y	Regular inspections of all electrical equipment will prevent faults going unnoticed.	Prevent use of electrical equipment where defaults are found at any time or during an inspection.
Smoking	X	The site is designated a NO SMOKING area.	A designated smoking area is located offsite and is supplied with a suitable receptacle for discarded smoking materials.
Sparks from loading buckets	X	Loading buckets are not used on site	No further controls required
Hot works e.g. cutting	Y	-	Dedicated cutting area with operational control procedures aligned to current HSE Guidance.

Possible Cause	Applicable	Reason	Control Measures
Hot exhausts	Y	Mobile equipment can ignite material trapped near their exhausts	Operatives to be instructed to clear material from around exhausts at end of each shift; this will be included in induction training, relative procedures and routine inspections.
Industrial heaters	X	No industrial heaters on site	No further controls required
Open burning onsite	X	No open burning permitted on site	No further controls required
Weather, e.g. lightning strikes	Y	Naturally occurring lighting strikes could be a source of ignition	If weather is deemed hazardous site operations will be ceased until such time that it is deemed safe to return to operations.
Tramp Metal	Y	Tramp metal can find its way into moving machinery and cause localised hot spots	Prevent metal getting into moving machinery by extraction by an eddy current separator.
Visitors & Contractors	X	An employee will always accompany visitors. Contractors are trained in safety & fire prevention procedures.	Site security, procedures are in place that outline employee's visitor responsibility, contractor EHS training.
Cylinders stored on site	X	No cylinders will be stored on site within the Shredder/Shear Compound.	No further controls required.
Batteries within waste deposits	Y	Potential for batteries to enter processing machinery	Upon receipt, scrap is visually inspected, and any non-conforming waste removed.

Appendix 1: Site layout plan – detailed PDF saved in FPMP folder



Appendix 2: Firewater containment plan – detailed PDF saved in FPMP folder



END OF DOCUMENT