

Fire Prevention & Mitigation Plan

Site Name: AJT Recycling Ltd

Environmental Permit Number: BB3737RS

November 2017
Version: 2.0 Draft

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1 Key Information

SITE DETAILS		
Location: Plot P1, Felinfach , Swansea.		
Postcode: SA5 4HB		
Site Access Grid Reference: SS 62455 95559		
SITE CONTACTS	Office Hours 7am-5pm	Out of hours
Owner: ANDREW THOMAS	01792 582568	07973958570
General Manager: JONATHEN DAVIES	01792 582568	07711948933
Site Manager/Fire Warden:	01792 582568	07711948933
Security Contact:	01792 582568	07711948933
EMERGENCY SERVICES	Office Hours 24 hours	Out of hours
Emergency	999	999
Medical: MORRISTON HOSPITAL	01792 704124	999
Police:	01792 456999	999
Fire:	0370 6060699	999
REGULATORS	Office Hours 9am-5pm	Out of hours
Health and Safety Executive (HSE)	01267 244230	
Local Authority:	01792 636000	
Natural Resources Wales	0300 065 3000	0300 065 3000
NRW Emergency Number	0800 80 70 60	0800 80 70 60
UTILITY AND KEY SERVICES	Office Hours	Out of hours
Water undertaker: WELSH WATER	0800 052 0130	0800 052 0130
Electricity supplier: SWALEC	0800 052 0400	0800 052 0400
Fuel supplier: O J Williams	01994 230355	
Oil spill contractor: GPT Environmental	01656 741799	01656 741799
Electrician: R Evans & Son	07813931817	07813931817
OTHER KEY CONTACTS	Office Hours 7am-5pm	Out of hours
Head Office:	01269 832294	07973883456
Adjacent landowners: M&R Commercials	07976607093	07976607093
Specialist advisors: TONY DAVIS	07581062375	07581062375

2 Introduction

- 2.1.1** This Fire Prevention Plan explains how the proposed acceptance, depollution and subsequent treatment of ELV's and storage of scrap metals will be conducted to ensure that the risks of fire is effectively assessed and controlled. As such it supplements those measures already described within the Environmental Management System (EMS).
- 2.1.2** The permit area is situated on Felinfach Industrial Estate and is surrounded by various commercial premises with the closest residential properties situated approximately 0.5 KM East of the operation. *Refer to Section 9 for notifying businesses and residents*

3 Fire Prevention Plan

- 3.1.1** This Plan has been prepared with reference to the following documents:
1. Fire Prevention and Mitigation Plan Guidance – Waste issue 2 August 2017
 2. Reducing Fire Risk at Waste Management Sites, Waste 28. Wish Guidance Issue 2 April 2017.
 3. Pollution Prevention Guidance: PPG 21 Incident Response Planning. July 2014 (now withdrawn).
 4. Pollution Prevention Guidance: PPG18 Managing Fire Water & Major Spillages (now withdrawn).
 5. Pollution Prevention Guidance: PPG 28 Controlled Burn (now withdrawn).
- 3.1.2** The plan of controls and measures is aimed at reducing the chance of a fire occurring and the impact should a fire occur based on a risk assessment that has considered.
- 3.1.3** The nature of combustible materials stored - this being principally non depolluted ELV's (NDPV's), stored fuels and oils. Tyres and related combustible gases related to the ancillary operations of the site (Tyre bailing/Oxy-Propane for gas cutting).
- 3.1.4** The presence and location of potential ignition sources - this being principally accidental sources or those risks that may arise from 'spontaneous' combustion.

4 Site Materials Inventory & Storage – Table 1.

Materials	Max Quantity (approximately)	Solid/Liquid/Gas or Powder	Fire Implications	Location
Non Depolluted ELV's	30 Tonnes	Solid	High Combustibility Potential.	Stored on Concrete surface. Location - see Fire Hazard Plan (FHP)
Depolluted ELV's & Ferrous Metals	1000 Tonnes	Solid	Low Combustibility Potential	Stored on impermeable concrete. Location - see FHP.
Lead Acid Batteries	200 Tonnes	Solid	Potential as ignition source.	Stored in approved container Building with Sealed Drainage system. Location - see. FHP
Non- Ferrous Metal	100 Tonnes	Solid	Very low combustibility potential. (Hazard is oil contamination).	Stored in Building with Sealed Drainage system. Location - see FHP.
Gas Oil	10,000 L	Liquid	Flammable	Bunded Tank on impermeable concrete with sealed drainage system. Location - see FHP.
Clean Petrol	995 L	Liquid	Highly Flammable	Stored in specialist tank container on sealed drainage system. Location – see FHP.
Clean Diesel	1300 L	Liquid	Flammable	Stored in specialist tank container on sealed drainage system. Location – see FHP.
Contaminated Fuel	995 L	Liquid	Highly Flammable	Stored in specialist tank container on sealed drainage system. Location – see FHP.
Coolant/screen wash	2500 L	Liquid	Non - Flammable	Stored in specialist tank container on sealed drainage system. Location – see FHP.

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Materials	Max Quantity (approximately)	Solid/Liquid/ Gas or Powder	Fire Implications	Location
Hydraulic oil	1300 L	Liquid		Stored in specialist tank container on sealed drainage system. Location – see FHP.
Engine oil	2500 L	Liquid		Stored in specialist sealed tank on sealed drainage system. Location – see FHP.
Used oil filters	200 Kg	Solid		Dedicated storage container on sealed drainage system within Building.
Propane	8 x 47Kg Bottles	Gas	Highly Flammable	When 'not in use' stored in locked cage. Location – see FHP

5 Fire Prevention

5.1 Operational controls

- 5.1.1 The site office is fitted with a fire detection and alarm system.
- 5.1.2 The permitted area will be a strictly NO SMOKING area with appropriate signage erected.
- 5.1.3 There will be No Hot Works undertaken within the DSEAR Zone 1 Area (Depollution & waste fuel storage area). See FIRE HAZARD PLAN (FHP). Any Hot Works undertaken within the Permitted Areas will be subject to Risk Assessment, with the subsequent Risk Reduction Measures being implemented.
- 5.1.4 Access to the Site is via security gates. The access is security controlled by the weighbridge operator and monitored by CCTV to reduce the risk of accidental or deliberate ignition by intruders (i.e. arson). The site is also subject to routine onsite security patrols (24 hour security).
- 5.1.5 The site will always keep an emergency quarantine area, an indicative location is shown within the Fire Hazard Plan (FHP) contained within Appendix 4.

- 5.1.6** The quarantine area is fixed to one position on the permitted area, however in the event of an emergency, the quarantine area maybe relocated to other locations on the permitted area where waste stock levels allow (e.g. where stock levels are low).
- 5.1.7** The quarantine area will be utilised to isolate burning materials mitigating the risk of fires spreading. As the site drainage system can be isolated from the sewer discharge, this, if required will enable firewater recirculation, the 'only water loss' being evaporational. All staff members are aware of the need to keep quarantine area clear at all times.
- 5.1.8** A member of the Site Operations Team will visual inspect this area during the working day to ensure that it is maintained. The TCM will also conduct inspections of the quarantine area and isolation facility on a weekly basis. Any 'non-conformances' will be logged within the site diary.

5.2 Material Storage Arrangements

- 5.2.1** These are show on the Fire Hazard Plan – Appendix 4.
- 5.2.2** The Non Depolluted Vehicles (NDV) will be rotated on an 'as received', to ensure no NDV will be stored for longer than 2 weeks maximum.
- 5.2.3** All ferrous metal stock will be rotated to ensure that materials are stored for a maximum of 3 months.
- 5.2.4** Battery storage will not exceed 3 months.
- 5.2.5** Tyres storage will not exceed 3 months.
- 5.2.6** Potentially flammable materials are kept at a distance from the site boundary to ensure that any outbreak of fire - should it occur - is contained within the site.

5.3 Storage Management & Mitigation Measures

5.3.1 Due to the ongoing 'loading and processing' of metals and ELV's , the Operatives effectively 'work' the working piles on a daily basis throughout the week. The 'working' of the piles will assist in the dissipation & release of any potential trapped heat, thereby reducing the likelihood of a hot spot forming.

5.3.2 A member of the Site Operations Team conducts a daily visual inspection around the perimeter of the stock piles to identify at the earliest opportunity any signs of heating/smouldering.

5.4 End of Day Operations

5.4.1 Operatives responsible for the operation of machinery (eg Fuchs, Tele-handler/FLT's etc) will park them at a distance from the flammable waste stored, including Tyres. This will avoid the potential for any short-circuiting of electrics creating a source of ignition when the site is closed.

5.4.2 Operatives will conduct an end of day visual inspection of onsite machinery once parked to ensure plant & machinery is left in a safe manner. Where necessary any debris collected on the plant and/or machinery will be cleaned off.

5.4.3 The plant operator will conduct an end of day inspection prior to closure, which will ensure: -

- That all machinery with exhausts are parked at a distance from any waste storage piles and that there is no trapped debris located within the vicinity of exhausts. (This ensures site operatives have conducted their end of day duties).
- That no debris has settled onto hot exhausts and engine parts.
- That all machinery and equipment is switched off.
- That there are no visible signs of smoke or flames onsite.

Any issues identified in the visual inspection will be logged in the site diary.

5.4.4 If there has been any 'Hot Work' activity, a 'fire watch' is maintained for at least hr post works.

6 Fire Response Plan

6.1.1 The Fire & Rescue Service will have access to fire hydrants, the closest being located at the entrance to the facility – See Appendix 1. Onsite, there are several **1000L** IBC water containers positioned adjacent to areas where 'hot works' are undertaken as an operational control measure to provide **immediate** fire suppression. As the drainage system has been designed with an outfall isolation valve on the main discharge tank, in the event of a Fire, this can be isolated and the **18000L** contents of

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the tank be accessed to provide fire water. Note the drainage system which in turn is recirculated through the sealed drainage via the silt trap & class 1 interceptor.

- 6.1.2** Advice from the local Fire & Rescue Service (FRS) on the appropriate provision of fire extinguishing devices will be followed.
- 6.1.3** All staff and contractors working on-site will be made aware of the Fire Detection & Prevention Plan and what they must do should an incident arise.
- 6.1.4** Regular exercises will be carried out to test how well this response plan works.

7 Fire Alert Procedures

Procedure in Event of Fire on the site

- 7.1.1** 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.
- 7.1.2** Everyone must immediately leave the site and proceed directly to the designated assembly area upon hearing the alarm (outside main entrance).
- 7.1.3** 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.
- 7.1.4** 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.
- 7.1.5** 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 units have been notified.
- 7.1.6** During out of hours AJT security officer conducts notification.
- 7.1.7** 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 collect 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.
- 7.1.8** On arrival the Fire Service will take charge and the person in charge must co-operate with the Fire and Rescue Service Officers. See Fire Service Act 2004 Sect. 45 for Fire Service Powers of entry.

8 Procedure in Event of Fire on Neighbouring Sites

- 8.1.1** 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.
- 8.1.2** Ensure the adjacent operators are notified of the outbreak if not already aware.
- 8.1.3** The procedure on the displayed fire notices to be followed when an alarm is raised.

9 Emergency Fire Procedures (Prior to Fire & Rescue Service Arrival)

- 9.1.1** Raise the alarm, initiate evacuation of people on site to the assembly area and dial 999 to call for assistance from Fire & Rescue Service.
- 9.1.2** Ensure appropriate machinery (Fuchs / Materials Handler/FLT) is standing by to help assist the Fire & Rescue Service to create appropriate breaks as instructed;
- 9.1.3** If safe to do so, use the machines to remove hot/burning materials to the fire quarantine area (isolate the source at least 6 m away from any potentially flammable materials).
- 9.1.4** Management will delegate a person responsible to liaise with the emergency services and an operative to notify the neighbouring commercial businesses of the fire risk.
- 9.1.5** Ensure access to site is clear for Fire & Rescue Service to gain easy access.
- 9.1.6** Notify relevant waste carriers to suspend deliveries until informed that the site is operational again.
- 9.1.7** If not already onsite, contact AJT Senior Management, Natural Resources Wales and relevant Support Contractors (Key Information page of FPMP).
- 9.1.8** Should the fire create large amounts of smoke the person responsible in conjunction with the FRS will arrange to notify any residential neighbours downwind of the site.

9.2 Emergency Fire Procedures (FRS Arrival)

- 9.2.1** On arrival of the FRS the responsible person will provide this Fire Prevention & Mitigation Plan to assist in combating the fire. Note a copy of the Plan is located in a Fire Box container adjacent to Weighbridge – see FHP.
- 9.2.2** The responsible person must inform the FRS about what measures have been taken to tackle the blaze.
- 9.2.3** The responsible person must notify the FRS of any potential sensitive receptors.
- 9.2.4** To minimise the potential load of fire water, the use sprays and fogs rather than jets will be considered by the FRS.

- 9.2.5** Under FRS instruction, AJT personnel will separate the burning material using FUCHS / Tele-Handlers for the FRS to quench it with hoses or in pools of water. Hence reducing the amount of firewater produced.
- 9.2.6** Where safe to do so, AJT Personnel will assist in the removal of unaffected material using mechanical equipment as instructed by the FRS.

9.3 Post-Incident Procedures (Prior to the Site becoming Operational)

- 9.3.1** Remove all burnt material using appropriate and lawful disposal methods.
- 9.3.2** Contact and organise clean up contractors where required to remove any excess fire water run off via pumping from the now isolated (from sewer) **18000L** storage tank (where necessary excess water would be removed during the incident using the same means).
- 9.3.3** Undertake incident investigation documenting findings and control measures implemented to reduce/eliminate chances of a re-occurrence.
- 9.3.4** Undertake a site/infrastructure inspection and where necessary carry out repairs to the permit area to ensure compliance.
- 9.3.5** Notify Natural Resources Wales, Local EHO and the FRS when the site has been reinstated.
- 9.3.6** Notify relevant waste carriers that the site is operational and ready to accept deliveries.
- 9.3.7** In the event of a fire this Fire Prevention Plan will be reviewed and revised as required and updated copies provided to the relevant authorities.

10 Reviewing and Monitoring the Fire Prevention and Mitigation Plan

- 10.1.1** The FPMP will be reviewed on an annual basis as a minimum, and where necessary revised in line with statutory requirements and best practice guidance. The FPMP will also be reviewed:-
- Following a fire or 'near miss' incident;
 - Prior to acceptance of additional combustible waste streams where the permit allows;
 - When increases in waste volumes are expected and where the permit allows;
 - Following changes to the operation including working practices/procedures, plant, machinery, equipment and staffing resources;
 - In conjunction with changes and development of site infrastructure that may impact (directly or indirectly) on the Permit Area

Appendix 1: Fire Risk Assessment

Table 2: Possible Causes Of Fire As Identified in PPG29 & FPMP Guidance 2, Aug 2017)

Possible causes	Applicable	Reason
• Batteries in ELV's;	Y	Potential for battery 'short circuits' on incoming Non Depolluted ELV's (NDPV's).
• Batteries within Waste Deposits	Y	As Above ONLY.
• Cylinders Stored at Site	Y	Propane & Oxy Cylinders are routinely used onsite.
• Leaks & Spillage of Oils & Fuels	Y	Waste Types received include NDPV's
• Hot works e.g. Welding, Cutting;	Y	Hot Works are conducted on the permitted are and could provide a source of ignition.
• Ignition Sources	Y	As above due to Welding/cutting
• Self- Combustion	X	Oxidising metal wastes are not flammable
• Incompatible Wastes;	X	Only two materials are stored onsite pending export. These are both kept on separate sections of the permitted area. Their chemical characteristics do not indicate any risk of adverse reaction.
• Arson or Vandalism;	X	Site has 24 hour manned security entrance with CCTV onsite.
• Plant or Equipment Failure;	Y	Electrical failure from mobile plant could present sparking risk Spills and leaks from failure of machinery hydraulics might provide fuel
• Electrical faults or Damaged/exposed Electrical Cables;	X	Weekly inspections of all electrical equipment will prevent faults going unnoticed.
• Naked Lights;	X	All light fixtures that may be heat sources are raised on posts high above ground level.
• Discarded Smoking Materials	X	The site is a designated NO SMOKING area
• Sparks from loading Grabs	X	No activity within or adjacent to the DSEAR zone 1 area.
• Plant & Hot Exhausts;	Y	Mobile equipment has the potential to ignite waste trapped near their exhausts
• Industrial Heaters;	X	No industrial heaters onsite
• Open Burning Onsite;	X	No opening burning of waste takes place on the site
• Weather, e.g. Lightning Strikes	Y	Naturally occurring lightning strikes could be a source of ignition.
• Visitor and Contractors	X	Only AJT personnel and authorised waste contractors will be allowed on permitted

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		area. Waste Contractors (waste carriers) will receive suitable information (drivers do's and don'ts) on arrival on site Suitable fire action notices displayed on site
• Tramp Metal	X	Waste types received are metal. Operational processing is designed for Tramp metal is removed at source by pre-sorting and / or extraction by magnet / eddy current separator No treatment of waste on site
• Hot loads deposited on site	X	Nature and characteristics of permitted wastes received.)
• Build up loose combustible waste, dust and fluff	Y	Nature and characteristics of permitted wastes received
• Reaction Between Wastes	Y	Potential is Lithium Ion Batteries

Sources of Ignition & Preventative/ Reduction Measures**Table 3: Potential Fire Sources & Prevention Measures**

Potential Causes	Primary	Secondary	Tertiary
Batteries in ELV's/ Batteries in Waste Received.	Customers remove batteries.	AJT staff inspect and if present on NDPV's remove batteries.	Dedicated storage in approved containers.
Cylinders stored at Site.	All unused cylinders are stored in gas locked gas cage.	Operational procedures cover the 'safe use and storage 'of cylinders.	
Leaks & Spillage of Oils & Fuels	Engineering design of site to provide containment, drainage and subsequent treatment of spills via class 1 full interceptor.	All staff trained in the Deployment of spillage kits.	Spillage and leakages procedure specified in the Environmental Management System.
Hot works e.g. Welding, Cutting & Ignition Sources	All works are conducted away from potentially flammable materials	1000L water IBC available for immediate dowsing via Fuchs grab.	Training in welding/cutting and 'Hot work' monitoring procedures for all staff with responsibilities in relation to permit.
Plant or equipment failure including leaks of fuels and spillages from equipment.	Equipment isolated whilst awaiting repair and parked away from waste storage piles overnight	Daily Pre User Checks and maintenance inspections at frequencies governed by the planned maintenance programme.	Spillage and leakages procedure specified in the Environmental Management System.
Weather, e.g. Lightning Strikes	Engineering design - Specialised Storage facilities all flammable liquids are earthed.	All depollution activities are conducted within earthed building.	
Plant & Hot exhausts	Operatives are aware of the risk of hot exhausts acting as a potential ignition source.	Operatives clear away waste from exhausts at the end of shifts (End of Day Operations).	

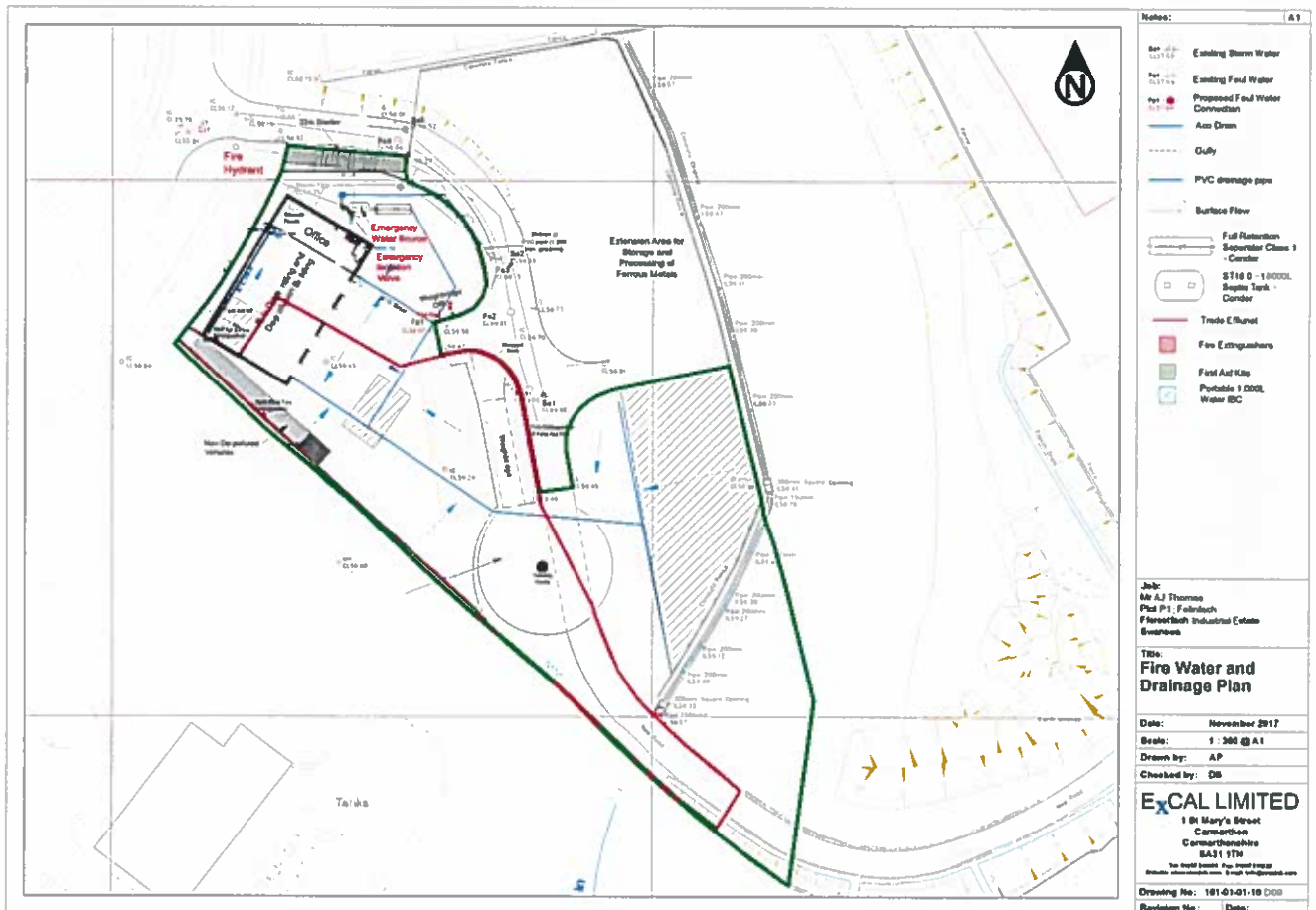
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Build up of Flammable/ Combustible wastes.	Waste acceptance/ operational procedures.	Specialised storage facilities (CROW equipment).	Training in waste acceptance and monitoring procedures for all staff with responsibilities in relation to permit.
Build up loose combustible waste, dust and fluff	Regular visual site inspections plus TCM documented Inspections. Where issues are identified appropriate control measures are introduced.	Good housekeeping procedures followed by operatives	Training in waste handling & storage for all staff with responsibilities in relation to permit.

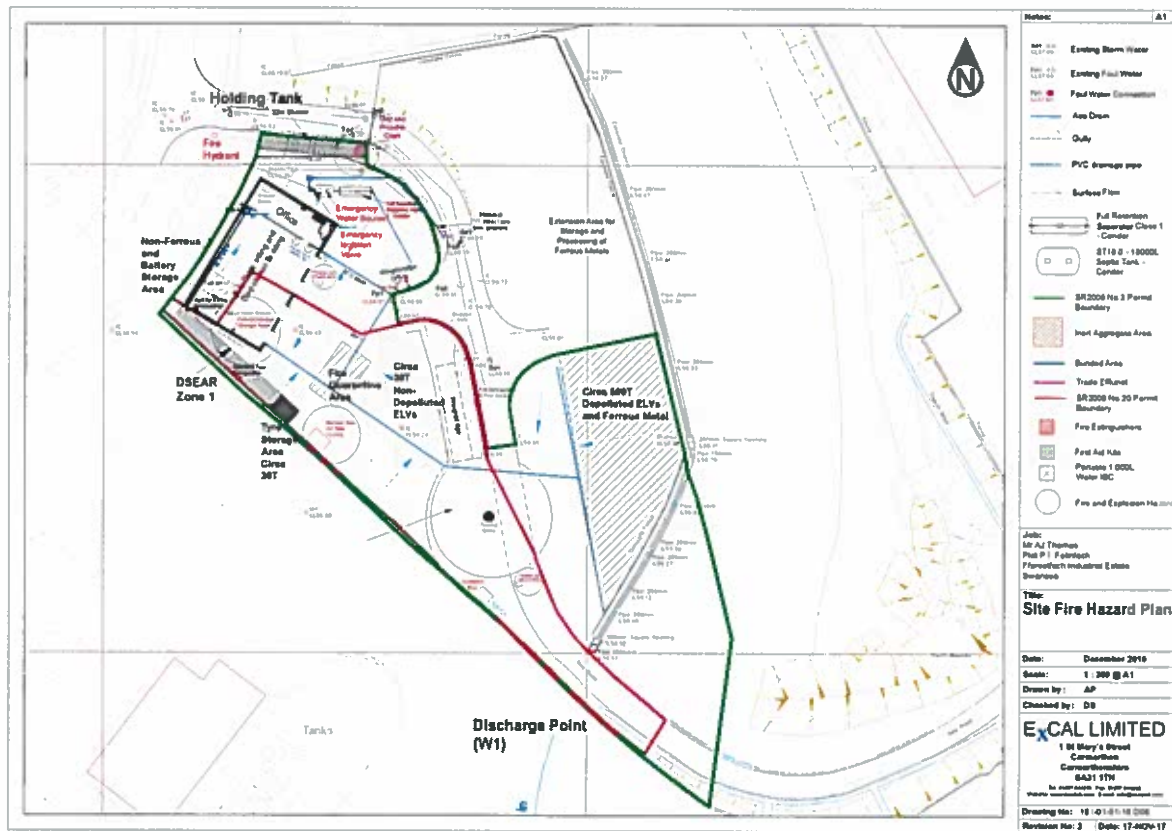
Appendix 2: Site Location & Receptor Plan with 'Wind Rose'.



Appendix 3 : Site Fire Water & Drainage Plan



Appendix 4 : Site Fire Hazard Plan



Appendix 5: Checklist

Item	Yes/No	Comments/Action
Material Storage		
Are combustible, flammable and other hazardous materials, including cylinders, stored on site?		
Does the management system describe how the quantity and type of material stored will be managed accounting for seasonal and market variations?		
Is the location and duration of storage in compliance with this Plan?		
Has the local FRS been consulted about stack layout, design and fire fighting strategy?		
Have fitting an automatic fire detection and suppression system been considered?		
Personnel safety		
Is suitable first aid, fire fighting equipment and training \available to the site?		
Are escape means available for staff adequate?		
Is there a plan in place to raise the alarm and evacuate workers in the event of fire being detected?		
Access		
Is suitable access for fire fighting vehicles available?		
Have appropriate steps been taken to prevent potential for fire to spread on and around the site?		
Would any factors inhibit access to and around the site in the event of fire? such as prevailing wind causing smoke or buildings/debris; security/fencing		
Environmental considerations		
Is there a drainage plan of the site that identifies where firewater might run to on the site?		
Are fire fighting water supplies adequate? (Refer to FRS for advice)		
Are there plans to contain firewater?		
Is a controlled burn an acceptable option? (Refer to FRS for advice)		

