Fire Prevention & Mitigation Plan (FPMP)

EV Recycling Ltd.

March 2025

Site Location:

EV Recycling Ltd., ATC Wales
Unit 12, Llanelli Gate
Dafen, Llanelli
Carmarthenshire
United Kingdom
SA14 8LQ

Overview

This Fire Prevention & Mitigation Plan (FPMP) has been created for EV Recycling Ltd, by ATC Wales. The site is used for recycling, remanufacturing and testing activities of automotive lithium ion battery cells and battery manufacturing scrap materials. Activities include accepting deliveries of batteries and battery materials, waste storage, waste processing and storage of the outputted product material.

Document Revision History			
Date	**Author**	**Version**	**Notes**
15/05/2019	Sam Joseph	1	Report
05/09/2019	Sam Joseph	2	Page numbers added, address amended, detail changes and additions to content
08/11/2019	Sam Joseph	3	Storage Quantities Added
15/01/2020	George Chamberlain	4	Address needs changing
31/01/2020	George Chamberlain	5	Address
05/02/2020	Sam Joseph	6	Various
11/02/2020	Sam Joseph	7	Drainage Plan & Materials Storage Information Added
05/03/2020	Sam Joseph	8	Feedback points addressed in order to satisfy NRW guidance. Section 6 added to document.
16/03/2020	Sam Joseph	9	Confidentiality Justification Review and changes to page 4
18/08/2020	George Chamberlain	10	Schedule 5 Response
26/08/2020	George Chamberlain	11	Removed non necessary confidential information for the Schedule 5 response. Removed Confidential Markings
06/10/2020	George Chamberlain	12	Schedule 5 Response
21/10/2020	George Chamberlain	13	Schedule 5 Response
02/11/2020	George Chamberlain	14	Added water hydrant information and previously amended information for confidentiality
10/11/2020	George Chamberlain	15	Amended confidentiality markings
21/12/2023	Sam Joseph	16	Amended document to comply with the Environmental Permit Variation and the latest FPMP Guidance from NRW
29/07/2025	Sam Joseph	17	Amended document to comply with the Environmental Permit Variation and the latest FPMP Guidance from NRW

Contents

Note:

An electronic copy of this document is kept and updated, as well as the physical copy which is located on-site. Printed version numbers are uncontrolled. Electronic copies are updated.

1. Fire Procedure

All staff members with fire awareness/fire marshal training have the required competency to carry out the following activities. Refer to the emergency roles and responsibilities list.

Step	What to do if it happens?
1	On discovering a fire, sound the alarm and initiate evacuation. On hearing the fire alarms, all personnel will evacuate the site and gather at the assembly point. All personnel are accounted for using the sign-in board & fire register.
2	For small fires and if safe to do so, trained personnel may use the appropriate fire extinguishing equipment to put out the fire. **Note: personnel are informed not to approach Lithium Ion batteries that are exhibiting signs of thermal runaway due to the potential for an explosion.**
3	Contact the fire emergency services if required. For example, if the fire is not able to be extinguished, is out of control and/or poses a serious threat (e.g. battery thermal runaway which cannot be extinguished safely).
4	If safe to do so, activate the Flapstopper device in the yard to contain firewater.
5	Contact nearby businesses if the fire is uncontained and poses an immediate threat.
6	Ensure that employees do not re-enter the building unless told it is safe to do so.
7	Contact Natural Resources Wales to inform them of the incident and confirm where fire water is going according to the site drainage plan.
8	After the fire has been extinguished, fill out the accident and incident report. A RIDDOR report may also be required depending on the severity of the situation.
9	Liaise with emergency services regarding future preventative measures.

2. Fire Environmental Risk Assessment

Assessment Part 4 of the ERA (Environmental Risk Assessment)	
Date of Assessment:	**20/03/2025**
Hazard:	Fire
Reason for Hazard:	The potential for fire from materials stored on-site exists if proper handling, monitoring and maintenance is neglected. In the event of a fire, the firewater run-off could be contaminated and cause harm to the environment if measures are not put in place
Possible Pathways:	Air/wind & materials can spread fire, and firewater run-off can transport potentially contaminated water via watercourses
Possible Receptors:	- Workforce - Nearby businesses - Local flora/fauna - Local watercourses
Consequences:	- Smoke damage to personnel, equipment, structural and local air quality - Property/equipment damage due to firewater ingress/burning - Injury or death to people in the local area - Disruption to our own and other businesses - Potential closure of nearby main road (A4138)
Control Measures:	- Acceptance & Inspection process for accepting waste batteries - Categorisation of batteries to identify potential risk - Separation of incompatible/combustible materials and ignition sources to remove potential ignition sources - No Smoking Policy, applicable to anywhere on the premises - Minimise stockpile, incorporate fire-breaks in material storage - Fire training, roles & responsibilities list and emergency drills - Provision of fire extinguishers and fire safety equipment - Store materials on an impermeable surface within a bunded area in close proximity to foul drainage in order to prevent firewater run off reaching the environment - Daily temperature & visual monitoring of waste storage areas
Likelihood of Hazard:	Highly unlikely when control measures are applied
Level of Risk to Receptors:	**Very low** when control measures are applied
Further Notes:	The main fire potential is thermal runaway of lithium-ion batteries

3. Site Layout

Site Address: *EV Recycling Ltd., Unit 12, Llanelli Gate, Dafen, Llanelli, Carmarthenshire, UK, SA14 8LQ*

3.1. Site entrances & exits and recycling & storage areas

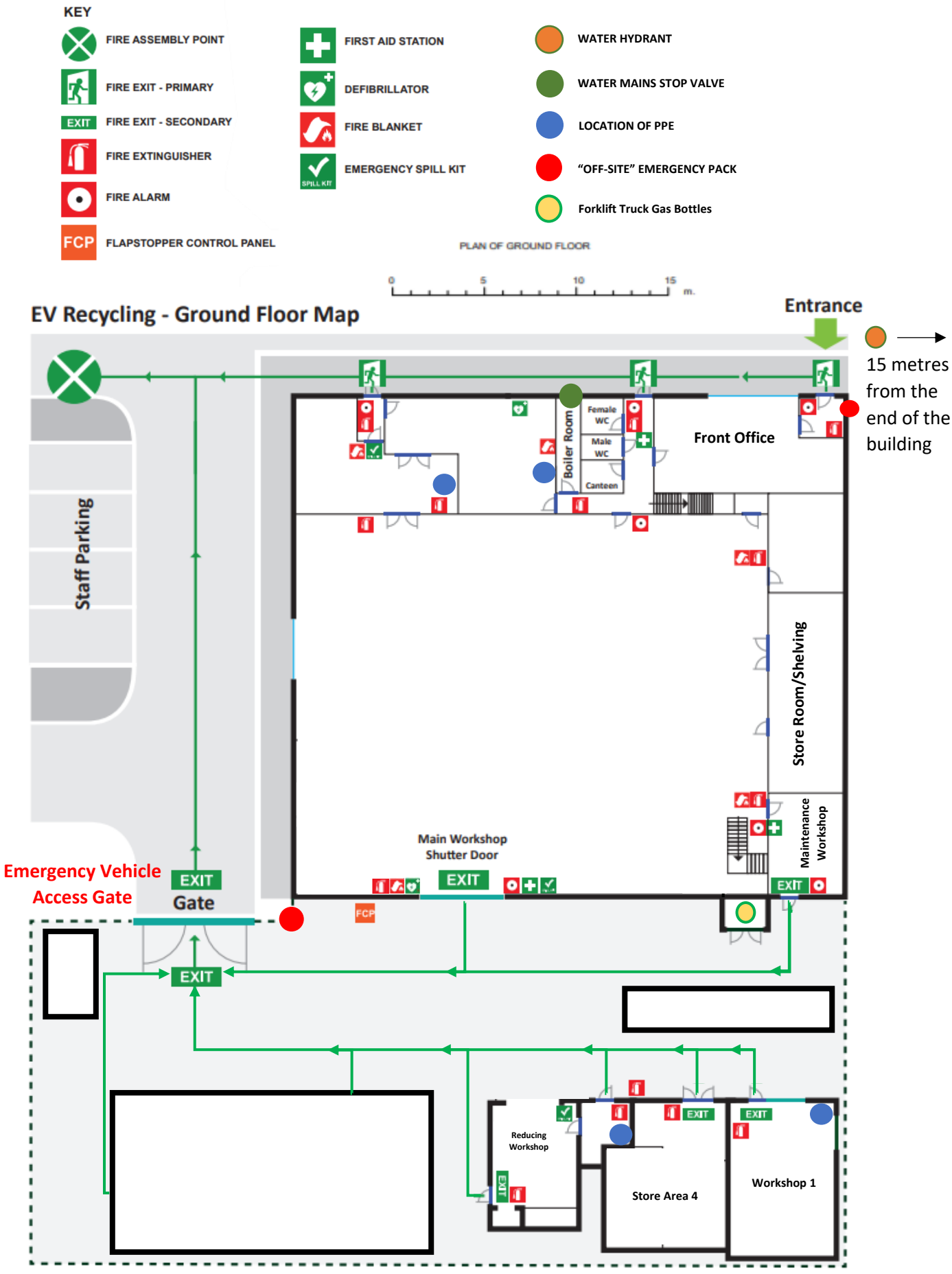
The image below is a general overview of the site, pinpointing the key areas. Muster stations/ Assembly points are depicted on-site using green signs (located at the off-site car park). A detailed site plan can be seen in section 3.1.2.

Prevailing wind direction: predominately West/South-West direction.

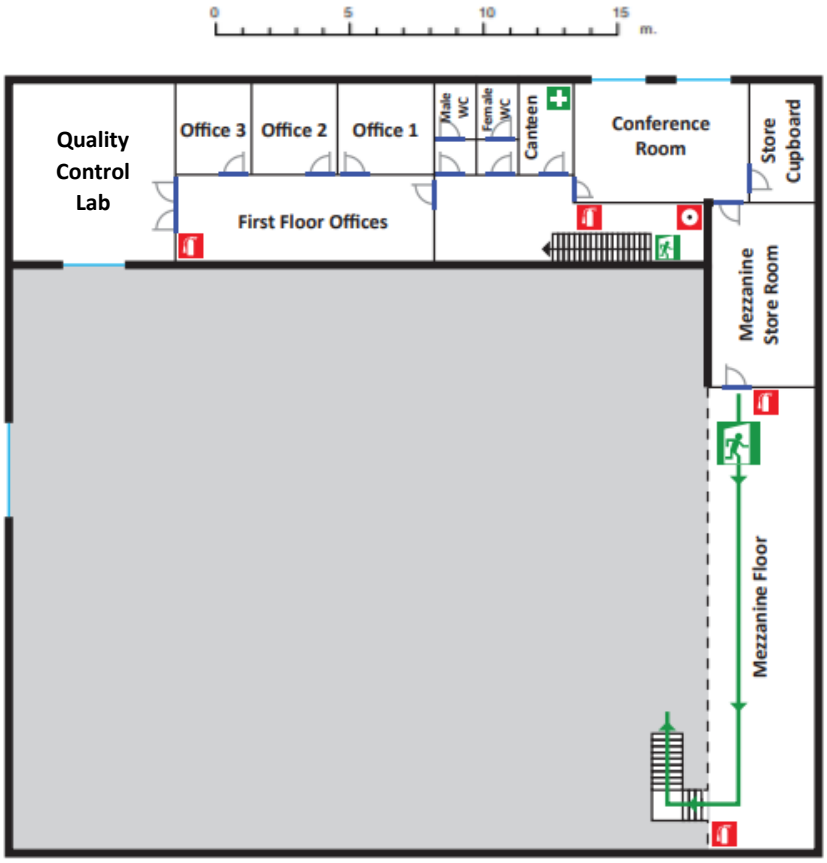
Water Hydrant Location at grid reference 253856,201869 Dafen industrial.

NOTE: The Google Earth image above is to show the site perimeter only.
Please use the site plan shown on the following pages for accurate layouts.

3.1.1. Fire Vehicle Access, Assembly Point & Fire Fighting Equipment



EV Recycling - 1st Floor Map



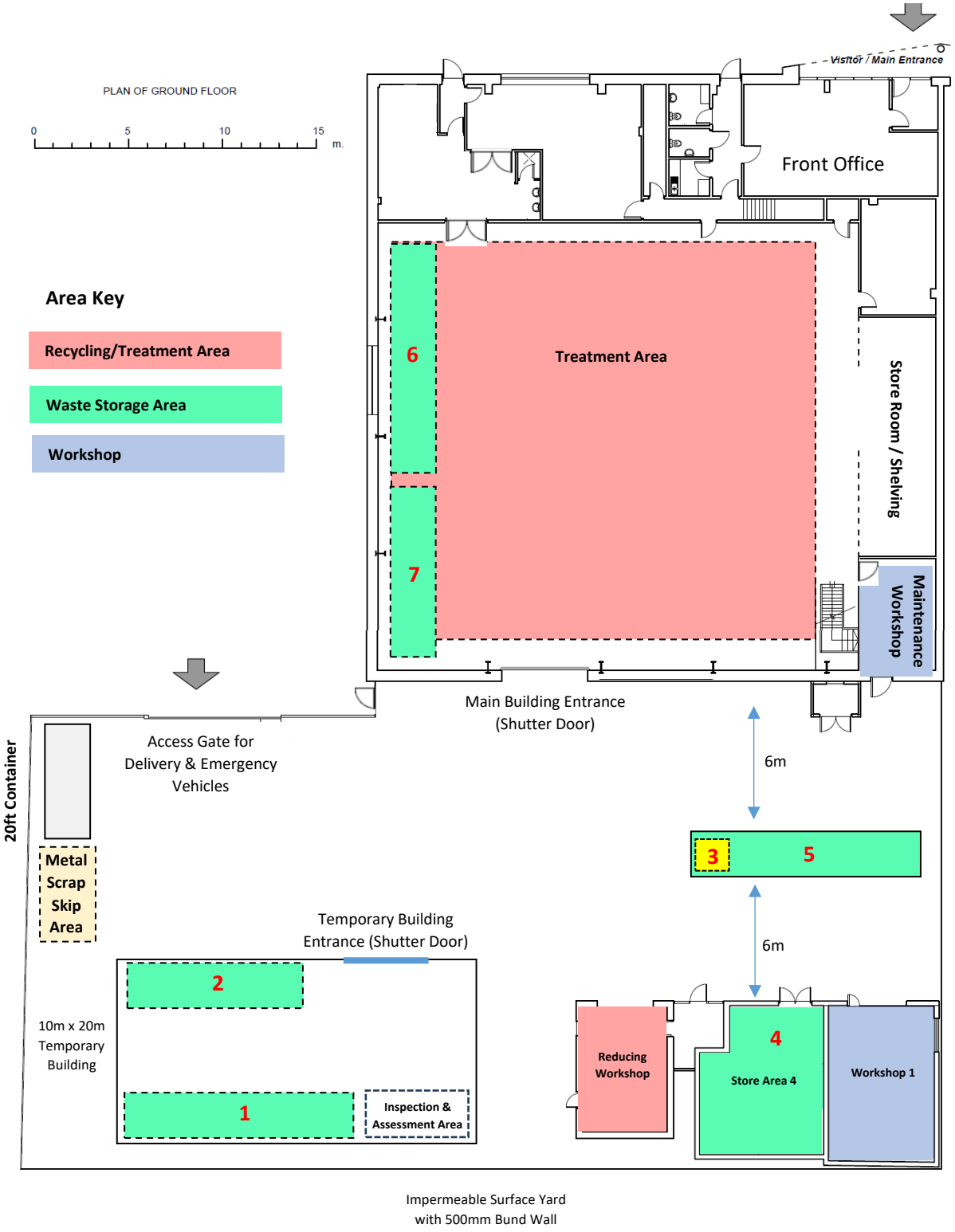
KEY

- FIRE ASSEMBLY POINT
- FIRST AID STATION
- FIRE EXIT - PRIMARY
- DEFIBRILLATOR
- EXIT FIRE EXIT - SECONDARY
- FIRE BLANKET
- FIRE EXTINGUISHER
- SPILL KIT EMERGENCY SPILL KIT
- FIRE ALARM
- FCP FLAPSTOPPER CONTROL PANEL

EV recycling™

3.1.2. Storage Quantities, Area Sizes and Separation Distances

The image below provides a general overview of the site, highlighting the key areas.
This will be provided to the fire brigade in case of an emergency.



Waste Area	Type	Details and Waste Types	Size of Area (metres)	Maximum Height of Stack? (metres)	Maximum Capacity (Quantity)	Maximum Weight (kg)	Storage time
1	Potential for Hazardous (including Mirror Hazardous and mirror non-hazardous)	Processed and Unprocessed Waste, including CAT 2 & 3 batteries. Inside Approved Packaging (e.g. ADR if required) and/or on labelled pallets. Separated manufacturing scraps consisting of anode and cathode materials.	12 x 3.5	2.59	12 Packs/120 Modules OR battery anode & cathode scrap	24,000	Up to 6 Months
2	Potential for Hazardous (including Mirror Hazardous and mirror non-hazardous)	Processed and Unprocessed Waste, including CAT 2 & 3 batteries. Inside Approved Packaging (e.g. ADR if required) and/or on labelled pallets. Separated manufacturing scraps consisting of anode and cathode materials.	10 x 3	2.59	120 Modules OR battery anode & cathode scrap	24,000	Up to 6 Months
3	HAZARDOUS	Separately collected by-product electrolyte from processing activities. Stored inside plastic, chemically resistant barrels over bunding.	3 x 2.5	2	N/A	3,000	Up to 6 Months
4	Non-Hazardous	Processed and Unprocessed waste. Including CAT 2/CAT 3 batteries OR dry cells OR anode scrap material OR cathode scrap material.	5 x 4	3	20 tonnes of CAT 2 or CAT 3 batteries OR waste battery materials	20,000	Up to 6 Months
5	Potential for Hazardous (including Mirror Hazardous and mirror non-hazardous)	Flexible **Quarantine Area**/40ft. Processed and Unprocessed including CAT1/CAT2/CAT3 batteries.	9 x 2.5	2.59	9 Packs/100 Modules	21,000	48hrs, or as required for quarantined items
6	Potential for Hazardous (including Mirror Hazardous and mirror non-hazardous)	Processed and Unprocessed Waste, including CAT 2 & 3 batteries. Inside Approved Packaging (e.g. ADR if required) and/or on labelled pallets. Separated manufacturing scraps consisting of anode and cathode materials.	12 x 3.5	2.59	12 Packs/120 Modules OR battery anode & cathode scrap	24,000	Up to 6 Months
7	Potential for Hazardous (including Mirror Hazardous and mirror non-hazardous)	Processed and Unprocessed Waste, including CAT 2 & 3 batteries. Inside Approved Packaging (e.g. ADR if required) and/or on labelled pallets. Separated manufacturing scraps consisting of anode and cathode materials.	10 x 3	2.59	120 Modules OR battery anode & cathode scrap	24,000	Up to 6 Months
Total Waste Storage Capacity						**140,000**	
Total Waste Storage Capacity (Hazardous & Mirror-Hazardous Waste)						**50,000**	

Note:

CAT 1 Batteries are safe and are product (reuse or repurpose).

CAT 2 Batteries are safe and can be product with further testing/rework.

CAT 3 Batteries are potentially unsafe or unsuitable for reuse. Can only be waste (recycle only).

Permitted Daily Waste Quantities

The site handles waste lithium ion batteries. A battery is defined as being either a pack, a module or a cell. The main source of the waste batteries are the Electric Vehicle Manufacturers and Battery OEMs. The site can treat up to a maximum of 20 metric tonnes daily for electric vehicle batteries and non-hazardous battery manufacturing scrap material (European Waste Code reference 16 03 04 and 16 06 05). The site can treat up to a maximum of 10 metric tonnes daily of mirror hazardous scrap material (European Waste Code reference 16 03 03).

All incoming waste is recorded using Waste Transfer Notes and an internal tracking system.

Storage Times

The maximum storage time for any single waste item is 6 months. If waste needs to be stored longer than this time period, it will need to be inspected and categorised again to ensure it is safe for continued storage. The storage time for various waste items will depend on the desired throughput which is determined by business requirements and compliance with the environmental permit.

The waste and all associated processes will be reviewed as part of the ISO14001 Internal and External Audits.

The company has been awarded ISO9001, ISO14001 and ISO45001 accreditation, and as such all activities on site are in compliance with these standards.

Flexible Quarantine Area:

This is a 40ft Storage Container on impermeable concrete on a bunded yard.

It can be used for temporary storage of any potentially dangerous items, including newly arrived batteries, quarantine of potentially dangerous batteries (e.g. batteries at higher risk of thermal runaway), and contained spillages from spill incidents. The Flexible Quarantine Area is 12m x 2.4m.

Any batteries or materials that are temporarily stored in the quarantine container should be moved at the earliest appropriate opportunity to create space for urgent quarantine requirements. After testing newly arrived batteries, they should be immediately moved to the relevant storage areas.

Fire within the Flexible Quarantine Area may be due to a battery thermal runaway event. Personnel are advised to evacuate the area and shut all doors to 40ft storage containers and buildings if safe to do so. Follow the fire emergency procedure outlined in this document and the EMS.

End of Waste

The end of waste procedure is required by the environmental permit, and involves testing the batteries received on the site. If the batteries pass the inspections and visual integrity checks they will be categorised as a product (CAT 1) and stored separately to the waste in readiness for dispatch for reuse or repurposing projects. If they are categorised as CAT 2 or CAT 3 they are deemed as waste and will be placed into one of the waste storage areas in readiness for processing.

The results of the test are made on a case by case basis, with safety always the priority. Tests may include an isolation test, voltage readings, SOH calculation (if possible), visual inspection, customer requirements for the batteries (e.g. history of the battery, such as crash damage), ECU interrogation (if required) and several other tests depending on the type of battery. This satisfies the End of Waste regulations. Batteries that are still waste after these tests will be recycled and processed into Black Mass product, therefore completing the end of waste procedure.

Waste Storage Location

All waste must be stored securely in the designated storage areas, and separate to any product batteries or product materials. The designated permanent waste storage areas area shown in the site layout plan. Different types of waste and also product must not be mixed with each other. To prevent this, all types of waste and product are stored separately to each other and in sealed containers and/or on labelled pallets. Please see the site plan for further information.

3.1.3. Battery & Material Categorisation

All the batteries as part of the acceptance and first inspection will be categorised in one of the following 3 categories.

CAT 1 Batteries are safe and are product (reuse or repurpose).

CAT 2 Batteries are safe and can be product with further testing/rework.

CAT 3 Batteries are potentially unsafe or unsuitable for reuse. Can only be waste (recycle only).

CAT 1 and CAT 2 batteries can be tested and put through the End of Waste procedure. If they pass they become products. If they fail they become CAT 3 and remain as waste until they are recycled and processed into product materials (e.g. Black Mass).

Battery manufacturing scraps do not require categorisation and will complete the end of waste procedure when they are treated as product materials (e.g. Black Mass).

3.1.4. Stack Size Clarification

Automotive OEM batteries arrive in ADR compliant packaging on a truck and are unloaded using a forklift driven by a trained operator. Batteries can arrived in one of three different formats: packs, modules and cells. An individual battery pack can weigh up to around 800kg. After going through the inspection and acceptance process, they are stored on pallets (or in their original packaging - whatever is more suitable). Product/CAT 1 batteries are temporarily stored (separate to waste) and transported to the customer for reuse/remanufacturing projects at the earliest opportunity. ADR compliant crates/containers can be stacked up to three high inside the containers. Waste battery packs (CAT 2, CAT 3) are moved to a relevant waste storage area to await the recycling process. Battery packs on pallets cannot be stacked. Batteries that are contained within drums/barrels are not stacked.

3.1.5. Waste stored in storage containers

All 40ft storage/shipping containers located on the site are one story only (i.e. Additional storage containers are not permitted to be stacked on top of each other).

They are located as far away from the main building as possible because they potentially have a higher fire risk due to the batteries stored inside them.

Containers are located 6m away from each other/buildings to maintain safe separation distances.

We will always endeavour to have enough room in the Flexible Quarantine Area to store emergency waste items. Items will be removed from this area after the required time period has passed or work has been done to make the items safe for normal storage.

The containers and the site is locked outside operating hours and when not in use.

The containers have side access doors.

The container walls heat up faster than the surroundings during hot summer days, which can pose a greater threat of thermal runaway. Therefore, waste is stored away from container walls to allow for better air circulation and temperature control, in addition to the usual daily monitoring checks.

3.1.6. Waste inside the Main Building

Waste is permitted inside the warehouse area of the main building. This is to allow for treatment activities such as dismantling. All batteries inside the main building have been assessed prior to entering the area (e.g. electrically isolated and not at risk of thermal runaway).

3.1.7. Layout and waste stacks on site

The site plan shows that all waste must remain outside of the main building in the designated waste storage areas. Waste is stored in ADR approved crates, boxes, containers and on pallets. Crates and boxes may be stacked inside the 40ft storage containers where suitable.

Plant machinery is located in Workshop 4 and the Reducing Workshop (outbuildings in the yard).

The Flexible Quarantine Container can accommodate any potentially dangerous waste (e.g. batteries at increased risk of thermal runaway).

Hot Works Permits will be issued where required and only in approved, designated areas away from any waste storage areas. From the layout plan it is clear that workshops are not directly exposed to any storage area of either CAT2 or CAT3 waste batteries, or battery manufacturing scrap materials.

3.1.8. Stock rotation requirements, seasonality of supply

The battery recycling is expected to have a steady supply and demand throughout the year and from month to month.

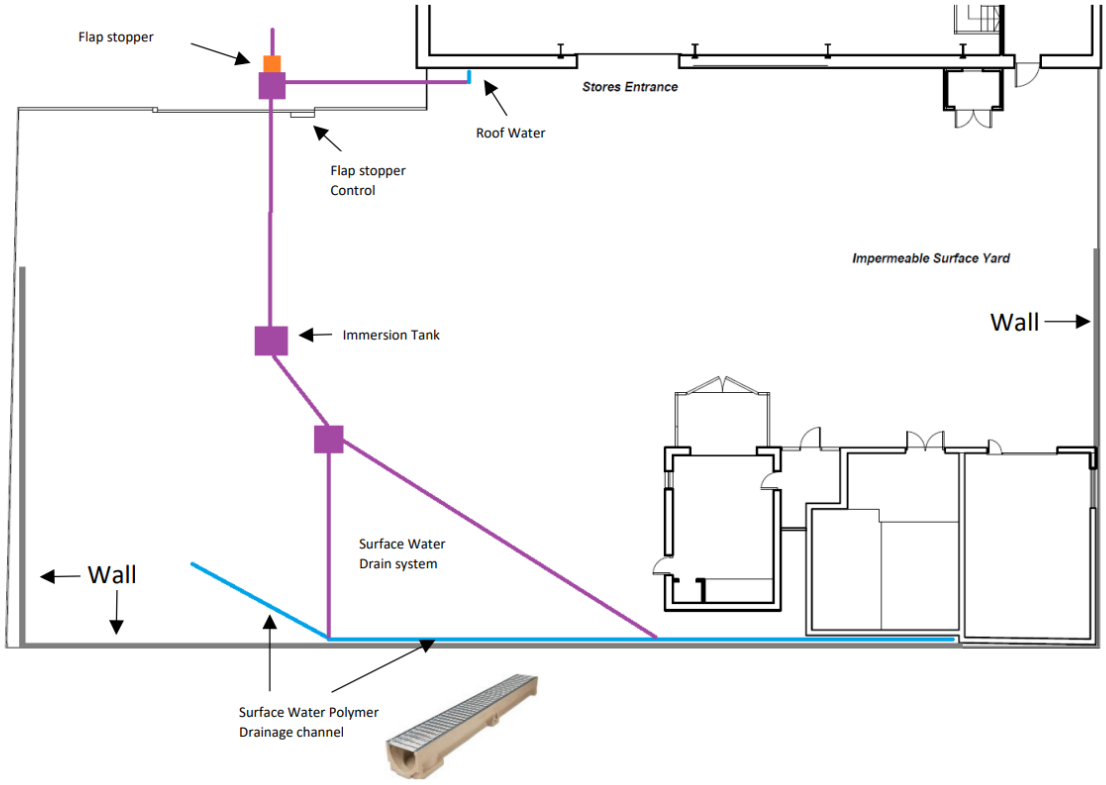
As soon as batteries are categorised to CAT1 and after passing the end of waste test the batteries are ready to be sold on, re-used or repurposed. This is the quickest turn around category of batteries as it can be used as is after being logged and tested.

CAT2 batteries require some repair work to be reused or repurposed. Batteries may also be CAT2 if the customer/supplier has requested destruction of the battery, regardless of its condition. The type of repair work required determines how much time it takes and whether or not the battery is sent for recycling. CAT2 batteries are fixed, tested and categorised as CAT1 and are ready to be re-used.

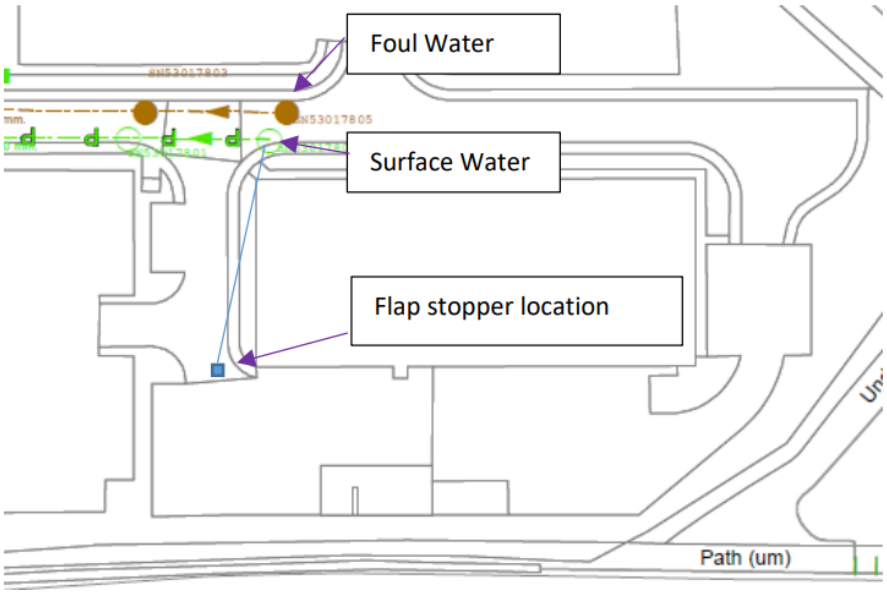
CAT3 batteries are the least likely type of battery at the site. These batteries have significant levels of damage and therefore they cannot be converted to CAT1. They need to be carefully handled and dismantled on a case-by-case basis prior to entering the recycling process, resulting in the longest processing time for any type of battery.

Product batteries are safe to remain in storage indefinitely under controlled and monitored conditions (indoors with daily temperature monitoring), but it is in the business interest to process the batteries as quickly as possible. If a waste battery has been in storage for 6 months, it will be retested and categorised to ensure continued safe storage. Internal tracking systems will be utilised.

3.2. Drainage Plan



All the surface water is captured on site and directed through the immersion tank inside the main gate within the boundaries of the property. The surface water is then connected onto the main surface water drain which is in front of the property as shown in the image below.



Note: The facility does not have permission to discharge any water into the foul sewerage system (i.e. fire water).

The foul water does not merge into the surface water within our site. Therefore the following measures have been implemented;

- The site is bunded using a 500mm high concrete permitter wall with waterproof paint. This, along with an immersion tank and drain blocking flap (Flap-stopper) device at the front of the main gate will be able to hold the fire water onsite and prevent any contaminants escaping to the drainage system.
- The fire water and any contaminants can be removed from the immersion tank access point. The immersion tank and flap-stopper device is serviced and inspected annually, and the flap-stopper device tested on a monthly basis.
- The metallic electro-pneumatically controlled flap-stopper in the surface water drain can be operated remotely from a control panel. Once activated, this traps all fire water or any other accidental spills on site until a time when it can be pumped out. There is potential for automating the operation of the flap-stopper by installing fluid sensors in the drainage system and linking it to the fire alarm panel.
- Flapstopper Servicing takes place on an annual basis. LED warning lights are checked for daily.

These control measures will ensure that in the event of an emergency, fire water, and any accidental spillages are prevented from exiting the site to nearby receptors.

Note:

- It is the responsibility of the fire marshal to activate the Flapstopper. The fire brigade will have access to this item if needed as well.
- In normal conditions, the Flapstopper default position is in the OPEN position, allowing water to pass through the drains and offsite.

Examples of a Spill kit and the Flapstopper in situ within the drainage system.

Electro-pneumatically controlled flap details

Name of the device: Flapstopper from EIL (Environmental Innovations).

The user manual of this device is available in the “Flapstopper User Manual” document.

This device meets the following UK and EU environmental legislations:

EA PPG 3,7,8,13, and 18 (managing fire water and major spills)

There are a lot of warnings and fault indications monitored from the control panel which is part of the daily procedure for checking that all systems are OK.

The personnel will be trained on using and identifying fault indications of the system. If the external LED located on the top of the housing is flashing, it indicates a potential fault which must be rectified prior to operations commencing.

In case of power outage it has a battery where the system can stay operational for at least whole day and there is an indication LED if the battery is running low.

OP1 – Push and hold Red button to close valve(s)

OP2 – Push and Hold Green button to open valve(s)

OP3 – Turn (removable) Door Keys to open door

All Control panels will see a standard layout. This entails a compressor with pressure gauge to the lower left side, PCB with protective casing in the upper centre, and room for a 12V Battery on the lower shelf of the enclosure. There is also a pneumatic manifold located in the lower right. Some panel may feature further terminals in the lower centre should they be needed.

There are no operations (OP) available inside the control panel; however, information below details components which may be of interest.

3.1 In Detail

- *The compressor*

The compressor output should be between 6, and 8 bar which will be indicated by the small green arrows seen on the pressure gauge.

- *PCB*

The PCB is housed in a protective enclosure. An LED and Wiring diagram are found further on in the manual. The pressure switch to the centre right of the board connects the PCB to the compressor. This will be via black air hose

- *12V 12ah Battery*

The battery ultimately powers the control panel. Whether your system is mains or solar powered, the battery is trickle fed, which then goes on to powering your system.

- *Manifold*

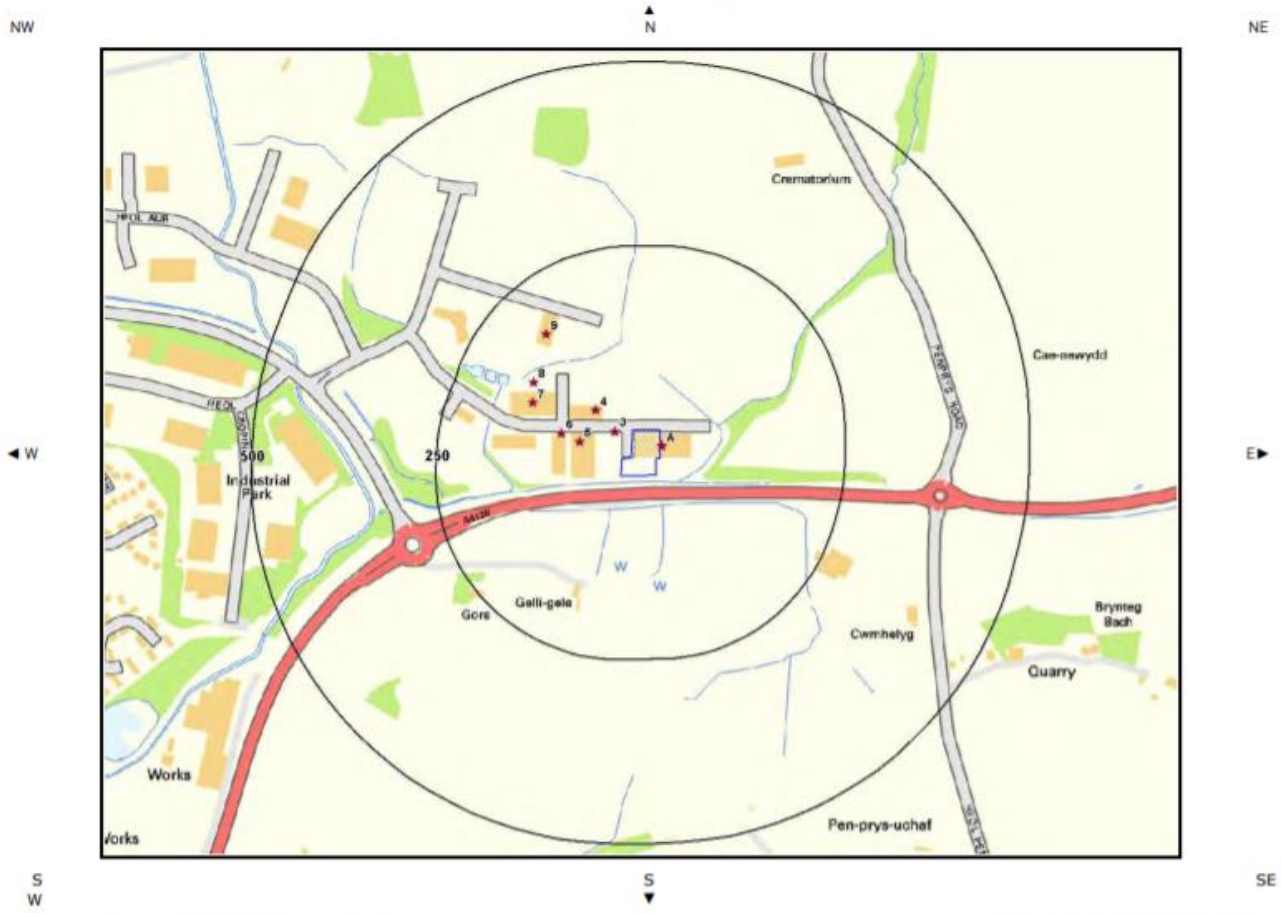
The manifold is a bespoke item to the control panel controlling the flows of air to make the cylinder work in lien with the pressure switch.

3.3. Nearby receptors & contact details

Note: Watercourse south of the site.

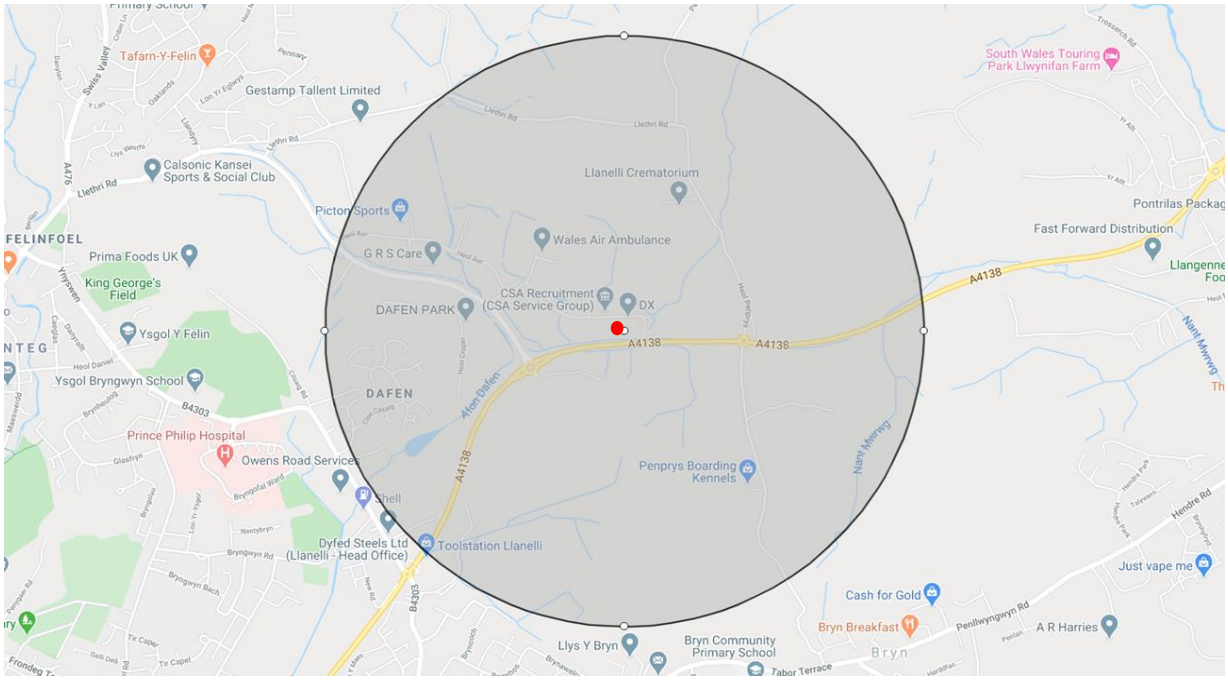
Groundsure
LOCATION INTELLIGENCE

4 Current Land Use Map



Current Land Use Legend

- Site Outline
- Search Buffers (m) 250 / 500
- Petrol & Fuel Sites
- Dangerous Substances (List 1)
- Dangerous Substances (List 2)
- Red List Discharge Consents
- Current Industrial Sites
- Part A(1) Authorised Processes and Historic IPC Authorisations
- Part A(2) and Part B Authorised Processes


Tafarn-Y-Felin
Gestamp Tallent Limited
Calsonic Kansei Sports & Social Club
Llanelli Crematorium
South Wales Touring Park Llwynifan Farm
Picton Sports
Wales Air Ambulance
Fast Forward Distribution
FELINFOEL
Prima Foods UK
G R S Care
King George's Field
CSA Recruitment (CSA Service Group)
DX
DAFEN PARK
A4138
Ysgol Y Felin
Ysgol Bryngwyn School
DAFEN
Afon Dafen
Prince Philip Hospital
Owens Road Service
Penprys Boarding Kennels
Nant Mwrwg
Shell
Dyfed Steels Ltd (Llanelli - Head Office)
Toolstation Llanelli
B4303
Hendre Rd
Just vape me
Cash for Gold
Bryn Breakfast
Penllwyngwyn Rd
A R Harries
Llys Y Bryn
Bryn Community Primary School
Tabor Terrace
Bryn


South Wales Touring Park Llwynifan Farm
Gestamp Tallent Limited
Llanelli Crematorium
Cwtchy Canines
Picton Sports
Wales Air Ambulance
G R S Care
CSA Recruitment (CSA Service Group)
DX
DAFEN PARK
A4138
DAFEN
Afon Dafen
Penprys Boarding Kennels
Nant Mwrwg
Owens Road Service
Dafen Cricket Club
Shell
Dyfed Steels Ltd (Llanelli - Head Office)
Toolstation Llanelli
B4303
Cash for Gold
Bryn Breakfast
Penllwyngwyn Rd
A R Harries
Llys Y Bryn
Bryn Community Primary School
Tabor Terrace
Bryn Post Office
Bryn

Immediate receptors - SA14 8LQ Dafen		
Name	**Address**	**Contact phone number**
DX Freight	Unit 13 Llanelli Gate	0843 509 2465
Caravan Storage Wales	Llanelli Gate Ind Est	01554 749991
Atcost Windows	Unit 10, Llanelli Gate	01554 750031
Storage Giant Llanelli	Unit 11 Llanelli Gate	01554 755799
DRL Partitions	Unit 1 Llanelli Gate	01554 754510
Treharne Automotive Engineering Ltd	Unit 8 Llanelli Gate	01554 775938
The Beacon Centre of Enterprise	Unit 5 Llanelli Gate	01267 246246
Wales Air Ambulance	Llanelli Gate Ty Elusen	0300 015 2999
Police Station	Llanelli Gate	01267 222020

Rest of the Industrial Estate - SA14 8LQ Dafen		
Name	**Address**	**Contact phone number**
Evans Safety Ltd	Unit C3, Llanelli Gate	0845 408 2354
CSA Recruitment	Llanelli Gate Business Park	01554 746746
Sonex3 Ltd	The Beacon	0330 100 3667
Toppers Wales Ltd	Unit D1 Llanelli Gate	01554 777501
Classic PVC	Unit5 Llanelli Gate	01554 777158
Cymru Autoglazing	Llanelli Gate Ind Est	01554 759041
GSF Motor Factors	Unit 4 Llanelli Gate	01554 775772
Marie Curie	Unit 2, Llanelli Gate	01554 759071
Cosmeditech	Unit 5, Llanelli Gate	0800 038 5580
GSF Car Parts	Unit 4, Llanelli Gate	01554 775772
Cymru Autoglazing	Llanelli Gate Ind Est	01554 759041
Morganstone Ltd	Llanelli Gate Ind Est	01554 779126

Nearby Industrial Estate (Heol Aur & Heol Cropin), Dafen Park, Dafen, Llanelli		
Name	**Address**	**Contact phone number**
British Red Cross Mobility Aids Service	Dafen Ind Est	01554 749374
Crest Trade Frames Ltd	Unit 1, Dafen Ind Est	01554 774571
Lockspot Self Storage	Heol Aur, Dafen Ind Est	01554 740066
Plantmax	Dafen Ind Est	07584 702517
Newgistics Freight Solutions Ltd	Unit 2, Dafen Ind Est	01554 740800
GEO Site & Testing Services Ltd	Unit 3, Dafen Ind Est	01554 784040
Picton Sports	Heol Aur, Dafen Ind Est	01554 754662
DPA Law Solicitors	Scarlet Court, Heol Aur	01554 749144
GRS Care Ltd	Scarlet Court, Heol Aur	01792 776238
Yodel	Unit 1, Dafen Park	01554 784912
Ambassador Windows Ltd	Unit 8, Dafen Park	01554 752144
Sgiliau Llanelli	Unit 5, Dafen Ind Est	01267 643345
Nixi Hair and Beauty Lounge Ltd	Unit 5, Dafen Ind Est	01554 897369

Teddingtons NDT	Unit 1, Heol Cropin	01554 744500
Ambassador Windows Ltd	Unit 8, Heol Cropin	01554 752144
Vaughan Sounds	3/4 Heol Rhosyn	01554 740500
Cwtchy Canines	Llethri Road Llanelli	07712 517417
J & A Construction	Gors Works Dafen Ind Est	01554 758767
Radnedge Reclaim Flooring	Dafen Inn Row	01554 755790
Commercial Marquee Hire Ltd	Unit 9, Dafen Ind Est	0800 612 6727
UK Auto Pro Moible Window Tint	Unit 2, Dafen Ind Est	01554 575038
Celtwood Carpentry & Joinery	Heol Cropin, Dafen Ind Est	07481 207484
Daniels Fans Ltd	Unit 7, Dafen Ind Est	01554 752148

Other Places within a 1Km range from the site		
Name	**Address**	**Contact phone number**
Gestamp Tallent Ltd	Plant Llethri Road	01554 772233
Thyssen Krupp Tallent	Llethri Road	
Penprys Boarding Kennels	Penprys Farm Bryn	01554 821574
	SA14 8BJ Llanelli	
Llanelli Crematorium	Penprys Road	01554 824137
	SA14 8BX Llanelli	
Sutherland Saddlery	Dafen Ind Park Roundabout	01554 746773
	SA14 9UU Dafen	
Dyfed Steels Ltd	Tube works Ind Est	01554 772255

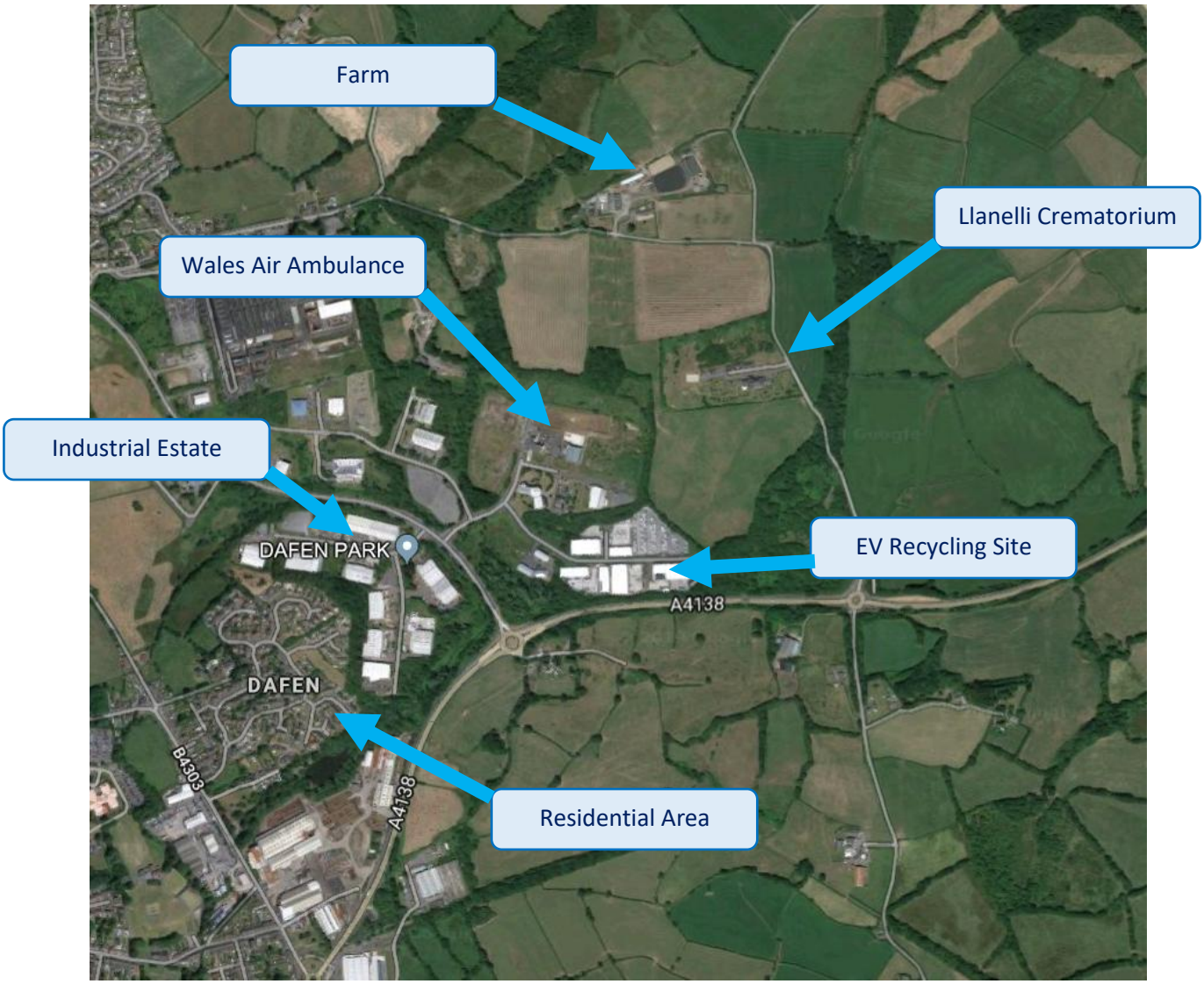
In the event of an emergency, the fire marshal is responsible for contacting the immediate receptors and receptors within 1Km.

3.4. Key site contacts & emergency contacts

SITE DETAILS			
Location: EV Recycling Ltd., Unit 12, Llanelli Gate, Dafen, Llanelli, SA14 8LQ			
Post Code: SA14 8LQ			
Site Access Grid Reference: 253813, 201833			
SITE CONTACTS	Name	Office Hours	Out of hours
Owner:	ATC Wales	01554 775938	07736381801
General Manager:	James Bates	01554 775938	07828602730
Site Supervisor:	Michael Williams	01554 775938	07400513050
Production Supervisor:	Curtis Fraser	01554 775938	07395048534
Security Contact:	James Bates	01554 775938	07828602730
Landowner / Agent:	ATC	01554 775938	01543427900
EMERGENCY SERVICES		Office Hours	Out of hours
Emergency		**999**	**999**
Medical: Welsh Ambulance Services NHS Trust		**01792 562900**	**999**
Police: Felinfoel, Dafen and Swiss Valley		**101**	**101**
Fire: Llanelli Fire Station		**0370 6060699**	**999**
REGULATORS		Office Hours	Out of hours
Health and Safety Executive (HSE)		01554 775938	07773291424
Local Authority: Carmarthenshire County Council		01267 234567	01267 234567
Natural Resources Wales (Local)		0300 065 3000	0300 065 3000
EA (24 hour emergency hotline)		0800 80 70 60	0800 80 70 60
UTILITY SERVICES	Name	Office Hours	Out of hours
Water undertaker:	Welsh Water	0800 052 0130	0800 052 0130
Sewerage undertaker:	Welsh Water	0800 085 3968	0800 085 3968
Gas supplier:	SSE	01256 304244	n/a
Electricity supplier:	Haven Power	0800 052 0400	0800 052 0400

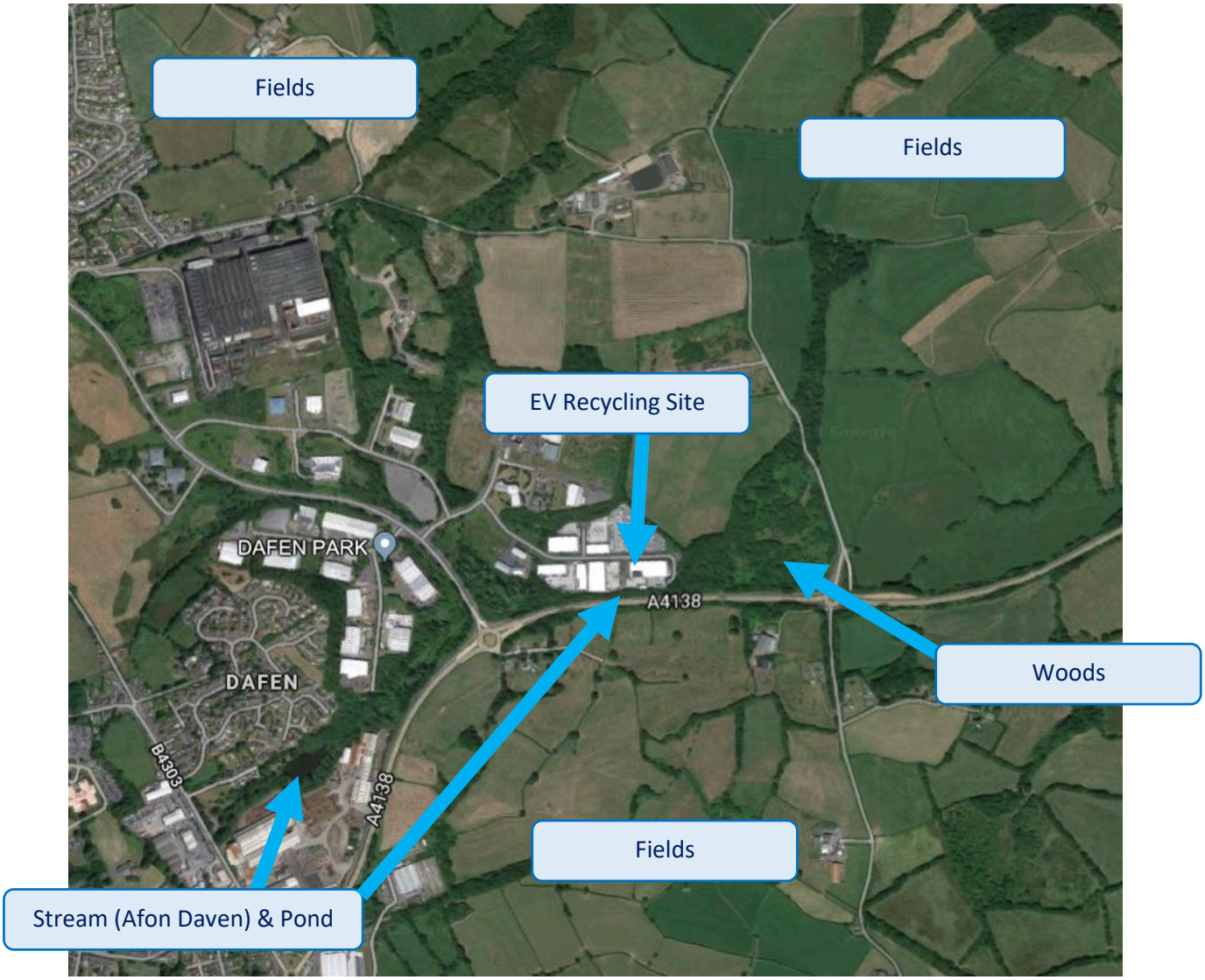
3.5. Map of human receptors within 1km

The map below shows the human receptors within 1km of the recycling site. See Section 3.3 for all the companies and contact details.



3.6. Map of environmental receptors within 1km

The map below shows the environmental receptors within 1km of the site.



4. Materials Stored On-Site, Weights & Containment

The following is a list of materials that are stored on site and could have the potential to cause harm to the environment if they escape. **This should be used as a guide only,** to show how much of each waste code and type could theoretically be stored on site at a given point in time.

- Total daily process/treatment capacity: **20 tonnes.** Daily process/treatment capacity for hazardous & mirror-hazardous waste: **10 tonnes.**
- The annual acceptance limit: **9000 tonnes.**
- The total waste storage capacity: **140 tonnes.** The storage capacity for hazardous and mirror-hazardous waste: **50 tonnes.**

List of Substances / Materials & Storage Facilities							
Material	**EWC Classification**	**European Waste Code (EWC)**	**Accepted On-Site?**	**Stored On-Site? (Post-Process)**	**Quantity (tonnes) Stored On-Site**	**Type & Size of Storage**	**Type & Size of Secondary Containment**
Lithium Ion Battery Cells, Modules & Packs	**AN (Absolutely Non-Hazardous)**	16 06 05 20 01 34	✓	✓	**95**	Raised shelving and/or on pallets/crates	Impermeable Surface & Bunded Area
Manufacturing Scraps (Lithium Ion Battery Cells & Modules, Cathode)	**MH (Mirror Hazardous)**	**16 03 03**	✓	✓	**15**	Raised shelving and/or on pallets/crates	Impermeable Surface & Bunded Area
Manufacturing Scraps (Cathode)	**MN (Mirror Non-Hazardous)**	16 03 04	✓	✓	**15**	Sealed container on pallets/crates	Impermeable Surface & Bunded Area
Manufacturing Scraps (Anode)	**MN (Mirror Non-Hazardous)**	16 03 04	✓	✓	**15**	Sealed container on pallets/crates	Impermeable Surface & Bunded Area
'Black Mass' (i.e. Nickel, Cobalt & Manganese Powder)	**MN (Mirror Non-Hazardous)**	Product	✗	✓	**20**	Sealed container on pallets/crates	Impermeable Surface & Bunded Area
Crushed Aluminium foils (i.e. Fractions)	**MN (Mirror Non-Hazardous)**	By-Product	✗	✓	**10**	Sealed container on pallets/crates	Impermeable Surface & Bunded Area
Miscellaneous (E.g. Scrap Metal Casings, Busbars)	**AN (Absolutely Non-Hazardous)**	By-Product	✗	✓	**7**	Skips / Scrap Metal Bins	Impermeable Surface & Bunded Area
Separately Collected Electrolyte	**AH (Absolutely Hazardous) ****	**16 06 06**	✗	✓	**3**	Sealed container	Impermeable Surface & Bunded Area

Note: The table above demonstrates that EV Recycling's activities and storage complies with **Annex III, Part A of Directive 2006/66/EC of the European Parliament and of the Council**.

4.1. Other materials & items on site of a potentially hazardous nature

The following table provides a list of other materials on site which are not directly linked to the recycling activities, but have potential to impact upon it due to potential fire hazards.

Material	Location	Type of Storage
Product Hazardous Voltage / High Voltage Batteries	**Storage Containers, Main Building**	Potential for High Voltage during testing and working activities. Stored securely in storage containers and – if safe to do so – the main building.
Flammable packaging material (e.g. Cardboard)	**Store Areas (Main Building & All Waste Bins)**	Stored in designated areas in the main building away from the recycling activities.
Forklift gas cylinders / bottles	**Yard**	Stored outside in the yard in the designated area, away from potentially flammable materials / items.
Product Output (E.g. Black Mass, consisting of nickel, manganese, cobalt and lithium)	**Main Building**	Stored securely in sealed bulk bags.

4.2. Type of waste received daily & annual throughput

The following table provides an overview on the average daily and the annual throughputs of waste material arriving at the recycling site.

Description of Waste Operation:	Batteries (Lithium Ion) - Discharging, disassembling and Crushing & Separation of raw materials. Battery Manufacturing Scrap Materials – Crushing & Separation of raw materials.
Annex I or Annex II Codes:	R04 (Recycling of metals)
Hazardous Waste Treatment Capacity (Daily Tonnes):	10
Non-Hazardous Waste Treatment Capacity (Daily Tonnes):	20
Storage Capacity of Non-Hazardous Waste:	140
Storage Capacity of Hazardous Waste (Including Quarantine Areas):	50
Total Storage Capacity:	140
Total Annual Acceptance (Tonnes each year):	9000

- Total daily process/treatment capacity: **20 tonnes.** Daily process/treatment capacity for hazardous & mirror-hazardous waste: **10 tonnes.**
- The annual acceptance limit: **9000 tonnes.**
- The total waste storage capacity: **140 tonnes**
- The storage capacity for hazardous and mirror-hazardous waste: **50 tonnes.**

5. Fire Extinguisher Locations & Utility Isolation Points

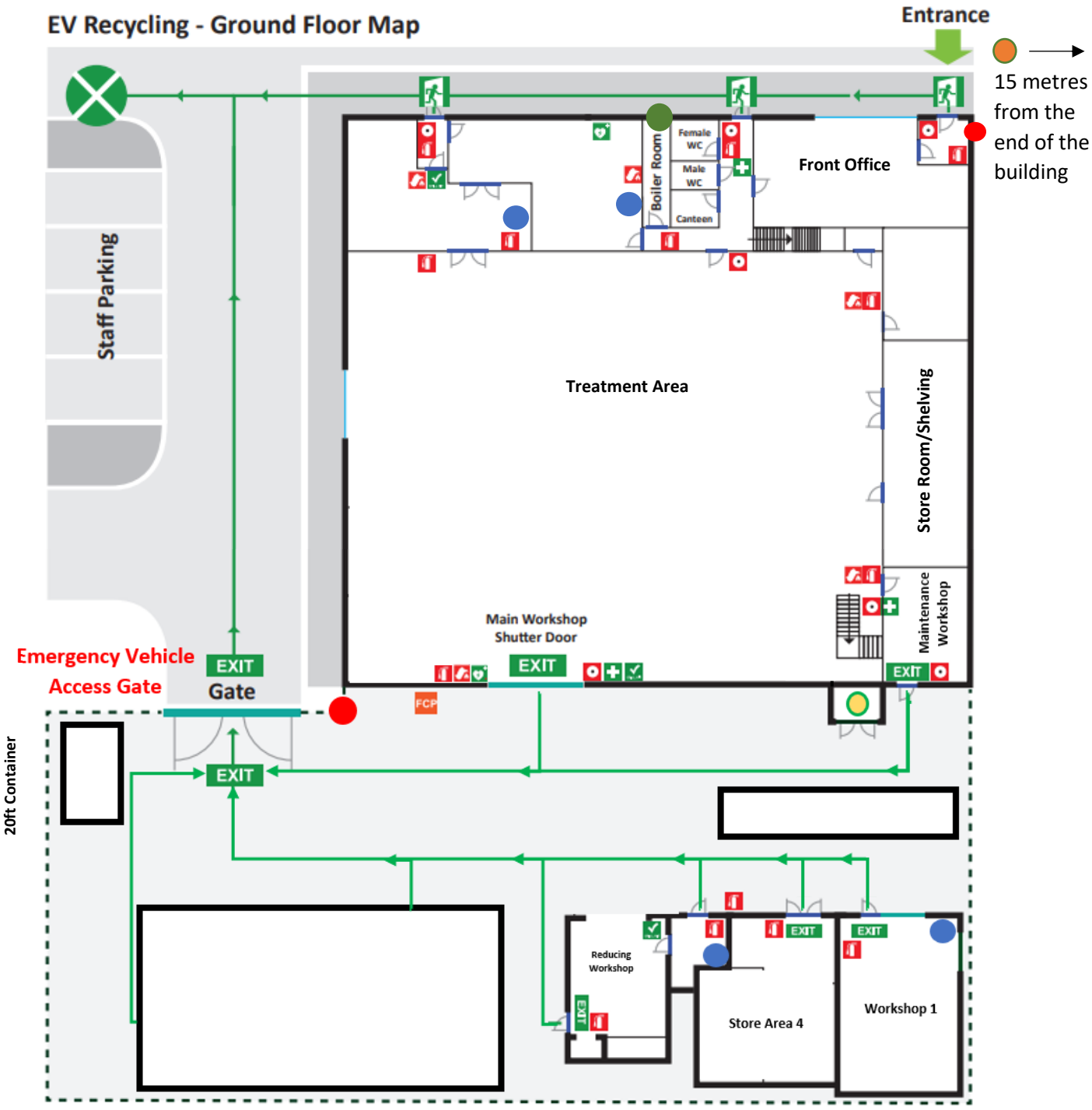
KEY

- FIRE ASSEMBLY POINT
- FIRE EXIT - PRIMARY
- EXIT FIRE EXIT - SECONDARY
- FIRE EXTINGUISHER
- FIRE ALARM
- FCP FLAPSTOPPER CONTROL PANEL
- FIRST AID STATION
- DEFIBRILLATOR
- FIRE BLANKET
- SPILL KIT EMERGENCY SPILL KIT
- WATER HYDRANT
- WATER MAINS STOP VALVE
- LOCATION OF PPE
- "OFF-SITE" EMERGENCY PACK
- Forklift Truck Gas Bottles

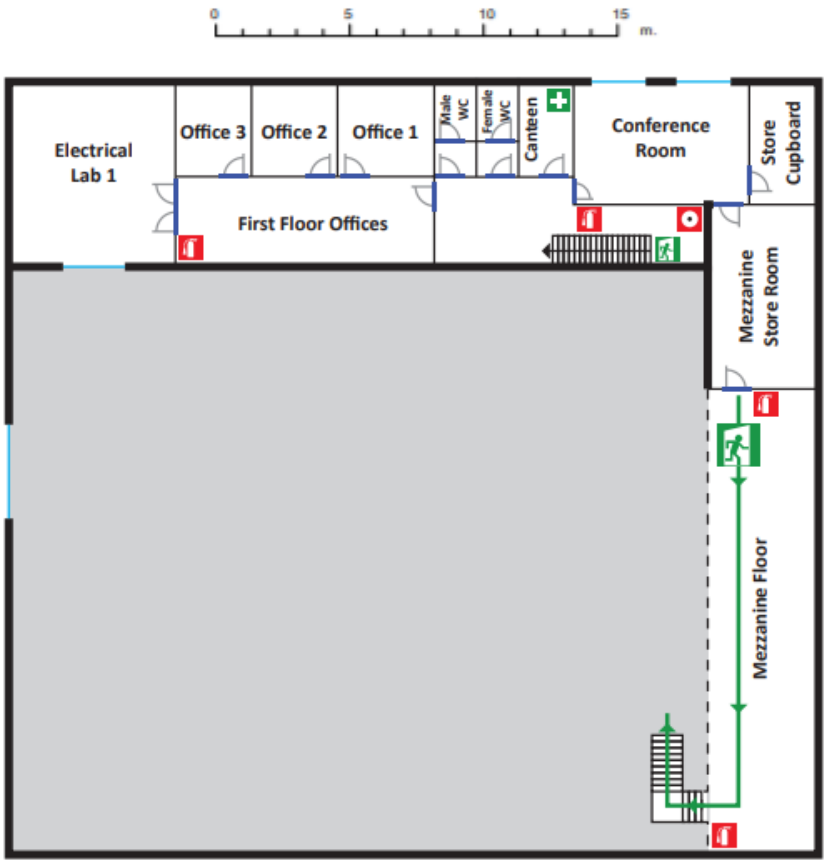
Isolation points:

- Electricity isolation point(s) located: **Server Room**
- Gas isolation point(s) located: **Externally within the gas meter housing**
- Water Isolation: **in front of the main entrance.**

PLAN OF GROUND FLOOR



EV Recycling - 1st Floor Map



KEY

- FIRE ASSEMBLY POINT
- FIRST AID STATION
- FIRE EXIT - PRIMARY
- DEFIBRILLATOR
- EXIT FIRE EXIT - SECONDARY
- FIRE BLANKET
- FIRE EXTINGUISHER
- SPILL KIT EMERGENCY SPILL KIT
- FIRE ALARM
- FCP FLAPSTOPPER CONTROL PANEL

EV recycling™

6. Specific Detail Referring to FPMP Guidance on NRW Website

As part of the guidance from NRW (Natural Resources Wales), the following points have been outlined here for ease of access.

Note that some points may be duplicated from earlier in this document.

6.1. Common Causes of Fire & Prevention Measures (Section 6 of Guidance)

Common Causes of Fire & Preventative Measures	
Cause	**Preventative Measure**
Arson/Vandalism	The site has security fencing, intruder alarms and CCTV to deter against criminal activity.
Visitors/Contractors	All persons on-site must sign in and are made aware of the fire safety procedures and assembly points. This is reinforced on-site through the use of suitable signage, safety toolbox talks and safe systems of work. Visitors and contractors are accompanied where required when moving about the site.
Ignition Sources	Fire breaks of 6 metres are maintained between waste storage areas in the yard and flammable items are distanced from sources of heat. This includes recycling equipment.
Self-Combustion	The risk of self-combustion is negligible with the materials stored on-site. However, visual checks & temperature monitoring will be carried out as part of the acceptance and/or storage procedures.
Plan/Equipment Failure	All equipment on site is serviced and maintained according to manufacturer's guidelines.
Discarded Smoking Materials	The site is strictly non-smoking. Smoking activities must be carried out off-site at a safe distance away, for example at the fire assembly points. No Smoking signage is present throughout the site.
Hot works (Welding, Cutting, etc.)	Where hot-works is required (e.g. welding), a risk assessment is performed and a permit to work be granted by the authorised person. During Hot Works a fire marshal will be assigned to oversee the works until the permit has been cancelled. An end-of-day fire watch is performed to confirm the area is safe.

Industrial heaters	On-site heating is maintained to standard guidelines.
Plant & Hot Exhausts	Daily temperature checks are conducted onsite using a thermal imaging camera to detect any hot spots and/or abnormal temperatures. These procedures are outlined in the EMS.
Damaged/Exposed Electrical Cables	All electrical equipment is tested annually by a qualified electrician and certified for use. (E.g. PAT testing)
Reactions Between Waste	Whilst the risk of reactions is negligible between the permitted waste types, different types of waste are not mixed together and stored in separate sealed containers. Please see the waste acceptance procedure in the EMS.
Hot Loads Deposited On-Site	The Flexible Quarantine Area is clearly indicated in both the site plans in the FPMP and EMS should issues arise. In the case of thermal runaway event, all staff must follow the emergency response procedure.
Build-up of Loose Combustible Material & Dust	At the end of each day, a visual check is carried out on the building and storage areas and includes checking for signs of potential fire hazards; as outlined in the EMS. The site should be regularly cleaned at least once a week. If activities or incidents cause excess dust, cleaning is require prior to further operations.
'Tramp' Metal	The recycling machinery is checked before and after operations as part of the safe systems of work and maintenance checks. During normal operation, the equipment is run through to clear any debris after processing has been completed.
Batteries within Waste Deposits	N/A – The site does not accept batteries within waste deposits.
Batteries in ELV's	N/A - All batteries accepted on-site are separated from the vehicle prior to processing.
Cylinders Stored On-Site	Gas cylinders are in use to power forklift trucks.

Leaks/Spillages	Spill Response Process and Spill Management Plan is in place to deal with spills and leaks. (ie. The Flexible Quarantine Area, spill kits and isolation/separation will reduce the risk from leaks/spillages on-site).
Battery Thermal Runaway	Thermal runaway of a lithium ion battery occurs during exothermic chemical reactions within the battery pack, module or cell due to high temperatures or short circuits. This leads to a fire and/or explosion which can result in nearby batteries also entering thermal runaway. Thermal runaway has the potential to occur during activities that involves access to the battery internals or changing the state of a battery (examples include discharging, dismantling or intrusive testing). When these activities are required, HV Risk assessments and safe systems of work are utilised by trained employees.
Hotter Months of the Year	It is noted that during hotter months of the year, the walls of the 40ft storage containers have a tendency to become much warmer than the surroundings. Therefore batteries are not stored directly against the metal walls and thermal checks are maintained. There is the potential in the future to use insulated containers which fluctuate in temperature less.

6.2. Storage Times & Self-Combustion Factors

Testing procedures and waste internal categorisation mitigates the fire hazard associated with higher-risk batteries (CAT3 – batteries with significant damage and/or fire damage) in the main facility. Batteries which have the potential to be higher risk are stored in the Flexible Quarantine Area or inside storage containers until they can be made safe/processed. (See Section 6.14). Refer to Section 3.2 for the maximum acceptable storage time for the waste types.

If the waste materials stored need to be moved in an emergency, they can be moved in the Flexible Quarantine Area which is a sealed 40ft storage container & the separation distances are adhered to.

6.3. Managing Waste Material Stacks & Separation Distances

In order to reduce risks – and for safety reasons – waste stack sizes and separation distances have been provided in the FPMP. Stack sizes are kept small so separation distances can also be kept to a safe minimum. These are shown on the site layout plans in the EMS and FPMP.

6.4. Enclosing Stacks using Bays/Walls

This section is not relevant to EV Recycling, because waste stacks are not separated using walls/bays.

6.5. Waste Stored Within a Building

Waste is stored inside the main building (warehouse) and in store area 4. This is for a number of reasons, including practicality and environmental factors. As mentioned previously, in order to reduce risks – and for safety reasons – waste stack sizes and separation distances have been provided in the FPMP. Stack sizes are kept small so separation distances can also be kept to a safe minimum. These are shown on the site layout plans in the EMS and FPMP.

CAT3 Batteries will be stored in the appropriate 40ft storage container and depending their state (Complete, crushed, fine) they will be inside plastic containers as well. The Battery mix and any electrolyte from the processes will be stored inside plastic containers within the 40ft storage container are categorised as CAT3 as well.

The building is fully equipped with firefighting equipment – such as extinguishers – and the locations of these are shown in the FPMP. Escape routes/fire exits and assembly areas are also shown. Office areas are situated away from waste storage areas. There is also a roller shutter door in the main building which can be used for emergency access and for clearing smoke to aid firefighting.

The same principals for storing materials is followed in the 40ft storage containers.

6.6. Waste Stored in Storage Containers

The storage containers have several doors to allow access if required. The containers are locked outside of operating hours and when not in use. The separation distances are adhered to between containers and the site buildings.

Materials in the containers can be stored by hand or using a forklift to stack the waste in a way that allows for monitoring.

6.7. Layout of Waste Stacks On-Site

The layout of waste stacks on-site are shown in the FPMP 'storage quantities and area sizes'; these are also referred to throughout the document. For example, details are provided on all the relevant topics such as; Permitted amounts of waste on-site, location of quarantine area(s), operational practicalities (such as emergency vehicle access), locations of firefighting equipment, hazardous waste (if any) locations. The location of the building and affected nearby businesses/infrastructure is also provided in the FPMP.

6.8. Seasonality & Waste Stack Management

This section is irrelevant to the activities of EV Recycling, because seasonal variations in the quantity of lithium ion batteries and battery materials does not occur.

6.9. Monitoring & Turning of Stacks

Whilst the storage areas will be monitored on a daily basis, the 'turning of stacks' is irrelevant to the activities of EV Recycling. Internal training is provided to check for hot spots using thermal imaging equipment, infrared temperature gauge and/or the use of data-logger temperature sensors. The stack piles are small enough for this to be sufficient. When materials stored inside plastic containers require temperature monitoring, thermistors can be attached on the side of them and the temperature can be logged and monitored as required.

Temperature monitoring is carried out once per day using the the daily/weekly/monthly monitoring, security & maintenance checks, which help ensure the site is in good working order in the morning prior to operations commencing, and that everything is secure and locked up in the evening. All checks are logged in the Maintenance Checklist manually and filed.

A hot spot is a temperature that is higher than the surrounding areas and can be easily observed using thermal imaging equipment. If a hot spot has been identified, the operations supervisor is informed and the area is immediately isolated. The emergency response procedure is followed as necessary.

Lithium Ion batteries have a higher risk of thermal runaway if they absorb heat from their surrounding temperatures. The temperature threshold at which thermal runaway is inevitable can vary depending on the specific battery and environmental conditions, however generally around 80C and above is considered to increase the risk. Therefore, if a battery temp of 60C or above is detected, precautionary measures are put in place to prevent the temperature increasing further. Precautionary measures will also be put in place if a battery with a significantly higher temperature than ambient is detected (e.g. if a 40C hot spot is detected during the middle of winter).

Voltages are only monitored for stock waste batteries prior to and after processing activities to ensure they are made safe for recycling.

6.10. Fire Detection

Fire detection system is installed (CCTV and smoke/heat detectors). Maintenance of these systems are carried out at regular intervals in accordance with a certified body; such as UKAS-accredited third party certification schemes. Fire alarm tests are conducted weekly, and fire drills are conducted at least annually.

6.11. Fire Suppression Systems

Due to the nature of the main fire hazard (ie. Lithium ion batteries) and the areas involved, it is not practical to install fire suppression systems. We have liaised with Mid And West Wales (MAWW) fire services to discuss our circumstances and they have been on site to conduct risk assessments.

6.12. Water Supply & Fire Water Management

Water is supplied to the site through the mains system. **There is a water hydrant located 15 meters from the end of our building** (It is highlighted in section 3.1). After communicating with our local fire brigade authority, it has been confirmed that this will be used in the event of a fire. The fire extinguishers located in the site are for extinguishing small fires only.

Fire water run-off is contained using an impermeable concrete surface, impermeable wall and yard. The yard slopes towards the drainage system so that surface water does not run off into surrounding areas.

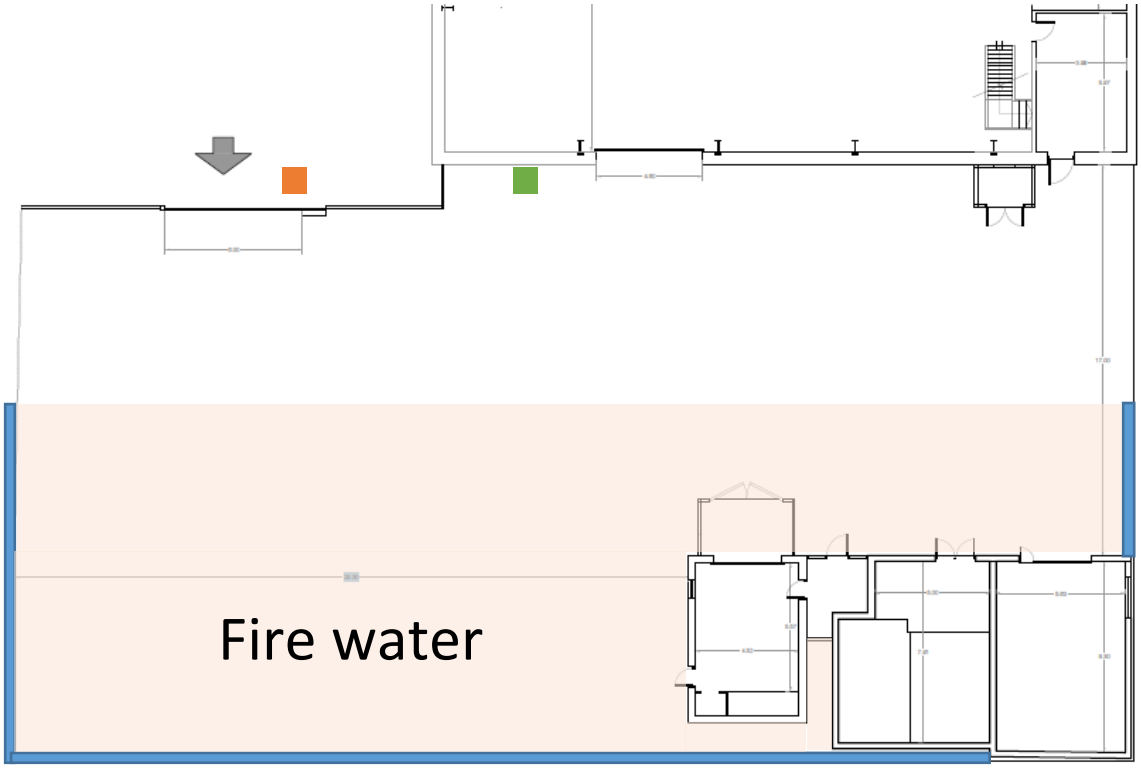
The containment ensures that fire water does not enter and contaminate local environmental receptors. These are detailed in the FPMP, Environmental Risk Assessment (ERA) and EMS. Primary and Secondary containments are provided.

In order to avoid the surface water sewer or the stream behind the building site being contaminated with fire water, we have incorporated the use of an immersion tank fitted with a Flapstopper (retains all water from the yard on site), spill kits and an impermeable wall around the site yard.

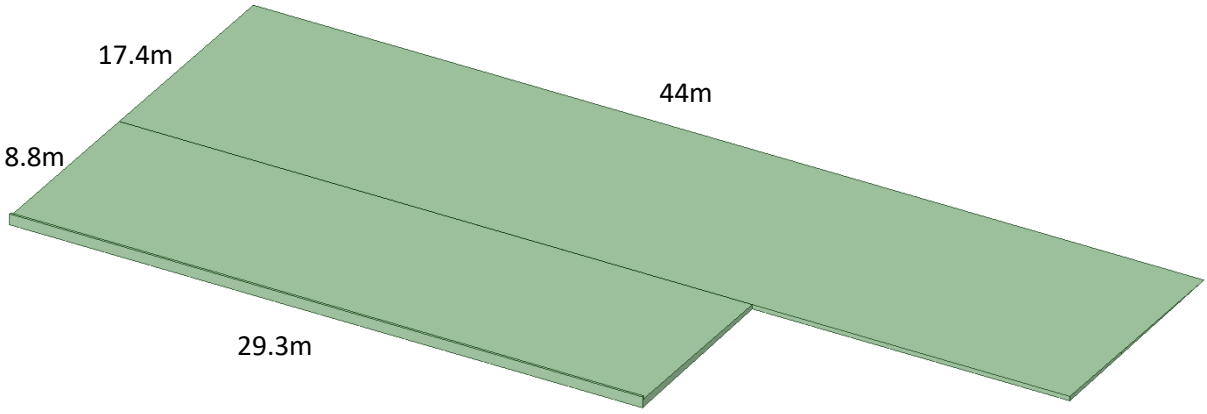
An internal study has been made and found that all the site yard drains pass through the point highlighted in orange in the picture below. This is situated within the permitter of the facility. This information has been confirmed by a Welsh Water trace that they completed on the 5/10/2020.

An automated flap (Flapstopper) is located in the drain (Orange) and can be operated remotely from a box next to the main gate (Green).

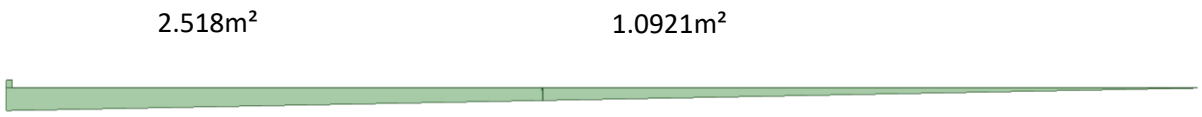
In the event of fire, the fire water will remain in the yard, and local authorised contractors will be hired to remove it from the site after the event. This will be done by pumping the water out from the lowest point in the site.



With the wall in place the site will be able to hold more than **120 m3.**
Below is a CAD drawing of the approximate volume of water which will stay on the site.



A cross section of it can be seen below with the surface areas provided.



Water needed for extinguishing the biggest stack:

The following calculations were used to calculate how much water is needed to extinguish the biggest volume of waste inside the 40ft storage containers or buildings.

40ft storage container maximum capacity = 67.7m3 (This is the worst case scenario, 24 Tonnes of lithium material (which is what we are declaring) it will only accumulate **11.14 m3** capacity within the container).

Nevertheless the calculations are made on the 67.7m3 capacity and the site will be able to hold this amount of water without allowing the fire water to go outside of the site.

Cubic Capacity	67.7	m^3
Litres per minute	451.33	L per minute
For 3 hours	180	minutes
Total Litres needed	**81239.4**	Litres of water needed for the biggest stack
Total volume of water which needs to be contained	**81.24**	m^3

Realistically with the maximum capacity of the 40ft storage container of 11.14 m^3 or 24 Tonnes of material, the following calculations are valid:

Cubic Capacity	11.14	m^3
Litres per minute	74.26	L per minute
For 3 hours	180	Minutes
Total Litres needed	**13368**	Litres of water needed for the biggest stack
Total volume of water which needs to be contained	**13.37**	m^3

The Litres per minute needed was calculated assuming that 2000 Litres of water are needed for 300m^3 as per NRW guidelines.

Conclusion

Even with the 40ft storage containers and temporary building in the yard, the site will have the capacity to hold the fire water needed for the biggest stack which is 13.37 m3.

6.13. Techniques used to minimise the risk of fire spreading on site or from the site

Separation distances are maintained between the waste storage areas. This helps limit the spread of a fire from one 40ft storage container to another or to the main building.

The batteries within the quarantine area have an acceptable distance both from the main site and from the next building (off site).

The diagram in section 5 shows all the locations of the fire extinguishers.

All the doors from the main warehouse to the office space are fire doors and rated to 30 minutes.

6.14. Pre-Acceptance Procedure

Pre-Acceptance Procedure	
Step	**In compliance with the Standard Technical Guidance (SGN) 5.06**
1	During the initial customer communications, the specific composition and quantity of waste is discussed and agreed upon prior to arranging delivery. These discussions include recording the waste information in an official document in order to assess the waste and ensure it is permitted to be accepted by the facility. (e.g. Waste Transfer Note and if required a Dangerous Goods Risk Assessment).
2	If a new or unfamiliar variant of the waste is being discussed (for example, a type of lithium ion battery with different composition, layouts or failure modes), a sample should be investigated in order to assess suitability prior to acceptance. For new customers, a site visit may also be required to ensure that waste is being handled properly and stored appropriately **(for example, all materials – including hazardous and non-hazardous materials – are stored in sealed containers and separated from each other in order to prevent potential contamination of waste and product).**
3	If all requirements are met, arrangements are made with the customer for delivery of the consignment of waste to the site. EV Recycling is able to offer assistance with logistics and packaging where required.
4	The pre-acceptance discussions are recorded and used for the waste tracking system and to assist with the acceptance of the consignment onto the site upon delivery.

6.15. Acceptance Procedure

Acceptance Procedure	
Step	**In compliance with the Standard Technical Guidance (SGN) 5.06**
1	Upon arrival of the consignment to the site, the transport vehicle is stopped in front of the gate ready for inspection. The necessary ID/paperwork checks are conducted to confirm the expected quantity and waste type (including Waste Transfer Note, ADR checklist and any other paperwork agreed with the customer such as packing lists). Prior to accepting the vehicle on-site, the operator must check if the vehicle is a hot load by answering the following question: Are there any active emissions of smoke or electric sparks/arcs from the area where the batteries or hazardous waste is being stored/transported? **If yes, inform the occupants of the vehicle and inform the emergency services immediately. Inform the fire marshal on site.** If the answer is no, and the paperwork checks/inspections have been conducted to a satisfactory standards, the operator instructs the vehicle to a suitable parking location and acceptance to the site/unloading commences. New deliveries are moved to the inspection/test area before being categorised and stored appropriately. Waste quantities are verified using weighing scales, & recorded using the relevant documentation.
2	Visual inspection: If there are indications on the batteries or **hazardous waste battery manufacturing scrap materials** of the following then they must enter quarantine for 48 hours. - Indications of explosion or fire taken place - Indication of loose components - Signs of leaked electrolyte - Cracks on the casing - Holes on the casing - Dents or scratches more than 4mm deep - High Voltage connections damaged - Insulated conductors exposed - Coolant leakage - Structural damage to sealed containers containing hazardous waste (e.g. battery manufacturing scraps).

3	The inspection dictates which category a battery is sorted into. The three categories are; CAT 1, CAT 2 or CAT 3. **CAT1: Safe battery, in good working order. Product.** The battery is cosmetically and functionally suitable for reuse or repurpose, adhering to the Waste Hierarchy. All product batteries are transported to the engineering site/storage facility for storage, reuse and repurposing projects as required. Product battery packs may be dismantled to module/stack level and discharged for easier handling and safer storage. **CAT2: Safe battery, but rework/repairs are required for reuse or repurposing.** The battery is classed as waste until rework is carried out, OR it is permanently waste and will enter the recycling/treatment process. Waste batteries are stored in the approved waste storage areas of the facility at EV Recycling. **CAT3: Potentially dangerous battery. Waste.** Signs of significant cosmetic or functional damage, such as fire damage. Stored in the quarantine container. The battery is made safe at the earliest opportunity and recycled/treated appropriately. Batteries are categorised inside the Inspection & Test Area, and then moved to the appropriate storage/treatment areas. Batteries are strictly prohibited from entering the recycling/treatment area until they have first been inspected and made safe (e.g. discharged). **All hazardous manufacturing scraps are classed and labelled as waste scraps. They are stored in the assigned waste storage areas until ready to be treated/processed.**
4	If the waste arrives without any documentation explaining what it is, or if the delivery includes waste that was not agreed on during the pre-acceptance procedure, then it will not be accepted on to the site. This satisfies the Duty of Care, waste regulations and environmental permit. Under these circumstances, EV Recycling has a duty to decline acceptance, prevent the delivery vehicle from entering the site and inform the customer of the issue.
5	After the waste has been verified, accepted and stored, the quantities are entered into the internal waste tracker by the authorised person. All documentation is kept as electronic copies and a hard copy. Documentation must be kept for records and audits. **Hazardous waste battery manufacturing scrap materials will be sampled periodically using XRF analysing equipment to ensure the composition of the material meets the agreed pre-acceptance criteria.**

6.16. Hot Loads

A hot load in this case is a delivery of waste material which is emitting smoke, fire or fumes. Hot loads therefore pose a risk to the site, employees and the local environment. All incoming deliveries must pass the pre-acceptance and acceptance processes before being permitted onto the site and unloading commencing. As part of the acceptance process, a visual inspection is carried out to confirm that there are no indications or signs of active emissions of smoke or electric sparks/arcs.

Should a potential fire be detected, inform the occupants of the vehicle, raise the alarm and follow the emergency response procedure. It is the responsibility of a fire marshal to notify close by receptors.

If a delivery vehicle on site is showing signs of fire or emissions, it is designated a hot load. Ask the driver to isolate the delivery vehicle if possible, raise the alarm and follow the emergency response procedure. It is the responsibility of a fire marshal to notify close by receptors.

6.17. During and After an Incident

In the event of fire on the site, any incoming deliveries of waste to the premises must be informed at the earliest opportunity. A fire marshal will liaise with the operations supervisor and admin manager to ensure this is actioned. Waste batteries must be returned to the sender until the facility is ready to receive the waste, or redirected to the nearest recycling centre.

All incoming waste is arranged with the customer/supplier prior to arranging delivery, and recorded using the required documentation as part of the pre-acceptance process (e.g. Waste Transfer Note, Dangerous Goods Risk Assessment, Dangerous Goods Note). The waste type, quantity and specifications are recorded and a decision is made whether the waste is able to be accepted. The company is also able to help the sender with logistics and carriage of dangerous goods arrangements, ensuring that ADR packaging requirements are met. The site does not accept daily call-ins; every delivery is pre-agreed and assessed according to the company processes. These precautions mitigate the chances of a fire occurring during transit or upon arrival to the site.

If a fire occurs on-site, a fire marshal will adhere to the fire procedure outlined in this document and in the Environmental Management System (EMS). The sites Emergency Response Procedure is actioned.

After an incident, a CAR is discussed and raised and a RIDDOR report generated if necessary. The company will work closely with Health & Safety and Fire Inspectors where required to ensure lessons learned are captured and actioned upon.

The removal of any contaminated waste is arranged with an authorised and approved contractor, following the removal of waste process.

After an incident and decontamination of the site has been completed, a maintenance security checks will be performed using the approved checklist. It is then confirmed with the operations supervisor, site supervisor and standards department that the site has been returned to a suitable state for normal operations to commence.

Confirm that the Flapstopper is reset.

Normal operations will resume when all parties concerned are satisfied with the outcomes.

6.18. Reviewing and Monitoring your Fire Prevention & Mitigation Plan

The FPMP is a live document and reviewed regularly by the company in order to capture any business changes. The reviews occur as part of the integrated management system documentation audits, complying with ISO9001, ISO14001 and ISO45001.

The FPMP must also be reviewed if the following circumstances occur:

- After fire, in order to improve the mitigation measures.
- If additional combustible waste streams accepted on site.
- If increase waste volumes accepted and/or stored.
- If there is a development of site infrastructure – new buildings.
- If there is installation of new equipment or plant.

With regards to staff training, the location of the FPMP will be located online and stored as a hard copy in a folder accessible to all personnel. A hard copy will also be available at the gate entrance.

All the procedures are clearly laid out in separate documents and are used for staff training. Training for new starters (e.g. during induction for recycling operatives), refresher courses and emergency drills will be conducted periodically.

All the processes, forms and any other documents are shared online, and any member of staff has access to them at all times. Frequent safety toolbox talks are used to communicate updates and reminders, and operation briefings are provided by the site supervisor frequently.

The site is monitored for at least the following activities;

- Inspection before, during and after shift
- Separation distances
- Monitor, control and record temperatures
- Monitoring of waste storage times
- Equipment and plant maintenance checks by qualified personnel (depending on the equipment)
- Ensure periodic testing of fire prevention and mitigation equipment is carried out (including emergency lighting and fire door checks).

If any of the site monitoring methodology changes, this document and the relevant procedure/process document will be updated.

Document Details:	
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