



Swansea Scrap Yard Fire Prevention & Mitigation Plan

Procedure	ECP 40
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Prepared by: Environmental Manager

Approved by: Health & Safety Manager

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1.0 Key Information

SITE DETAILS			
Location: Graigola Wharf, Kings Dock, Swansea			
Postcode: SA1 1QT			
SITE CONTACTS			
Name	Position	Office Hours (Mon-Fri 6am-6pm / Sat 6am-2pm)	Out of Hours
TBC	Yard Supervisor (COTC Holder)	TBC	TBC
Paola Menghi	Scrap Handling Manager	07841 781342	07841 781342
EMERGENCY SERVICES			
Ambulance, Fire & Police		999	999
REGULATORS			
Natural Resources Wales		0300 065 3000	0300 065 3000
Local Authority Environmental Health: City & County of Swansea Council		01792 635600	01792 635600
OTHER KEY CONTACTS			
Name	Position	Office Hours (Mon-Fri 8am-4pm)	Out of Hours
Richard Lewis	Environmental Manager	07739 855918	07739 855918
Patricia Carranceja	Health & Safety Compliance Manager	07739 855927	07739 855927
ABP Swansea	n/a	0870 609 6699	0870 609 6699

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2.0 Introduction

The purpose of this fire prevention plan 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.

2.1 Risks of fires

2.1.1 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 and 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

2.1.2 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:

- waste metals (scrap metal)

Types of combustible waste include:

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There are no combustible wastes being stored onsite

Other activities

- Storage of fuel for onsite plant and machinery
- Storage of lubricating oil for onsite plant and machinery

3.0 Whole Site Considerations

3.1 Protection of human life

To ensure suitable control measures are in place to protect personnel on site there are arrangements in place for adequate means 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 (see Appendix 2).

3.2 Location and neighbouring sites/ businesses/ environment

Sites - The adjacent land includes operations associated with the Port of Swansea. Northeast is King's Dock and southeast is Queen's Dock.

Residential - There are no residential or other sensitive land uses within the vicinity of the site. The nearest residential properties are located near the edge of the Prince of Wales Dock (500 metres north). Further residential properties (associated with Swansea Marina) are located approximately 730 metres west.

Businesses – To the east is a waste reclamation and recycling centre and further east is a separate mixed metal recycling facility. Other operations in the immediate dock area are associated with the operations of the dock to import and export various materials.

Environment – No protected sites are identified within 1-km of the Site, which includes Sites of Special Scientific Interest (SSSI), Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Ramsar Sites, National Nature Reserves (NNR), Areas of Outstanding Natural Beauty (AONB), National Parks and Local Nature Reserves (LNR) within 1-km of the Site.

The Site is located within the Port of Swansea and is surrounded by surface water on two sides (i.e. King's Dock to the north and Queen's Dock to the south).

Infrastructure - Access to the site is via an existing private access track leading off Baldwins Crescent and then to the A483.

3.3 Risk to sensitive receptors

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

The nearest local fire service station is Swansea Central Fire Station, The Strand, Swansea, SA1 2AW – approx. 10 minutes from site (2-3 miles dependent on route).

4.0 Managing common causes of fire/ sources of ignition

4.1 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. Swansea Dock has 24 hour manned security at the entrance.

4.2 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 areas 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.

4.3 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.

4.4 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.

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4.5 Hot works

Hot works are prohibited within the permitted area.

4.6 Industrial heaters

Not applicable – currently there are no industrial heaters on site; to be reviewed if introduced.

4.7 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.

4.8 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 6 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.

4.9 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

4.10 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 are aimed to prevent unauthorised waste being accepted and where accidentally accepted limiting the impact; and 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;

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- 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 (refer to section 3.10)

4.11 Deposited hot loads – quarantine area

A designated quarantine area will be located on site (refer to appendix 2 - Site Evacuation Plan) 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.

The quarantine area will be kept clear at all times – unless it's being used in the event of a fire.

4.12 Site/plant shut-down

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

4.13 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 by grab crane

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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.

5.0 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.

5.1 Manage storage time

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'.

5.2 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)
- separate and segregate combustible content from within scrap metal
- staff are trained to detect and manage hotspots; and to include stock management
- routinely turning of piles to ensure the waste remains cold and any localised warming is dissipated quickly
- 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'

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.

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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.

6.1 Maximum pile sizes

Waste Item	Storage Area	Storage containment / type / restrictions
Ferrous Metals	Concrete hardstand	Piled (Max 4.5 Meters high)
Non-Ferrous Metals	Concrete hardstand	Piled (Max 4.5 Meters high)

Table 1 – Waste Item storage and pile sizes

For all waste piles, the maximum length or width will be no more than 20 metres.

Waste piles will be segregated into single waste types and interlaced to break up the chimney effect.

7.0 Prevent fire spreading

7.1 Separation distances

A separation distance of at least 6 meters between waste piles and the site perimeter, any buildings, or other combustible or flammable materials will be maintained.

8.0 Quarantine Area

Refer to section 4.11

9.0 Detecting fires

9.1 Fire Alert Procedures

- 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 (as per appendix 2) 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

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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. See Fire Service Act 2004 Sect. 45 for Fire Service Powers of entry.

9.2 Non-waste facilities on site

The main office will have a fire/smoke detection system, in line with building standards. Fire extinguishers will be provided with training for personnel likely to use them. In general, waste will be stored at least 10 meters from office/welfare areas.

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

10.1 Prior to Fire & Rescue Service 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;
- Ensure appropriate machinery is standing by to help assist the Fire & Rescue Service to create appropriate breaks as instructed;
- 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

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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;
- Where practicable deploy sandbags to form barrier between the quayside and the affected waste, thereby creating a containment area in order to prevent the uncontrolled discharge of firewater to the dock.
- Ensure access to site is clear for Fire & Rescue Service to gain easy access.
- Notify Senior Celsa Management, Contact ABP Office and Natural Resources Wales (contact numbers in section 1.0 Key Information, on page 1 of FDMP)

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 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.
- 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 Post-Incident Procedures

- Remove all burnt material using appropriate and lawful disposal methods
- Contact clean up contractors where required including an approved supplier will be appointed to tanker away and dispose of fire waste water.
- Post incident reports and enquiries. Ensure any incidents are recorded on ProSafety.
- Notify Natural Resources Wales, Local EHO and the FRS when the site has been reinstated. In the event of a fire this Fire Prevention Plan will be reviewed and improved as required and updated copies provided to the relevant authorities.

11.0 Communication, training and drills

This Fire Prevention & Mitigation Plan including any relevant records will be readily available to access at all times, including during an incident. All records will be stored in the site office and will be communicated during the company site induction.

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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 through 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 reviewed 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.

N.B. - please turn over for section 12.0 Fire Risk Assessment

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12.0 Fire Risk Assessment

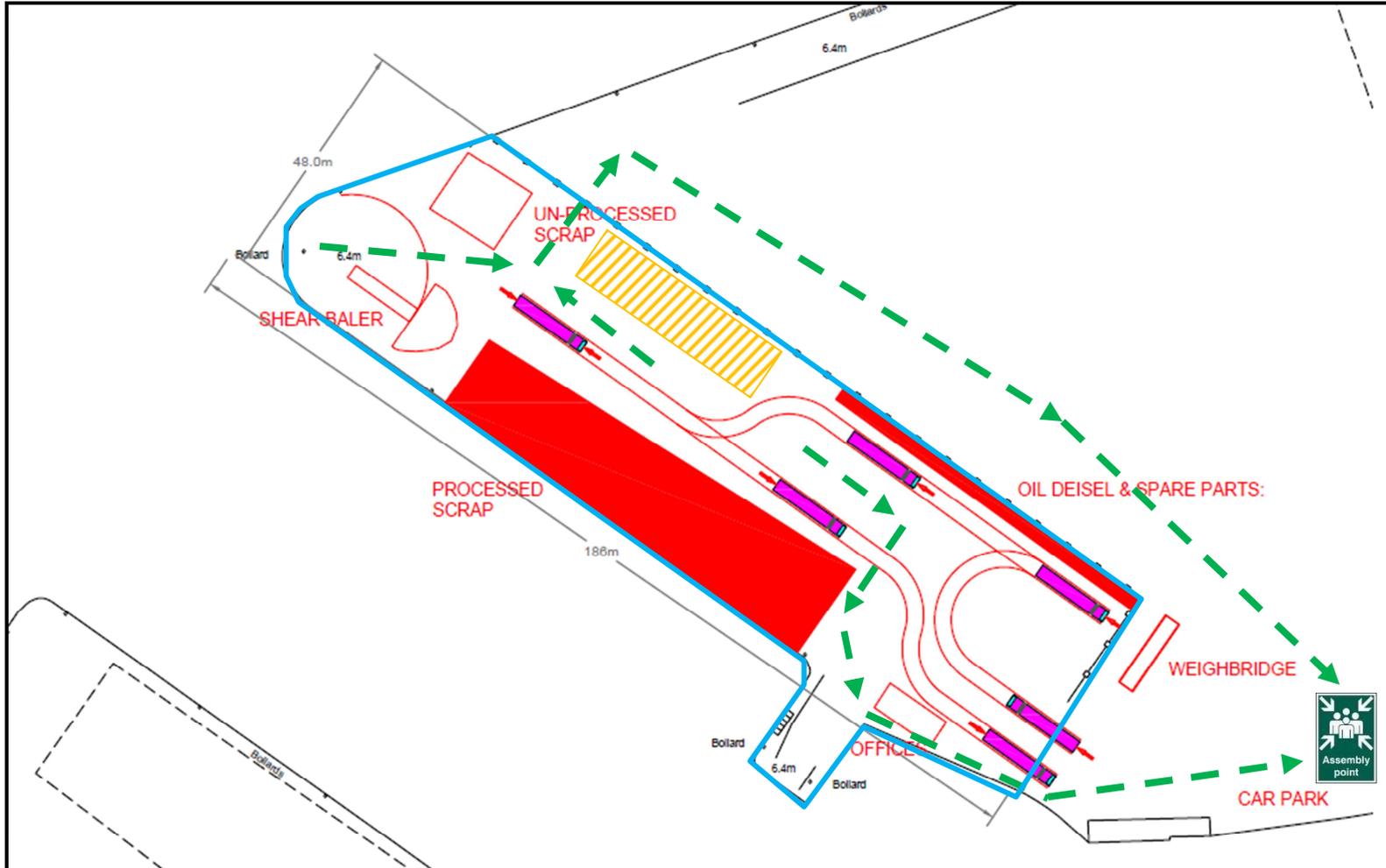
Possible Cause	Applicable	Reason	Control Measures
Self combustion;	Y	Potential for scrap metal to be contaminated with combustible material e.g. oils, paints, grease etc.	Scrap metal is purchased to particular grades that should be free from such contaminants. Upon arrival at site the scrap is inspected 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 dock has 24 hour manned security entrance and the site has CCTV in place.	Dock security and site 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;	X	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.
Naked lights;	X	All light fixtures that may be heat sources are raised on posts high above ground level.	No further controls required
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. welding, cutting;	Y	Hot works prohibited with the permitted area	No further controls required
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 lightning 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.

Table 2 – Potential Causes of Fire and Prevention Measures

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Appendix 2 – Site Evacuation Plan



KEY

-  = Exit Route
-  = Assembly Point
-  = Site Boundary
-  = Quarantine Area