



Fire Prevention & Mitigation Plan

Site Name: **Former JR Steel works**

Environmental Permit Number: **EPR/EB3397TU**



Table of Contents

1	Key Information & Table 1
2	Introduction
3	Fire Prevention Plan
4	Site Materials Inventory & Storage Requirements & Table 2
5	Fire Prevention & Mitigation Measures
6	Fire Response Plan
7	Fire Alert Procedures
8	Procedure In Event Of Fire <u>On Neighbouring Sites</u>
9.1	Emergency Fire Procedures (Prior To FRS Arrival)
9.2	Emergency Fire Procedures (FRS Arrival)
9.3	Post-Incident Procedures
<u>Appendix 1:</u> Site Plan Permit Area Layout and Site Location Plan Site Location Plan	

List of Tables

<u>Table 1:</u>	Key Site and Emergency Contacts
<u>Table 2:</u>	Site Materials & Storage Inventory
<u>Table 3:</u>	Fire Status Escalation Actions and Procedures
<u>Table 4:</u>	Fire Risk Assessment - Possible Causes Of Fire
<u>Table 5:</u>	Fire Risk Assessment - Potential Fire Sources & Prevention Measures

1 Key Information

Table 1 – KEY SITE AND EMERGENCY CONTACTS

This table contains information and contacts you may need in an emergency

SITE DETAILS		
Location: Former JR Steel Works, Bryntywod, Llangyfelach, Swansea.		
Postcode: SA5 7LE		
Site Access Grid Reference: 51* 40 38.21 NORTH, 3* 57 59.63 WEST		
SITE CONTACTS	Office Hours 7am-5pm	Out of hours
Owner/Site Manager: GAVIN GRIFFITHS	01792 795829	07971 784003
General Foreman: DYLAN DAVIES	01792 795829	07920 852439
Fire Warden: PHIL COX	01792 795829	07854 393926
Site Supervisor/Fire Deputy Warden: JOHNNY JONES	07972 886935	
Security Contact: ANDREW WRIGHT	01792 795829	07772088880
Landowner: GAVIN GRIFFITHS	01792 795829	07971 784003
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 (Local)	01792 325560	03000 65 3000
NRW (24 hour emergency hotline)	03000 65 3000	03000 65 3000
UTILITY AND KEY SERVICES	Office Hours	Out of hours
Water undertaker: WELSH WATER	0800 052 0130	0800 052 0130
Sewerage undertaker: TBC		
Gas supplier: N/A		
Electricity supplier: SWALEC	0800 052 0400	0800 052 0400
Oil supplier: WEST WALES LUBRICANTS	01267 222064	
Fuel supplier: WATSON FUELS	01291 426907	
Chemical supplier: AUTOSMART	07967 750855	
Oil spill contractor: NATURAL SOLUTIONS	01656 741799	01656 741799 NRW 03000 65 3000
Maintenance contractor: JAMIE JONES	07772422536	
Electrician: CAIN McKENNA	07896 835899	



Plumber: JAMIE JONES	07772 422536	
Locksmith: LOCK TECH	01792 655680	
Joiner: JASON DYER	07989 247977	
OTHER KEY CONTACTS	Office Hours 7am-5pm	Out of hours
Head Office:	01792 795829	
Adjacent landowners: AFON TINPLATE	01792 312000	
Specialist advisors: TONY DAVIS	07581062375	07581062375

Specialist advisor:	Tony Davis	07581 062375	07581 062375
Insurance Provider	Griffiths & Armour Insurance Brokers	+44 (0)151 600 2120	+44(0)7976 152973



2 Introduction

- 2.1** This Fire Prevention Plan explains how the proposed acceptance and storage of various waste types under SR 2008 No 3 be conducted to ensure that the risks of fire are effectively assessed and controlled.

3 Fire Prevention Plan

- 3.1** This Plan has been prepared with reference to the following documents:

1. Fire Prevention and Mitigation Plan Guidance – Waste issue 1 May 2016
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)

- 3.2** 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:

- 3.3** The nature of potentially combustible materials stored – these being paper/cardboard, wood and textiles.

- 3.4** The presence and location of potential ignition sources - this being principally accidental sources, as due to the nature and characteristics of the waste treated and stored at the site, it is not envisaged that they are likely to exhibit 'spontaneous' combustion characteristics.

4 Table 2 - Site Materials Inventory & Storage Requirements

Materials	Max Quantity (approximately)	Solid/Liquid/ Gas or Powder	Fire Implications	Location
Wood	25 tonnes	Solid	Combustible	Impermeable surface, loose in bay (Emptied each night) shown on site layout plan.
Wood	4 tonnes	Solid	Combustible	Stored in Skip
Soft Plastic	0.5 tonnes	Solid	Combustible	Stored in Skip
Hard Plastic	2 tonnes	Solid	Combustible	Stored in Skip
Cardboard/Paper	3 tonnes	Solid	Combustible	Stored in Skip
Metal	5 tonnes	Solid	Non-combustible	Impermeable Surface, loose in Bay
Inert Fines	10 tonnes	Solid	Non-combustible	Impermeable Surface, loose in Bay
Hardcore	15 tonnes	Solid	Non-combustible	Impermeable Surface, loose in Bay
Residual Lights	1 tonne	Solid	Combustible	Impermeable Surface, loose in Bay
Residual Heavies	3 tonnes	Solid	Combustible	Impermeable Surface, loose in Bay



5 Fire Prevention & Mitigation Measures

5.1 Operational controls

- 5.1.1** The permitted area will be a strictly NO SMOKING area with appropriate signage erected.
- 5.1.2** There will be no fuel stored within the permitted area.
- 5.1.3** A 'Hot Works' permit is required from Griffiths Waste Management (GWM) in order for contractors to carry out hot works. Any 'Hot Work' required on machinery/plant / equipment associated with the activities will NOT be conducted within the permitted area.
- 5.1.4** Access to the Site is via security gates and weighbridge. The access is security controlled 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 Site Operational Layout shown in 5.2_ The quarantine area will be utilised to isolate any burning materials thereby reducing the risk of fires spreading between other material stockpiles and/or plant and machinery. In the event of a fire, the quarantine area will be utilised to isolate any burning materials thereby reducing the risk of fires spreading between other material stockpiles and/or plant and machinery. The quarantine area will be bunded with sandbags to mitigate against firewater runoff. The quarantine area will be kept clear at all times.
- 5.1.6** When operational, a member of the Site Operations Team will visually inspect the permitted 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.

5.2 Site Operational Layout Plan:

SEE APPENDIX 1



5.3 Storage Management & Mitigation Measures

- 5.3.1** A member of the Site Operations Team conducts a daily visual inspection of all the waste processing and storage areas to ensure there are no signs of heating.
- 5.3.2** If identified a member of the Site Management Team is immediately notified, escalating conditions as detailed within Table 3 as necessary.
- 5.3.3** If required, a member of the Site Operations Team will conduct temperature measurements of the working piles utilising a thermal probe.
- 5.3.4** In the event of any temperatures exceeding 15° Celsius above the ambient temperature being detected, a Member of the Site Management Team will be notified immediately. Temperature checks will be conducted at regular intervals throughout the operational day. Operatives will be prepared to implement procedures identified within Table 3.
- 5.3.5** In the event of further temperature checks indicating a temperature 20° Celsius above the ambient temperature implement procedures within Table 3 escalating as necessary.
- 5.3.6** Waste will not be stored onsite for longer than 6 weeks.

5.4 Fire Status & Procedures

Table 3: Fire Status Escalation Actions & Procedures

Alert Status	Characteristics	Action	Preparation
Status 1	Visible signs of heating	Evaluate temperature measurement	Equipment ready for deployment (Loading Shovels, Spillage Kits, Monitoring Equipment etc.) Be prepared to initiate fire procedures (Section 9) and notify the Site Management Team if not already present.
Status 2	Material smouldering/ smoke emissions	Move material to Quarantine Zone If necessary, deploy portable firefighting equipment and activate if required.	Equipment ready for deployment (Loading Shovels, Spillage Kits, Monitoring Equipment etc.) Be prepared to initiate fire procedures (Section 9) and notify the Site Management Team if not already present
Status 3	If Temperature Continues to Escalate	Supervisor / Site Operations Manager to notify FRS of continuing rise in temperature. If practicable dig out and spread on quarantine area for cooling.	Equipment ready for deployment (Loading Shovels, Spillage Kits, Mobile sandbags, etc.) Equipment ready for deployment. Be prepared to initiate fire procedures (Sections 7-9)
Status 4	Visible Flame	Raise the site fire alarm immediately & initiate Fire Procedures detailed at <u>Sections 7-9</u> . Alert FRS and provide onsite support as directed by FRS	Deploy sandbags around the quarantine area to mitigate against potential fire water runoff
Status 5	Full Fire Established	On arrival of the FRS the appointed Fire Warden will transfer control of the incident over to the Chief Officer who will instruct site employees accordingly. If safe to do so, at the direction of the FRS, use machinery to remove materials ablaze to the fire quarantine area. Deploy sandbags along the perimeter of the building & around the quarantine area to mitigate against potential fire water runoff.	Prepare for the arrival of the FRS and follow all instruction, as well as having all available machinery ready for deployment to assist in tackling the blaze.



5.5 End of Day Operations

- 5.5.1** Operatives responsible for the operation of machinery (Loading Shovel and Stereo Loader) will park them at a distance from any exposed waste storage piles. This will avoid any short-circuiting of electrics creating a source of ignition when the site is closed.
- 5.5.2** 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.
- 5.5.3** 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 exposed 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.
- 5.5.4** Any issues identified in the visual inspection will be logged.

6 Fire Response Plan

- 6.1.1** The Fire & Rescue Service will have access to fire hydrants and potential river water abstraction as indicated in 'Site Location Plan– Permit Area Layout' Appendix 1.
- 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 Prevention & Mitigation 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 at Beechwood House upon hearing the alarm.
- 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 the Senior Security Officer(Colin Roberts) 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 *Raise the alarm and initiate evacuation of people on site to the assembly area*

- 9.1.1** Dial 999 and call for assistance from Fire & Rescue Service;
- 9.1.2** Ensure appropriate machinery 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 plant machinery 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 operations of the fire risk;
- 9.1.5** If required and practicable deploy sandbags to form a 'bund' around the affected waste, thereby creating a containment area in order to prevent the uncontrolled discharge of firewater.
- 9.1.6** Ensure access to site is clear for Fire & Rescue Service to gain easy access.
- 9.1.7** Notify Senior Management and Natural Resources Wales (contact number on page 1 of FPMP)

9.2 Emergency Fire Procedures (FRS Arrival)

- 9.2.1** On arrival of the Fire & Rescue Service (FRS) the responsible person will provide this Fire Prevention Plan to assist in combating the fire.
- 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 for fire water run off the use sprays and fogs rather than jets will be considered by the FRS.
- 9.2.5** If necessary, instigate a controlled burn; the final decision to do this will rest with the FRS's Incident Commander.
- 9.2.6** Under FRS instruction, ABP 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.
- 9.2.7** Where practicable, isolate and recycle firewater from within the constructed containment bund (9.1.5.).
- 9.2.8** Where safe to do so, GWM Personnel will assist in the removal of unaffected material using mechanical equipment as instructed by the FRS.

9.3 Post-Incident Procedures

- 9.3.1** Remove all burnt material using appropriate and lawful disposal methods



- 9.3.2** Contact clean up contractors where required
- 9.3.3** Post incident reports and enquiries
- 9.3.4** Notify Natural Resources Wales, Swansea City Council (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.



Fire Risk Assessment

Table 4: Possible Causes of Fire

Possible causes	Applicable	Reason
• Self combustion;	Y	Potential for certain waste types (wood) to spontaneously combust if hot spots are allowed to build.
• Incompatible wastes;	X	The chemical characteristics of the materials accepted onsite do not indicate any risk of adverse reaction. Materials are segregated for storage.
• 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.
• Smoking;	X	The site is a designated NO SMOKING area
• Hot Loads Deposited at Site	X	Load inspection as per waste acceptance procedure.
• Sparks from loading buckets;	y	Potential, dependent upon surface eg concrete but lower if hot rolled Tarmac surfacing is used.
• Hot works e.g. welding, cutting;	Y	Hot Works prohibited with the permitted area
• Hot exhausts;	Y	Mobile equipment can ignite waste trapped near their exhausts
• Industrial heaters;	X	No industrial heaters onsite
• Open burning onsite;	X	No opening burning takes place on the port
• Weather, e.g. lightning strikes	Y	Naturally occurring lightning strikes could be a source of ignition.
• Neighbouring Site Activities	Y	Proximity to waste wood processing facility

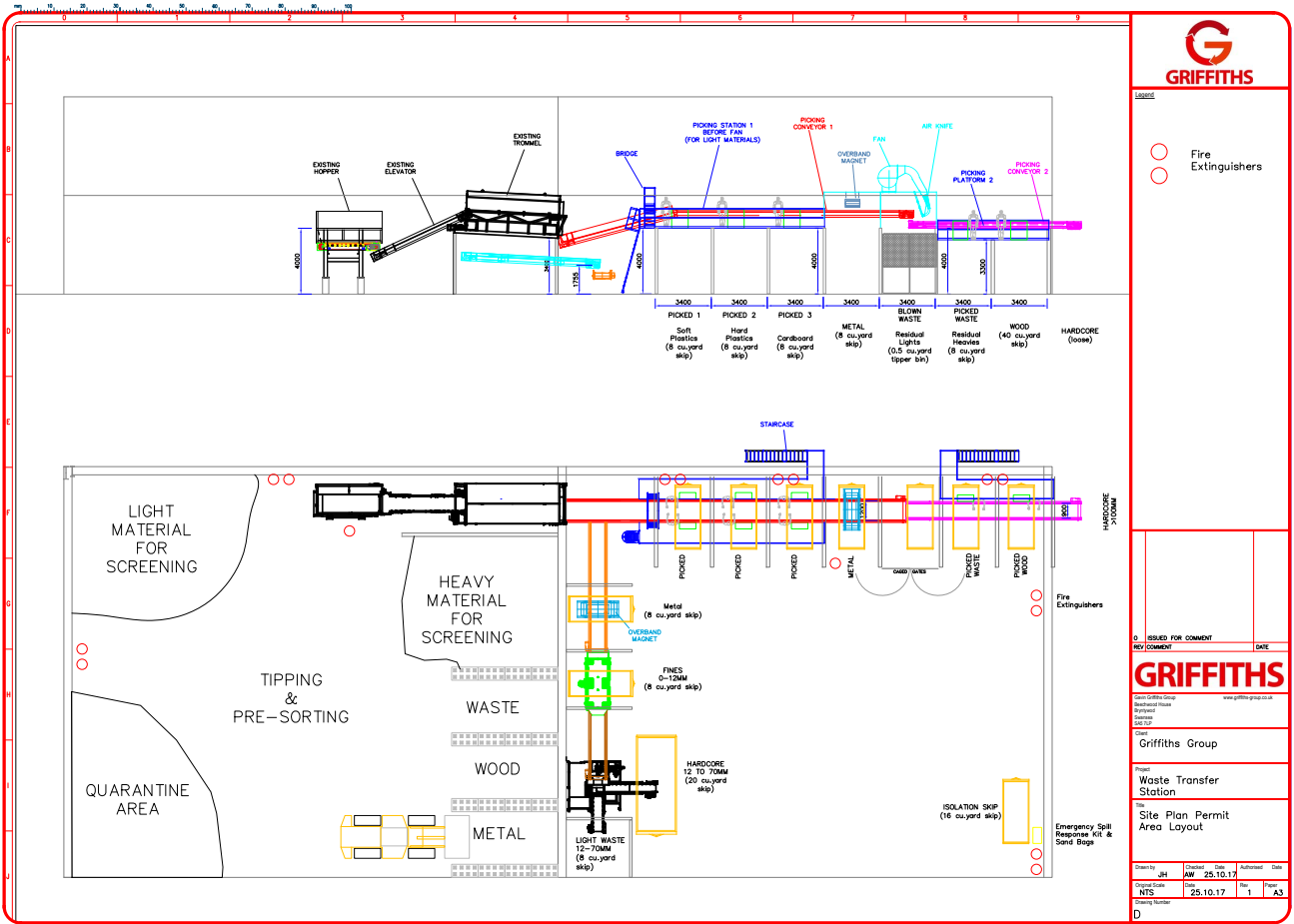
Sources of Ignition & Preventative/ Reduction Measures

Table 5: Potential Fire Sources & Prevention Measures

Potential Causes	Primary	Secondary	Tertiary
Self-Combustion	Material will only be stored on the facility or a maximum of six weeks.	The Site Operations Team visually inspects (daily). If required and physical examines to include daily temperature invasive measurements the working piles/ material stockpiles utilising a temperature probe.	Containment & use of water sprays to dampen material.
Plant or equipment failure	Equipment isolated whilst awaiting repair and parked away from waste storage area's overnight.	Daily Pre User Checks and maintenance inspections at frequencies governed by the planned maintenance programme.	Spillage and leakages procedure specified in the Environmental Incident Response Plan.
Hot works	Hot Works Prohibited on Permitted Area		
Hot exhausts	Operatives are aware of the risk of hot exhausts igniting trapped waste	Operatives clear away waste from exhausts at the end of shifts (End of Day Operations).	Portable fire extinguishers in vehicles.



APPENDIX 1



Griffiths Waste Management
Fire Prevention & Mitigation Plan v1.0 Draft

