

Working Plan

for the Receipt, Storage and Transfer of Controlled Waste at Giants Wharf, Briton Ferry

Appendix D

Refuse Derived Fuel (RDF/SRF) and Wood Chip



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		Name: Andrew J Williams	
		Position: Chief Executive	
		Signed:	
		Date:	

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1. General Considerations

● Introduction and Document Status

- a) Briton Ferry (Shipping Services) Ltd operate a port storage and shipping facility on their **Giants Wharf** on the bank of the River Neath as shown in **Appendix A - Site Plans 1.1 - Site Location Plan** to this **revised Working Plan**. Historically, the Wharf was used for the dismantling/breaking up of large ships, hence the name "Giants Grave".

The **25 acre site** as shown in **Appendix A - Site Plans 1.2 - Site Permit Boundary Plan** site comprises of **4 storage warehouses** and **3 berthing points** along its wharf, there are also additional outside storage areas to facilitate the movement of wastes or materials onto the **berthing points 1 & 2** ready for the loading and unloading of ships as shown in **Appendix A - Site Plans 1.3 - Site Layout Plan**.

- b) The **River Neath** runs southwards past the site and is classified **Grade 5** in terms of water quality which at this point it is **tidal** and can therefore **facilitate** the receipt and dispatch of **large ships** (up to 4,000 tonnes cargo capacity) at the Briton Ferry Giants Wharf.



The site is **not located within or near a groundwater protection zone**, and lies within a **Minor Aquifer High**. The site is also **not located within 200 meters of a protected habitats site** (e.g. SAC, SSSI etc.).

- c) The Briton Ferry Shipping Facility at Giants Wharf **was issued a Waste Management Licence EAWML34183 in January 2001** which permitted the receipt, storage and export of controlled waste, as specified and **in accordance with the Working Plan submitted in the original Licence application** i.e. Aluminium Salt Slag (a water reactive and hazardous (toxic & flammable) waste). The **previous receipt, storage and exports of Aluminium Salt Slag ceased at the facility in circa 2004 / 2005**, since then Briton Ferry have not accepted wastes under the controls of their permit.

- d) Briton Ferry (Shipping Services) Ltd now propose to accept the following wastes for export for recovery:

- **Refuse Derived Fuel (RDF/SRF) EWC/LoW 19 12 10**

This waste type has been **previously approved in 2009** Revision 1 to the Working Plan:

- **C- Additional Schedule of Wastes to be Accepted at the Facility**

- **Wood (Woodchip) EWC/LoW 19 12 07**

This is a new **additional waste type which is proposed for approval by Natural Resources Wales**, the waste type, description and details is **appended to this revised working plan** as:

- **Appendix C. - Waste Types Revision 2**

- **Additional Waste to be Accepted at the Facility**

- **Consolidated Lists of Waste to be Accepted at the Facility**

This revised working plan does not attempt to replace existing working plan documents, i.e. if exports of Aluminium Salt Slag were to re-commence then the existing working plan and control documents and procedures would still be relevant subject to, any changes to those previous operations. This revised working plan on written acceptance by Natural Resources Wales would then form ***an addendum to the original working plan sections for the storage of RDF/SRF & Woodchip.***

- e) ***This revised working plan does however, provide updates the relevant sections of the existing working plan*** using the same section numbering and headings ***to facilitate the receipt, storage and transfer of Refuse Derived Fuel (RDF/SRF)*** EWC/LoW 19 12 10 in weatherproof wrapping (bales) and ***Woodchip*** EWC/LoW 19 12 07 in loose bulk form for export from the UK to EU countries for use as a fuel in energy recovery. The controls and procedures provided within this revised working plan also implements the requirements specified in the Environment Agency, Regulatory position statement 128, The short term storage of refuse derived fuel at a dockside January 1014 Version 3 and has regards to Environment Agency Regulatory position statement MWRP RPS 131, The short term storage of chipped wood waste for fuel at a dockside.
- f) This document (and any other referenced or associated documents to it) provides information to the Operator and to the Natural Resources Wales for the operation and regulation of the activities carried out at the site. ***This document*** (in any form e.g. electronic or hard copy) ***should remain with the Operator at all times*** during the active & operational status of the site. ***Any proposed changes to the site, its' activities or management should be discussed with the Natural Resources Wales, reviewed and updated within this document beforehand.*** This document from time to time ***may be updated*** to reflect best practices, changes to operations and regulations etc. therefore, ***current/updated copies of this document are made available by directly contacting the author, requests for copies of this Working Plan should be made to:***

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Appendix D, Operational Flow Charts and Method Statements

1.1 Specified Waste Management Operations

i) Location of waste management activities within the site

The storage activities for baled RDF/SRF and Wood Chip are carried out within the designated areas (bulk storage sheds 1,2,3 and 4) and open yard areas (Wharf Storage WS1 and Yard Storage YS1) outlined in red as shown in **Appendix A - Site Plans 1.3 - Site Layout Plan**. RDF/SRF and Wood Chip will be received in vehicles travelling along the site access road that runs adjacent to the River Neath and which used to be the (now dismantled) mineral railway.

ii) Waste types

Refused Derived Fuel (RDF) EWC/LoW Code 19 12 10 also sometimes referred to as



Solid Refined Fuel (SRF) is typically manufactured from the physical treatment of non-hazardous municipal solid wastes at Material Recovery Facilities, the typical size of bale to be received will approximately 1m³ with an approximate weight of 600 kg.

Product specifications for its composition, calorific value, particle size of the resulting flock or shred and moisture content will be provided (associated with TFS documents) by the producer(s) to Briton Ferry Shipping Services Ltd prior to agreeing to receiving the wastes

Wood Chip EWC/LoW Code 19 12 07 is manufactured from the physical treatment of



non-hazardous municipal, Commercial and industrial solid wastes at Wood Recycling Facilities, the typical size of the chips to be received will approximately be screened to <75mm and <10mm to (exclude fines) in loose bulk form.

Product specifications for its composition, calorific value, moisture content, particle size and range (to exclude fines/dust) and of the Woodchip to be received will be provided by the producer(s) (associated with TFS documents) to Briton Ferry Shipping Services Ltd prior to agreeing to receiving the wastes

iii) **Operational storage capacities**

RDF/SRF will be stored within the following areas provided in **Table 1.1 Storage Areas and Maximum Capacities** provided below:

Table 1.1 RDF/SRF Storage Areas and Maximum Capacities		
WS1	Wharf Storage Area 1	1,800tonnes (50m x 20m x 3m x 0.6 (LxWxHxDensity))
YS1	Yard Storage Area 1	2,700 tonnes (60m x 25m x 3m x 0.6 (LxWxHxDensity))
SS1	Storage Shed 1	1,350 tonnes (35m x 15m x 5m x 0.6 (LxWxHxDensity))
SS3	Storage Shed 3	1,575 tonnes (30m x 15m x 5m x 0.6 (LxWxHxDensity))
SS4	Storage Shed 4	2,430 tonnes (45m x 18m x 5m x 0.6 (LxWxHxDensity))

The **total combined allocated maximum storage capacity** on site for RDF pending dispatch is **9,855 Tonnes**. It is anticipated that a maximum of up to 3,500 tonnes of RDF will be received and transferred onto each ship (3,500 tonnes per Notified Shipment/Movement) for export each month i.e. less than 42,00 tonnes throughput per year.

Woodchip will be stored within the following areas provided in **Table 1.2 Storage Areas and Maximum Capacities** provided below:

Table 1.2 Woodchip Storage Areas and Maximum Capacities		
WS1	Wharf Storage Area 1	2,800 tonnes (50m x 20m x 3m x 0.4 (LxWxHxDensity))
YS1	Yard Storage Area 1	1800 tonnes (60m x 25m x 3m x 0.4 (LxWxHxDensity))
SS1	Storage Shed 1	900 tonnes (35m x 15m x 5m x 0.4 (LxWxHxDensity))
SS2	Storage Shed 2	1,050 tonnes (30m x 15m x 5m x 0.4 (LxWxHxDensity))
SS3	Storage Shed 3	1,050 tonnes (30m x 15m x 5m x 0.4 (LxWxHxDensity))

The **total combined allocated maximum storage capacity** on site for RDF pending dispatch is **7,6000 Tonnes**. It is anticipated that a maximum of up to 2,000 tonnes of Woodchip will be received and transferred onto each ship (2,000 tonnes per Notified Shipment/Movement) for export each month i.e. less than 24,00 tonnes throughput per year.

Wharf and Yard Storage areas



WS1 and **YS1** will be used for the intermittent and temporary storage of wastes for loading onto ships from the wharf on berths 1 & 2.

Storage Shed 4 **SS4** will be used for the primary / principle storage of *RDF/SRF* pending loading operations.



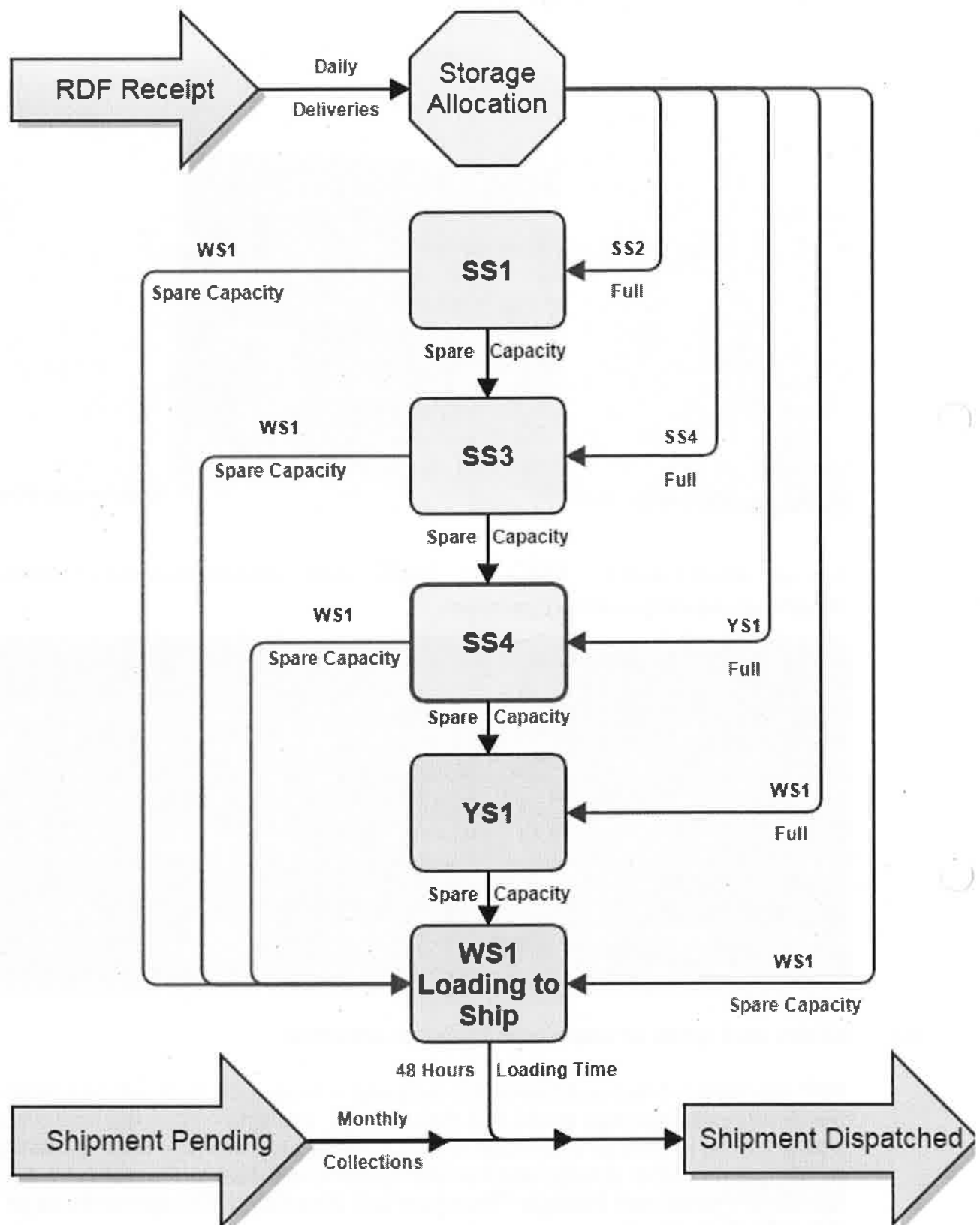
Storage Shed 2 and 3 **SS2** and **SS3** will be used for the primary / principle storage of *Woodchip* pending loading operations.



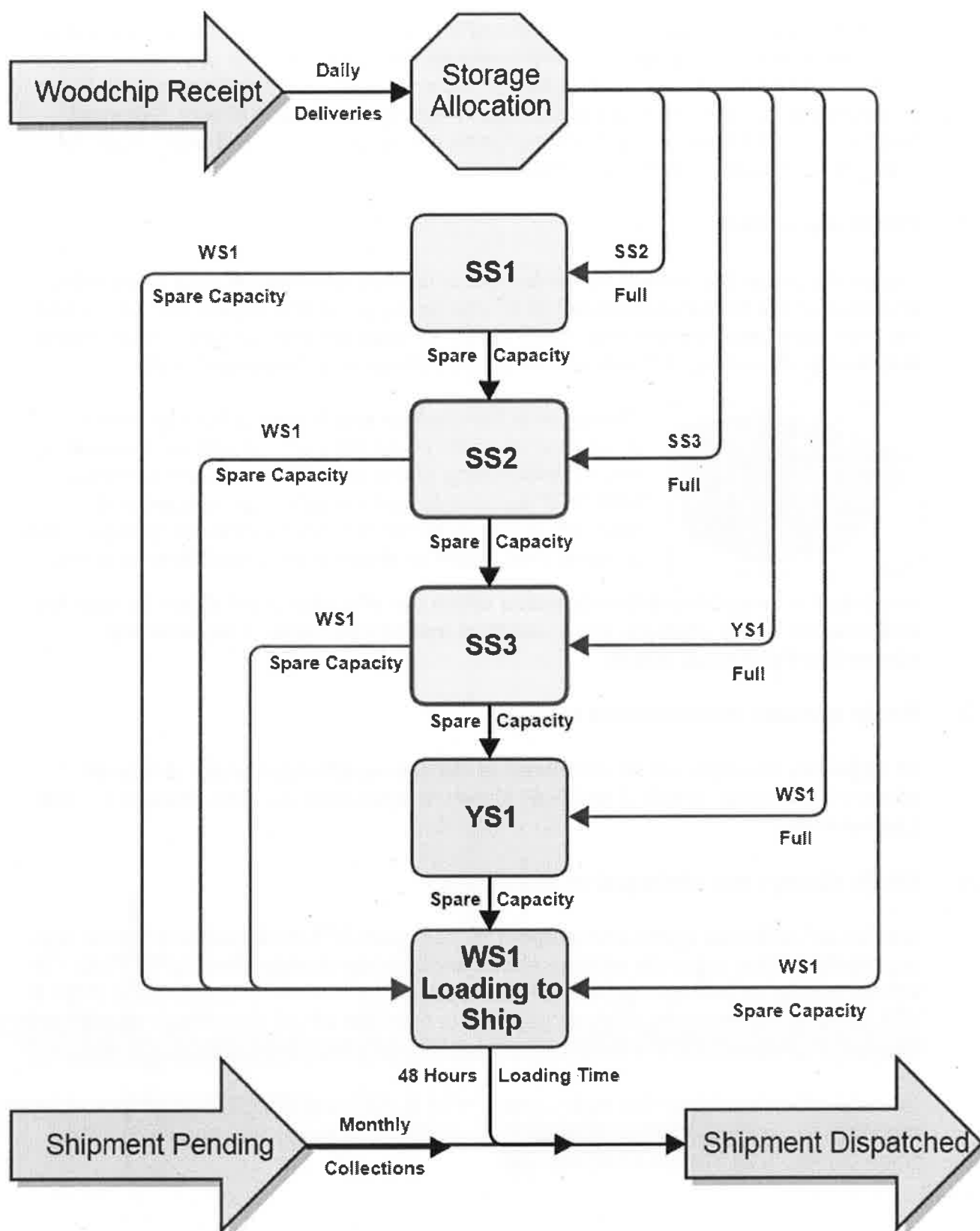
iv) Nature and types of waste management activities

RDF received in bales and Woodchip received in loose bulk form will be placed within the **designated storage areas** and their **receipt, storage allocation and dispatch dates will be recorded to ensure minimal temporary storage time is maintained** by using a rotational storage and transfer system as shown in **Flowchart 1.1 & 1.2 - RDF/SRF Rotational Storage Flowchart** and **Woodchip Rotational Storage Flowcharts** overleaf:

Flowchart 1.1 - RDF/SRF Rotational Storage Flowchart



Flowchart 1.2 - Woodchip Rotational Storage Flowchart

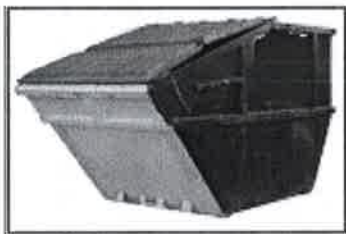


2 Waste acceptance, control systems and procedures

- 2.1 All incoming loads must carry the **relevant documents**, the documents details are checked for compliance with the Environmental Permit for the site and conformance to the Transfrontier Shipment documents. Controlled waste transfer notes will be used to record vehicle deliveries to the Storage Shipping Facility and Waste Shipment Notification and Movement & Tracking forms will be used to record waste exports from the UK Storage Shipping Facility.

2.2 Waste Inspection

Visual checks on the wastes for conformance with documentation prior to agreeing acceptance will be pre-determined at source during producer inspections carried out the producing recovery facilities, confirmation checks are then carried out on receipt and during off loading of the materials at the Storage and Shipping Facility.



On arrival at the Storage and Shipping Facility, visual inspection of waste is carried out to check for compliance prior to proceeding to the storage areas, any damaged **RDF/SRF** bales detected will either be rejected and returned to the producer or stored inside the storage sheds pending their return or repair prior to loading onto ships.

Unwanted or unsuitable debris detected within the **Woodchip** will either be rejected and returned to the producer or be removed and placed within a covered skip adjacent to the storage sheds

2.3 Waste quantity measurement systems

All deliveries of waste will be measured at the site weighbridge which is located adjacent to Storage Sheds 2 and 3 as shown in **Appendix A - Site Plans 1.3 - Site Layout Plan**.

2.4 Waste storage and segregation processes

Wastes of different types and subject to separate TFS Notifications will be kept segregated within separate storage sheds and outside storage areas WS1 AND YS1. Where wastes of different types (RDF & Woodchip) are stored in open areas WS1 & YS1 pending loading onto ships at berths 1 or 2 on the wharf, then these **wastes will be kept segregated** with a minimum distance of 6 meters between the stockpiles.

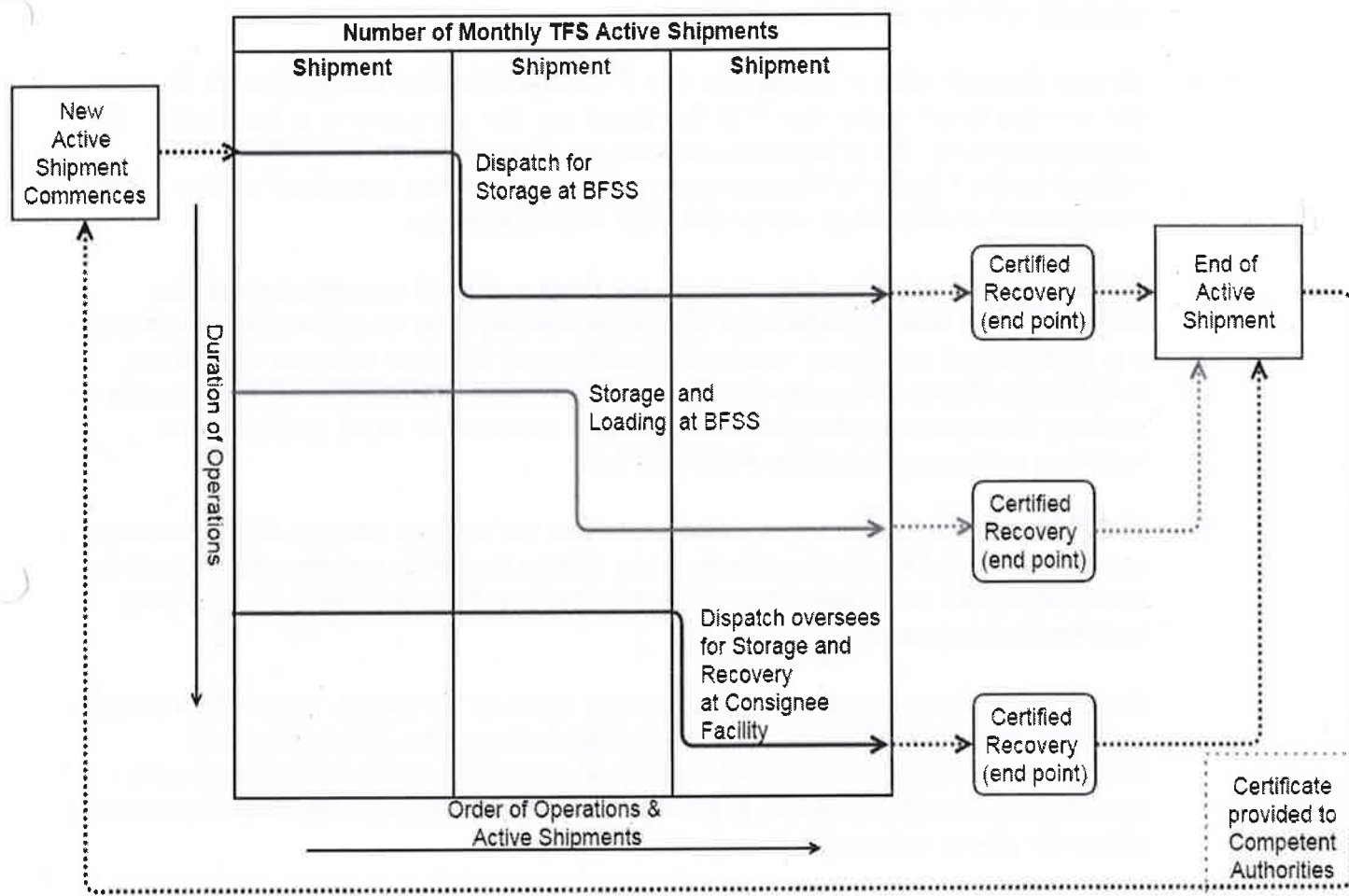
Storage of woodchip in the **open areas WS1 & YS1 will be stored within concrete blocked concealed and bunded areas** to contain the waste and ensure that the chips cannot blow around or off-the site.

Typical maximum storage times for wastes received pending dispatch will be **2 months** under normal operations and conditions, however the **storage of RDF will be limited to no longer than a maximum of 4 months** in any event to ensure that the waste does not undergo unnecessary degradation.

Storage time and capacity will not only be limited to the physical operational storage capacities provided in section 1.1 iii), but also to the maximum number of **"Active Shipments"** in transit and storage at the Shipping Facility at any one time to **3 shipments** under the Authorised TFS Notification.

Figure 2.4 Active Shipments Flow-diagram below shows how this additional limiting factor is applied.

Figure 2.4 Active Shipments Flow-diagram



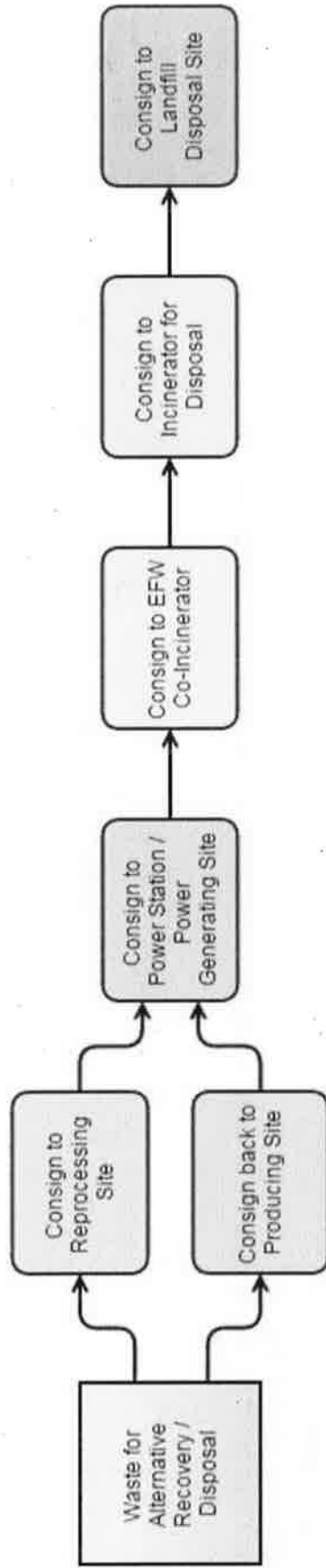
2.5 Alternative Recovery or Disposal Plan

If, by any unavoidable changes or circumstances i.e. **Force Majeure**, to the wastes undergoing storage that the storage time of RDF or Woodchip is likely to or does **exceed 4 months storage** at the facility, then all receipts of waste will be stopped and **Natural Resources Wales will be notified** in writing and, if necessary, i.e. to prevent longer term storage which may cause deterioration or detrimental degradation of the wastes, then an **alternative recovery disposal plan shall made** an agreed for the waste(s) stored at the facility.

- **Where shipments cannot proceed as planned under the TFS Notification(s)** from the Storage and Shipping Facility, by e.g. due to default of the receiving overseas Consignee or the movements are deemed as illegal traffic, then arrangements under the **TFS Contract** for the return of the wastes back to the Producer/Notifier will be carried out. Under these circumstances it is the Producer/Notifiers obligation to arrange alternative recovery or disposal of the waste(s) with the UK Competent Authority.
- **Where there is also a default by the Producer/Notifier being unable to take the wastes back** under the **TFS Contract** e.g. the company is in liquidation, then arrangements for the alternative recovery or disposal of the waste(s) will be subject to the **Financial Provisions and arrangements provided to the Competent Authorities under the TFS Notification(s)**.
- **Where wastes undergoing storage for longer than 4 months cannot be shipped from the Storage and Shipping Facility due to other circumstances** e.g. operational problems, incidents, accidents or adverse weather conditions then **Briton Ferry Shipping Services will provide alternative arrangements** to remove the wastes undergoing storage for 4 months for more to alternative recovery or disposal facilities within the UK.

The **Alternative Recovery or Disposal Plan for wastes stored at the facility will be provided to Natural Resources Wales for their agreement** and will be provided before or no later than 2 weeks after the 4 month waste storage time limit has been exceed.

Due to possible changes of circumstances, state of the waste, economic climates and available outlets for the wastes at variable times etc., the Alternative Recovery and Disposal Plan will need to be reviewed, made and agreed on a case by case basis, however, a **Model Recovery and Disposal Plan** is provided below for use or reference, if and when needed:



2.6 Waste dispatches

The loading of RDF/SRF from vehicles and onto ships will be carried out using mobile mechanical soft grabs so as not to damage the weatherproof wrapping during on-site storage and off-site transit, Wood Chip will be loaded onto ships using a mobile crane fitted with a 6m³ grab.

3 Site Management

3.1 Staffing at the site typically comprises of a Site Manager, Technical Administrator, Sales and admin staff which are located within the site office, additional staff include Crane Operators and Machine Drivers which operate within the confines of the Wharf and Storage Areas.

A technically competent manager certified by WAMITAB will also be employed to manage the waste storage and transfer operations in accordance with the site permit.

4 Records, Reporting/Notification

4.1 The following **records** will be made and kept at the site/facility in accordance with the requirements of the environmental permit.

Table 4.1 Site/facility Records	
Wastes Received	
1	Time and date
2	Waste carrier licence number
3	Quantity of waste received
4	Storage allocation
5	Waste description and waste LoW/EWC code
6	Physical nature of the waste and packaging/type e.g. solid, loose, bulk, whole item etc.
7	The producer details and local authority production/origin code
8	Controlled waste transfer notes and TFS Documentation
9	The fate of the waste (i.e. recovery operation(s) type)
10	Pre-acceptance checks (e.g. quotations, agreements & specifications, analysis and producer site visit checks)
11	Any irregularities with the load, prior to offloading and on inspection after acceptance, (e.g. contamination, odours, unsuitable debris, non-permitted wastes, items etc.)
12	Redirected (rejected) waste/loads for alternative off-site treatment/disposal including any instructions/correspondence from the Natural Resources Wales

Wastes dispatched	
1	Time and date
2	Waste carrier licence number
3	Quantity of waste dispatched
4	Waste description and waste LoW/EWC code
5	Physical nature of the waste and packaging/type e.g. solid, loose, bulk, whole item etc
6	The destination of the waste and the local authority destination code
7	The receiving site permit or number or exemption details
8	Controlled waste transfer notes and TFS Documentation
9	The fate of the waste (i.e. recovery or disposal)

4.1.1 Site inspections carried out by the site manager will be recorded using **Form 4.1.1**.

4.1.2 Training Records for staff will be recorded using **Forms 4.1.2a & 4.1.2b**

4.1.3 A copy of the **Ships Fire Action and Contingency Plan** for vessels berthed at the dockside shall be requested from the Shipmaster for retention at the site office and shall be **made readily available to the Fire & Rescue Service** in the event of a fire occurring in the ships hold.

4.3 The following **notifications and reports** will be made to the Natural Resources Wales (NRW) without delay:

- Quarterly returns for wastes received and dispatched.
- Any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution using **Form 4.3**.
- Any breach of a limit specified in the permit using **Form 4.3**.
- Any significant adverse environmental and health effects using **Form 4.3**.
- Records of complaints, pollution incidents or breaches of the permit and the actions that have been or are intended to be taken to deal with them using **Form 4.3**.
- Storage time limits for non-solid combustible / readily biodegradable wastes that are nearing 4 months storage at the Shipping facility.
- Alternative Recovery and Disposal Plan limits for non-solid combustible / readily biodegradable wastes that are nearing 4 months storage at the Shipping facility using **Form 2.5.1 Alternative Recovery and Disposal Plan - Record Pro-forma**.

4.4 Site Notice Board

A site notice board will be displayed at the site entrance to the facility, and will contain the following information:

Table 4.4 Site Notice Board Details	
Facility Name:	Briton Ferry (Shipping services) Ltd
Facility type:	Storage and Transfer Facility
Operator:	Briton Ferry Shipping Services
Contact Details;	01639 825700
Emergency Contact;	07836 329329
This permitted facility is authorised by the Natural Resources Wales	
Environmental Permit Number: EAWML 34183	
Natural Resources Wales (incident hotline)	0800 807060

5 Forms

Form 2.5.1 – Alternative Recovery And Disposal Plan

[illegible]

Form 4.1.1 – Site Inspection Checklist

Check: Type: Daily ☐ Weekly ☐ Monthly ☐ Yearly ☐

Checks: (Score 1 to 3) 1 = Satisfactory 2 = Poor / Action Recommended 3 = Urgent Actions

Site Inspection Checklist								
Day of inspection	Mon	Tues	Wed	Thurs	Fri	Sat	Score	Action By:
Weather Conditions								
Spillages and Leakages								
Site Personnel/Manning								
Waste Storage Areas								
Waste Capacities & Duration								
Waste Temperature								
Waste Types								
Waste Segregation								
Waste Quarantine								
Fuel Storage Tank, Hoses and Bunds								
Drains & Traps								
Equipment/Machinery & Maintenance								
Infrastructure & Maintenance								
Security/Fences/Gates								
Surfaces & Site Roads								
Security CCTV Systems								
Signage								
Loose debris and litter								
Dust								
Noise								
Odour								
Mud & Debris on Road(s)								
Vermin/Pests								
Tidiness / Housekeeping								
Comments/Actions taken:								

Inspected by:

Name: Position: Date:

Form 4.3 – Incidents, Accidents, Non-Conformances & Complaints

Incidents, Accidents, Non-conformances & Complaints			
Date of Incident		Time of Incident	
What happened, what was it about?			
Was a permit condition Breached?, if so which permit(s) and condition no.(s)			
Was anyone else aware of this – other witnesses? If so who?			
What have you done to make sure that it does not happen again?			
Was there any significant pollution or environmental damage to land, water or protected areas? (tick one)			
(examples may include: dust, odour or noise pollution outside the site or spillage of polluting liquids onto the ground, or into a drain or a watercourse)			
Yes	No	If Yes, take steps to prevent further damage and notify the Natural Resources Wales on 0800 807060 and any other relevant regulators ASAP	
Have you done so? (tick one)			
Yes	No	You must also write or send an email to confirm this to the local office refer to the <i>Appendix D - Risk Assessment</i>	
Who did you phone and at what time did you phone?			
Describe any other actions taken or instructions given including names dates and times			
Name:	Signed:	Position:	Date: / /

Continue on a separate sheet if you do not have enough room and keep the completed form in the file to discuss with **Natural Resources Wales Local Llandarcy Office Tel No. 01792 325526** when they visit.

Form 4.1.2a - Training Record

[illegible]

Form 4.1.2b - Training Checklist

JOB	TRAINING REQUIRED (tick boxes to show who needs which training)												COMMENTS		
	Environmental Awareness				Maintenance and Operations				Accidents and Emergency						
	Environmental and permit awareness	Waste separation and storage	Add as required												
Site Technical Manager								Maintenance of Plant and Equipment					Fire procedure		
Operations Manager								Operation of Plant and Equipment					Spill response procedure		
Admin / Office Clerk													Add as required		
Drivers															
Machine Operators															
Maintenance Engineer															

Appendix D - Risk Assessment for the Storage of RDF/SRF & Woodchip

1 – Environmental Risk Assessments

H1 Environmental Risk Assessment for Fugitive Emissions

Fugitive Emissions Risk Assessment and Management Plan				Assessing the risk		Overall level of risk?
Site operations and potential targets		Risk management measures ^[1]		Probability of exposure	Consequence	
Hazard	Pathway	Receptor				
To Air Dust from off-loading and reloading operations.	Airborne particulates transported by the wind	Adjacent residential premises at Pill Terrace appx 30m to the East of the site. Adjacent industrial premises appx 30m to the South of the site. Footpath users appx 30m to the North and East of the site.	Waste Types & Acceptance Procedures Dry dusty wastes are not accepted for processing. Dust suppression systems (spray damping) employed if necessary. Records & Reporting Site Inspection Checklist	Possibility of occurrence is low	Possible annoyance of dusts affecting adjacent premises and nearest residents during intermittent operations during working hours	Low

Fugitive Emissions Risk Assessment and Management Plan					
Site operations and potential targets			Assessing the risk		
Hazard	Pathway	Receptor	Risk management measures ⁽¹⁾	Probability of exposure	Consequence
To Water					
Run-off of polluting liquor/leachate from waste storage areas and drainage systems	Site surfaces and drainage systems	River Neath Groundwater beneath the site	Waste Types & Acceptance Procedures Operations are carried out within designated areas. Site surfaces are swept and kept clean, clean out drains and silt traps regularly. Records & Reporting Site Inspection Checklist	Possibility of occurrence is low	Pollution River Neath Pollution to groundwater
					Low

Fugitive Emissions Risk Assessment and Management Plan				
Site operations and potential targets		Risk management measures ⁽¹⁾		Overall level of risk?
Hazard	Pathway	Receptor	Assessing the risk Probability of exposure	Consequence
Pests				
Infestation of flies or scavengers (e.g. rats) in the waste	Degradable food wastes within baled RDF/SRF pad.	Adjacent residential premises at Pill Terrace appx 30m to the East of the site. Adjacent industrial premises appx 30m to the South of the site. Footpath users appx 30m to the North and East of the site.	Possibility of occurrence is low	Spread of diseases and damage to property
		Waste Types & Acceptance Procedures Pre-inspections of wastes to be accepted carried out at the producing facilities. Degradable wastes which are capable of attracting vermin are not accepted. Degradable fractions which are capable of attracting vermin that are found within the waste are returned or are stored in a covered and sealed skip for off-site treatment or disposal. Records & Reporting Site Inspection Checklist Checks for pests and vermin. Pest control measures		Low

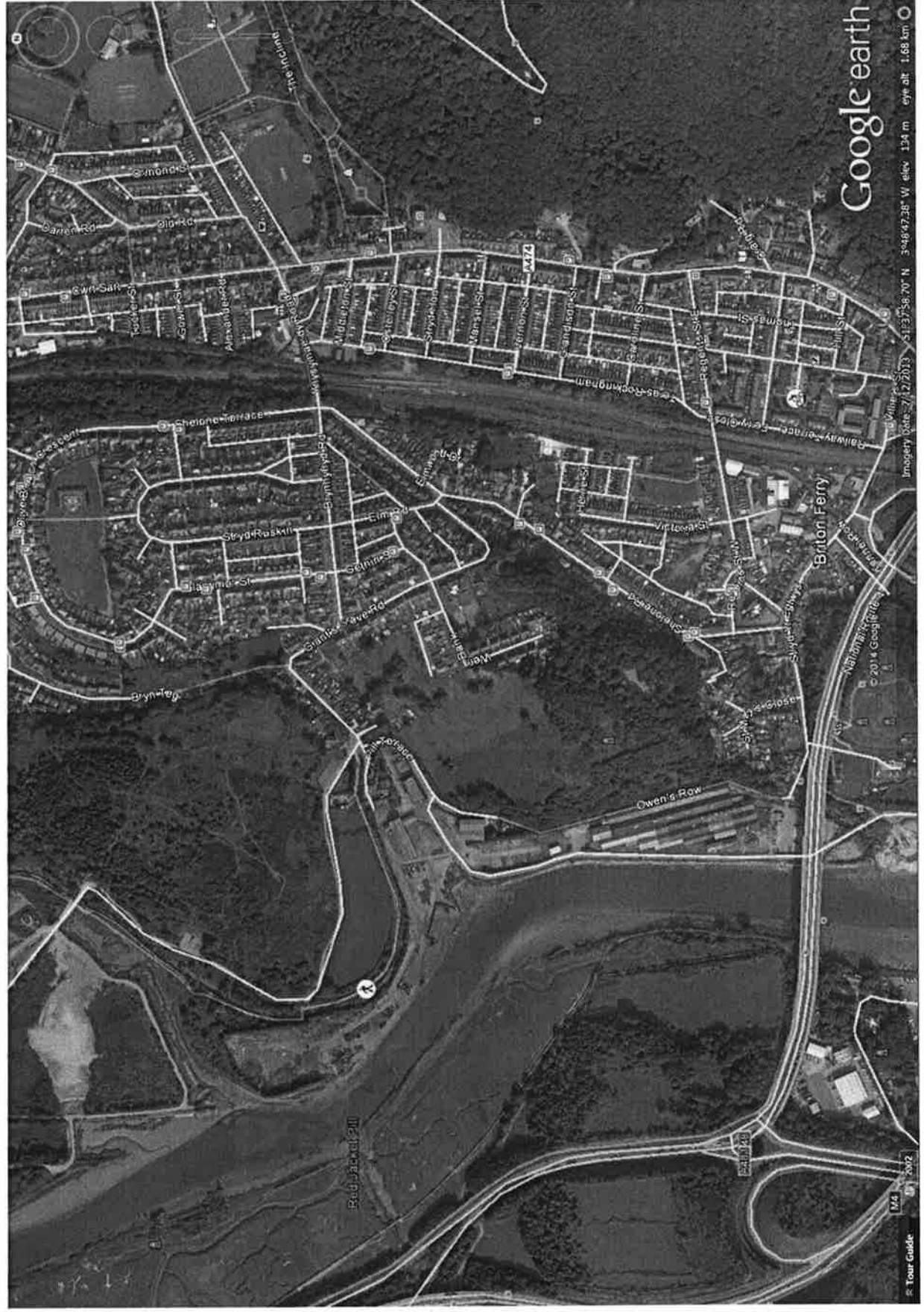
Fugitive Emissions Risk Assessment and Management Plan				
Site operations and potential targets		Risk management measures ⁽¹⁾		
Hazard	Pathway	Receptor	Assessing the risk Probability of exposure	Consequence Overall level of risk?
Litter				
Litter and light wastes within receiving waste	Airborne litter and light wastes transported by the wind	Adjacent residential premises at Pill Terrace appx 30m to the East of the site.	Possibility of occurrence is Moderate	Accumulation of litter outside the site boundary
• Unloading				
• Loading				
• Storage				
		Light wastes (e.g. Woodchip) that temporarily stored outside pending loading onto ships to be contained within concrete bunding/blocks. Loading onto ships is not to be carried out during high winds (beaufort scale 5 or above). Storage to be carried out within designated areas of the site. Records & Reporting Site Inspection Checklist Visual inspections on & off-site. Retrieval of litter		

Fugitive Emissions Risk Assessment and Management Plan				
Site operations and potential targets		Risk management measures ⁽¹⁾		
Hazard	Pathway	Receptor	Assessing the risk Probability of exposure	Consequence
Mud				
Mud from storage areas	Tracking of dust and debris from the site onto roads and into surface water drains.	Occupants and users of adjacent industrial premises. Surface waters	Low	Accumulation of mud outside the site boundary
		Waste Types & Acceptance Procedures Soils sludges and liquids are not accepted. Operations are carried out within designated areas. Site surfaces and access are swept regularly and kept clean Records & Reporting Site Inspection Checklist Visual inspections on & off-site		Low

Fugitive Emissions Risk Assessment and Management Plan				
Site operations and potential targets		Risk management measures ⁽¹⁾		
Hazard	Pathway	Receptor	Assessing the risk Probability of exposure	Consequence
Noise and Vibration Noise and vibration from vehicular traffic on-site Noise and vibration from waste loading and unloading operations	Air - wind direction, and; Land – transmission of vibrations	Adjacent residential premises at Pill Terrace appx 30m to the East of the site. Adjacent industrial premises appx 30m to the South of the site. Footpath users appx 30m to the North and East of the site.	Frequency and possibility of occurrence is low to moderate	Possible annoyance of noise and vibration affecting adjacent premises and public using the footpaths for a short duration during intermittent operations during working hours
Waste Acceptance Procedures Designated vehicle routes, offloading, loading and operations are carried out within designated areas Plant Maintenance Schedules Cessation of operations and re-hire or replacement with suitably noise abated plant Records & Reporting Site Inspection Checklist On-site daily auditory monitoring by the site manager				Low

Fugitive Emissions Risk assessment and Management Plan				
Site operations and potential targets		Risk management measures		
Hazard	Pathway	Receptor	Assessing the risk Probability of exposure	Consequence
Odours				
Smells/odours generated from odorous wastes accepted	Odours transported by the wind	Adjacent industrial premises. Residential premises appx 30m to the East of the site.	Waste pre-acceptance procedures Malodorous wastes are not accepted Waste Types & Acceptance Procedures Wastes causing odours are not accepted and returned to the producer, or are placed and stored within covered/sealed skips Wastes capable of generating odours are not typically stored for more than 2 months, or 4 months maximum. Removal or rejection of non-permitted wastes found within loads wastes for off-site treatment/disposal Records & Reporting Site Inspection Checklist Olfactory monitoring carried out on-site by site manager	Possible annoyance of smells affecting adjacent premises and public using the footpaths for a short duration during working hours
			Possibility of occurrence is low	Low

Figure 1 - Local Receptors

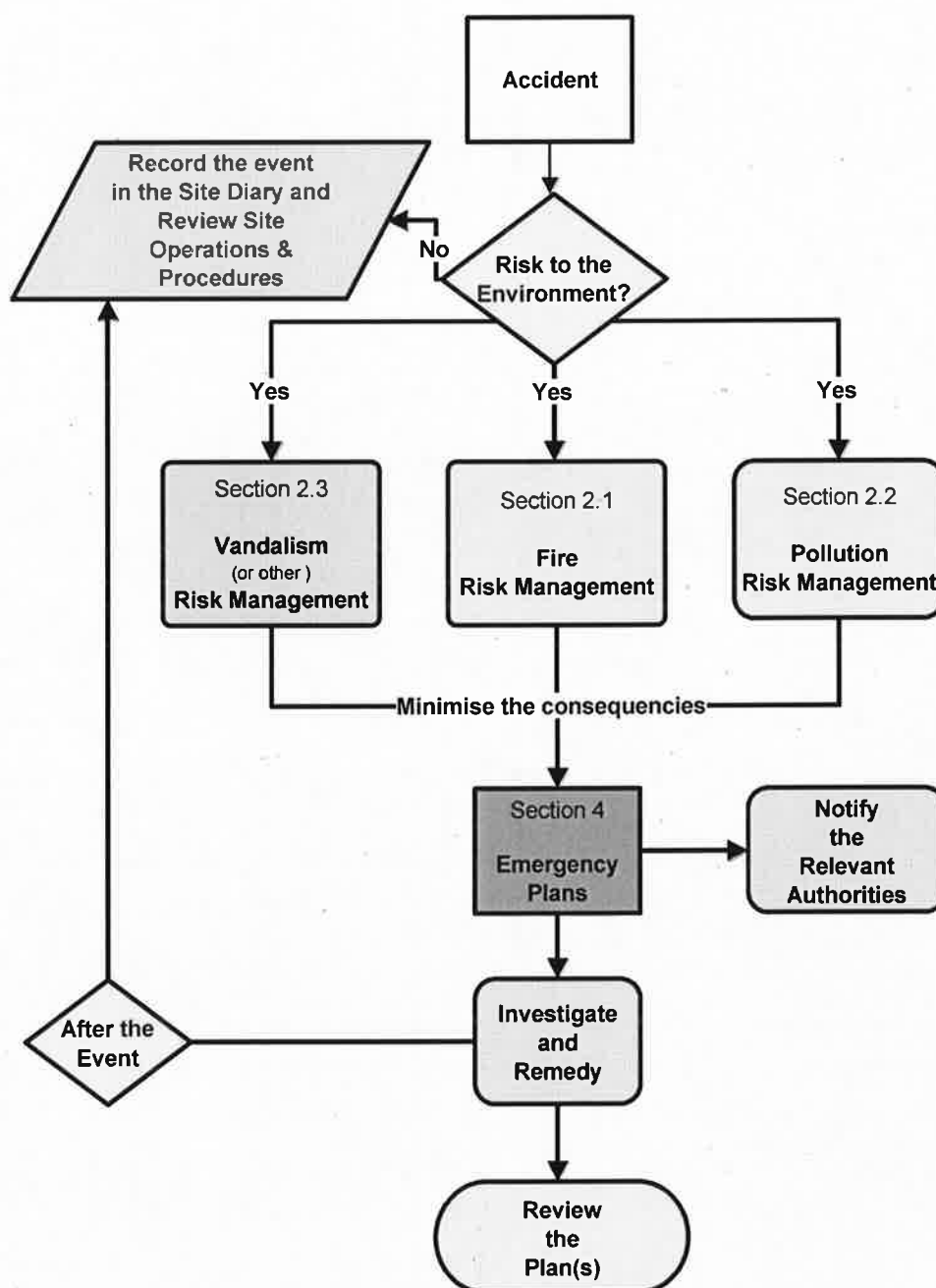


Appendix D - Fire Action Plan & Fire Risk Assessment for Non-hazardous Solid Combustible Wastes

Section 1

What to do if an Accident Happens

If an accident happens and causes damage to the environment, or has the likely possibility to do so, the procedures and actions provided in this management plan should be carried out.



Section 2 - Types of Accidents

2.1 Fire

Table 2.1 Fire Risk Management			
Hazard	Event/Failure	Probability and Consequences	Severity and Pathway
Fire 	Spark or ignition from machinery, site staff or persons on-site. Auto ignition of combustible wastes (e.g. processed Woodchips & RDF/SRF).	Low probability. Air pollution (smoke and fumes). Damage to adjacent and nearby properties. Injury or death. The public using nearby canal and footpaths. Pollution to water (River Neath & Canal).	Severity is moderate to high. Spreading by contact and air. Contact with and combustion of stockpiled combustible wastes and other flammable substances. - Fuel tank, flammable gas bottles, drums and containers. - Buildings, plant and equipment. Explosive (fine dust) atmospheres. Decomposition of organic material in situ generating heat in stockpiled combustible wastes.
			Signage at site as a designated no smoking area. Signage at site instructing no naked flames or fires. 24 hour CCTV monitoring of all operational areas (including CCTV monitoring inside the storage sheds) on-site. Fire extinguishers stationed ready for immediate for use in locations Storage Sheds 1, 2, 3 & 4: Sand stockpiled adjacent to Storage Shed 3. Size of stockpiles kept to recommended maximum sizes. Processed wood chip kept to a storage height of less than 3 metres (10 feet) in operational storage areas. Segregation of stockpiles are wide enough to act as firebreaks (at least 4 metres) for emergency vehicles to get through. Dust suppression systems to be employed, if necessary. Use of front-end loader and stockpiled sand to cover wastes on fire and/or use extractable on-site water and bowser to extinguish & control the risk or potential spreading of fire, only if safe to do so.

Table 2.1 Fire Risk Management			
Hazard	Event/Failure	Probability and Consequences	Severity and Pathway
Fire 			Contaminated fire water escaping from the site and entering the River Neath or Canal Storage times of combustible wastes kept to a minimum, (less than 4 months), or otherwise stockpiles are monitored for temperature and/or rotated). Stockpiles are kept segregated and within designated areas and at distances greater than 6 meters from other flammable tanks, bottles and containers, or separated by a firewall. Storage of flammable liquids and gasses: Fuel oil tank (6,000lt), Lube oil drums (5 x 205lt) and 2 x Oxyacetylene gas bottles stored in secured maintenance building (fitting shop) which is annexed to Storage Shed 4. Fuel tank (appx 2,000lt) sited adjacent to storage shed 3 and stockpiled sand to be covered with sand in event of fire. Notify the Local Fire and Rescue Service Containment of fire water with sand and rapid removal of contaminated firewater on-site, where practicable. Dammit Mats placed over surface water drains. Arrange for local contractor (e.g. Tradebe 01656 862136) to remove contaminated fire waters.

2.1.1 Maintain Safe Stockpile Sizes

An extract of **Safe Storage - Combustible materials, prevent and control fire: PPG29** for the maximum recommended limits are provided below

5.1. Maximum stack sizes

The table below set out the maximum recommended sizes for stacks of different combustible materials. The minimum separation distance shown is for stacks of this size.

Material	Max height (m)	Length/width (m)	Max vol (m ³)	Max area (m ²)	Min separation (m)
Paper, cardboard and rags	5	20	750	235	6
Wood	10	20	1370	235	6
Plastic and other materials	5	20	450	235	6
Rubber	5	20	300	235	15
Fridges, computers and electrical equipment	5	20	300	235	15

For materials that can spontaneously combust, such as rubber crumb and wood chip, the maximum height of the stack must be no more than 3 metres

2.2 Polluting substances

Table 2.2 Pollution Risk Management

Hazard	Event/Failure	Probability and Consequences	Severity and Pathway	Actions to Prevent or Minimise
Fuel Tank and Drums and Containers of Highly Polluting Substances 	Minor spillages and leakages from daily use and handling.	Low to moderate probability.	Severity is low to moderate.	Absorbents kept readily available in the maintenance building to clean up minor spillages.
	Spills and Leakages from refueling plant.	Pollution to land.	Site surfaces ↓ Site drains ↓ River Neath	Contaminated/used absorbents to be kept within sealed containers within the maintenance building prior to off-site disposal.
	Deterioration and failure of container or containment.	Pollution to site drains.		Refueling to be carried out in designated area on impermeable surface and supervised at all times.
	Damage to fuel tank, containers and pipes.	Pollution to River Neath		Weekly checks to detect signs of wear, corrosion and damage, to ensure good condition and fit for use of equipment and infrastructure
	Collision from moving plant and vehicles using the site.			Placing signs and barriers/obstacles at tank and container areas to prevent collision from moving plant and vehicles.
	Overfilling fuel tank.			Designated vehicle/traffic routes to be maintained on-site.
				Fuel tank 6,000lt (diesel/gas oil) also kept within maintenance building, capacity not to be exceeded and sight level gauge to be checked before and during refilling. Oil drums 5 x 205lt, kept within maintenance building, on banded pallets and on an impermeable surface.

2.3 Vandalism

Table 2.3 Vandalism Risk Management

Hazard	Event/Failure	Probability and Consequences	Severity and Pathway	Actions to Prevent or Minimise
Vandalism 	Unauthorised entry to the site leading to: • Willful damage to fuel tank, drums and containers • Arson	Low probability. Consequences could be any of those already specified for Fire and Fuel tank and Drums and containers of polluting substances.	Severity is potentially high. Pathway could be any of those already specified for Fire and Fuel tank and Drums and containers of polluting substances.	<i>Site supervision and signage</i> in place to prevent unauthorised persons. <i>Buildings and site access gates</i> are kept locked outside working hours. CCTV and remote sensing located around the site is in operation at all times. <i>Off-site security</i> employed to monitor CCTV and instruct intruders to leave the site. <i>Off-site security to alert police</i> if intruders refuse to leave the site immediately.

Section 3 - Fire Prevention & Mitigation Checklists

Checklist 3.1 General Considerations		
Item	Yes/No	Comments/Actions
Do you have combustible and other Hazardous materials on your site?	Yes	Baled Refuse Derived Fuel (RDF/SRF) and loose Woodchip. Fuel tank, oil drums and oxyacetylene gas bottles located within Maintenance building annexed to Storage Shed 4 Fuel tank (appx 2,000lt) sited adjacent to storage shed 3 and stockpiled sand to be covered with sand in event of fire.
Do separation distance between stacks and other features on your site comply with the guidance in PPG 29?	Yes	4 meters segregation and use of fire walls.
Is your storage quantity reasonable and within permit/licence conditions?	Yes	See Working Plan Section 1.1 iii) Operational Storage Capacities
Is the location and duration of storage appropriate?	Yes	Typically less than 2 months storage time and no longer than 4 months maximum storage time.
Does your site have suitable first aid firefighting equipment and training for staff?	Yes	
Are all means of escape for your staff adequate?	Yes	Additional briefing of Staff and Operators required before Waste Storage Operations Commence
Do you have a plan in place to raise the alarm and evacuate workers?	Yes	Additional briefing of Staff and Operators required before Waste Storage Operations Commence
Have you provided suitable access for firefighting engines?	Yes	Main Entrance at South Access Road to the Facility. Additional Emergency Entrance at Western Access to the Facility
Are fire fighting water supplies adequate on your site and are suitable open water supplies available? Your FRS can help you calculate this.	Yes	Water can be sourced at the site from the Canal to the East of the site.
Are the location of hydrants and their flow rates marked on your site plan, even if outside the site boundaries?	No	FRS Fire contingency plan is to use the readily available canal or river water.
Have you consulted the FRS about stack layout and design	Yes	
Have you assessed potential fire spread on and around your site?	Yes	Low Risk: Fire spread between Storage sheds 1 to 4 is unlikely due to design and fire break walls. Outside storage is in separated stockpiles.

Checklist 3.2 Access		
Item	Yes/No	Comments/Actions
Prevailing wind causing smoke and fumes around access areas and routes to your site	Yes	Low Risk: Prevailing winds are predominantly from the South West, main access route to the site is downwind from the predominant prevailing winds
Rough terrain	No	
Buildings/debris	Yes	Buildings, Stockpiles and Plant are positioned away from each other providing adequate segregation / space for access / exit
Security/fencing	Yes	CCTV & monitoring also provided continuously, All access gates are kept locked outside working hours, site security fencing is maintained in good condition.

Checklist 3.3 Environmental Considerations		
Item	Yes/No	Comments/Actions
Do you have a drainage plan for your site?	Yes	
Do you know which local watercourses, groundwater and/or Sewage Treatment Works firewater run-off will flow to and how they may be affected by firewater run-off?	Yes	Receptor is the River Neath which adjoins the Wharf Facility. Fire water is likely to be minimal and impact to the River Neath as insignificant due to small volumes generated which would be greatly diluted within the receiving water. Firewater may be potentially harmful to aquatic life due to elevated COD / BOD of firewater.
Do you have adequate plans and facilities to contain firewater?	Yes	Front-end loader can be used to place sand to dam/contain fire water from leaving the site.
If firewater can't be contained, is a controlled burn a safe option?	Yes	This may only apply to <i>Woodchip</i> .
Is a controlled burn also the best option for air quality and/or fire fighter safety?	No	This may only apply to <i>RDF/SRF</i> where air quality could affect local residents.
Do you know which properties and residential areas surrounding your site may be affected by smoke?	Yes	Local residents on Pill Terrace and other nearby residents situated beyond the East of the Facility.

		Adjacent Industrial premises located to the South of the Facility, but only if the winds are from a Northerly direction.
If the answer to the question above is yes – is there a plan in place to tell people living there what to do, e.g. keep door and windows shut?	No	Meeting/discussions with local FRS and Site Health and Safety Consultant to be arranged and procedures to be put in place before Waste Storage Operations Commence.
Do you have a plan to dispose of firewater and other wastes	Yes	See Section 2 - Fire Risk Assessment. See Section 4 - Pollution Incident Response Plan.

Section 4 Pollution Incident Response Plan

Emergency Plan			
Emergency/Accident/Incident Type:			
FIRE			
Principle Environmental Impact:			
- Air pollution caused by smoke - Damage to properties and site infrastructure - Pollution of water from contaminated firewater			
Principle Health & Safety Hazard/Risk:			
- Injury or death from heat or contact with flames - Inhalation of harmful smoke or fumes - Injury or death from collapsing property of infrastructure - Explosion from flammable atmospheres or sealed or flammable containers			
Appropriate Personnel	Name	Contact	
		On-site/Home	Off-site/Mobile
Site Manager	Neil Rickard	01639 825700	07836 329329
Company Manager	Andrew Williams	01639 825700	07710 552662
Site Supervisor	Peter Ling	01639 770167	07711648565
Health and Safety Advisor	Robert Price	07971 960240	07971 960240
Environmental Adviser	Joe Gatley	01792 386699	07900 698331
Natural Resources Wales	Local Office	01792 325526	
Natural Resources Wales	Emergency Hotline	0800 80 70 60	
HSE	Incident Contact Centre	0845 300 99 23	
Emergency Services	Fire, Police, Ambulance etc.	999	999

Emergency Plan

Emergency/Accident/Incident Type:

Major Leakages & Spillages

Principle Environmental Impact:

- Pollution to drains and waters outside the site
- Pollution to land
- Pollution to groundwater
- Damage to vegetation and ecosystems

Principle Health & Safety Hazard/Risk:

- Harmful or toxic in contact with the skin
- Harmful or toxic by inhalation
- Harmful or toxic by ingestion
- Prolonged exposures may cause long term adverse effects

Actions in case of a spillage or leakage

- 1 Contain and absorb the substance, if safe to do so
- 2 Prevent substances from entering drains or waters, cover drains with dammit mats located in boxes on sides of storage sheds and contain firewater by creating temporary bunds using stockpiled sand.
- 3 Identify the substance and its hazardous properties
- 4 For large spills and leaks use specialist contractors (Natural Solutions 01656 741799 for hazardous contamination clean-up or Tradebe for removal of firewater 01656 862136) to assist and remediate
- 5 Follow safety advice provided on or with the contents or obtain material safety data sheets
- 6 Wear suitable PPE
- 7 Remove and or clean the affected areas
- 8 Place contaminated absorbents, affected soils, wastes, items etc. into a sealed container
- 9 Arrange for suitable disposal of contaminated debris