



Berth 31 Barry Docks.

Fire Prevention and Mitigation Plan

14th November 2025



Notice

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Document Control

Version	Date	Author / Checked by	Change Description
1.0	06/06/2024	LJB/RV	Issue for SR
8.2	07-05-2025	LJB/RV	Updated in response to CAR_NRW0048105
8.3	21 05 2025	LL	Update for bespoke
9.0	13 06-2025	LL	Stockpile height review
10.0	26-06-2025	LL / RV & TJ	Final
11	14-11-2025	LL	Update following NDM

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Drawings

Reference	Title
LMM/075/01b	Layout Plan dated 01 10 2024

Appendices

Appendix A	Permitted Waste Types
Appendix B	Sensitive Receptors
Appendix C	Contact Details
Appendix D	Storage Details Assessment
Appendix E	Wetting Agent Details
Appendix F	Maintenance Record app

Foreword

This FPMP has been produced with consideration of various fire guidance documents including those from NRW, EA, BRE and WISH.

The FPMP also takes account of SWWP's experience from its other wood recycling operations which already have fire plans developed working collaboratively with various agencies including local fire and rescue services. Liaison and consultation with sectors trade bodies and third-party expertise, such as WRA (Wood Recyclers Association). We are also members of SafeContractor (Alcumus Safecontractor – Health & Safety Contractor Accreditation).

The FPMP deals with the practicalities of the storage requirements to maintain a viable waste wood recycling operation whilst meeting the objectives:

- minimise the likelihood of a fire happening.
- mitigate the effects of a fire on the community and the environment.
- minimise the resources of third parties required during a fire.
- reduce clean-up and remediation costs.

1 Overview

Operator and Permit

- 1.1 The operator will be SWWP, who run a network of wood recycling operations, and the activities will take place under a bespoke Permit that will replace Standard Rules Permit EPR/DB3196HH.

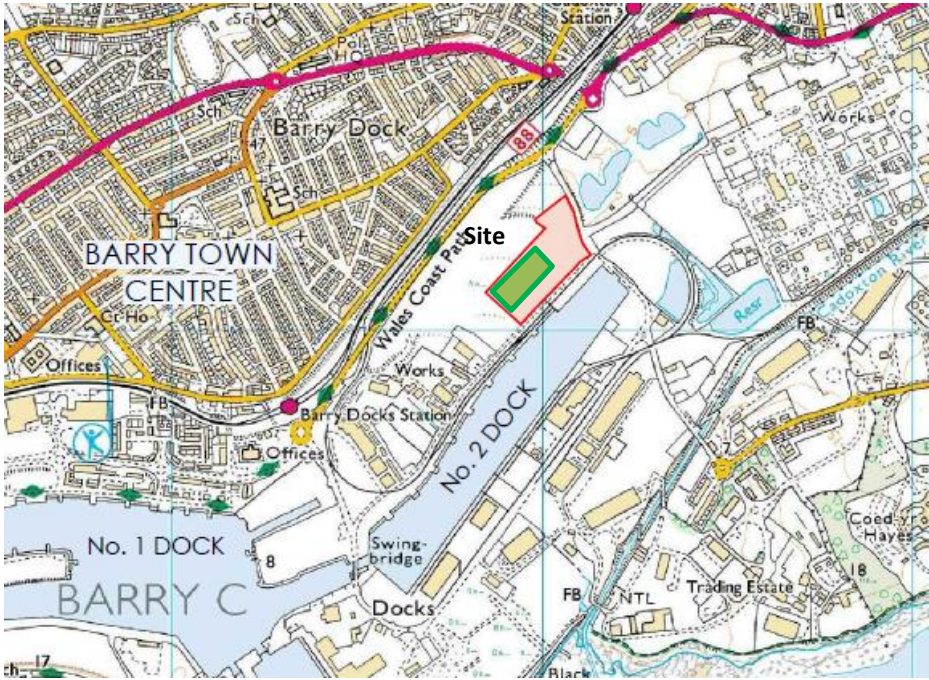
Permitted Activities

- 1.2 The site activities are the storage and treatment of waste wood with sorting, separation, shredding and chipping for recovery for uses including as biofuel, board mill products, etc.
- 1.3 The permitted waste types to be accepted are non-hazardous wastes, as set out in the Permit, see Appendix A. The Permitted wastes sought include “17” codes but are restricted to wood only, Additionally metal codes and site activity R4 provide a facility for the aggregation of metals recovered from other wood recovery operations with onward shipping of the metals for recovery and up to 500 tonnes per annum of green waste may be received which will be stored separately for no more than three months before transfer out.
- 1.4 Metal waste is that removed from wood waste such as window catches and hinges considered to have no combustion risk associated. The 17 code C&D wastes are noted as limited to wood only, so dealt with in this FPMP.

Site Location

- 1.5 The site address is: Berth 31 Wimborne Road, Barry Docks, Barry, Glamorgan, CF63 4AB. Grid Reference: 312969 168124

Figure 1: Site Location (nts)

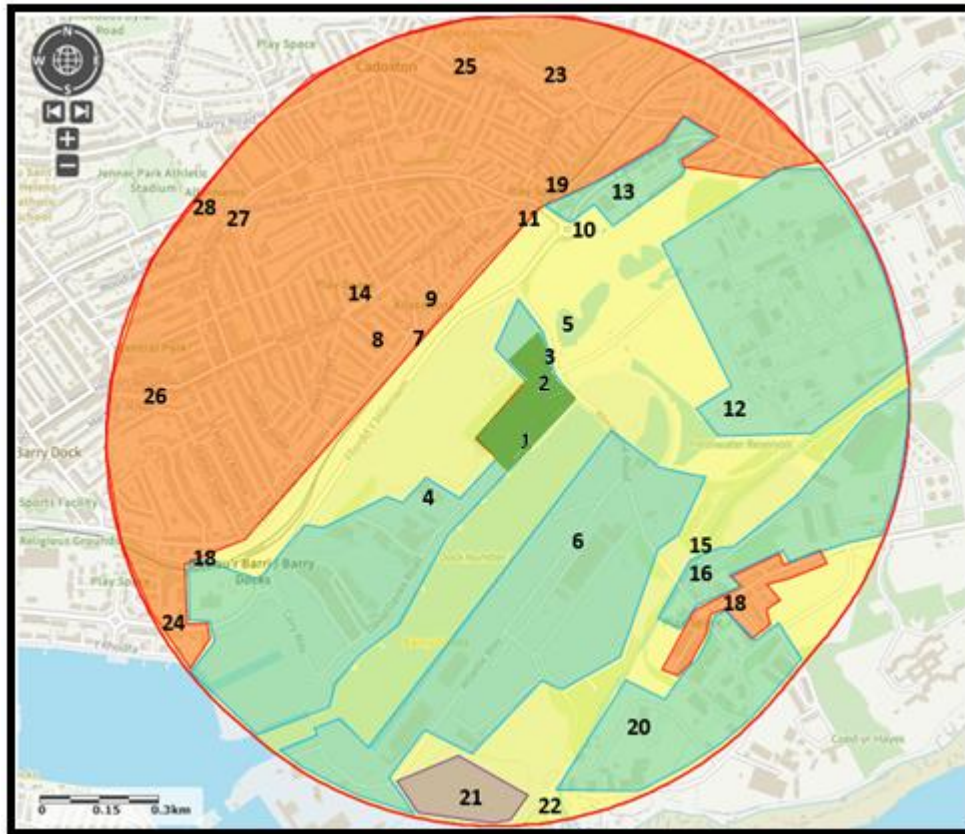


Site Context

- 1.6 Berth 31 at Wimborne Road is located wholly within the Barry Docks complex on the south eastern side of Barry, see Figure 1. Access to the site is from Wimborne Road via an internal road network.

Sensitive Receptors

Figure 2: General Location: Receptors 1km (nts)



- 1.7 Figure 2 gives context to the site and nearby receptors with the site is at the centre of a 1km radius circle. The immediate surrounds are the docks themselves with various dockside operations and other industrial operations (green shading) together with large areas of open, unused land here (yellow shading). More detail on the sensitive receptors is provided in Appendix B.
- 1.8 The immediate surroundings workplaces within the docks are the closest receptors and these are industrial uses and storage activities associated with the port. Further to the west and north of the site, just over 300m at the closest point, the nearest residential properties (orange shading) are located at Cadoxton. Additionally planning consent has been granted for further

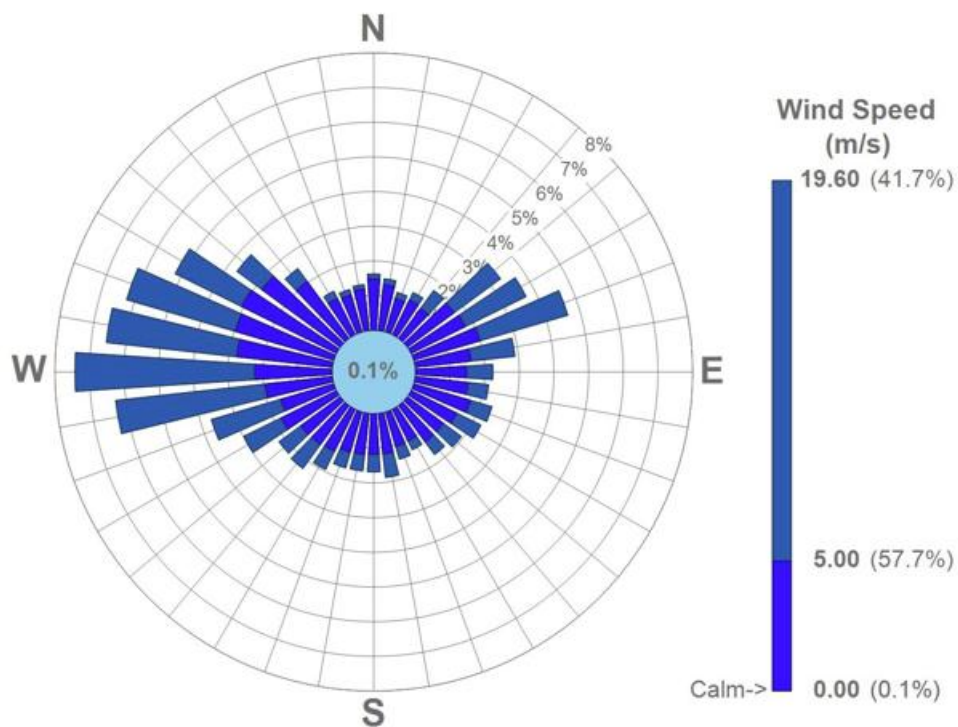
residents in the old railway siding between Ffordd Y Mileniwn and the railway line. This is approximately 180m from the parking and storage area of the site.

1.9 In terms of infrastructure there is a network of local roads linking to the A4055 (the main highway route in the area) approximately 420m north of the site. The main railway line lies 265m to the north west with two local train stations, Barry Docks and Cadoxton, found 625m south and 680m north respectively. Private railway sidings for the docks are closer to the site including passing immediately on the eastern side of the site. A solar farm is located approximately 835m to the south of the site.

1.10 In terms of environmental receptors within 1km of the site these include the waterbodies of Barry Docks, some man-made water bodies associated with previous industrial activities to the north now known as Barry Ponds and the Cadoxton River to the south east. The only nationally designated conservation site in the locality is the Hayes Point and Bendricks Rock SSSI 850m to the south of the site.

1.11 The wind direction, as shown in Figure 3, in the area is primarily from the west to south west.

Figure 3: Wind Rose Cardiff Observation Station (5 years)



Combustion Products

1.12 Table 1 outlines the potential combustion products generated from a fire incident.

Table 1: Potential Combustion Products from Fire Incident

Combustion Product	Possible pathway to receptors
Fire waters	Surface waters: however overall contained drainage system will ensure impacts do not extend beyond permit boundary
Burnt Material	None: immobile, so no impacts beyond site boundaries
Steam	Air: Very quickly dissipates in atmosphere, no impacts anticipated beyond site boundary
Gases	Air: Very quickly dissipates in atmosphere, no impacts anticipated beyond site boundary
Thermal Radiation	Air: Very quickly dissipates in atmosphere, no impacts anticipated beyond site boundary
Smoke	Air: Smoke to be blown off site onto adjacent land/receptors. Will dissipate in atmosphere and time limited to incident with no permanent impacts. Any community receptors downwind would be notified of the need to close windows during an incident and stay indoors.
Dust/ash	Air: Smoke to be blown off site onto adjacent land/receptors and cause soiling when it settles the settling of this airborne. Any community receptors downwind would be notified of the need to close windows during an incident and stay indoors. Firefighting techniques would include the spraying of smoke with water to bring down particles in the air and reduce escape off site.
Soot	

1.13 From table 1 the combustion products with the potential to impact the local community are smoke, dust/ash/soot. The impact is dependent on the duration of an event therefore minimising the duration of an incident is the priority. How receptors are impacted depends on weather conditions i.e. smoke, dust/ash and soot are all dependant on wind to mobilise off site and as the distance from the site increases the impacts will reduce. Noting the prevailing winds and the closest nearest receptors are a limited number of dockside operations it is not considered that there would be significant impacts from combustions products on these receptors.

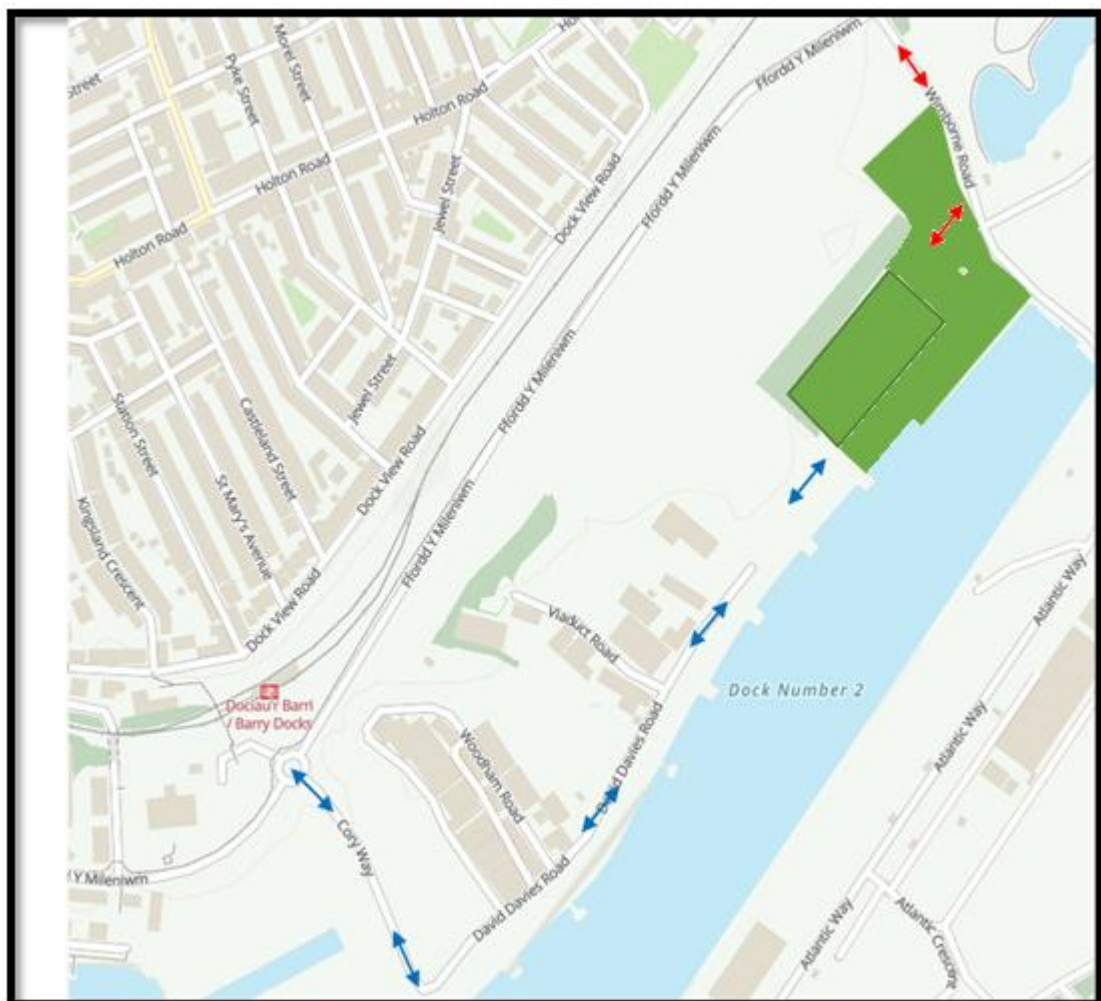
Site Layout Details

- 1.14 The site layout plan is attached, Drawing No LMM/075/01A. This includes details of the general site layout showing waste storage and processing areas, access points and site buildings.

Site Access and Alternative Emergency Access

- 1.15 The primary approach route to the site is from the A4055 from the north onto Ffordd Y Mileniwm to Wimborne Road. Separately access can be made from the south again from the A4055 and Ffordd Y Mileniwm but onto Cory Way via the David Davies Road. The main access point to the site is from Wimborne Road to the north shown by red arrows. The alternative southern access is shown by the blue arrows and provides an alternative emergency access route, see Figure 4. All the roads leading to the site and the site accesses themselves are of a sufficient size to accommodate large emergency vehicles.

Figure 4: Emergency Access Routes



- 1.16 The main access and alternative access will be kept clear at all times from any processing or storage operations to ensure full access and unobstructed circulation of emergency vehicles. The site is an open yard area with a level surface and is fully accessible to all vehicles including emergency vehicles.
- 1.17 The alternative approach from the south would only be used in an extreme situation e.g. when smoke prevented access from the north (which is assessed as unlikely).

Contact details

- 1.18 Site contact details together with emergency contacts and neighbouring businesses are provided in Appendix C.

Off Site Emergency Pack

- 1.19 An off-site emergency information pack will be held in a box located near the site entrance.

2 Waste Material, Product and Process

Permitted Activities

- 2.1 The site waste wood activities involve the storage and treatment of waste wood with sorting, separation, shredding and chipping for recovery for use such as biofuel and board mill products etc.
- 2.2 The waste types accepted at the site are non-hazardous waste woods as listed in the permit, see appendix A.
- 2.3 The site will handle a maximum of 250,000 tonnes per annum with an average weekly processing capability of 5000 tonnes although production will vary in response to demand.

Waste Acceptance

- 2.4 Suppliers are informed of SWWP's pre acceptance criteria to ensure any waste wood brought to site complies with the correct waste types and is free from contaminants.
- 2.5 All waste arriving at site is subject to the waste acceptance procedures operated by site staff as detailed in the EMS.

Waste Acceptance: Permitted Waste

- 2.6 The waste accepted onto site is sourced from local Council provided household waste recycling facilities, waste transfer stations, construction operations or waste from wood operations such as furniture manufacture and has not been subject to extensive periods of storage prior to arrival at site. Typically wood waste accepted at the site has been subject to minimal treatment, with initial pre-sorting or limited pre crushing of graded wood, but no treatment such as size reduction by chipping or shredding of the waste has taken place.

Waste Treatment: Processing

- 2.7 The processing operations involve the sizing of the waste to meet set specifications dependant on the product being made. The extent of the processing depends on the product specification. The processing operations involve physical sizing and this treatment does not use heat nor result in the generation of heat in the product.
- 2.8 The machinery and plant involved in processing operations includes loading shovels, excavators, screeners, shredder, trommel and eddy current. The processed wood, to set specifications, is placed in a storage pile in accordance with the storage pile limits before its removal from site.

2.9 The processing equipment is operated to avoid the generation of 'waste' fines. All site operatives involved in processing operations are instructed to be vigilant for non-wood material/contaminants including the likes of batteries and instructed to halt operations and remove any non-compliant material.

Waste Storage

2.10 The waste is stored outside in loose form. No storage of mixed waste takes place. The aim is to ensure that the waste is stored in its largest size for as long as possible. Therefore processing typically only takes place in response to orders for processed material. Storing waste in its largest form reduces the possibility of self-heating and additionally reduces dust and debris being blown in and around the site.



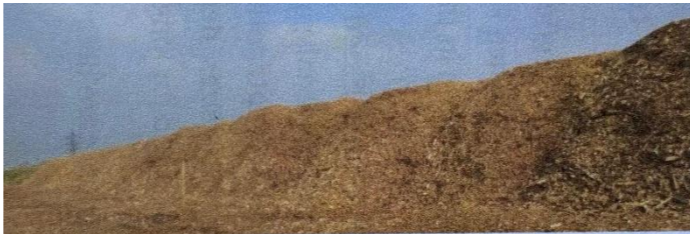

2.11 The waste wood will be loose in one of two forms;

- Unprocessed waste wood in sizes from 100mm to 3000mm. There will be little or no fines in this waste.
- Processed wood chips in sizes 12mm to 100mm with little or no fines.

2.12 The precise configuration of storage piles will vary reflecting operational needs but will conform to storage dimensions and durations in this FPMP in line with NRW FPMP.

2.13 Typically >90% of wood on site is in unprocessed form in line with industry best practice.

2.14 Appendix D has a risk assessment for the storage arrangements.

CHARACTERISATION	DESCRIPTION	PHOTO	RISK
Unprocessed	This is 'raw' waste wood that is sourced directly from the external sites on which it is generated or aggregated. Particle sizes range from 100 - 3000mm. Material is effectively free of Fines		VERY LOW RISK NRW FPP <3 months storage There are no known cases of Unprocessed waste wood self-combusting.
Semi Processed	This wood refers to wood that has undergone some initial processing, followed by screening to produce a biomass/ boardmill fuel of various grades to meet customer requirements. Semi-processed wood has a particle size of between 100-800mm		LOW RISK NRW FPP <3 months storage Limited Controls Needed SWWP target storage for <2 weeks
Processed	Following all the processing stages, and the screening of the wood to remove the majority of Fines, the waste wood is considered 'Processed'. Particle sizes range from 12 - 100mm		MEDIUM RISK NRW FPP <1 month storage Controls needs on pile size Processed material is not stored more than 1 month, with most transported within 2 - 5 days
Fines	Fines are removed, stored and handled separately. Fines have particle sizes ranging from 0-12mm		HIGH RISK Strict controls needs on pile volume size and retention time SWWP target storage <3 weeks

Storage Pile Sizes

- 2.15 Wood waste will be stored in piles sizes taking account of NRW FPMP guidance, operational needs and practicality of running the wood processing. The maximum pile sizes are detailed in table 2 below.

Table 2: Maximum Pile Sizes

Material	Dimensions metres (max)			Volume Shaped (m3)	Tonnage	Max Storage Duration
	Length	Width	Height			
Unprocessed Wood	93	19	9	14,313	2863	3 months
Processed Wood	23	9	9	1677	335	1 month

*Pile volumes calculated with allowance for shaping

- 2.16 It is self evident that there will be two working piles, that is, actively being processed or created during processing and dimensions will naturally fluctuate in the course of these operations as the material is moved. In these situations such piles will be subject to continuous staff monitoring and at the end of the working day the site manager will be responsible for ensuring pile sizes conform to stated dimensions.

Separation Distances

- 2.17 Separation distances, in accordance with the separation distances in the NRW FPMP guidance, are:

Long wood pile sides (67 – 75m); 12m

Short wood pile sides (20m): 10m

Quarantine area: 6m

Fire Walls

- 2.18 Interlinked concrete blocks (often referred to as ‘lego blocks’) are used to create fire walls for storage bays. A metre freeboard will be maintained between the top of the storage pile and the top of the concrete block wall. The walling is located such that a pile can be accessed from both sides of a pile for fire fighting purposes. The maximum width of the bays will not exceed 10m as per NRW FPMP guidance.
- 2.19 The concrete block specification will meet Class A1 fire resistance standards in accordance with EN 13501-1, i.e. they are non-combustible. At this standard the block walls will give a minimum

of 4 hours fire resistance, beyond guidance requirements, and will assist in preventing any fire spreading.

Storage Quantity

- 2.20 The maximum amount of wood storage will be less than 17,000 tonnes.

Waste Treatment: Stock Rotation

- 2.21 Full records are kept of all waste accepted and its storage location on the site. As waste is accepted at the site it is directed to an appropriate area for unloading. The processing operations are designed to process the oldest waste wood first.
- 2.22 Records are kept as to when each storage pile is cleared and pile removal is based on the oldest pile being removed first. Storage pile details are recorded on an excel sheet covering the location, type of material, date of clearance, any temperature monitoring and any associated hot spot remediation works. These records are kept at the weighbridge office, up dated and reviewed by the site manager on a daily basis.

Recording of Storage Piles Durations

- 2.23 A schematic layout of all storage piles is maintained in the site office on a white board which identifies each pile with a unique reference number. Pile are formed in sequence and details recorded for each pile include the date that storage commenced, the 'out by' date and the maximum storage period. Tonnages are also recorded for each pile to ensure storage limits are not exceeded. At the end of each week a photograph is taken of the white board and kept as part of the site records. Figure 5 provides an illustration of the operation of the recording system.
- 2.24 The site manager will measure all piles when formed to confirm compliance with the relevant dimensions (size and separation distances as per this FPMP). A measuring wheel and telescopic measuring stick will be kept on site for this purpose. If the pile exceeds the maximum size, wasted will be removed and put into the next storage pile. Once a pile is created to the correct size and recorded, as above, no waste wood will be added.

Figure 5: Storage Recording

Pile A Date In: 13 Jun 2020 Date Out*: 13 Sept 2020 Actual Tonnage: 305 Maximum Tonnage: 316	Pile B Date In: 20 Jun 2020 Date Out*: 20 Sept 2020 Actual Tonnage: 1015 Maximum Tonnage: 1021
Pile C Date In: 27 Jun 2020 Date Out*: 27 Sept 2020 Actual Tonnage: 1075 Maximum Tonnage: 1080	Pile D Date In: 4 Jul 2020 Date Out*: 4 Oct 2020 Actual Tonnage: 964 Maximum Tonnage: 964

3 Preventing Fires

- 3.1 To prevent fires all practical measures will be taken to remove ignition sources, operate a robust acceptance/inspection regime and prevent self-ignition by controlling pile sizes, stock rotation and restricting storage times.
- 3.2 The following paragraphs details measures to combat common causes of fire and ignition sources.

Plant and Equipment

- 3.3 The plant and equipment used at this site is detailed in table 3, but may be subject to amendments. The site also has a loading conveyor used for loading boats.

Table 3: Plant and Equipment

Plant/Equipment	Fire Prevention	Inspection
Loading Shovels/Excavators	inbuilt fire detection and suppression systems	Daily Inspection sheet
Shredder	inbuilt fire detection and suppression systems	Daily Inspection sheet
Screener	inbuilt fire detection and suppression systems	Daily Inspection sheet
Tractor and water bowser	Portable Hand Held Fire Extinguisher	Daily Inspection sheet
Eddy Current Separator	Portable Hand Held Fire Extinguisher	Daily Inspection sheet
Compressor	Portable Hand Held Fire Extinguisher	Daily Inspection sheet
Diesel Bowser	Portable Hand Held Fire Extinguisher	Daily Inspection sheet

- 3.4 The processing plant have an automatic modular dry chemical fire suppression system which has two components to the suppression system. The first component is a 25lb agent cylinder fitted with an electric control head. An actuation current is provided to the electric control head by linear detection or the operator pushing the fire button on either the internal or external mounted manual actuator. Power to operate the system is drawn from the vehicle battery or provided by a 24hr self-recharging back-up battery inside the control panel. System status is

constantly monitored by the control panel and communicated to the operator by visual LED indicators and audible alarm. On activation a dry chemical is discharged through fixed high capacity fast flow nozzles in a cone shaped spray pattern. The secondary component is an automatic liquid cooling system with a 2.4 US Gallon liquid agent cylinder discharged through 2 nozzles. The Amerex liquid cooling system is designed to be used as a secondary agent to reduce the heat in the hazard area and to reduce the possibility of a re-flash of a fire on mobile and self-propelled equipment.

- 3.5 The frequency of servicing for all bar the tractor, compressor and diesel bowser meets the manufacturer's recommendations with servicing at every 500 operational hours. Every machine has a QR code linked to 'WorkMule' app, each operators has this app on their phones which allows them to record daily inspections prior to use. Full records of inspection and maintenance work is sent to Site Manager/ Fitters and actioned accordingly. (photo Appendix F).

Electrical and Exposed Cables

- 3.6 A schedule is maintained for the regular inspection and maintenance by a certified electrician of all electrical works on site covering all buildings and plant. Records of inspections and maintenance works are kept by the site operator. There are no electrical installations within 12m of any storage pile and no electrical equipment will operate near a storage pile on a temporary basis without the permission of the site manager.

Naked lights, hot works and Smoking

- 3.7 A designated smoking area is provided at the northern end of the site away from the wood piles.
- 3.8 No naked lights are permitted on site
- 3.9 Hot works are only undertaken by trained persons using a risk assessment and permit to work system, ensuring that safe working practices are followed:
- Welding/cutting is undertaken with a hot work permit typically at the workshop where fire extinguishers are available
 - No hot works are performed within 6m of waste or combustible/incompatible materials
 - Site signage is used to re-enforce the permit to work policy for welding
 - A post works fire watch is made one hour after works, if the site has not cooled sufficiently further regular checks are made until cooling is confirmed

Heat and Spark Prevention/Detection

- 3.10 All plant exhaust systems have silencers (mufflers) fitted and these are blown out at the end of the working day.
- 3.11 The loading shovels do not have rubber strips fitted as rubber stripping is not a robust material for the shovel edges on hard ground surfaces such as the surface at Berth 31, as it damages easily and is so rendered ineffective in a very short period of time. However plant operatives are briefed to watch for any sparks and should a fire start as a result of a spark this would be instantly detected by the plant operator and, as this would be only a small surface fire, it would be readily extinguished by the hand fire extinguisher held in the plant cab.

Gas Bottles and other Flammable Substances

- 3.12 Maintenance works are undertaken off site and any materials such as gas bottles and other substances such as oils and grease necessary for maintenance works are kept in the maintenance and stores building away from the waste storage areas.
- 3.13 Any refuelling necessary during the working day is done by a mobile diesel bowser with plant removed from the working area and away from any storage areas.

Fire Watch

- 3.14 All site employees are briefed to remain vigilant across the site for signs of heating or fires throughout the working shift and to specifically check for any signs at the start and end of any breaks or shifts or if moving to new working areas. All staff will have hand held radios to provide an immediate alert on discovering a fire.
- 3.15 The daily site inspection includes surveillance for any signs of heating or fires. At the end of the working, an hour after all machinery and plant has been turned off, a further site inspection will be undertaken by the responsible site operative to check for any signs of heating or fires.

Parking of Plant

- 3.16 At the end of the working day all plant is either parked in the processing area or adjacent to the site offices with a minimum separation distances of 10m or 12m from any storage piles as appropriate.

Automatic Fire Detection Systems

- 3.17 Most of the site plant and equipment has automatic fire detection and extinguishing systems as previously detailed. These are subject to regular maintenance and testing in accordance with

manufacturer's specification to ensure they are fully functional at all times. When an automatic system is activated the plant will cease operation immediately and if safe to do so will be moved from the operational area or storage area as applicable. The affected plant will only return to operational use when a complete inspection confirms it is in a suitable condition to do so which includes the full operation of the automatic fire detection system.

- 3.18 The site has a CCTV system covering the operational area, whilst not specifically designed for flame and heat detection, will provide an element of additional monitoring to assist the detection of fires outside working hours with automatic notification out of hours to the operator and dock security for appropriate actions.

Industrial Heaters

- 3.19 There will be no industrial heaters on site.

Exhausts and other Hot Machinery

- 3.20 All machinery, including exhausts will be constantly monitored whilst in use by its operative. All machinery will be cleaned down at the end of the day with compressed air, to remove any dust or fluff that may have accumulated on the machinery during its operation and will be moved away from combustible material. All machinery will be rechecked an hour after the finish of works to check the plant has cooled. Checks will be recorded in the site diary.

Open Burning

- 3.21 There is no open burning permitted on site. The Dock Authority policies include prohibiting fires, so there is no possibility of any open burning within the dock complex boundaries.

Incompatible Materials

- 3.22 There is no possibility of any reaction between incompatible materials as the only material stored and processed on site is waste wood.

Neighbouring Site Activities

- 3.23 The immediate neighbouring properties are detailed in Appendix B with the site surrounded by other dock industries with a variety of other storage operations.

Hot Loads Deposited on Site

- 3.24 The waste acceptance procedures are designed to ensure no hot loads are accepted to site with every load received inspected by a site operative. No loads will be deposited without a site operative being in attendance. Inspections for hot loads are detailed in the waste acceptance procedures.

Self-Heating /Self-Combustion

- 3.25 The actual risk is dependent on the relationship between the size of the chips/particles, the size/height of the storage pile and the length of time it stored i.e. the risk is increased with smaller particle sizes, larger pile sizes and lengthy storage periods. SWWP will manage the risk based on NRW guidance, BRE report 'Review of EA FPMP' dated August 2016 and WISH Guidance. The majority of the wood will be stored in the largest particle size possible, i.e. stored as unprocessed wood in sizes from 100mm to 3000mm. Pile sizes, separation distances and storage durations will comply with NRW FPMP.
- 3.26 Notwithstanding this the wood is kept damp by regular spraying of water in dry conditions to meet moisture requirements for processing and assisting with keeping dust down. The application of water and the associated cooling effect will further minimise the potential for any heating/combustion of this material that could potentially occur by means of the sun's rays.

Monitoring

Staff Inspections

- 3.27 There is daily monitoring of all stock piles on site. For both unprocessed and processed material, this is done by means of visual inspections conducted at the start and end of the working day.

Signs of Heating

- 3.28 All site staff will be trained in how to recognise visible signs of pile heating by identifying;
- Smoke
 - Steam:- to understand the difference between evaporation due to the warming of the sun on dew, for example and steam originating deeper in the stack.
 - Smell
 - Discolouration with charring/blackening/ darkening of the material
 - Fire/ flames/glowing embers
 - Anything else unusual i.e. collapses in the centre of piles, disruption of the stacks/piles, signs of unauthorised activity.
 - Signs of antisocial behaviour including litter, wilful damage, graffiti, smoking materials.
- 3.29 If any of the above signs are spotted in a pile the operative staff must immediately notify site managed to assess and implement 'hot spot actions'.

Hot Spot Actions

- 3.30 All site staff will be trained on 'Hot Spot' actions from identification of a hot spot to its management. On identifying signs of heating, or when an automatic heating alert is received, an assessment will be made by the site manager of the relevant stockpile to identify the extent of the hot spot and enable an informed decision as to the remedial actions to be taken to cool the material by the most effective method in as short a time as possible and generating the minimum amount of residues.
- 3.31 All operations in the vicinity of a hot spot will cease and plant will be removed from the vicinity until the hot spot has been assessed and then appropriately remediated so there is no fire risk. Where deemed necessary the affected area will be isolated from the rest of the pile and/or other piles moved away.
- 3.32 The preference is to cool material in situ and to use techniques that will produce minimal residues where this can be done safely without increasing fire risk. The methods to cool a hot spot in situ include use of water, turning (rotating) the pile¹, smothering with inert material or spreading of the material by site operatives using a large shovel to remove material from affected area, either spreading it in the quarantine area or on adjacent ground where it does not compromise minimum separation distances – if necessary material in adjacent piles will be temporarily pushed away to create increased separation distances and allow cooling immediately adjacent to the pile.
- 3.33 Unprocessed material will be considered to have cooled when the material is no longer warm (a hand held thermal image camera will be used to assist with confirming the temperature of the cooled wood) and no longer steaming/smoking. At this point the cooling actions to cease.
- 3.34 If the cooling actions are not successful such that a hot spot develops into a combustion incident the fire trained site operatives will tackle the fire as detailed in the section 4. Should they be unable to safely tackle the fire, then the fire service will be called.

Hot Spot Recording and Monitoring

- 3.35** Full records will be kept of each hot spot incident, detailing its initial identification to final full remediation. A regular full review of all hot spot incidents will be undertaken by the Site Manager to establish the effectiveness of the fire plan and management system.

¹ Pilling turning will automatically take place when two trial pits in a single pile identify signs of heating.

Contingency Arrangements: Storage and Emergency

- 3.36 The operator has his own alternative wood recycling sites including at Swansea Docks which can be used to divert wood waste to in circumstances that Barry Docks cannot accept wood waste either due to site closure during a fire incident or when the site has reached its storage limits.

Seasonality

- 3.37 Wood recycling can have an element of seasonality with both the generation of waste wood and the demand for the wood products. Greater levels of waste wood are generated during the spring and summer months when construction levels are highest. This has a mismatch with the period of highest demand for the processed wood product, such as demand from energy plants, in autumn and winter. As a low value, high bulk commodity, with seasonal variations in arisings meeting the supply/demand challenge a high level of storage is essential. It is necessary to capture and store all waste wood to iron out the imbalance in waste arisings and the demand for the processed product.
- 3.38 SWWP has established with a series of contracts sourcing material from local authorities, various waste producers and manufacturing operations. SWWP has supply contracts with major power plants which include the nearby Margam power plant (Margam has a minimum supply requirement of 200,000tpa of wood). Whilst power station demand is highest in the winter SWWP supply Margam throughout the year. Additionally SWWP have supply contracts with board mill producers which require a continuous supply over the year. The contract with the Kronspan board manufacturer takes 200 loads per week. These are considered resilient outlets with renewable power plants an essential as part of the government energy drive. Similarly the board manufacturers have adapted manufacturing lines and are driven by policy drivers to use sustainable sources of material. It is not anticipated that there will be any lessening of demand for the wood product from these customers.
- 3.39 The site will form part of a larger supply network which is also used to assist in evening out imbalances in supply of arisings and demand for processed products.

Arson/Vandalism

Security

- 3.40 The site is remote from public areas situated in a private dock complex which has controlled security access. Members of the public are not allowed general access to the dock complex or onto the site itself. The site itself is securely enclosed in the dock complex. The dock complex is subject to regular security patrols 24hours a day. The site gates are only open during working

hours when operatives are on site. The site has a CCTV system with live streaming access and provision for motion activation to provide instant notification alerts of any unauthorised presence on site out of hours. We have 24hr hr on site via contracted professional security to monitor site, from unauthorised access/ trespass. The CCTV footage will be live streamed to the site operator and by our security.

Leaks and spillages of oils and fuels

3.41 All plant and machinery is regularly maintained and inspected. Any defects such as fluid leaks are dealt with immediately and any machine leaking oil or fuel will not be used until repaired are affected. Any leaks of oils or fuel will be immediately dealt with and contaminated materials removed off site to an appropriate disposal facility. Spill kits are kept on site and any spillage/leak incidents will be fully recorded in the site diary.

Ignition Sources

3.42 Operations on site are designed to keep storage piles and sources of ignition separate. The FPMP deals with the management of various ignition sources under separate headings, table 4 provides a summary of ignition sources and how they are managed at Barry Docks.

Table 4: Summary of Ignition Sources and their Management

Source of Ignition	Prevention/Management
Arson/Vandalism	Dock Security/ Site Security 24hrs and 24hrs CCTV and secure site boundaries.
Self Combustion	Storage times do not exceed NRW guidance. Monitoring for signs of self heating is provided for by means of visual monitoring by staff and the CCTV. Monitoring to ensure appropriate stock rotation and processing to order to minimise amount of storage of processed material.
Plant or equipment failure	Regular full inspection of plant and maintenance beyond manufacturer's specification.
Electrical faults	Regular electrical inspections/testing undertaken. No electrics in vicinity of storage areas.
Naked lights	None allowed on site, restricted area for smoking for staff provided away from storage areas.
Discarded smoking materials	No fires allowed on site.

Hot works	Hot works can be carried out but a hot works permit need to be provided before any work starts
Industrial heaters	None used on site.
Hot exhausts/plant engines	Hot plant subject to continual monitoring in course of working operations. Dust and dirt is removed at the end of each working day using an air compressor and then the plant is check an hour later to ensure it has cooled down.
Open burning (on site or adjacent land)	No fires allowed on site. No burning takes places on surrounding land
Damaged or exposed electrical cables	Regular electrical inspections/testing undertaken. No electrics in vicinity of storage areas.
Reactions between incompatible materials	Single waste stream not subject to chemical reactions. Waste acceptance procedures ensure no non-permitted/incompatible material is accepted at the site.
Neighbouring sites activities	Largely surrounded by dock areas with adjacent uses posing little fire risk.
Sparks from buckets	Site operatives to watch for sparks and initiate procedures if a spark starts a fire.
Hot loads	Monitoring for hot loads takes place as loads arrive at site with protocol to manage material.

4 Firefighting

Firefighting – General

4.1 Firefighting will be undertaken by site staff when safe to do so. On discovering a fire during the working day all members of staff are instructed in the following procedures:

1. Raise the alarm, inform TCM/ Site security
2. Bring into effect fire-fighting actions immediately and safely on the affected area:
 - Assess the scale, location and intensity of the fire
 - Call the Fire Service if required
 - Inform Dock Security
 - Direct staff for fire fighting purposes (see point 5)

On hearing the alarm staff are instructed to:

3. Evacuate the site including, where safe to do so, shutting down plant and machinery and moving away from the wood piles
4. Remain on site to assist with any fire fighting only if directed by the TCM (this will only apply to suitably fire fighting trained staff)
5. Notify by mobile phone Head Office to make arrangements for divert any incoming wastes (responsibility of TCM or in his absence the designated on-site deputy)
6. Return to site only when the TCM directs it is safe to do so

4.2 Out of hours there will be no processing operations or movement of plant and machinery with plant parked away from the wood piles. Out of hours on discovering a fire the procedures are:

1. Raise the alarm
2. Contact TCM/out of hours contact
3. Assess the scale, location and intensity of the fire
4. Bring into effect and fire-fighting actions to be immediately and safely be brought into action on the affected area

5. Call the Fire Service if required
 6. Inform Dock Security
 7. Inform Head Office
- 4.3 In the event of a fire during the working day all site processing operations will cease, no waste will be accepted to the site and all machines not used in firefighting in the affected area must be switched off and moved to a safe location. Operations at the site will not recommence until it is safe to do so without risk to the environment. Similarly in the event of a fire outside normal operating times the site will not reopen until it is safe to do so without risk to the environment.
- 4.4 Contingency arrangements for the diversion of waste will be activated to redirect any incoming wastes to the other facilities as discussed previously.
- 4.5 Should the emergency services be called out the Site Manager will be responsible for liaising with them on their arrival.
- 4.6 Out of hours, staff and managers will be on call to attend the site to enable plant and machinery to be used in assisting the fire service.

Fire Fighting –Strategies

- 4.7 The main strategy for firefighting is to separate unburnt material from a pile where a fire has started to reduce available 'fuel' and minimise the burn time. Therefore should a fire start in one part of a pile, on-site equipment (loading shovels/excavators) will be used to move material from the affected pile so reducing the potential combustible material in the pile and reducing the duration of a combustion event. Employing this technique SWWP anticipate that a fire incident at most would affect only quarter of a storage pile.
- 4.8 The mobile plant utilizing full metal attachments will be used to assist with firefighting during an incident.
- 4.9 In the event a fire in a storage pile, plant will push away the unaffected parts of the pile, either to the quarantine area or using separation distances as temporary quarantine areas where this does not present a risk of combustion to other storage piles. SWWP has run trials on moving 7m piles and estimate that a 6m gap can be created in 20 mins. . The plant on site can move material rapidly with loading shovels and an excavator.

- 4.10 Where feasible cleared ground would be used to spread burning/heated material to allow more rapid cooling and reduce the duration of the fire incident. Once the material was cooled it would be removed, temporarily to the quarantine area if it is not possible to move directly off site. Any 'moved' unburnt material would be returned to a normal pile formation as soon as possible.

Fire Fighting – Initial Response

- 4.11 The initial response on the outbreak of a fire will be to deploy a tractor and tanker, with a rain gun attachment and the mobilisation of plant to be used in firefighting (i.e. to assist moving material as appropriate).
- 4.12 The tank will be continually ready with a full tank of water and also a puncture proof solution in the tyres to ensure no flat tyres. The tractor and tanker is able to access all parts of the site and can be instantly mobilised to the location of a fire incident. The tanker capacity is 1,900 gallons.
- 4.13 The tank has a pressurised system allowing a high volume of water to be discharged in a short period of time over greater distances, both horizontally and vertically, ensuring it can target water to any location. The rain gun mounted attachment is able to rotate over 360°, again highly accessible in allowing delivery of water to all areas of the site. A side valve allows a hose attachment with further flexibility as to fighting a fire with variable spray ability.
- 4.14 To fully discharge the tank of all 1,900 gallons takes approximately 4.5 minutes, delivering water at a rate of approximately 2,000 litres per minute. The discharge of the hose can be controlled with the nozzle which has a variable flow control allowing water to be applied at a range of rates from a light spray to drenching. The rate of application of water will be assessed at the point of use to ensure the most effective use of water². The preference is to apply water as a spray as opposed to drenching a fire as this can be a more effective (quicker) way to extinguish a fire removing the energy from the fire and absorbing heat quicker with the water turning to steam. Not only can this put out a fire faster but produces with minimal fire water runoff.
- 4.15 The refilling operations are swift with a similar 5 minutes refill time. Therefore once the tanker has discharged its load it will run on a cycle of refilling and discharging as needed for the fire incident in tandem with the other actions outlined below.

² Fire Service training will include assessment of the most effective rate of water application.

Firefighting – Movement of Material

- 4.16 As mentioned above, material will be moved ('pushed' as this is the quickest means) to a safe distance from the fire, to a location where its temporary storage does not compromise access for firefighting purposes or give risk to potential pollution risk. For safety reasons, no burning material will be moved across the site. After a fire, burnt material may be removed to the quarantine area if appropriate.

Fire Service

- 4.17 Fighting a major fire would be undertaken by the local fire service because of the safety risks to the staff. The South Wales Fire and Rescue Service will be invited to train at the site to become familiar with the site layout. The fire service will use their own high volume pumps and hose equipment for firefighting but will be able to use SWWP personnel and equipment to help in the movement of material to assist firefighting.

Controlled Burn

- 4.18 SWWP do not propose to use 'controlled burn' as a firefighting technique at Barry Docks as the FPMP provides extensive measures in its firefighting strategy to swiftly extinguish any fire. A controlled burn would only take place with prior agreement with the NRW, Fire Service and Public Health Wales.

Firefighting Equipment

- 4.19 Fire extinguishers and/or automatic fire suppression systems are provided on each item of mobile plant as detailed previously. The location of the firefighting equipment is shown on the accompanying plan is LMM 075/01A, with the majority of the fire stores kept in the container stores adjacent to the site access and readily accessible at all times.
- 4.20 Fire extinguishers are situated strategically around the site and all are checked and serviced annually by a certified third party company. Fire extinguishers are present in all mobile plant.
- 4.21 The on-site firefighting equipment includes:
- Tractor and Tanks
 - Loading shovels
 - Excavator
 - Pump
 - Fire Extinguishers: Water spread strategically around the site.
 - CCTV & 24/7 security as part of the firefighting equipment
 - Weighbridge Office – Water & CO2
 - Stores Container – Powder and Foam
 - PPE

- 4.22 All firefighting equipment is subject to a regular inspection and maintenance regime to ensure it is fully operational and ready for use at any time. Where appropriate couplings to match fire service appliances will be used.
- 4.23 When an inspection identifies any repair or maintenance work required for the effective operation of the equipment this will be undertaken as a matter of priority. All firefighting equipment shall be inspected following its use to ensure it is fully operational and effective. Records are kept of all inspections and maintenance works.

Water Supply

Water Requirement – NRW Guidance

- 4.24 NRW provides a ‘rough guide’ of water requirements that 300m³ of combustible material will need a water supply of 2,000 litres a minute for a minimum of 3 hours, which equates to 1,200ltrs per 1m³ (or 1.2m³ of water to 1m³ of combustible material). At Barry Docks with the largest pile at 14,313m³ this would give a water requirement of 17,175m³.
- 4.25 However as noted above, it would never be SWWP or the Fire Service’s strategy to simply let the full extent of a pile burn. SWWP, with considerable experience in these operations, have estimated that no more than a quarter of a pile would be burnt, however for the purposes of an abundance of caution, it is was assumed that half of the 93m long largest stockpile had to be supplied with water, and that water then managed, that would be just over 7,000m³ of wood requiring 8,587m³ of water based on the NRW’s rough guidance figures.

Dock Water

- 4.26 The water in the docks is fresh water and available for use in firefighting. This has been confirmed by the Docks³ and is the main source of water to be used for any major fire incident in the dock complex. The area of open water in the docks is circ 50ha and even if the full volume required in line with NRW guidance was sourced from the dock it would not result in any noticeable change to dock water levels. Therefore there is no shortage of waters for firefighting on the availability of dock waters alone however there are other onsite sources of water as detailed below. ABP have confirmed SWWP are authorised to access and use this.

³ Associated British Ports Limited who own Barry Docks.

Fire Hydrant

- 4.27 There are fire hydrants on the dockside but it is not proposed to use these.

Mains Water

- 4.28 There is a 3 inch mains water supply on site however it is not anticipated this would be used for firefighting purposes.

Onsite Water Storage

- 4.29 Bank side flows naturally towards drain (gully) middle of the yard, water is pumped into storage tanks. The site has a water tank with a capacity of 1,000,000 litres and an additional 18,000 litres tank. These waters are retained onsite for dust suppression purposes, but in the event of a fire the water can also be used for fire fighting

Wetting Agent

- 4.30 As noted there is no shortage of water available for firefighting purposes however the FPMP aims to minimise its use as is consistent with meeting NRW's aim of minimising the impact of a fire incident. In addition to reducing the need for firefighting waters as a result of removing material from piles and SWWP will use wetting agent in the water applied to a fire.
- 4.31 A supply of 600 litres of wetting agent (30 x 20l containers) will be maintained on site (see Appendix E for details). The wetting agent is for use during a fire incident with on-site staff able to use the wetting agent in the on-site tankers or it can be used by the Fire Service. The wetting agent will make the on-site water supplies go further and extinguish fires more efficiently.
- 4.32 The wetting agent is able to penetrate the fibres of the wood deeper than water alone providing cooling, preventing fire spread and reigniting of burnt material. The wetting agent is used at between 0.2% and 0.5% concentration with water.
- 4.33 The wetting agent used is identical to that used by Mid and West Wales Fire and Rescue Service who carry this product on all their front line fire appliances. Guidance on wetting agents was supplied by Simon Pearson of Mid and West Wales Fire and Rescue Service. Simon is the lead for waste fires and sits on the national working groups. This advice has already been used along with the wetting agent at 2 other sites in Wales.

Containment of Firewater

- 4.34 Fire water run off will be contained by the means of a raised lip and bunding around the site boundaries with the impermeable site surfacing. The raised barrier around the site will be a minimum of 0.47m high with demountable barriers at similar height at the site access points.

With an operational site area of 2.3ha this represents a minimum storage capacity of 10,810⁴ and together with the storage capacity in the tank is sufficient to provide for water generated fighting a fire. . A 3rd party company (GD Environmental) will be contracted to remove any fire water.

4.35 However SWWP aims to reduce the water used, and so the containment requirements and requirement for disposal of any contaminated firewaters by a variety of good firefighting techniques including:

- i. The firefighting strategy;
- ii. Use of wetting agent;
- iii. Training in correct use of water when firefighting (spray not drenching); and,
- iv. Absorption/evaporation losses

4.36 The use of a water/wetting agent, i.e. wetting agent is added to the firefighting water, will reduce water usage and hence containment requirements. A mix of 300m³ would equate to the equivalent use of 3,000m³ water hence a reduction in the actual used liquid volume of 2,700m³ i.e. a reduction of over a third of the water requirement for the proposed storage at Barry Docks.

4.37 Then there are the losses during firefighting, items (iii) and (iv). As water is administered to the fire, a percentage will evaporate as steam and some will absorb into the wood. The EA has accepted FPPs that have assumed not all the water used to douse a fire will emerge as surface water, because of evaporation and potential uptake by waste, and using the following caveat:

“Assuming 25% water absorbed and 50% evaporated. Assuming most water hitting the target area will be evaporated with drainage increasing during the damping down operation. These assumptions have been used in previous FPPs which have been accepted by the Environment Agency” (SLR Statement on approved FPP).”

4.38 Assuming solely a 25% loss through absorption/evaporation (*a very conservative estimate*) the containment requirement would be reduced by 2,146m³ irrespective of other measures reducing water usage.

Quarantine Area

⁴ NRW requires a supply of water for a 300m³ pile of 2,000litres/minute for three hours (equivalent of 360,000litres or 360m³).

- 4.39 Quarantine provision for the site is identified on plan LMM/075/01A. The quarantine area is a bare area of ground which is kept clear. Excluding the surrounding separation distances, the total quarantine area has a volume of 7245m³. There is a 6m separation distance on all sides of the quarantine area increasing to 10/12m separation distance to the nearest wood storage piles. This area will be kept completely clear. This complies with of the requirements, indeed goes beyond, NRW guidance which requires a quarantine area able to accommodate 50% of the largest pile which at the Barry Docks is 7,156 m³.
- 4.40 However as as noted above, in the event of a fire the focus would be to create a break in the pile by moving a ~ 6m width of that stockpile, not wholesale relocating more than necessary of that pile, this would necessitate ~1000m³ of quarantine space. Additional space is also available in areas of the wider yard not normally used for storing wood.
- 4.41 The area is to be used to hold materials removed from a storage pile during an incident, also for the cooling heated materials from hot loads directed to the quarantine area or to hold burnt material after a fire. Burning material will not be moved into the quarantine area because of the unacceptable risk to staff and potential ignition to other storage areas.
- 4.42 When the area is used to cool heated material, initially material will be tipped onto the ground and spread over the ground. An assessment will be made of how to cool the material. Options to cool the material include simply spreading out the material or the application of water via a mister or hose/bowser.
- 4.43 If heated material has been deposited in the quarantine area there will be on going monitoring throughout the working day of the cooling operations and material temperature. At the end of the working day a final assessment will be made and appropriate actions undertaken to ensure that no material is left outside working hours in a condition that might lead to self-combustion.
- 4.44 Once the material has been cooled sufficiently a further assessment will be made as to the suitability of the cooled material for processing. If it is no longer fit for purpose it will be disposed of at an appropriately permitted site, currently the nearest disposal facility is the Dockway Landfill. If the material is suitable for use it will be returned to an appropriate storage area.
- 4.45 Full records will be maintained of materials brought to the quarantine area including the cooling treatment, monitoring and final removal either as product or for off-site disposal.

Combustion Products

- 4.46** Table 1 outlines the potential combustion products from fire incident. All staff FPMP training will include how to apply water to a fire to effectively fight the fire and minimise the generation of combustion products.

Disposal of Fire Residues

- 4.47 Burnt material will not be suitable for use as a wood product and will be removed from site to an appropriately permitted disposal site.
- 4.48 The used fire waters will be contained within the site as previously detailed. After a fire incident absorbent matting will be used to remove any contaminated materials on the surface of the waters such as oils or floating debris. The used matting will be disposed to an appropriate facility. The quality of the used fire waters will then be assessed as to its possible reuse, treatment or disposal such that it does not pose any environmental risk.
- 4.49 Currently the nearest disposal facility able to accept the burnt materials, used equipment (matting) etc is the Docksway Landfill.

Reporting

- 4.50 All fire incidents will be fully recorded, including investigation of the cause of the incident and any actions implemented. Full details will be provided to the NRW.

Review

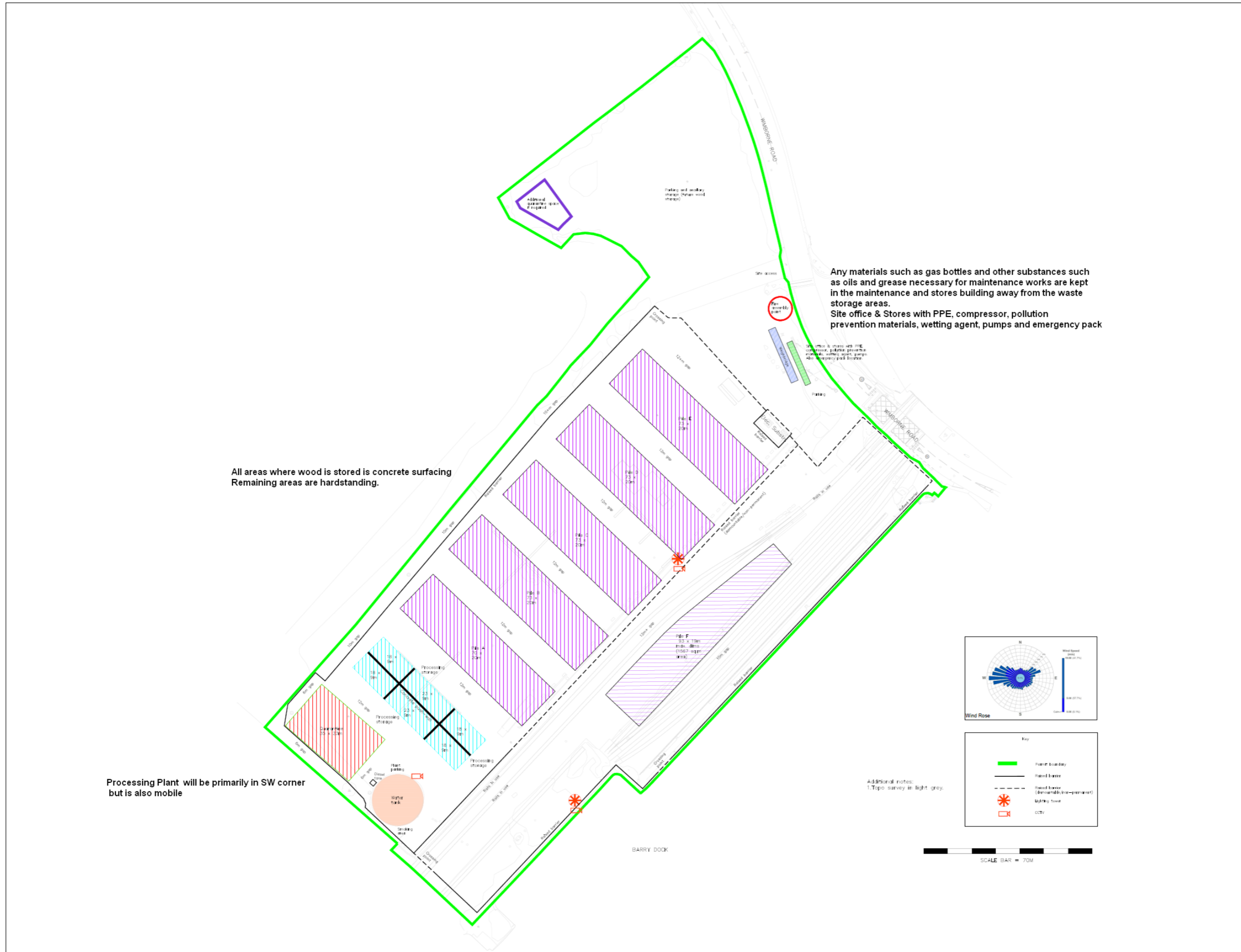
- 4.51 The contents of the FPMP will be kept under regular review by management. Notwithstanding the regular review the FPMP will also be reviewed in response to changes in operational activities, new legislative requirements and any relevant site incidents.

Training

- 4.52 All staff are fully trained in fire procedures which includes up-date training and routine fire drills. Fire training and familiarity forms part of the site induction training before staff can commence working on site. All nominated 'firefighting' operatives will have specific practical training at the site using the firefighting equipment and following procedures of the FPMP.
- 4.53 Refresher training and a full mock site incident exercise will take place at least once a year with the help of an external training supplier (Construction Hub Academy). Management will review the need to increase the frequency of fire training and exercises in response to staff turnover, changed site practises and any incidents or near misses. Full records are kept of all training events.

Communication

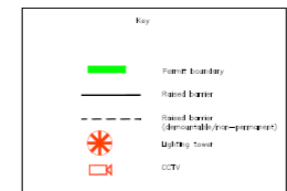
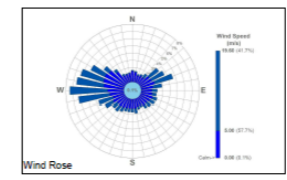
- 4.54 An up-to-date FPMP will be kept in the site office available for inspection by all members of staff. An 'off site' copy of the FPMP will also be kept in a box at the site entrance so in an emergency situation NRW and the local fire service can readily access the document to assist in dealing with an incident.
- 4.55 Visitors to the site will be made aware of the fire prevention and fighting procedures to ensure they understand their responsibilities.
- 4.56 In terms of communication during an incident when a fire incident occurs the Site Manager will immediately contact the docks security and give consideration to directly notifying any human receptor locations which are downwind of the prevailing wind at the time of the incident. When the Fire Service is involved with an incident their advice will be sought on who to contact and how the communication will be undertaken.



All areas where wood is stored is concrete surfacing
 Remaining areas are hardstanding.

Any materials such as gas bottles and other substances such as oils and grease necessary for maintenance works are kept in the maintenance and stores building away from the waste storage areas.
 Site office & Stores with PPE, compressor, pollution prevention materials, wetting agent, pumps and emergency pack

Processing Plant will be primarily in SW corner but is also mobile



Additional notes:
 1. Topo survey in light grey.

SCALE BAR = 70M

© SWP
 This drawing should only be used for its original intended purpose.
 Any alterations, modifications, or changes should be made in consultation with the original author.
 Dimensions to centre unless otherwise stated.



Revision	Boundary revised	27 Nov 2024
Author	Customer	Date
Unit A4 Pacific Road, Compass Business Park, Cardiff CF24 0HL		
Project: BARRY DOCK WOOD DEPOT		
Drawing Title: FIRE PLAN		
Drawn Date: 01/10/24		Surveyed Date
Scale: 1:500		(AT A0)
Drawing Number: LMM/075/01		Rev: A

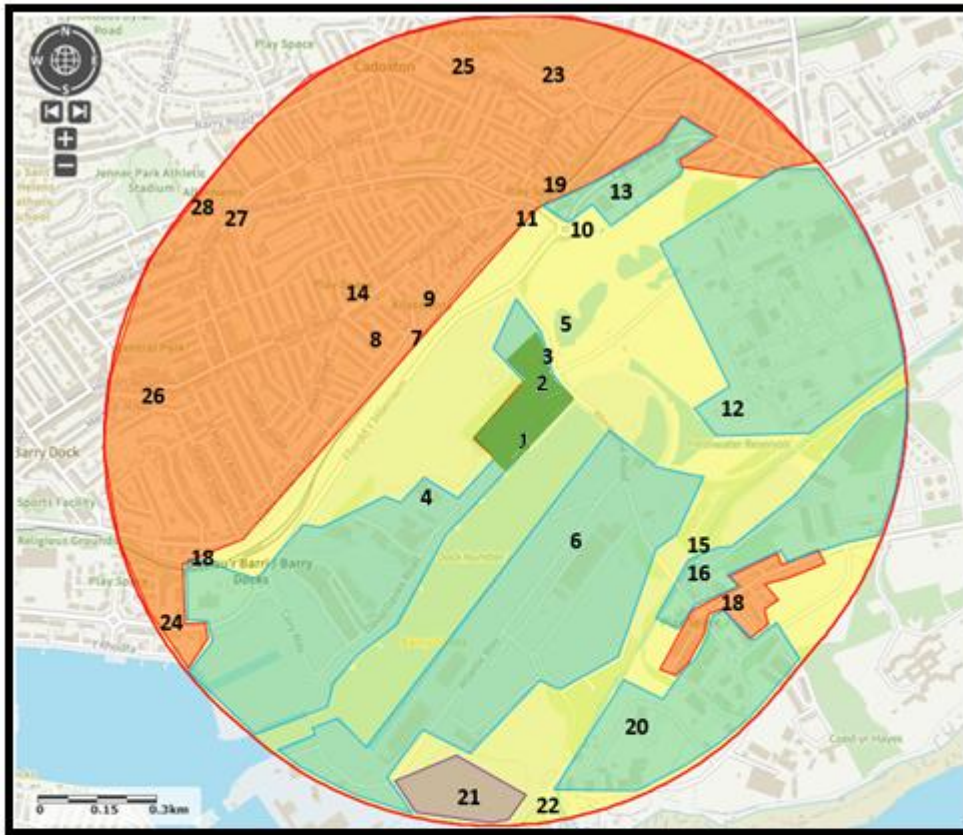
Appendices

Appendix A – Permitted Waste Types

EWC Code	Description
02 01 03	Wood and bark
02 01 07	Wood and bark
03 01 01	Wood bark and cork
03 01 05	Sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04
03 03 01	waste bark and wood
15 01 03	wooden packaging
17 02 01	Wood
17 09 04	Mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03 (consisting of wood only)
19 05 01	composted fraction of municipal and similar wastes (consisting of wood only)
19 12 02	Ferrous metals
19 12 03	Non ferrous metals
19 12 07	Wood other than that mentioned in 19 12 06
20 01 38	Municipal wood waste
20 02 01	Wood, bark and green waste only

Appendix B – Sensitive Receptors

Sensitive Receptors Location Plan



- Green – Site
- Blue – Industrial and commercial
- Yellow – Open ground
- Red – Residential
- Purple – Solar Farm

Sensitive Receptors Table

	Potential Receptor	Receptor Type	From Boundary of Permit	
			Distance (m)	Direction
1	Docks, roads and Private railway	Dock Infrastructure and water bodies	0-1000m	S, E
2	The Construction Hub Academy	Workplace	0m	N
3	Local Roads	Infrastructure	100m+	N,S,E,W
4	David Davis Road	Workplace	150m+	S
5	Barry Ponds	Water/Recreation	160m+	N
6	Atlantic Way	Workplace	170m+	S, SE
7	Main Railway Line	Infrastructure	265m+	W
8	Cadoxton	Residential	300m+	NW
9	Allotments	Community	310m+	NW
10	A4055	Infrastructure	420m+	N,W
11	Barry Mosque	Community	420m	N
12	Dows Silicons	Workplace	440m	NE
13	Cardiff Road	Workplace	480m+	N
14	Play Park	Recreation	500m	NW
15	Cadoxton River	Water	540m	SE
16	Windmill Parc	Workplace	540m+	SE
17	Barry Docks Station	Infrastructure	625m	SW
18	Bendricks Rd/Hayes Rd	Residential	655m+	SE
19	Cadoxton Station	Infrastructure	680m	N
20	Atlantic Trading Estate	Workplace	735m+	SE
21	Solar Park	Infrastructure	835m	S
22	Hayes Point to Bendrick Rock SSSI	Conservation Site	850m	S
23	Victoria Park	Recreation	855m	N
24	Barry Waterfront	Residential	865m+	SW
25	Cadoxton Primary School	Educational	900m	N
26	Central Park	Recreation	900m	W
27	Barry Library	Community	950m	NW
28	Barry TFC Stadium	Community	975m	NW

Appendix C – Contact Information

Barry Docks, Barry		
Site Phone Number	07759711473	
Emergency Services	999	
Police HQ Incident Room	101	
Local Police	101	
Doctor	Court Road Surgery, 29 Court Rd, Barry CF63 4YD Tel: 01446 733181	
A&E	Barry Hospital - Minor Injury Unit. Colcot Road. Barry. CF62 8YH. Tel: 01446 704000/704042	
NHS Direct	0845 4647	
Natural Resources Wales	24hour hot line – 0300 807060 Local Office – Cambria House, 29 Newport Rd, Cardiff CF24 0TP Tel: 0300 065 3000	
Electricity Emergency	Western Power 0800 052 0400	
Water Services & Emergencies	Welsh Water 0800 052 0130	
Local Authority	Glamorgan Council 01446 700111	
Company Contacts Out of Hours		
Operator	Tim Jackson	07719 019209
	Martin Chubb	07739324593
	Rita Vassallo	07736958177
	Chris Chaney	07759711473
Neighbour Contacts		
Associated British Ports*	0870 609 6699	
The Construction Hub Academy	01446 744775	
Dow Silicones UK	01446 732350	

*ABP 24 security who hold all contact details for dock operations (not reproduced here for GDPR reasons)

Appendix D – Storage Details Assessment

Material: Unprocessed Wood

Pile	Dimensions (m)			Volume (m3)	Shaped	Tonnage
	Length	Width	Height			
A	70	20	9	12,600	11,340	2268
B	73	20	9	13,140	11,826	2365
C	73	20	9	13,140	11,826	2365
D	73	20	9	13,140	11,826	2365
E	73	20	9	13,140	11,826	2365
F	93	19	9	15,903	14,313	2863
Totals				81,063	72,957	14,591

Separation Distance: Minimum 12m long sides

Maximum Storage Duration: <3 months

Description of Material		BRE Risk Matrix	FPMP Objective	Control Measures
Pre-sorted and/or unprocessed waste wood		Low/Medium	Reduce likelihood of Fire	Waste acceptance procedures to ensure no 'foreign bodies' or excessive chemical contamination or heated material
Particle Size	150-3000mm			Controlled storage durations and rotation measures
Fines	None		Pile Height <9m	
			Duration of fire incident <4 hours	Procedures to remove non burning, combustible material in affected pile
				Provision of dedicated Fire fighting equipment as detailed in FPMP
				Staff training in fire procedures and use of equipment
				Joint training exercise with local Fire Service to confirm procedures
			Minimise spread of Fire inside and outside the site	Separation distances as per NRW guidance
				Rapid fire fighting procedures to prevent fires becoming well established with

resultant radiation
combustion risk

The BRE report notes for material >150mm critical temperatures for self combustion are 'relatively high'

So high as to preclude self-combustion, unless a foreign object, heat source or localised hotspot is introduced into the waste mass.

Storage times well below BRE calculated self ignition times for this product size

Material Type: Processed Wood

Pile	Dimensions (m)			Volume (m3)	Shaped	Tonnage
	Length	Width	Height			
1	18	9	9	1458	1312	262.44
2	23	9	9	1863	1677	335.4
3	18	9	9	1458	1312	262.44
4	18	9	9	1458	1312	262.44
5	23	9	9	1863	1677	335.4
6	18	9	9	1458	1312	262.44
Totals				9558	8602	1720.56

Separation Distance: Fire Walls and Minimum 12m

Maximum Storage Duration: <1 month

Description of Material		BRE Risk Matrix	FPMP Objective	Control Measures	Residual Risk
Processed with fines removed		Low/Medium	Reduce likelihood of Fire	Pile Height <9m	Low
Particle Size	10-70mm			Controlled storage durations	
Fines	None			No fines	
*Based on sample 4 of BRE			Duration of fire incident <4 hours	Procedures to remove non burning, combustible material in affected pile	
				Provision of dedicated Fire fighting equipment as detailed in FPMP	
				Staff training in fire procedures and use of equipment	

	Joint training exercise with local Fire Service to confirm procedures
Minimise spread of Fire inside and outside the site	Separation distances as per NRW guidance Rapid fire fighting procedures to prevent fires becoming well established with resultant radiation combustion risk

Appendix E – Wetting Agent

FREEFOR SF 3F

SF **Wetting and
Foaming Agent
Fluorine Free
Solvent Free**

**PERFORMANCE &
WARRANTY**

FREEFOR SF meets international requirements
EN 1568-1 & 2: Pass
EN 1568-3: Class III C

FREEFOR SF can be used for all structural fires with tap water, sea water and brackish water.

FREEFOR SF has a 10 years warranty in its original packaging and at storage temperatures -30°C / +60°C.

PHYSICAL DATA

Appearance /colour

Concentration for wetting application

Concentration for foaming application

Specific Gravity at 20°C (Kg/dm³)

Viscosity at 20°C (cStokes)

Freezing point

Ph at 20°C

Sediments after ageing

Surface tension (mN/m)

FOAM QUALITY

Low Expansion

Drainage Time 25% / 50%

Medium Expansion

High Expansion

Foam Expansion values depend on the equipment

FREEFOR SF

SF1 SF2 SF3

Light red liquid

0.1-0.3% 0.2-0.5% 0.3-1%

0.3-0.5% 0.5-1% 1-3%

1.07 1.03 1.01

15 3 2

-10°C -8°C -5°C

7

0%

25

8

2 min. / 4 min.

100

600



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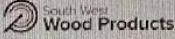
Unit B, 18 Brunel Road, Earlsree Industrial Estate,
Corby, Northants, NN17 4AW, United Kingdom

VAT Registration No: 929 9419 72 - Registered in England: 02220189

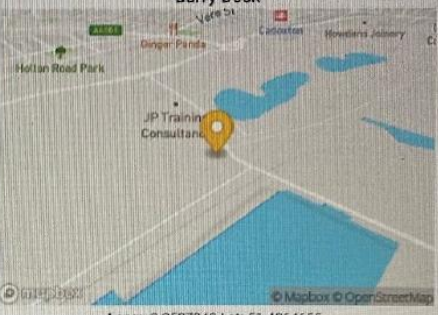
www.3fff.co.uk

Appendix F Maintenance app example.

workMule Plant Inspection



Name Operator 7	Date 08/05/25	Time 07:30:03
Safety Score 100%	Failures 0	
Inhouse-ID CBI 6400T	Fleet # CBI	Serial # 19099



Barry Dock
 Long: -3.2507249 Lat: 51.4064655

Inspection Results

Inspection	Inspection
LOCK OFF/TAG OUT (LOTO) PROCEDURE	Operational Controls
Frame & Mountings	Adblue
Steps, Walkways & Handrails	Coolant
Discharge Shoots & Belts	Engine Oil
Feed Hopper	Fuel
Jaw / Drum / Cone	Hydraulic Oil
Mast & Lighting Pod	Transmission Oil
Milling Drum / Teeth	Water Tank
Hydraulic Components	Emergency Systems
Right Tracks	Equipment Startup
Right Body Panels	Lights and Beacons
Hydraulic hoses	Hydraulic Components
Amber Warning Beacon	Operational Controls
Left Tracks	Equipment Movement
Left Body Panels	Equipment Safety Features
Grease	Equipment Shutdown
E-Stop	