FIRE PREVENTION & MITIGATION PLAN

Plot 10, Gaerwen Industrial Estate, Gaerwen, Anglesey, LL60 6HR

Green Skips (Environmental) Ltd

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Oaktree Environmental Ltd

Waste, Planning & Environmental Consultants

Oaktree Environmental Ltd, Lime House, 2 Road Two, Winsford, Cheshire, CW7 3QZ
Tel: 01606 558833 | E-Mail: sales@oaktree-environmental.co.uk | Web: www.oaktree-environmental.co.uk
REGISTERED IN THE UK | COMPANY NO. 4850754

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THIS DOCUMENT IS DUE FOR REVIEW IN **JANUARY 2023** OR AS A RESULT OF ANY INCIDENTS WHICH MAY LEAD TO THE REQUIREMENT FOR IMMEDIATE REVIEW, WHICHEVER IS THE SOONER

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Site Address:	Plot 10, Gaerwen Industrial Estate, Gaerwen, Anglesey, LL60 6HR		
Site Operator:	Green Skips (Environmental) Ltd	**National Grid Ref:**	SH 47664 71480

CONTACT	DESCRIPTION	OFFICE HOURS	OUT OF HOURS
Kevin Davies	Site Manager & TCM	01248 421526	07900492723
Ysbyty Cefni (Hospital) Llangefni, Anglesey, LL77 7PP	Main NHS Hospital	03000 850016	999 or 112
	Accident & Emergency (A&E) 12-hour service	999	999 or 112
Bronllys Surgery Gaerwen, Ynys Môn, LL60 6JN	Local Doctor Surgery (GP)	01248 421645	999 or 112
GorsafHeddlu Llangefni. Llangefni Police Station Llangefni, Ynys Mon, LL77 7EN	Local Police Non-Emergency	999 or 112	999 or 112
	Police Emergency	999 or 112	999 or 112
North Wales Fire & Rescue Service (Llangefni Fire Station) Isgraig, Lon Newydd LL77 7PT	Fire and Rescue Service (in Emergency Dial 999)	01248 750110	999 or 112
Natural Resources Wales (Bangor) Maes y Ffynnon, Bangor LL57 2DW	Local NRW Office	0300 065 3000	0300 065 3000
Isle of Anglesey County Council Council Offices, Llangefni Anglesey, LL77 7TW	Council General Enquiries	01248 750057	999 or 112
Oaktree Environmental Ltd Lime House, 2 Road Two, Winsford, Cheshire, CW7 3QZ	Specialist Advisor (Waste and Planning Issues)	01606 558833	999 or 112

1 Introduction

1.1 Overview of site operations

1.1.1 This document considers the risks associated with fire on site at Plot 10, Gaerwen Industrial Estate, Gaerwen, Anglesey, LL60 6HR.Green Skips (Environmental) Ltd is the permit holder and operate an A11: Household, Commercial & Industrial Waste Transfer Station Environmental Permit (EP) involving the reception, storage and treatment of Household, Industrial and Commercial (HIC) wastes.

1.2 Fire prevention objectives

1.2.1 This Fire Prevention& Mitigation Plan (FPMP) has been produced in accordance with Natural Resources Wales' (NRW) - Waste Management; Guidance Note 16 published July 2017 to:

- Minimise the likelihood of a fire;
- Reduce impact from emissions during or after a fire on the local community, critical infrastructure and the environment;
- Ensure suitable resources required by the NRW and other emergency responders are available during an incident; and,
- Identify post incident clean-up and remediation costs.

1.3 General

1.3.1 In addition to this document the site will be operated in accordance with an Environmental Management System (EMS). The main operations which take place at the site are as follows:

- Storage and bulking of wastes
- Sorting (with loading shovel/360° excavator or by hand)
- Separation (by using appropriate mechanical treatment plant comprising hopper, trommel, blower, picking line and overband magnet)

1.3.2 The layout of the site is shown on Drawing No. GIE/209/03.

1.3.3 This FPMP document will be kept in the site office and all operational staff must be aware and understand the contents of the FPMP and what they must do during a fire.

1.3.4 This document will be due for review two years from the date of approval, as a result of any incidents which may lead to the requirement for immediate review, or the FPMP guidance changing, whichever is the sooner.

1.3.5 This FPMP also will be located in the Emergency Services Box (ESB) located near the site entrance as shown on Drawing No. GIE/209/03 in Appendix I. The ESB will also contain contact numbers for immediate receptors who could be in danger if a large fire broke out at the site. The receptors are shown on Drawing No. GIE/209/04 in Appendix I and table 9.1 In the event of a fire, the Fire & Rescue Service and NRW would be able to view this FPMP to ensure the actions set out are implemented to meet the objectives shown in section 1.1.1

1.4 Staffing and management

1.4.1 The table below details the minimum staff requirements when the site is open for the reception of waste and, therefore, shows the minimum number of staff available to tackle a fire on site during operational hours. Only the site manager, machine/plant operators and general operatives will be permitted to tackle fires on-site.

Table 1.1 - Staffing numbers and responsibilities

Position	Employees	Responsibilities
Site manager & TCM	1	Overall management of the site
Machine / Plant Operator's / General Operatives	3	Waste handling/processing, reception, plant operation and general housekeeping
Office / Admin	2	General administration

1.5 Plant and equipment

1.5.1 The table below details the plant/equipment on site including that equipment specifically required for the implementation of this FPMP. Only trained operators will be permitted to drive/operate the plant/equipment listed below.

Table 1.2 - Plant & Equipment

Item	Number	Function
360^0 excavators	2	Loading/unloading/movement of waste
Loading Shovel	2	Loading/unloading/movement of waste
Mechanical Trommel / Picking Line	1	Separation of wastes

1.6 Hours of operation

1.6.1 The site will be open during the following hours for the delivery and receipt of waste on site; including depositing, sorting, moving, storing and removing waste:

Monday to Friday	07:30 – 18:00
Saturday	08:00 – 18:00
Sunday / Bank holidays	CLOSED

Note: The site will not always be open and operating hours will vary depending on the amounts of waste needed to be treated.

1.7 Correspondence with Fire and Rescue Service

1.7.1 North Wales FRS and Welsh Water were contacted in the preparation of the FPMP in order to obtain fire hydrant information which is discussed in Section 10 of this document.

1.7.2 Green Skips (Environmental) Ltd will ensure all plans are suitable and seek a two-yearly response from Natural Resources Wales and FRS with regards to their FPMP and associated operations on site. This regular correspondence will ensure all measures to prevent, mitigate and contain fires on site are up to date and deemed sufficient by the FRS.

1.8 Sensitive receptors

1.8.1 A Receptors Plan (reference Drawing No. GIE/209/04)has been provided in Appendix I to highlight all main receptors within 1,000m of the site.

1.8.2 All human and environmental receptors detailed in Section 5 of the FPMP guidance are shown on the above plan and if they are not shown then there are none present within 1,000m of the site.

1.8.3 To minimise the impact on the local area and associated receptors from a fire on site, this document details mitigation measures which will decrease the likelihood of a fire occurring on site and limit the size and duration of a fire if it does occur. These measures will ensure the potential impact on any of the surrounding land is as minimal as practicably possible.

2 Managing common causes of fire

2.1 Common Causes

2.1.1 The following list outlines common causes of fire and outlines specific examples of these sources, the associated risks and any mitigation measures necessary to manage them:

Source	Risk	Specific mitigation
Arson or vandalism	Deliberate ignition of wastes by intruder(s) and/or vandalism of site infrastructure, plant and/or machinery which may give rise to malfunction or compromise the integrity of waste storage/containment measures	Site security measures are detailed in Section 2.9 and shown on Drawing No. GIE/209/03
Plant or equipment	e.g. spillages of fuel, sparks from machinery or malfunction caused by ineffective maintenance	All items of plant will be subject to the preventative maintenance checklist and stored 6m away from combustible materials when the site is closed; see Sections 2.8.
Electrical appliances and cabling	Faulty appliances or damaged/ exposed electrical cables may spark as a result of a power surge	All electrics on site will be fully certified by a qualified electrician and with written procedures in place that set out the regular maintenance. Any potential ignition sources from suspected electrical faults should be isolated and an electrician should be contacted immediately to rectify the situation. Where possible, staff should immediately remove any stored wastes from the vicinity of the fault area or cable traverse if safe to do so .
Discarded smoking materials	Risk of ignition of stored wastes from smoking materials which have not been fully distinguished	The site has a strict no smoking policy.
Open burning on site or on adjacent sites	Risk of ignition from radiative heat or flaming from open burning on site or an adjacent site	Open burning is strictly prohibited at the site. Staff are trained regarding the implications if they are found to be carrying out this operation.

Source	Risk	Specific mitigation
Overheating of stored waste	sources of heat may include heating pipes, hot exhausts, light bulbs, space heaters or direct	Stored wastes will be visual inspected throughout the day and turned as necessary to prevent the formation of 'hot spots'. Where appropriate or when waste starts to heat up (stockpiles i.e. wood stockpile, sorted bays etc.) the moisture level of the stockpiles will be controlled via water suppression by the onsite hosepipes in order to limit the potential of overheating/self-combustion. Waste stockpiles/stacks will be routinely turned in order to dissipate heat and limit the potential for overheating/self-combustion. Reference should be made to Section 4.1.3.
Sparks from loading buckets/shovels	Scraping of loading buckets/shovels causing sparks which may ignite stored wastes	Fire extinguishers are fitted in the cab of all mobile plant
Hot works	e.g. welding, soldering, cutting, etc. which involve the use of high temperature equipment which may be a source of both primary and residual heat to stored wastes	All hot works (including welding/cutting, etc.) are to be carried out will solely in the area as defined on Drawing No. GIE/209/03 which is located at a minimum of 6 metres from any stored wastes. The site's hot works procedure is provided in Section 2.3 Below.
Industrial heating	Industrial heaters and/or pipework used to heat internal and external areas on site which may, in turn, supply heat to stored wastes increasing the risk of combustion	There are no industrial heaters (or associated pipework) used at the site.
Hot exhausts / other sources of ignition	Potential source of both primary and residual heat to stored wastes	Hot exhausts and other sources of ignition will be kept 6m from combustible and flammable waste piles. Staff will be trained and made aware of the risk. The site manager will constantly monitor operational staff/plant to ensure a 6m distance is maintained.
Loose material build-up around plant/machinery and exhausts	Light waste and ambient particulates with high combustibility settling and building up in key areas in and around plant/machinery and around exhausts	Plant / equipment is monitored daily as per the checklist and dedicated site staff cleaning the areas around plant and equipment. Shift teams at end of each shift clean the area around the equipment they have been working on and ensure the equipment is clear of all debris and material.

Source	Risk	Specific mitigation
Hot loads	Imported wastes which may contain materials which are above ambient temperature or harbour reactive properties which would increase the risk of fire at the site	All loads are inspected in accordance with our waste acceptance procedures. If such loads arrive at site, they are intercepted by site operatives who will refuse the acceptance of the waste. They will then if necessary be directed to the quarantine area to ensure the material does not pose a concern/fire risk to the site. The material will if required be treated to ensure the risk of fire is completely negated.
Overhead power lines	Any overhead power lines on or around the site may ignite in the event of a fire and worsen the effects	There are no overhead power lines located in close proximity to the site.
Other combustible non-waste materials on or near the site not mentioned above	Any combustible non-waste materials on or near the site may ignite in the event of a fire and worsen the effects	Apart from those sources and risks mentioned in the table above (or elsewhere in this FPMP), there are no other combustible non-waste materials/liquids/gases on or near the site other than those which will be rejected.
Batteries within waste deposits	Ignition of stored wastes via batteries within imported wastes	All loads are inspected in accordance with our waste acceptance procedures. If any wastes are identified as containing batteries these will intercepted by site operatives who will separate them from the waste pile for storage within the dedicated battery storage area. There will be no ELVs accepted at the site.
Visitors or contractors	Misuse of site, plant or machinery, not adhering to site rules	All visitors/contractors allowed onto site will be provided with site induction training and/or be escorted around the site by a site manager (depending on the nature of their visit and scope of works) to ensure site rules are adhered to in full and that they are aware of the potential fire risks of the site and associated plant, machinery and infrastructure. Appropriate risk assessments and full inductions (including training in this FPMP document) will be carried out for contractors undertaking work at the site where supervision from site management in not required or is not feasible.

Source	Risk	Specific mitigation
Reaction between wastes	Combustible waste piles may ignite in the event of a fire and worsen the effects if wastes react	All wastes will have been sorted at source or on site before being placed into separated stockpiles. Waste will either be contained within bays / containers or have a separation distance. All loads are inspected in accordance with our waste acceptance procedures and all wastes will be visually inspected throughout the day.
Cylinders stored at site	Interaction with burning or reactive waste and causing a larger fire event	Any cylinders stored on site will be kept within a locked cage with a suitable distance from any combustible wastes.
"Tramp" metal	Metal could be hot from mechanical processing and interact with lighter waste causing a fire	The treatment plant will have an overband magnet present which will remove any tramp metal from the waste. There are no current proposals for any other mechanical treatment plants i.e. trommel, picking lines etc.
Leaks and spillages	Interaction with burning or reactive waste and causing a larger fire event	All flammable liquids will be contained and stored within a bunded area. Any leaks or spillages cleared immediately by depositing sand or absorbents on the affected area and removed to the quarantine area or to a dedicated quarantine skip to await removal to a suitably permitted facility. There will be no ELVs accepted on site.

2.2 Fuel/Oil Storage

2.2.1 The location of fuel storage on site is shown on Drawing No. GIE/209/03 and procedures for fuel storage on site are as follows:

- Tanks will be surrounded by a bund capable of containing a minimum of 110% of the volume of fuel stored in the tank.
- All pipework and associated infrastructure will be enclosed within the bund.
- A lock will be fitted to the tank valve to prevent unauthorised operation.
- All valves and gauges on the bund will be constructed to prevent damage caused by frost.
- No combustible waste will be stored within 6 metres of the tank.

2.2.2 The tank will be clearly marked showing the product within and also its capacity.

2.3 Hot Works Procedure

2.3.1 Hot works carried out on site (i.e. welding/cutting/etc.) will be carried out in the area shown on Drawing No. GIE/209/03 and the following procedures will apply:

a) Check that hot work is required, or could you use an alternative (drill and bolt etc).
b) All hot works must be carried out as shown on Drawing No. GIE/209/03 due to its significant stand-off from other stored materials/wastes on site (i.e. 6 metres).
c) Ensure the area is cleared of all flammables.
d) Ensure you have TWO fire extinguishers to hand. The type would depend on your working environment but generally a CO_2 and a Powder extinguisher would be suitable.
e) Ensure you have used screens to shield bystanders from sparks and welding flash.
f) Ensure you have an observer to watch over you and check for sparks while you work
g) When you are ready to set up you will need to get a key to unlock the equipment from site management.
h) When you are set up you must get the site supervisor or manager to check your preparation.
i) If they are happy, they will sign your permit which should be displayed, and you can proceed.
j) During cutting/welding your observer should remain with you at all times and be constantly checking the area for sparks or signs of fire.
k) When the work is complete again check for fire and if all looks OK, note the time the hot work finished on the permit.
l) Check again for fire for at least 30 minutes and, if all is clear, the permit must be signed off. This would usually be by the person who authorised it.
m) Hot work requires one permit per person for each day.

2.3.2 A ‘Hot Works’ permit to work form is shown in Appendix IV.

2.4 Other hazardous (non-waste) material storage

2.4.1 The site will not store any gas cylinders, aerosols, oils, diesel or other combustible liquids and there will be no chemicals present on site unless they have been intercepted and rejected. In the event the site needs to store any of these materials they will be stored in a suitable area and this FPMP will be updated accordingly.

2.5 Smoking policy

2.5.1 Smoking is prohibited on the site. Any persons found smoking will be evicted from the premises.

2.6 Fuel/Oil Storage

2.6.1 The location of the above areas are shown on Drawing No. GIE/209/03 and procedures for fuel storage on site are as follows:

- Tanks are surrounded by a bund capable of containing a minimum of 110% of the volume of fuel stored in the tank.
- All pipework and associated infrastructure will be enclosed within the bund.
- A lock will be fitted to the tank valve to prevent unauthorised operation.
- All valves and gauges on the bund will be constructed to prevent damage caused by frost.
- No combustible waste will be stored within 6 metres of the tank.

2.6.2 The tanks are clearly marked showing the product within and also their capacity. In addition to daily checks by staff for the tank's integrity, the tanks are also alarmed to ensure the operator notified in advance prior to the tanks being full.

2.7 Smoking Policy

2.7.1 Smoking is prohibited in all waste management and storage areas and a designated smoking area is available on site as shown on Drawing No. GIE/209/03.

2.8 Mobile and fixed plant maintenance

2.8.1 All mobile and fixed plant on site including vehicles in the fleet are subject to annual manufacturer maintenance to ensure proper working order in the form of service contracts.

2.8.2 Site management will undertake or delegate additional preventative maintenance checks on a more frequent basis i.e. daily, before, during and 1 hour at the end of each working day using a checklist similar to that in Appendix II to ensure the following:

- Machinery is mechanically sound for use and no presence of black fumes or trailing liquids visible prior to use or following shutoff of plant/equipment.
- Mobile plant is stored in the out-of-hours plant storage area as shown on Drawing No GIE/209/03 following cessation of activities and external separation distances of 6m are observed between plant and any combustible or flammable material.
- In the building, all plant will be powered-down and completely shut off prior to cessation of operations on any given day.
- Plant which is not in use for any extended period is stored at least 6 metres from combustible waste.
- All plant and equipment vehicles are fitted with fire extinguishers in the cab. Rubber strips are not considered appropriate as they are usually removed via uneven and bumpy ground.
- Dust from processing/treatment operations on site can settle throughout the working day onto processing plant, plant exhausts and engine parts so a fire-watch will be implemented after cessation of works and equipment powered down for 1 hour each day to remove any dust/fluff using brushes, hoses etc... Any build of dust/fluff will be removed from the equipment and deposited into a container to await removal from site and site management informed.

2.9 Site security

2.9.1 The site security measures are clearly shown on Drawing No. GIE/209/03 and are fully secure during operational hours and out-of-hours ensuring there will be no risk of intrusion into the site.

2.9.2 The site benefit from site-wide CCTV coverage with 24-hour on and off-site supervision. The locations of CCTV cameras are indicatively shown on Drawing No. GIE/209/03 and will provided full coverage of all areas on site which store waste. The sites also benefit from suitable security fencing and lockable gates to prevent unauthorised access.

2.9.3 The CCTV installed will have movement and infra-red / heat sensors so in the event of any unusual activity i.e. intruders, unusual rises in heat, the CCTV will notify the out-of-hours contact who will view the footage and decide what course of action to take place i.e. attend the site within 5 minutes and call the FRS or Police. The out-of-hours contact lives 500 metres away from the site and will be able to attend the site within minutes. The out-of-hours contact could also source 2-3 other staff who could at the site within 10 minutes depending on the scale of the incident.

2.9.4 The site security will be inspected on a daily basis and any defects which impair the effectiveness of the security will be repaired to the same or better standard within a suitable timescale. All repairs will be noted on the site diary within 24 hours of the event. The checklist in Appendix II provides further information.

2.9.5 The security measures at the site are under constant daily review under the site's inspection regime. If unauthorised access becomes apparent as a problem at the site the security measures will be reviewed and improvements implemented.

2.10 Electrical faults or damaged/exposed electrical cables

2.10.1 All fixed wiring electrical cabling on site will be inspected daily by staff and serviced in accordance with Legislation (3/5 years) by fully qualified and certified electrical

contractors to undertake both Planned Preventative Maintenance and Reactive Maintenance (under contract) of the following:

a) Fire detection & alarm system;
b) Emergency lighting;
c) Machinery checks / services (as per manufacturers' instructions).

2.10.2 In terms of portable appliance testing (PAT), this will be serviced annually by qualified and certified electrical contractors.

2.10.3 Daily inspections of cabling, etc. will be undertaken and the daily Fire Checklist can be used as a reference. Any potential ignition sources from suspected electrical faults will be isolated and the appointed electrical contractors will be contacted immediately to rectify the situation. Where possible, staff will immediately remove any stored wastes from the vicinity of the fault area or cable traverse if safe to do so.

3 Waste acceptance procedures

3.1 General

3.1.1 Strict waste acceptance procedures are in place at the site as shown below and the following details will be recorded for every load deposited at the site:

a) The date and time of delivery.
b) The name and address of the waste producer.
c) The detailed and accurate description of the waste including type, quantity (in tonnes and/or cubic metres) and EWC codes.
d) How the waste is contained e.g. loose, container type.
e) The carrier's name and address.
f) Driver's name, signature and vehicle registration No.
g) Signature or initials of person(s) producing/ accepting/ inspecting/ carrying the waste.
h) Additional handling details/notes made by the driver after inspection of the load.
i) SIC code of the premises which produced the waste (where relevant).
j) Waste hierarchy declaration.
k) Information on previous treatment of the waste e.g. manual or mechanical.

3.1.2 Any wastes identified during the incoming waste inspections which do not conform to site acceptance criteria will not be accepted. If the non-conforming waste is discovered following deposit, the waste will be loaded back onto the tipper vehicle and removed off site or and quarantined immediately to await safe removal. Where the waste cannot be identified, the Natural Resources Wales will be contacted to agree a procedure to remove the waste from site.

3.2 Combustible waste reception

3.2.1 Incoming combustible wastes will be tipped inside the main transfer building. There will be two main types of material which are likely to be tipped at the site in this area as shown below:

- **EWC code 17 09 04** - Mixed construction, demolition and excavation (CDE) waste; and,
- **EWC code 20 03 01** - Mixed municipal (MM) waste.

3.2.2 The above wastes will be tipped to the north of **AREA 6** and loaded from the south of the pile into the waste treatment plant using mobile plant as shown on Drawing No. GIE/209/03.

3.2.3 Any waste brought into the site already separated will be stored in the relevant storage areas (**AREAS 1 – 3)** located at the site as shown on Drawing No. GIE/209/03.

3.3 Other wastes

3.3.1 The site would not ordinarily accept the following wastes as separate loads and are likely to be found on site from the sorting process:

- paper / cardboard = **Area 5**
- textiles = **Area 5**
- end-of-life tyres vehicle tyres = **Rejected**
- waste electrical and electronic equipment = **Area 5**
- batteries = **Rejected**
- refuse derived fuel (RDF / SRF) = **Area 10**

4 Managing waste piles

4.1 Stored combustible waste/materials

4.1.1 The main wastes accepted and stored on site which have been identified as having combustible potential are summarised in the table overleaf below which is also shown on Drawing No. GIE/209/03 in greater detail. Wastes considered non-combustible have not been included in this table and are referenced in the operator's EMS.

Table 4.1 -Waste Storage Area Details Table

Plan Ref	Description	Storage type	Containment	Height / width of firewall	Max Length (m)	Max Width (m)	Height (m)	Approx. Area (m2)	Conversion factor	Volume (m3)	Tonnage (approx.)	Max Duration of storage
AREA 1	Mixed wood waste	Unprocessed/sorted	3-sided concrete block storage bay	3.2m / 0.8m	10	9	2	90	0.666	120	50	<7 days
AREA 2	Trommel fines overflow bay	Unprocessed/sorted	As above	As above	10	7	2	70	0.666	93	73	<7 days
AREA 3	Green waste	Unprocessed/sorted	As above	As above	10	5	2	50	0.666	67	64	<7 days
AREA 4A	Inert & excavation waste pile i.e. soils/stones	Unprocessed	As above	As above	11.5	11	2	126.5	0.666	168	192	<14 days
AREA 4B	Inert & excavation waste pile i.e. soils/stones	Unprocessed	As above	As above	11.5	11	2	126.5	0.666	168	208	<14 days
AREA 5	Various sorted wastes i.e. metal, plastic, plasterboard etc.	Unprocessed/sorted inside 40 cubic yard skips	Part contained in concrete block storage bay	As above	6.1 per skip	2.4 (per skip)	2.5	15 per skip	1	15 x 3 = 45	40 - 60	<14 days
AREA 6	Waste reception area	Free-standing/unprocessed	N/A - Area clear out-of-hours	N/A	5	10.5	3	52.5	0.666	105	100	<12 hours
AREA 7	Fines beneath the trommel	Processed	Free standing pile / 3-sided bay	2.5m / 0.15m	6	2	2.5	12	0.666	20	33	<72 Hours
AREA 8	Residual waste	Sorted/blown	Free-standing inside steel cage	As above	6	2	2.5	12	0.666	20	10	<72 Hours
AREA 9	Waste wood	Hand-picked	Free standing pile / 3-sided bay	As above	3	2	2.5	6	0.666	10	3	<72 Hours
AREA 10	Lights cage i.e. paper/plastic/residual	Hand-picked	Free standing pile / 3-sided bay	As above	3	2	2.5	6	0.666	10	3	<72 Hours
AREA 11	Scrap metal	Sorted by magnet	3 no. sealed, locked 10 cubic yard skips	As above	6.1	2	1.2	12.2	1	14.64	18	<72 Hours

4.2 Waste stored in free-standing piles

4.2.1 The table below details the wastes stored on site and procedures to reduce the risk of combustion/ignition in line with the Natural Resources Wales FPMP guidance. Reference should also be made to Drawing No. GIE/209/03 for details and locations for each of the storage areas):

Table 4.2 - Combustible waste storage and monitoring table for free standing piles

Pile Ref:	Storage/monitoring procedures to reduce the risk of fire
AREA 1 - 3 Storage Bays comprising wood, trommel fines and green waste	• This area acts as the main waste holding bays. • The waste in this stockpile will be tipped at the left had side (south) of the pile and then extracted from the right (north) of the stockpile to ensure the first in first out principle applies. The process of removing the waste will then be done in a clockwise process. • **Stock rotation (unprocessed)**–It is proposed the maximum duration of waste stored here will be <72 hours i.e. Sat-Mon but the 7 days has been provided for contingency purposes. • **Maximum storage** – The maximum storage time permitted in the FPMP guidance is 4 weeks for fines (AREA 2) and 3 months for AREAS 1 & 2, it is proposed to store these wastes for <7 days which is 3 weeks below the maximum timescale where additional measures are required; however, the operator will commit to removing **all waste** within the pile on a monthly basis to ensure no waste is stored for longer than 4 weeks. This is demonstrated in the stock rotation sheet and diagram in Appendix II which the operator will complete. • As this is a dynamic stockpile, the process of tipping and excavating from the pile will be ongoing which will reduce the actual amount of time the wood will be stored prior to processing. • All stockpiles are easily accessed for firefighting. • In addition to the CCTV, the waste will be visually monitored throughout the day by site operatives • At least once a day or every 3 hours in warm weather conditions exceeding 75^0F and long periods when the pile is prone to sun exposure, the material will be monitored using a thermal gun. If a reading of 50^0C is recorded which is considered the trigger temperature, the pile will be doused using hoses and transferred into the quarantine area for further dissipation. If the temperature hasn't reduced, the pile will be continually turned and doused until the temperature has reduced to normal i.e. <30^0C. This process will also be done in the event of any signs of sparks or smoke following continuous staff monitoring. • To ensure a representative reading of the pile is undertaken, the operator will excavate a load and take a reading in the centre of the pile using the thermal gun.
Area 6 Waste Reception Area	• This area acts as the main waste reception and sorting area prior to being sorted by hand or plant. • Any large visible recyclables will be hand-picked or extracted using the loading shovel / 360^0 grab and placed into one of relevant storage areas at the site. • In the event of non-conforming or reactive waste discovered, the waste will be immediately consigned to the quarantine area using the above plant or loaded back onto the delivery vehicle and removed off site. • Once loaded into the treatment plant, the waste is pushed down from the north to ensure the first in first out principle applies and ensuring the stockpile is dynamic.

Pile Ref:	Storage/monitoring procedures to reduce the risk of fire
	• Waste will be tipped at the front of the pile and removed from the rear to ensure that the waste is constantly moving. • The area is continuously visually monitored throughout the day by trained site operatives who will be trained via toolbox talks by site management in recognition of fire i.e. the early signs. • During out-of-hours, this area will be clear of waste material. Operatives will carry out visual inspections of the pile continuously throughout the day and no waste will be tipped 1 hour prior to shutdown to ensure the pile can be processed to ensure that the area has been cleared. This has been based on the throughput of the plant. • No further monitoring required other than visual by trained staff as the pile will not be stored for >12 hours.
AREAS 7 - 10 Mechanically treated waste in storage bays/cage comprising trommel fines, light waste, wood and residual waste	• These are bays which store sorted waste from the treatment plant. • The waste stored in these bays will have undergone mechanical treatment i.e. trommel, blower, magnetic separation etc. Therefore, the wastes stored in these bays are highly unlikely to reach a trigger temperature. • **Stock rotation**–It is proposed the maximum duration of waste stored here will be <12 hours i.e. the working day but the 72 hours has been provided for contingency purposes. • The site has contracts set up with destination sites and the storage times have been based on the throughput of the plant and storage capacities of each bay. If the storage of the bay is exceeded, the plant will cease until the bay has been cleared • All waste is stored within a secure3-sided bay portioned with a fire wall; details of the fire wall are shown in Section 5.2 • As the pile is largely free standing, the waste will be 2.5m at the top centre of the pile which will form a dome shape so there is a suitable free board of at least 1m between the top of the pile and where the waste hits the wall at a 45-degree angle. • The piles are visually monitored throughout the day by site operatives and trained personnel who will be trained via toolbox talks in recognition of fire. • In addition to the CCTV, the waste will be visually monitored throughout the day by site operatives using a thermal gun.

4.3 Waste stored in containers

4.3.1 The table below details the waste types which are stored in containers at the site.

Table 4.3 - Combustible waste storage table for waste stored in containers

Pile Ref:	Storage/monitoring procedures to reduce the risk of fire
AREA 5 Containers of sorted waste comprising metal, plastic, wood etc.	• The containers are standard 40 cubic yards in size and will consist of residual (non-recyclable) waste, metals, plastic, wood etc which have been handpicked and are stored to ensure the easier transfer and movement of waste from the site. • The containers are stored on the ground and replaced by empty containers once removed off site. • All the waste stored in the skips will have been sorted so the waste is unlikely to contain any hot loads or incompatible waste which could lead to a spark or overheating causing a fire. • The containers will be removed from site when full which will be between 24 hours – 14 days. • The waste in the containers will not exceed the height of the containers which is approximately 2.5m. • All skips are open at the top to allow access for firefighting. • In the event of a fire breaking out in one of the skips, they can be dragged into the quarantine area by mobile plant to reduce the spread i.e. to another skip or adjacent waste piles. • No further monitoring required other than visual by trained staff.
AREA 11 Container for scrap metal	• This area will consist of scrap metal which has been separated by the overband magnet and deposited into the 40 cubic yard skips below. • As the waste in the skip is pre-sorted, it will not contain any hot loads which could lead to a spark or overheating causing a fire. • The container will be removed from site when full which is usually <72 hours. • The waste in the containers will not exceed the height of the containers which is approximately 2.5m. • All skips are open at the top to allow access for firefighting. • In the event of a fire breaking out in containers, they will be immediately consigned to the quarantine area using a loading shovel and undergo extinguishing using on site extinguishers and water supplies. • No form of monitoring other than visual required.

4.3.2 Mobile plant i.e. loading shovels are used to move containers to the quarantine area to prevent the fire spreading. Mobile plant is kept on site at all times and is accessible 24 hours a day.

4.3.3 There will be skips present at the site which will be stored as shown on Drawing No. GIE/209/03. The skips will be removed when full and then moved back once the contents have been removed.

4.4 General waste storage monitoring

4.4.1 In addition to the above tables, the risk of fire may be reduced via the visual monitoring of wastes and use of the thermal gun, which if a high reading is recorded, moisture control (i.e. regular wetting down of wastes to reduce heat of stored wastes) and the rotation of wastes stored in bays will be undertaken during hot (above $75^{o}F$) and dry weather conditions exceeding a 3-day period to ensure dissipation of heat if considered appropriate by the TCM/site manager.

4.4.2 Hot spots will be detected and controlled with the use of a thermal gun and presence of flames, smoke would be detected by trained or staff or thermal imaging cameras.

4.4.3 As detailed in Table 4.2 under Areas 1 – 3, if a reading of $50^{0}C$ is recorded which is considered the trigger temperature, the pile will be doused using hoses and transferred into the quarantine area for further dissipation. If the temperature hasn't reduced, the pile will be continually turned and doused until the temperature has reduced to normal i.e. $<30^{0}C$. This process will also be done in the event of any signs of sparks or smoke following continuous staff monitoring

4.5 Baled waste storage

4.5.1 There will be no baled waste storage on site.

4.6 Waste stored within buildings

4.6.1 There is a covered area on site used for the reception of wastes and storage of trommel fines and part of the light wastes within the cage:

a) Area 6 – These piles are stored to a height of 3m. No wastes will be stored in this area for longer than 12 hours. Fire walls are not present here as the stockpile is continuously monitored throughout the day and clear out of hours.
b) Areas 7 & 8 – These piles are stored to a maximum height of 2.5m. No wastes will be stored in these areas for longer than 72 hours. Area 7 & 8 are separated by 0.15m fire wall which is considered an ample fire wall to.

4.6.2 These piles also benefit from continuous visual monitoring throughout the day and out of hours CCTV.

4.6.3 The waste in these stockpiles will be tipped at the front of the stockpile and then extracted from the rear of the stockpile to ensure the first in first out principle will apply.

4.7 Stock rotation and seasonal variations

4.7.1 Details of stock rotation are clearly shown in Sections 4.2 – 4.3 for all wastes which are stored and processed on site.

4.7.2 In the event of destination site closures or seasonal demands for wastes leading to a longer storage duration, the operator can

- Divert incoming waste and send stored waste to an alternative site. The operator can search for additional site's using NRWs public register for alternative sites who could take this material, or they would contact the destination sites where waste from the site will be sent.

4.7.3 The operational outputs and residues produced by the site and the disposal or recovery routes are detailed as follows which the operator has outlets for:

a) Brick/rubble - for crushing to produce 6F2 aggregate or similar product under the operator's Aggregates Protocol.
b) Some materials will not be recovered after processing (or will not be fit for use at recovery sites) such as clays and some soils. These materials may be disposed at suitably permitted landfill site.
c) Fines - as material for site restoration works on site or used as landfill cover.
d) Soils - used on site for site restoration works or blend with compost for topsoil creation for re-sale.
e) Metals – metals removed from the overband magnet will be taken to a suitably permitted site for further recovery.
f) Rejected material will be removed from site as detailed in Section 2.6.

g) Wood – Used for biomass or animal bedding

h) Paper/cardboard and plastic – Sent to paper/plastic recycler for further treatment

i) Waste unsuitable for processing will be sent to a suitably permitted site.

4.7.4 The list of outlets has not been provided due to confidentiality purposes however the contracts will range from weekly – monthly depending on seasonal variations and demand for material.

5 Prevent fire spreading

5.1 Waste storage general / fire breaks

5.1.1 Combustible waste will be stored as per Drawing No. GIE/209/03 and within the limit of Natural Resources Wales FPMP guidance. All stockpiles of stored wastes are detailed in the Storage Area Details table on Drawing No. GIE/209/03 in respect of their description, maximum length and width, area, volume and storage duration.

5.1.2 The operator will store waste materials in their largest form and minimise pile sizes wherever possible. Visual inspections are carried out continuously and any material which has moved outside of the bay will be either placed back into the bay or in a sealed container following detection. If any brands or lighted material are discovered, they will be placed into the quarantine area or sealed non-combustible rejected waste skip.

5.1.3 Fire breaks are clearly shown on Drawing No. GIE/209/03.

5.1.4 The aim of the site is to process the incoming material and arrange for its export off site as soon as practicably possible following sorting to minimise over-stocking which in-turn minimises the risk of overheating and spontaneous combustion which is clearly detailed throughout section 4.

5.1.5 The site will ensure 'first in, first out' principle is met.

5.1.6 **Storage on flat ground**: Site surfaces where wastes are stored are flat and, therefore, reduce the risk of falling materials which would accelerate the spread of fire.

5.2 Fire walls and bays

5.2.1 There are two different sets of firewalls used which:

- Reduce the need for 6m separation distances between different waste piles; and
- Reduce the need to provide a 6m separation from the waste and permit or site boundary.

5.2.2 The table overleaf details the type of wall and demonstrates their properties to:

a) resist fire (both radiative heat and flaming); and,
b) have a fire resistance period of at least 120 minutes to allow waste to be isolated and to enable a fire to be extinguished within 4 hours.

Table 5.1- Fire wall details and specifications

Firewall type	Width	Site location / use	Specification
Solid concrete firewall	0.15m	AREAS 7 - 11	2018 International Building Code Table 721.1(2) [Ref. 4 – Item 4-1.1]: 3 - 4hours fire resistance.
Interlocking concrete legio block	0.8m	1 - 6	Mona precast (mega blocks) - Class A1 in accordance with Clause 4.3 4.4 of EN:13369 - <120 minutes.

5.2.3 All Fire walls on site are installed in accordance with the manufacturers recommended requirements to ensure they are fully sealed and load bearing. The above walls are checked throughout the day by staff via daily inspections if any gaps or damage to the walls are present which could compromise their integrity, the walls will be repaired and sealed as soon as practically possible.

5.3 Freeboard

5.3.1 For waste which is stored in and against walls, a suitable freeboard will be visually monitored throughout the day by operational staff who are loading/removing waste to/from the bay to ensure waste stockpiles don't exceed the freeboard height of the bay. The stockpile will be reduced immediately i.e. by moving wastes to quarantine area if a freeboard cannot be maintained. In the event of breakdowns, the operator will divert waste material to an alternative site until the freeboard is maintained. It is not possible to scientifically calculate the flame height as each waste pile is different and could contain a number of different sizes/grades of waste leading to a lesser or greater flame height.

5.3.2 The dimension of each mega block is 1600mm x 800mm x 400mm and meaning the operator can work out the height of the waste storage by looking at the joint i.e. for AREAS 1 – 3, the top of the fifth block would comprise 2m so any waste beyond this will be noted by operational staff to site management who will reduce the height and volume of the pile

to ensure the 1m freeboard is maintained at the top and sides to prevent bridging of waste around the walls.

5.3.3 In terms of Areas 7-10, the bays are connected to the main structure of the treatment plant meaning they are all enclosed so there is no physical way the waste could extend beyond the bay.

5.4 **Wind**

5.4.1 As can be seen from Drawing No. GIE/209/03, the vast majority of wastes are stored within bays (with a minimum 1.0m freeboard), covered areas or containers and are thus sheltered from the wind.

5.4.2 In the event of a fire, the larger stockpiles (i.e. wood and plasterboard – Area 1 and 2) will be reduced in height using mobile plant if it is safe to do so,

6 Site inspection programme

6.1 Daily checks

6.1.1 Site management are responsible for carrying out daily site walks for checking drainage systems, security measures and waste storage areas. Site management can reference the fire checklist shown in Appendix II but may use internal check sheets. The site also carries out weekly inspections for firefighting equipment to ensure they are fit for purpose.

6.1.2 Carrying out the above checks daily will keep the levels of dust, fibre, paper and other loose combustible materials, which could aid in the acceleration of a fire, on site surfaces to a minimum and ensure all containment of wastes on site are functioning effectively in accordance with the storage limitations provided in the table on Drawing No. GIE/209/03.

6.1.3 Operational staff will be trained by site management to ensure visual inspections of escape routes, fire exits, extinguishers etc. are clear in the event of a fire; Drawing No. GIE/209/03 shows all fire exists for buildings, storage locations of firefighting equipment and escape routes.

6.2 Staff training

6.2.1 Operational staff will be subject to site inductions which includes basic fire emergency procedures by site management. If necessary, a third-party fire consultant will be contacted to carry out additional training.

6.2.2 A full test (drill) of the procedures in this document will be carried out every 12 months to test that the plan works. The first test will take place within one month of the agreement of this document with Natural Resources Wales. The outcome and any follow up training for staff will be documented in the site diary and relevant forms in the EMS. The fire checklist may also be used during the drill.

6.3 **Toolbox talks**

6.3.1 All operational staff will receive fire awareness, fire detection (including the use of thermal gun) and firefighting procedures training / toolbox talks by trained site management prior to working at the site. This will enable the operational staff to detect early signs of fire and to minimise the chance of a fire breaking. Refresher testing will be mandatory every 6 months or sooner if site operations change which could lead to a greater fire risk.

7 Quarantine area

7.1.1 In accordance with the FPMP guidance a designated quarantine area has been provided as shown on Drawing No. GIE/209/03. The quarantine area will be kept clear at all times and allows for a 6-metre buffer from the site perimeter and other stored waste or other combustible materials on site.

7.1.2 The largest combustible pile on site is considered to be **AREA 1** comprising of the mixed wood waste and if this area was full would have an approximate volume of 120m^3. The quarantine area proposed has an area of 90m^2 and a volume capacity of approx. 60m^3 if the waste was stored at a height of 2m which is 50% of this stockpile.

7.1.3 The quarantine area will be clearly marked out using paint to ensure staff are aware of its location to ensure nothing is stored here throughout the day or out-of-hours.

7.1.4 In the event of a fire, the quarantine area will be used either to isolate wastes which are smouldering to allow safe dissipation of heat without placing other areas on site at risk of ignition; or, to remove any other wastes stored near which could be affected by the fire spreading. It is envisaged a fire would be extinguished in situ so in assuming the fire has been extinguished, the 'burnt out' waste would be removed to the quarantine area where it can be continually doused down and monitored prior to export off site to suitably permitted site.

8 Fire detection procedure

8.1 Automated/out-of-hours detection

8.1.1 The site will benefitfrom an infra-red/heat automated detection system which will have full coverage of all areas which store combustible and flammable material. The system will be installed by a UKAS accredited company and fitted with site specific infra-red / heat sensors. The infra-red heat sensors will be set to a trigger temperature by the manufacturer which will be below the point of combustion or flame event which will send a direct alert to the out-of-hours contact. In the event of a call being logged to the out-of-hours contact, the footage can be viewed instantly in HD format, if a fire, smoke or flames are present then the operator would immediately log a call to the FRS by dialling 999 and then attend the site. The out-of-hours contact can also source 2-3 other staff within 10 minutes of a call depending on the scale of the incident.

8.1.2 The FRS nearest station is also situated approximately 4 miles from the site so the FRS could be at the site promptly (<10 minutes) following a notification.

8.2 Manual detection/on site detection

8.2.1 If a fire is detected or suspected by a member of staff during operational hours, the person will sound the fire alarm and report site/operations manager or TCM or can then then conduct the following procedure:

a) Raise the fire alarm (if not already done by another staff member).
b) Initiate evacuation of staff and visitors on site to the meeting point and instruct delegated person(s) to conduct a roll-call to ensure all site users are accounted for.
c) Assess the intensity and scale of the fire and make a judgment as to whether the fire can be managed without the requirement for assistance from the emergency services i.e. using the hose or fire extinguishers.
d) If viable and safe, instruct necessary site staff to commence extinguishment.

9 Fire response procedures

9.1 Response procedure

9.1.1 Further to the detection measures in Section 8, the following procedures would apply in the event of a fire at the site:

a) Call the Fire Response Service (FRS) immediately using 999.
b) Call the Natural Resources Wales Emergency Contact Number.
c) A suitably trained employee will initiate fire water containment measures to close the site's surface water drainage system (see Section 11).
d) Prior to the FRS arriving, inform all neighbouring premises likely to be affected.
e) If not previously informed, senior management of the company will be informed at this point of the details, nature and extent of the fire and whether assistance from staff from other depots is required.
f) Ensure access routes are clear.
g) If safe to do so, site management will inspect the location of the fire, to identify immediate risks to surrounding premises and the FRS.
h) Ensure operators of appropriate machinery are standing by in a safe location to help create fire breaks, under the direction of the FRS when they arrive.
i) Site management will identify themselves to the FRS as soon as they arrive on site and will provide them with a copy of this document and update them with relevant information that will assist them in dealing with a fire more effectively.
j) Implement pollution control measures if safe to do so (see Section 12).

9.1.2 In the event of site management being absent from site, the operator will ensure the TCM or a suitably competent deputy is available during operating hours to take command of an incident should one occur.

9.2 Staff/Visitor Response Procedure

9.2.1 The following quick actions will be undertaken by site operatives where a fire is detected or suspected on site:

a) Don't panic
b) Inform the site manager or technically competent manager immediately
c) Raise the alarm (if not done so already)
d) Do not try to tackle the fire yourself unless you are trained in doing so and you are sure of the nature of the fire
e) Leave the site using the nearest exit as quickly and as orderly as possible
f) Assemble at the specified fire assembly point
g) The site manager or delegated operative will be in charge of calling the emergency services on "999" and ensuring that all persons who were working in the building are assembled safely
h) Do not return to the site until you have been given the 'all clear' by the emergency services and/or site management / responsible person.

9.3 Evacuation of Staff (and Drill Procedure)

9.3.1 An evacuation plan will be formulated for the site and all operational staff will be made aware of the actions through site inductions, refresher training, toolbox talks etc. The fast and effective evacuation of staff to the fire assembly point will increase safety on site and limit the impact of a fire on any persons on site.

9.3.2 Fire drills will take place every 12 months and 1 month after site operations commence to ensure evacuation times are acceptable and that site staff remain informed of evacuation procedures.

9.3.3 The drill will be a simulation of an emergency with the location of a mock fire notified to staff in order to test the response speed in deploying pollution control equipment i.e. including drain mats/plugs and ensure all firefighting equipment is sound. The fire check

form may also be completed and a detailed report of the outcome of the exercise will be prepared to assist with staff training.

9.4 Access for emergency services

9.4.1 The site has direct access for the emergency services. The nearest fire station is 4.2 miles away from the site at Llangefni Fire Station, Isgraig, Lon Newydd, L77 7PT and therefore it is anticipated the response time is <10 minutes.

9.4.2 The width of the surrounding roads and gateway exceeds the minimum required by the FRS which is 3.7m. Site management will also ensure the 3.7m access routes are maintained throughout the working day and before cessation of works during site inspections.

9.4.3 Access routes for emergency services around the site are clearly shown on Drawing No. GIE/209/03.

9.5 Notifying receptors

9.5.1 The contact numbers of key sensitive receptors identified within 1km of the site who could be directly affected in the event of a fire along with the Receptor Plan will be stored within the site office and in the emergency services box.

9.5.2 As it isn't feasible for a contact number to be provided for every individual residential receptors and individual business within 1km, the most sensitive receptors and closest business receptors have been included within the table overleaf.

Table 9.1- Receptor Contact Information

CONTACT	DESCRIPTION	CONTACT NUMBER
Isle of Anglesey County Council	Contact for residential/small business receptors	01248 750057
Mornest Caravan Park	Caravan Park	01248 421725
Holland Arms Hotel	Hotel	01248 421651
Ysgol Esceifiog	School as identified on receptors plan	01248 421669

9.5.3 The above receptors will be contacted by a co-ordinated approach where staff from Green Skips (Environmental) Ltd will contact them by phone and/or email.

9.5.4 Following discussions with from Isle of Anglesey County Council, they have advised that once Emergency Services arrive on site i.e. FRS, Police, the lead authority (usually the Police) will co-ordinate a systematic approach to ensure all the relevant sensitive receptors within 1,000m are notified. This will involve via telephone calls, personal visits (knocking on doors) and or using a load speaker while driving around the associated catchment. In addition to this, the Emergency Services would also publicise the fire on their Social Media outlets and contact local news websites, radios who can also provide updates on the incident. The Council will not commit in providing written communication to demonstrate their approach as it would depend on the type/size of fire as they have numerous approaches.

9.5.5 The police with the assistance of ECSS and any other attending authority will ensure all relevant properties are informed of the fire event and given clear instructions of the actions they need to take.

10 Suppressing fires & water supply

10.1 General

10.1.1 Section 16 of the Natural Resources Wales FPMP mentions the site should have enough water available for firefighting to take place and to manage a worst-case scenario. A worst-case scenario would be the largest waste pile catching fire.

10.1.2 The largest combustible waste pile on site in the external area is located in **AREA 1** equating to <120m^3 and to extinguish within 3 hours it would require approximately 144,000 litres (144m^3) of water requiring a flow of approximately 800 litres per minute based on the calculation provided in the table below.

Table 10.1 - Water supply calculations

Maximum pile volume in m^3	Water supply needed in litres per minute	Overall water supply needed over 3 hours in litres	Total water available on/off site in litres
120	120 x 6.67 = 800	800 x 180	144,000 (140m^3)

10.2 External suppression - fire hydrants

10.2.1 As shown on Drawing No. GIE/209/03 and the image below, there are multiple fire hydrants situated in close proximity to the site; the nearest being approximately 75m from the site. It is considered the FRS could be plug into the hydrant and spray water onto the stockpiles. There is no flow data or information available regarding the fire hydrants.

10.2.2 The North Wales FRS have confirmed that they 'cannot give flow rates as we cannot guarantee them'. They also stated that they operate on the recommendations for Industrial Estates as the following:

- Up to one hectare minimum of 20 l/sec (1200 l/min)
- One to two hectares minimum of 35 l/sec (2100 l/min)
- Two to three hectares minimum of 50 l/sec (3000 l/min).

10.2.3 The site is located on the Gaerwen Industrial Estate which is over 3 hectares and therefore the hydrant would have a flow rate of 3000 l/m which would meet the required 713 l/m.

10.3 On-site suppression measures

10.3.1 The site will have access to fire extinguishers to put out small fires and prevent a fire spreading during early detection. The locations of these are indicatively shown on Drawing No. GIE/209/03 and will kept clear of waste material and mobile plant at all times to ensure access is available 24/7.

10.3.2 The site also has access large volumes of non-combustible waste comprising of inert soil, stone material which could also be used as a suppression measure using the mobile plant

available at the site by smothering the fire and reducing the oxygen which would reduce the amount of fire water required. This method could be implemented within minutes of a fire breaking out. Should this technique be used, the site then would ensure the potentially hazardous material is disposed of a suitably permitted site.

10.3.3 Mobile plant listed in table 1.2 i.e. excavators, loading shovels will be used to move unburned material to the quarantine area and away from waste that is on fire to prevent it from spreading. The mobile plant has fitted with fully enclosed cabs and heat protected hydraulic systems (i.e. covered with fire retardant) to ensure that they are suitable to withstand heat and move waste that is on fire. The waste on fire which will have been separated will be quenched using on-site hosepipes, inert waste material or by the FRS. The waste will be kept here until the fire has been extinguished. The site may also fill a sealed skip with water and load burning waste into it.

10.3.4 The site is able to bring/hire in additional plant, tankers and bowsers to help move waste, remove fire water and aid in fighting fires.

10.3.5 The site will not install a fire suppression system within the building for the following reasons which has been based on FRS recommendations for similar FPMPs submitted to NRW:

- The waste within the building is continuously visually monitored throughout the day by site operatives; any fire that occurs will be detected immediately and be tackled using the onsite suppression i.e. fire extinguishers, hosepipes and inert materials whilst awaiting the arrival of the FRS.
- Outside of operational hours, the infra-red/heat automated detection system within the building will monitor the site and automatically notify the operator in the event of a fire. The operator along with 2-3 operatives and the FRS can attend the site within 10 minutes to begin extinguishing the fire.
- The building is open-fronted meaning there is full access to areas storing waste.
- The site has appropriate mobile plant on site to assist in tackling a fire.

- All waste stored in the building will be considerably less than permitted in NRWs FPMP guidance.
- All waste stored inside the building will not be stored longer than 72 hours which is significantly less than the FPMP guidance.

11 Managing fire water

11.1 Drainage

11.1.1 The drainage for the site is clearly shown on Drawing No. GIE/209/03 and in summary:

- The building has a floor area of 648m^2 which is surfaced with impermeable concrete and will benefit from its own sealed drainage system comprising a 0.1m high ramp/concrete kerb.
- The surface drainage system of the waste storage and treatment area consists of an impermeable concrete pad measuring approximately 1,550m^2 which is sealed around north, west and south by a 3m high solid concrete walls concrete kerb. The southern part of the pad will have a drainage channel cut into the concrete approximately 0.15m deep and the pad is engineered to fall towards this channel which will drain into a 30,000 sealed underground tank.
- Areas of the site which do not store and treat waste i.e. the transfer building roof water will be collected into storage tanks and used for active suppression or cleaning of plant and equipment.
- Hardstanding areas comprising crushed stone/aggregate will naturally soakaway or surface water will evaporate.

11.2 Containment of fire water

11.2.1 As detailed in Section 10, the largest pile would require containment for 144,000 litres (144m^3) of water in accordance with the FPMP guidance.

11.2.2 In the event of a fire in AREAS 1-3 or AREA 5 it is envisaged all water would pool in the concrete yard due to the surface water drain and the table below demonstrates the yard has the adequate amount of containment for firewater.

Table 11.1- Firewater Containment Calculation Concrete Yard

Volume of Water (m^3)	Containment Area (m^2)	Containment Required	Total Containment On Site
120	1,524 – 45m^2 (waste bays and containers) = 930m^2	144/930 = 0.155	0.16 (sealed kerb) = 0.04 containment available

11.2.3 In the event of a fire in waste stored inside the building which has its own drainage system, it is considered the fire water would remain inside the building as demonstrated in the table below based on a fire in AREA 6 which has a volume of 100m^3

11.2.4 Using the above containment techniques, the fire water would pool / pond into external concrete yard to avoid it exiting through the site entrance. The concrete yard area to the north (minus the transfer building) measures approximately 1,524$m^2$and is entirely sealed by the concrete walls to the west, north and east 0.15m kerb/seal to the south to prevent fire water from escaping from the concrete pad. There could also be an additional 30,000 litres of containment using the storage tank if it was empty during the time of the fire; however, the volume of this can't be relied upon as it will fluctuate therefore it is assumed that it would not be a suitable method of containment.

11.3 Removal of fire water

11.3.1 Upon successfully extinguishing a fire all standing fire water would be pumped using a hired-in vacuum tanker from a reputable drainage contractor and deposited to a suitably permitted site for treatment.

11.3.2 Pre-agreement will be made in advance with NRW and the FRS to see if the firewater could be treated on site.

11.4 Control of Combustion Products

11.4.1 Combustion products likely to be associated with the waste stored at the site include; oxides of carbon, nitrogen and particulate matter including white smoke (mixed waste). Additional combustion products may also include PAHs, dioxins and particulate matter including black smoke from plastics.

11.4.2 The release of combustion products may be controlled by the low size of waste piles at the site and the swift removal of burning wastes to the quarantine area (thus reducing spread of fire and reducing the amount of combustion products created).

12 After an incident

12.1 Contingency Planning

12.1.1 In the event of a fire the site will cease accepting waste. All customers who wish to deliver wastes during a fire will be notified by site admin staff and any who arrive without prior notification will be turned away. If urgent, deliveries will be directed to an alternative waste facility in the borough; details of which can be found on the Natural Resources Wales public register.

12.1.2 No waste will be accepted on site until the post-fire site recovery procedures outlined in the section below have been fully implemented and the site is authorised to re-open for trade and waste acceptance.

12.1.3 Incoming wastes during a fire event will be diverted to another waste facility. This site can also transport any mobile plant to the site to assist with tackling the fire.

12.1.4 The site will have contractors in place who will have access to the site plant and will be used as a back-up to assist in firefighting techniques and waste material removal.

12.2 Site decontamination

12.2.1 Surface water on site will be cleared using the following method:

a) Using a bowser, all standing fire water should be sucked up and taken off site or stored in a tank/bowser prior to removal off site. The site will have a contract set up with a supplier who empties the storage tank so would be able to quickly source the company in.
b) Using all available resources, remove the debris to the pile of fire damaged waste for removal to landfill or permitted site.
c) Using a road sweeper, sweep the yard (damp as required using the bowser) until all ash and clinker has been removed.

d) All debris has now been isolated and all contaminated water holding areas have been cleaned and emptied.
e) Wash the yard down in entirety using clean water or allow a reasonably heavy rain shower to wash the yard down.
f) It is at this stage that site management should decide whether to repeat areas of the clean-up.

12.2.2 If the clean-up operation has been deemed complete, the surface water protection measures can now be removed. This will be achieved using the following methods:

a) Ensure that surface water checks are made during the next rainfall event to validate that clean-up has been undertaken satisfactorily. Record all findings and actions in the site diary.
b) Account for all consumables that have been used in the fire and re-order / replace immediately.
c) Restack, and re-locate all items used for the surface water protection during the fire to their storage locations ready for future deployment.
d) Check monthly that items are still present and correct and still serviceable for use in an emergency.

12.2.3 The operator will liaise with NRW throughout the event ensuring they are satisfied with the clean-up programme and notify the operator when the site can begin accepting waste again onto site.

12.2.4 Due to the nature of the site's customers, there are no regular waste contracts which need to be dealt with if the site is closed for a period of time due to any incidents. In the event that the site is not able to receive wastes the customer will be offered alternative authorised facilities where they can take their waste.

12.3 Post fire site recovery

12.3.1 If a recovery procedure is required, the operator would instigate the following;

a) Remove damaged material to a permitted facility that is able to deal with it legally.
b) Ask engineers to carry out repairs on any plant, vehicles and/or infrastructure.
c) Assist the FRS with the fire investigation and where necessary engage the advice from a professional fire consultant.
d) Review the FPMP and EMS procedures and improve upon where found deficient.
e) Review training requirements for staff.
f) Assess whether further preventative measure could be implemented.
g) Ensure all fire equipment, where used, is replenished.
h) Remove fire water to a permitted facility for disposal.

Appendix I

Drawings

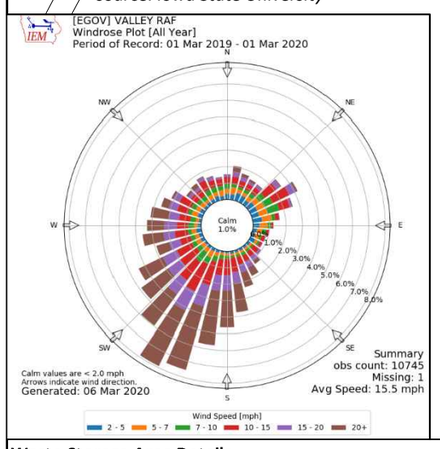
Key:

- Permit boundary
- Waste storage areas
- Hazardous storage i.e. fuel
- Non-waste storage areas
- Waste recycling buildings
- Concreted areas
- Other buildings (offices, etc.)
- Stone surface / free draining
- 0.6m wide/2-3m high concrete block walls
- 0.1m concrete kerb/seal around pad
- Mains water point
- Spill kit
- Fire fighting equipment (extinguishers, etc.)
- Access routes for emergency vehicles and site plant manouevring areas
- Fire alarm
- Flame / infra red CCTV
- Pollution & control equipment i.e. mats
- Surface water fall direction
- Clean drainage
- Manhole (dirty water)
- Manhole (clean water)
- Gully (dirty water)
- Drainage channel (concrete seal)
- Plant shut off
- Fire assembly point
- Emergency services box

Scale Bar (1:250)
0 m 10 m 20 m

Proposed wind sock
Northern boundary comprising 2m high concrete block walls with 5m high dust netting
AREA 4B
AREA 4A
AREA 3
AREA 2
AREA 1
AREA 5
7m
0.1m high ramp for sealed system
AREA 12
AREA 11
Lights cage
Overband magnet
AREA 10
Blower
AREA 9
AREA 8
AREA 7
Trommel
Conveyor
Hopper
Loading area
Excavator
AREA 6
Waste transfer building (open fronted facing west)
Quarantine area (90m² / 60m³)
6m
Drainage channel in front 0.16m concrete seal
Western boundary comprising 2.4m palisade fencing
Empty skip storage area
Site access / egress - lockable gates
Out-of-hours mobile plant storage
30,000 litre sealed underground storage tank
Clean water tanks for roof water
Eastern boundary comprising post and wire fencing and vegetation
South-western boundary comprising 2m steel wire fencing
Staff visitor parking
Weighbridge
Offices/ welfare
Offices/ welfare
Empty skip storage area
General plant/machinery storage area
Fuel/oil storage
Workshop
Southern boundary comprising 2m steel wire fencing

Compass Wind Rose for RAF Valley (EGOV) Period 2019
- source: Iowa State University



Waste Storage Area Details

Plan Ref	Description	Storage type	Containment	Height / width of firewall	Max Width (m)	Max Length (m)	Height (m)	Appox. Area (m2)	Conversion factor used	Volume (m3)	Tonnage (approx)	Max Duration of storage
AREA 1	Mixed wood waste	Unprocessed/sorted	3-sided concrete block storage bay	3.2m / 0.8m	10	9	2	90	0.666	120	60	<7 days
AREA 2	Trommel fines overflow bay	Unprocessed/sorted	As above	As above	10	7	2	70	0.666	93	93	<7 days
AREA 3	Green waste	Unprocessed/sorted	As above	As above	10	5	2	50	0.666	67	80	<7 days
AREA 4A	Inert & excavation waste pile i.e.	Unprocessed	As above	As above	11.5	11	2	126.5	0.666	168	202	<14 days
AREA 4B	Inert & excavation waste pile i.e.	Unprocessed	As above	As above	11.5	11	2	126.5	0.666	168	202	<14 days
AREA 5	Various sorted wastes i.e. metal, plastic, plasterboard etc..	Unprocessed/sorted inside 40 cubic yard skips	Part contained in concrete block storage bay	As above	6.1 per skip	2.4 (per skip)	2.5	15 per skip	1	15 x 3 = 45	40 - 60	<14 days
AREA 6	Waste reception area	Free-standing/unprocessed	N/A - Area clear out-of-hours	N/A	5	10.5	3	52.5	0.666	105	105	<12 hours
AREA 7	Fines beneath the trommel	Processed	Free standing pile / 3 sided bay	2.5m / 0.15m	6	2	2.5	12	0.666	20	20	<72 Hours
AREA 8	Residual	Sorted/blown	Free-standing inside steel	As above	6	2	2.5	12	0.666	20	6	<72 Hours
AREA 9	Waste wood	Hand-picked	Free standing pile / 3 sided	As above	3	2	2.5	6	0.666	10	3	<72 Hours
AREA 10	Lights cage i.e. paper/plastic/residual	Hand-picked	Free standing pile / 3 sided bay	As above	3	2	2.5	6	0.666	10	3	<72 Hours
AREA 11	Scrap metal	Sorted by magnet	3 no. sealed, locked 10 cubic yard skips	As above	6.1	2	1.2	12.2	1	14.64	15	<72 Hours

Conversion factors for waste piles are worked out using the following methods set out by Natural Resources Wales)
Conversion of 1 for materials stored within containers, area of storage in stackable containers and waste/bale stacks
Conversion of 0.66 for waste stored within a bay
Conversion of 0.33 for waste stored in a free-standing stockpile
For areas containing skips, conversion is calculated by volume of each skip x number of skips

NOTES

REVISION HISTORY

Rev	Date	Init:	Description:
-	06.3.20	CP	Initial Drawing
A	09.4.20	CP	Re-sub for variation
B	05.8.20	CP	NRW/client comments
C	20.8.20	CP	Client comments
D	26.8.20	CP	Amended drainage layout
E	09.10.20	CP	NRW comments
F	16.11.20	CP	NRW comments

Oaktree Environmental Ltd
Waste, Planning and Environmental Consultants

DRAWING TITLE
SITE LAYOUT & FIRE PLAN

CLIENT
Green Skips (Environmental) Ltd

PROJECT/SITE
Gaerwen Industrial Estate, Gaerwen, Ynys Mon LL60 6HR

SCALE @ A2	JOB NO	CLIENT NO
1:250	4011	209

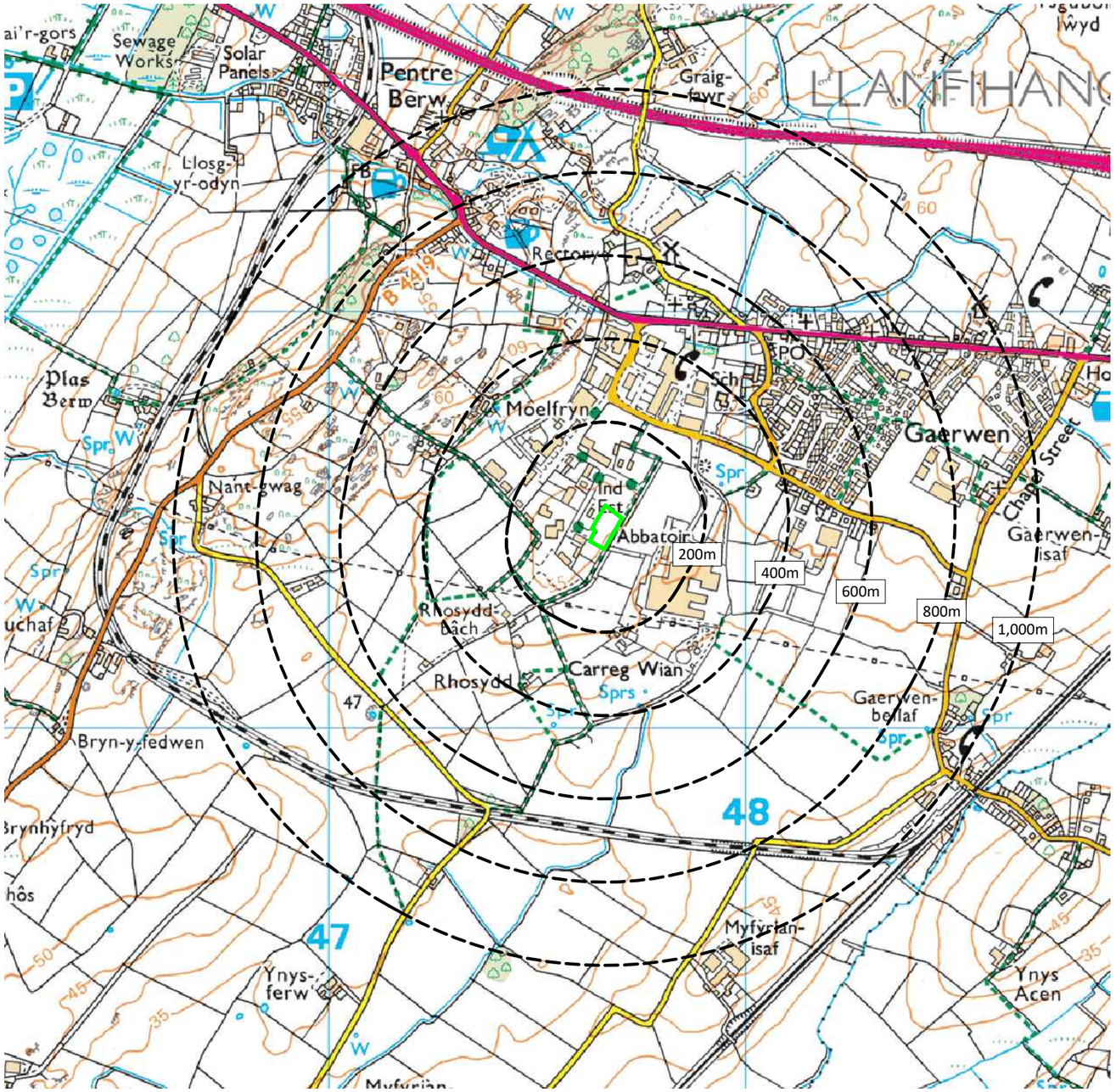
DRAWING NUMBER	REV	STATUS
GIE/209/03	F	Issued

DRAWN	CHECKED	DATE
CP	--	16.11.20

Lime House, Road Two, Winsford, Cheshire, CW7 3QZ
t: 01606 558833 | e: sales@oaktree-environmental.co.uk

KEY:

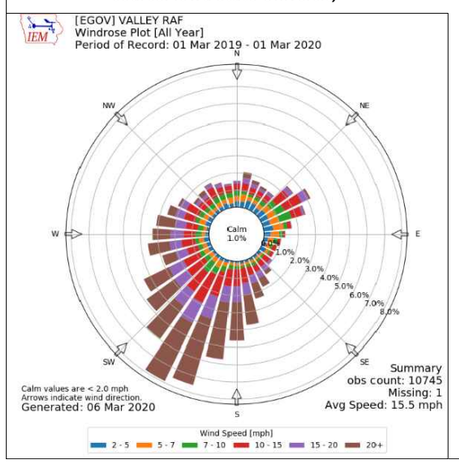
- Permit boundary
- Stream, river, beck
- Surface water body (pond / pool / lake)
- Buildings includes residential, agriculture, industry, commerce and retail - could also include houses)
- Residential blocks / properties
- Class A roads
- Class B roads
- Class C roads
- Railway line
- Woodland areas
- Public footpaths



Scale Bar (1:12,500)

0 km 500 m 1 km

Compass Wind Rose for RAF Valley Airport
(EGCC) Period 2019 - 2020
source: Iowa State University



NOTES

1. Boundaries are shown indicatively.
2. Wind rose data shows the prevailing wind direction to be blowing in south-westerly direction.

REVISION HISTORY

Rev	Date	Init:	Description:
-	02.4.20	CP	Initial Drawing

Oaktree Environmental Ltd
Waste, Planning and Environmental Consultants

DRAWING TITLE
RECEPTOR PLAN

CLIENT
Green Skips (Environmental) Ltd

PROJECT/SITE
Gaerwen Industrial Estate, Gaerwen, Ynys Mon
LL60 6HR

SCALE @ A3	JOB NO	CLIENT NO
1:12,500	001	209

DRAWING NUMBER	REV	STATUS
GIE/209/04	-	Issued

DRAWN	CHECKED	DATE
CP	--	02.04.20

Lime House, Road Two, Winsford, Cheshire, CW7 3QZ
t: 01606 558833 | e: sales@oaktree-environmental.co.uk

Appendix II

Record Keeping Forms

GREEN SKIPS (ENVIRONMENTAL) LTD
SITE INSPECTION FORM - MINIMUM ONCE DAILY - TO BE REFERENCED THROUGHOUT THE DAY

	DAY→						
TYPE OF INSPECTION ↓	TIME OF INSPECTION (START)						
	TIME OF INSPECTION (FINISH)						
EMERGENCY ACCESS							
WEATHER TEMPERATURE							
SECURITY - GATES							
SECURITY - FENCING							
SITE ROADS / SURFACES (CLEAR FROM HAZARDS)							
WASTE BAY STORAGE							
WASTE CONTAINERS STORAGE							
WASTE TYPES - COMPATIBILITY							
COMBUSTIBLE WASTE STORAGE (WITHIN PROPOSED LIMIT)							
COMBUSTIBLE WASTE STORAGE (AWAY FROM POTENTIAL IGNITION SOURCES)							
FIRE FIGHTING EQUIPMENT E.G. FIRE EXTINGUISHERS, HOSE REEL							
STAFF ON SITE HAVE RECEIVED FIRE SAFETY TRAINING							
CONCRETED AREA AND SEALED DRAINAGE (INTEGRITY)							
DRAINAGE CHANNELS / GULLIES FUNCTIONING							
HOT EXHAUSTS FIRE WATCH							
NO SMOKING SIGNS IN PLACE							
QUARANTINE AREA CLEAR							
WELFARE / OFFICE FACILITIES							
ELECTRICAL APPLIANCES AND CABLING CHECK							
HOT EXHAUSTS FIRE WATCH (DUST/FLUFF CLEANED REMOVED)							
LITTER (I.E. LOOSE COMBUSTIBLE WASTE MATERIALS)							
REJECTED WASTE TYPES / STORAGE							
FIRES (ANY INCIDENTS REPORTED)							
PLANT/EQUIPMENT MAINTENANCE CHECKS							
DUST							
OTHER (SEE NOTES BELOW)							
INSPECTION CARRIED OUT BY							

NOTES/ACTION (CONTINUE ON A SEPARATE SHEET IF NECESSARY):

CHECKED BY		**SIGNATURE**	
POSITION		**DATE**	
Sheet		***of***	

GREEN SKIPS (ENVIRONMENTAL) LTD
PREVENTATIVE MAINTENANCE CHECKLIST

CHECKED BY	**POSITION**
DATE	**DATE OF LAST CHECKLIST**

	EQUIPMENT ITEM					
OFFICIAL MAINTENANCE CHECK REQUIRED (Y/N)						
IF NO, DATE OF LAST CHECK						
IF YES, DATE OF NEXT CHECK						
IS ITEM IN CORRECT WORKING ORDER						
LEAKAGES OF OIL/DIESEL ON MOBILE PLANT / VEHICLES						
IF NO, WHAT REPAIRS ARE REQUIRED (USE SEPARATE SHEET IF REQUIRED)						
WERE REPAIRS DETAILED ON THE LAST CHECKLIST						
IF YES, HAVE THEY BEEN CARRIED OUT						
ADDITIONAL REPAIRS OR ACTIONS REQUIRED						

GREEN SKIPS (ENVIRONMENTAL) LTD - EMPLOYEE TRAINING NEEDS ASSESSMENT / REVIEW

EMPLOYEE NAME				**DATE COMPLETED**			
POSITION				**REVIEW DUE**			
TRAINER				**OUTCOME**	**PASSED**		
POSITION					**FURTHER TRAINING REQUIRED**		
CARRIED OUT /SIGN OFF >	**Y/N**	**SIGNED BY EMPLOYEE**	**SIGNED BY TRAINER**		**Y/N**	**SIGNED BY EMPLOYEE**	**SIGNED BY TRAINER**
ENVIRONMENTAL PERMIT				**FIRE PREVENTION & MITIGATION PLAN**			
MANAGEMENT SYSTEM				**FIRE SAFETY**			
SITE RULES				**EMERGENCY PROCEDURES**			
RECORD KEEPING / TRANSFER NOTES				**STORAGE /PILE SIZE LIMITS**			
RECOGNITION OF WASTE TYPES				**STORAGE DURATION**			
SECURITY				**FIRE DETECTION**			
VEHICLE CHECKS				**FIRE ALARMS**			
PLANT OPERATION				**FIRE FIGHTING EQUIPMENT**			
PLANT CHECKS				**FIRE WATER CONTAINMENT MEASURES**			
AMENITY - LITTER, ODOUR, PESTS etc.				**SPILL CLEARANCE**			
NOTES AND ACTIONS:							

STOCK ROTATION SHEET (4-WEEKLY) – WEEKS 1-52

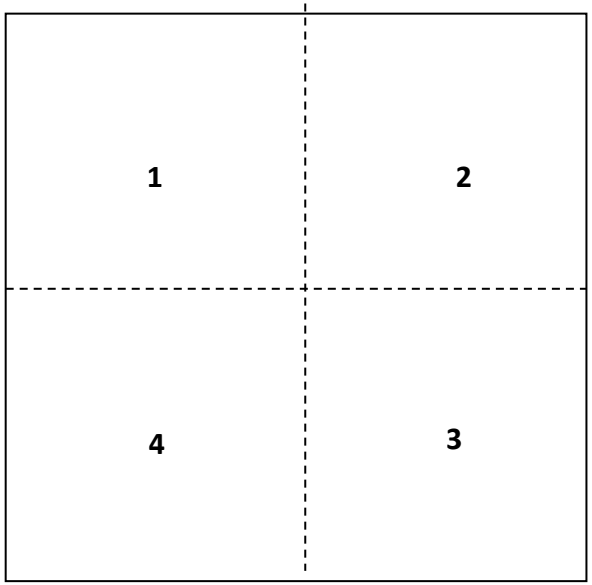
PILE REF	MAX STORAGE TIME	WEEK No ___			WEEK No ___			WEEK No ___			WEEK No ___		
		MATERIAL PRESENT (% FULL) *	WEEK NO. FOR LAST CLEARANCE	WEEK NO. FOR NEXT CLEARANCE	MATERIAL PRESENT (% FULL) *	WEEK NO. FOR LAST CLEARANCE	WEEK NO. FOR NEXT CLEARANCE	MATERIAL PRESENT (% FULL) *	WEEK NO. FOR LAST CLEARANCE	WEEK NO. FOR NEXT CLEARANCE	MATERIAL PRESENT (% FULL) *	WEEK NO. FOR LAST CLEARANCE	WEEK NO. FOR NEXT CLEARANCE
1	1 WEEK	%			%			%			%		
2	1 WEEK	%			%			%			%		
3	1 WEEK	%			%			%			%		

*Estimates of how full the storage area is should be made by the same person (if possible) to improve reproducability and reliability

STOCKPILE ROTATION DIAGRAM

STOCKPILES 1 – 3 WILL HAVE A WEEKLY CHECK AND 4 WEEKLY CHECK IF REQUIRED

BACK



FRONT

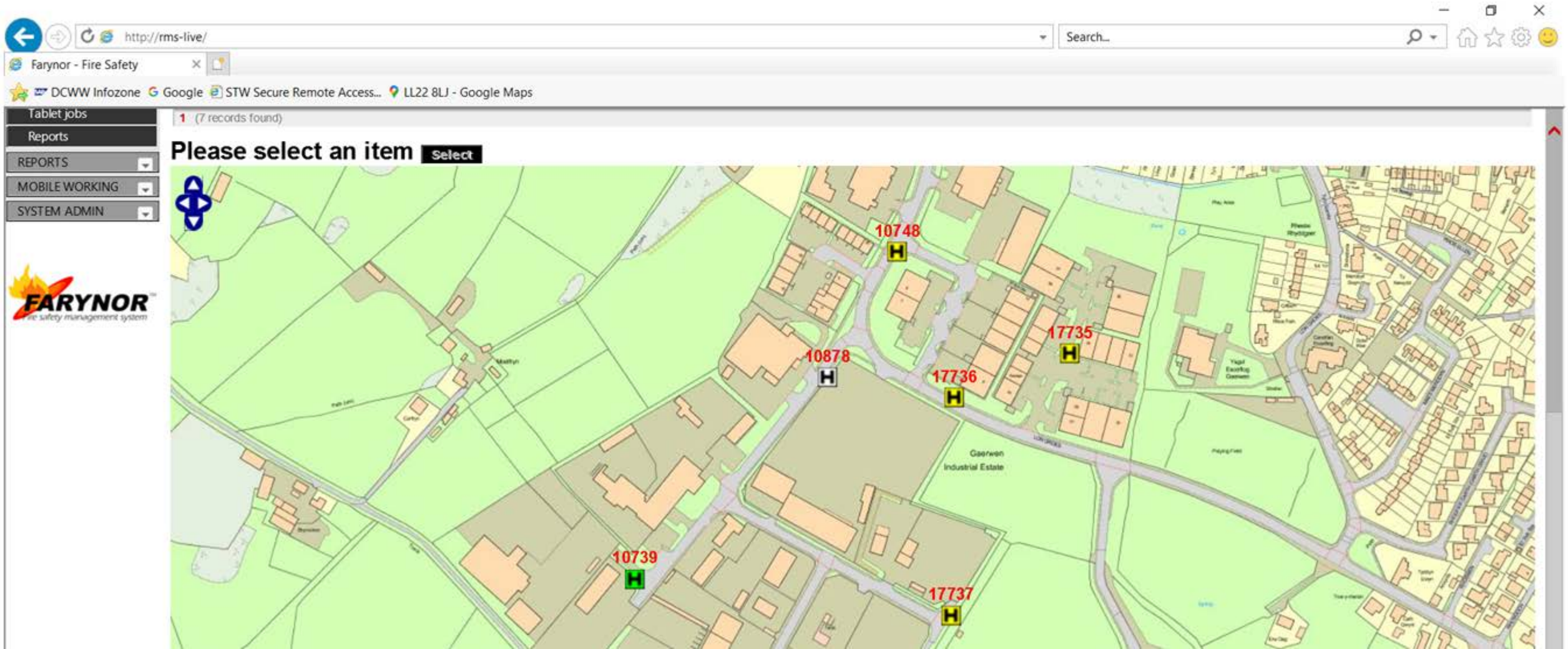
The diagram above shows the stock rotation layout for the stockpiles included Stock Rotation Sheet checklist.

Appendix III

Correspondence with North Wales Fire &Rescue Service and Welsh Water

From: Sharon Bouckley
Date: Monday, 30 March 2020 at 09:49
To: Isaac Allen
Cc: Steven Dixon
Subject: FPMP for Unit 10, Gaerwen Industrial Estate

Good Morning
Please find attached map showing locations of fire hydrants on the Industrial Park. Unfortunately we cannot give flow rates as we cannot guarantee them. We operate on the recommendations for Industrial Estates as the following: Up to one hectare minimum of 20 l/sec (1200 l/min) z One to two hectares minimum of 35 l/sec (2
to three hectares minimum of 50 l/sec (3000 l/min).
Best Regards
Sharon Bouckley



Appendix IV

Hot Works – Permit to Work Procedure

Permit-to-Work Form

Section 1 – Details of Work (to be completed by authorised person)

Permit Number: 001 Exact Location of Work:

	Postcode:

Specific Details of Work:

Work to commence -	Date:	Time:
To be completed by -	Date:	Time:

Specific Hazards and Precautions:

Physical Controls e.g. safety devices / lock off procedures / Checks after work complete etc.

I declare that the above has been made known to the Competent Person in charge of the work.
I consider that the above mentioned location is safe for the Competent Person to commence work activities.

Signature of Authorised Person:		Date:
		Time:

Section 2 – Acceptance of Receipt of Copy by Competent Person

I acknowledge receipt of this permit and understand the special precautions that are to be adopted as described above. Neither I, nor the person under my control, will work on any other activity or location other than those specified in Section 1.

Signature of Competent Person:		Date:
		Time:

Section 3 - Clearance

I hereby declare that the work described in Section 1 is complete. The area has been inspected and all persons, tools and equipment have been withdrawn.

Signature of Competent Person:		Date:
		Time:

Section 4 – Cancellation

I hereby declare this permit cancelled. I have received the copies of the permit back from the Competent Person

Signature of Authorised Person:		Date:
		Time: