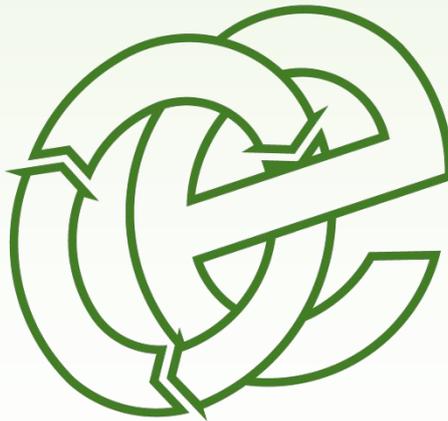


# FIRE PREVENTION & MITIGATION PLAN

Units 9 & 10, Vauxhall Industrial Estate, Ruabon, Wrexham LL14 6HA

**New Horizon Biofuel and Animal Bedding Co 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 | Fax: 01606 861183 | E-Mail: [sales@oaktree-environmental.co.uk](mailto:sales@oaktree-environmental.co.uk) | Web: [www.oaktree-environmental.co.uk](http://www.oaktree-environmental.co.uk)

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THIS DOCUMENT IS DUE FOR REVIEW IN **NOVEMBER 2024** OR AS A RESULT OF ANY INCIDENTS WHICH MAY LEAD TO THE REQUIREMENT FOR IMMEDIATE REVIEW, WHICHEVER IS THE SOONER

## CONTENTS

<b>DOCUMENT HISTORY:</b> .....	<b>I</b>
<b>CONTENTS</b> .....	<b>II</b>
<b>LIST OF TABLES</b> .....	<b>IV</b>
<b>LIST OF APPENDICES:</b> .....	<b>V</b>
<b>SITE INFORMATION &amp; KEY CONTACTS LIST</b> .....	<b>VI</b>
<b>KEY RECEPTOR CONTACT LIST</b> .....	<b>VII</b>
<b>1 INTRODUCTION</b> .....	<b>1</b>
1.1 OVERVIEW OF SITE OPERATIONS .....	1
1.2 FIRE PREVENTION OBJECTIVES .....	1
1.3 GENERAL SITE INFORMATION .....	1
1.4 STAFFING AND MANAGEMENT .....	2
1.5 PLANT AND EQUIPMENT .....	3
1.6 HOURS OF OPERATION .....	3
1.7 CORRESPONDENCE WITH FIRE AND RESCUE SERVICE .....	3
<b>1.8 SENSITIVE RECEPTORS</b> .....	<b>4</b>
<b>2 MANAGING COMMON CAUSES OF FIRE</b> .....	<b>6</b>
<b>2.1 DETAILS</b> .....	<b>6</b>
2.2 FUEL STORAGE .....	8
2.3 OTHER HAZARDOUS (NON-WASTE) MATERIAL STORAGE .....	8
2.4 HOT WORKS PROCEDURE .....	9
2.5 SMOKING POLICY (INCLUDING E-CIGARETTES) .....	9
2.6 MOBILE AND FIXED PLANT MAINTENANCE .....	10
2.7 SITE SECURITY .....	11
2.8 ELECTRICAL FAULTS OR DAMAGED/EXPOSED ELECTRICAL CABLES .....	12
<b>3 WASTE ACCEPTANCE</b> .....	<b>13</b>
3.2 COMBUSTIBLE WASTE RECEPTION .....	14
<b>4 MANAGING WASTE STORAGE TO PREVENT SELF-COMBUSTION AND THE FIRE SPREADING</b> .....	<b>15</b>
4.1 MANAGING STORAGE TIME .....	15
4.2 MONITORING AND CONTROL OF TEMPERATURE .....	15
4.3 WASTE STORAGE TABLE .....	15
<b>5 MANAGING WASTE PILES</b> .....	<b>17</b>
5.1 STORED COMBUSTIBLE WASTE/MATERIALS .....	17
5.2 PROCESSED WASTE .....	18
5.3 TEMPERATURE MONITORING FOR STORED WASTE .....	18
5.4 STOCK ROTATION AND SEASONAL VARIATIONS .....	19
<b>6 PREVENT FIRE SPREADING</b> .....	<b>20</b>
6.1 FIRE WALLS AND BAYS .....	20
6.2 WIND .....	21
<b>7 SITE INSPECTION PROGRAMME</b> .....	<b>22</b>
7.1 DAILY CHECKS .....	22
7.2 STAFF TRAINING .....	22
7.3 TOOLBOX TALKS .....	23

<b>8</b>	<b>QUARANTINE AREA</b> .....	<b>24</b>
8.1	GENERAL .....	24
<b>9</b>	<b>FIRE DETECTION PROCEDURE</b> .....	<b>25</b>
9.1	AUTOMATED DETECTION .....	25
9.2	MANUAL DETECTION .....	25
<b>10</b>	<b>FIRE RESPONSE PROCEDURES</b> .....	<b>26</b>
10.2	STAFF/VISITOR RESPONSE PROCEDURE .....	27
10.3	EVACUATION OF STAFF (AND DRILL PROCEDURE) .....	27
10.4	ACCESS FOR EMERGENCY SERVICES .....	28
10.5	NOTIFYING RECEPTORS.....	28
<b>11</b>	<b>SUPPRESSING FIRES &amp; WATER SUPPLY</b> .....	<b>30</b>
11.1	GENERAL .....	30
11.2	INTERNAL SUPPRESSION/ALTERNATIVE MEASURES .....	30
11.3	SITE-WIDE SUPPRESSION .....	30
11.4	EXTERNAL SUPPRESSION - FIRE HYDRANTS.....	31
<b>12</b>	<b>MANAGING FIRE WATER</b> .....	<b>32</b>
12.1	DRAINAGE.....	32
12.2	CONTAINMENT OF FIRE WATER .....	32
12.3	FIRE WATER BOOM DEPLOYMENT PROCEDURE .....	33
12.4	REMOVAL OF FIRE WATER .....	34
12.5	CONTROL OF COMBUSTION PRODUCTS .....	34
<b>13</b>	<b>DURING AND AFTER AN INCIDENT</b> .....	<b>36</b>
13.1	CONTINGENCY PLANNING.....	36
13.2	SITE DECONTAMINATION .....	36
13.3	POST FIRE SITE RECOVERY .....	37

## List of Tables

Table 1.1 - Plant and Equipment.....	3
Table 1.2 – Receptor Table .....	5
Table 1.3 - Common fire sources and mitigation.....	6
Table 4.1 - Combustible waste storage table .....	16
Table 5.1 – Storage/monitoring procedures – free-standing piles.....	17
Table 6.1 – Fire wall details and specifications.....	20
Table 11.1 - Water supply calculations.....	30
Table 12.1 - Firewater Containment Calculation Unit 9 .....	32
Table 12.2 - Firewater Containment Calculation Unit 10 .....	33

## **List of Appendices:**

### **Appendix I - Drawings**

Drawing No. VIE/2704/03 – Site Layout & Fire Plan

Drawing No. VIE/2704/04 – Receptor Plan

### **Appendix II - Record Keeping Forms**

Site Diary/Inspection Form

Preventative Maintenance Checklist

Training Needs Assessment

## Site Information & Key Contacts List

<b>Site Address:</b>	Units 9 & 10, Vauxhall Industrial Estate, Ruabon, Wrexham LL14 6HA		
<b>Site Operator:</b>	New Horizon Biofuel and Animal Bedding Co Ltd	<b>National Grid Ref:</b>	SJ 30505 45326

<b>CONTACT</b>	<b>DESCRIPTION</b>	<b>OFFICE HOURS</b>	<b>OUT OF HOURS</b>
Philip Thomas Yang Liu	Director / Site Manager Director / Site Manager	Email only	07730 402400 07792 482757
Mark Imrie	Technically Competent Manager	Email only	07958 587462
<b><u>Wrexham Maelor Hospital</u></b> Croesnewydd Road, Wrexham, LL13 7TD	Local NHS Hospital (Main)	01978 291100	999
	Accident & Emergency (A&E)	999	999
<b><u>Gardden Road Surgery</u></b> Gardden Road, Rhosllanerchrugog, Wrexham, LL14 2EN	Local Doctor Surgery (GP)	01978 801890	999 or 112
<b><u>North Wales Police</u></b> Former Oriel Gallery, Rhosddu Road, Wrexham, LL11 1AU	Local Police Non-Emergency	0300 330 0101	999 or 112
<b><u>North Wales Fire &amp; Rescue Service</u></b> Wrexham County Safety Office, Bradley Road, Wrexham, LL13 7SU	Fire and Rescue Service (in Emergency Dial 999)	01978 367870	999 or 112
<b><u>Natural Resources Wales (Nearest Office)</u></b> Chester Road, Buckley, CH7 3AG	Environmental Regulator	0300 065 3000	0300 065 3000
<b><u>Wrexham County Borough Council</u></b> 16 Lord Street, Wrexham, LL11 1LG	Planning Department	01978 298994	999 or 112
<b><u>Transport for Wales Ltd</u></b> Ruabon Station, Station Road Ruabon, Wrexham LL14 6DL	Railway Network	03333 211 202	999
<b><u>Dwr Cymru (Welsh) Water</u></b>	Mains water and sewerage supplier	0800 052 0130	0800 783 4444
<b><u>Oaktree Environmental Ltd</u></b> - Lime House, 2 Road 2, Winsford, Cheshire CW7 3QZ	Specialist Advisor (Waste and Planning Issues)	01606 558833	999 or 112 or

## KEY RECEPTOR CONTACT LIST

CONTACT	DESCRIPTION	NUMBER
Rise & Shine Day Nursery 18 Bridgeway East. Wrexham, LL13 9FZ	Nursery School	01978 660006
Redbrook Day Nursery, Bryn Lane, Wrexham, LL13 9UT	Day Care Centre	01978 664374
St Paul's Voluntary Aided School, Wrexham, LL13 9JT	School	01978 661556
New Hall Independent Hospital, New Hall Rd, Ruabon, Wrexham LL14 6HB	Hospital	01978 822212
Travis Perkins, Afon Goch, Wrexham LL14 6RA	Retail	01978 822826
Ruabon Medical Centre, High St, Ruabon, Wrexham LL14 6NH	Doctors	01978 823717
CeramTec UK Ltd, Vauxhall Industrial Estate, Ruabon, Wrexham LL14 6HY	Manufacturing	01978 810456
Brother Industries (UK) - Moulding Division, Vauxhall Industrial Estate, Ruabon LL14 6HA	Manufacturing	01978 813489
Wrexham Motor Company, Unit 7, Gardden Industrial Estate, Ruabon, Wrexham LL14 6RG	Retail	07730 772151
I Hayward Ltd, Gardden Industrial Estate, Ruabon, Wrexham LL14 6RG	Waste Facility	01978 823940
H K Motors, Gardden Industrial Estate, Ruabon, Wrexham LL14 6RG	Waste Facility	01978 810100
Enovert, Hafod Landfill Site, Bangor Rd, Johnstown LL14 6ET	Waste Facility	01785 251555

**N.B. – list will be reviewed every 6 months or sooner if required**

# **1 Introduction**

## **1.1 Overview of site operations**

1.1.1 This document considers the risks associated with fire on site at Units 9 & 10, Vauxhall Industrial Estate, Ruabon, Wrexham LL14 6HA. The is operated as a physical treatment facility for hazardous and non-hazardous plastic waste.

## **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 site information**

1.3.1 This document considers the risks associated with fire on site at Units 9 & 10, Vauxhall Industrial Estate, Ruabon, Wrexham LL14 6HA. The site will be operated by New Horizon Biofuel and Animal Bedding Co Ltd (the operator) as a hazardous waste treatment facility involving the cleaning, washing and mechanical treatment of plastic waste for recovery.

- 1.3.2 In addition to this document the site is managed and operated in accordance with a fully comprehensive Environmental Management System (EMS); also prepared Oaktree Environmental Ltd and reference should be made to Document Ref. VIE-2704-A for its content.
- 1.3.3 The layout of the site is shown on Drawing No. VIE/2704/03 which appears in Appendix I of this document. This FPMP document will be kept in the site office located as shown on Drawing No. VIE/2704/03.
- 1.3.4 This FPMP will also be located in the Emergency Services Box (ESB) located near the site entrance. 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. VIE/2704/04 in Appendix I and table 9.1 and in the event of a fire, the Fire & Rescue Service (FRS) 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 site will require up to 6 staff to be fully operational to ensure the measures in this FPMP are met. There will be at least three members of staff available for each shift which does not include the two directors and TCM who will be present occasionally but will manage the site remotely.
- 1.4.2 All operational staff and contractors must be aware and understand the contents of the Fire Prevention & Mitigation Plan (FPMP) and its location in order to respond and action the proposals set out in this FPMP to ensure the three objectives in Section 1.1.1 are met.

## **1.5 Plant and equipment**

1.5.1 The table below details the mobile plant/equipment on site, fixed plant has not been included but is shown on Drawing No. VIE/2704/03. The mobile plant can also be used to aid in fire suppression or manoeuvring of waste to reduce the spread of fire. Only trained operators will be permitted to drive/operate the plant/equipment listed below.

**Table 1.1 - Plant and Equipment**

<b>Item</b>	<b>Number</b>	<b>Function</b>
Fork lift	3	Loading/unloading/movement/sorting
Telehandler	1	Importing / exporting material
Bobcat skidsteer	1	Site sweeping/housekeeping

## **1.6 Hours of operation**

1.6.1 The site will operate on a 24/7 basis with approximately two days per month being shutdown to carry out a full housekeeping. The site will operate 07:00 - 19:00 then 19:00 – 07:00 in two separate shift patterns.

1.6.2 In the event the site is closed or not in operation for any reason, the gates will be locked and secured to prevent unauthorised vehicular and/or pedestrian access and a 24-hour security presence will be maintained to monitor waste and product stocks.

## **1.7 Correspondence with Fire and Rescue Service**

1.7.1 The Fire & Rescue Service (FRS) and Welsh Water were contacted in the preparation of the latest FPMP review with a view to obtaining details regarding the nearest hydrants in the proximity of the site and also their projected water supply in the event of an incident.

1.7.2 New Horizon Biofuel and Animal Bedding Co Ltd will seek a response from the NRW and FRS should a fire incident occur or any major site, infrastructure or operational changes with regards to their FPMP and associated operations on site. 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 Sensitive Receptors Plan has been provided to highlight all main receptors within 1,000m of the site which could be affected by a fire at the site.
- 1.8.2 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 (as per Section 1.1 above). These measures will ensure the potential impact on any of the surrounding land is as minimal as practicably possible.
- 1.8.3 As it isn't feasible for a contact number to be provided for every individual residential receptor and individual business within 1km, the most sensitive receptors and closest business receptors have been included within the table overleaf.
- 1.8.4 The primary sensitive receptors for any fire event would be the site itself and any site users.
- 1.8.5 The table overleaf provides a summary of the receptors within 1,000m of the site and how the risks of pollution from a fire incident are kept to a minimum.

Table 1.2 – Receptor Table

Receptor	Receptor Type	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Risk Management
Numerous surrounding industrial and commercial uses on Vauxhall Industrial Estate	Industrial / commercial premises	Fire causing the release of polluting materials to air (smoke, fumes and particulate matter)	Respiratory irritation, illness and nuisance to local population.  Financial loss of businesses due to closure of adjacent roads/evacuation of premises.	Air transport of smoke.	High	Medium	Medium	Procedures set out in this FPMP.  Toolbox talks and liaison meetings with receptors to review procedures in the event the site is subject of a fire.
Residential dwellings in the surrounding area shown on Drawing No. VIE/2704/04	Residential	As above	Respiratory irritation, illness and nuisance to local population.	Air transport of smoke.	Medium	Medium	Medium	As above
Surrounding highway networks	Major road networks	As above	Closure of roads due to excessive smoke fumes.  Increased risk of accidents due to poor visibility.	Air transport of smoke.	Medium	Medium	Medium	As above
Ruabon - Barmouth Railway Line	Railway	As above	Closure of railway due to excessive smoke fumes.  Increased risk of accidents due to poor visibility.	Air transport of smoke.	Medium	Medium	Low	As above
Surface Waters	Surface Waters	Direct run off of fire water across site or to surface waters.  Fire causing the release of polluting materials to air (smoke, fumes and particulate matter).	Loss of amenity, deterioration of water quality, killing of flora / fauna and other local wildlife  Harm to protected site through toxic contamination, nutrient enrichment, smothering, disturbance, predation etc.	Air transport of smoke.  Direct run off of fire water across site to surface waters.	Low	Medium	Low	Procedures set out in this FPMP.  The site has a sealed drainage system.
Protected sites comprising Johnstown Newt Sites SAC & Stryd Las a'r Hafod SSSI	SSSI / SAC	As above	As above	Air transport of smoke.	High	High	Low	Procedures set out in this FPMP
Other habitats and species inc. deciduous woodland	Protected sites and species	As above	As above	Air transport of smoke.	High	High	Low	Procedures set out in this FPMP

## 2 Managing Common Causes of Fire

### 2.1 Details

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

Table 1.3 - Common fire sources and mitigation

Source	Risk	Magnitude of Risk / Likelihood	Brief outline of Mitigation (refer to Section 4 for storage/monitoring procedures)	Magnitude of risk / likelihood following 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	Medium	<ul style="list-style-type: none"> <li>• Appropriate site security infrastructure.</li> <li>• Vehicle checks on arrival to the site.</li> <li>• Plant &amp; equipment daily checks and preventative maintenance of plant / equipment by manufacturer.</li> <li>• Staff training / toolbox talks.</li> </ul>	Near-zero
Plant or equipment	Spillages of fuel, sparks from machinery or malfunction caused by ineffective maintenance	Medium	<ul style="list-style-type: none"> <li>• Plant &amp; equipment daily checks and preventative maintenance of plant / equipment by manufacturer.</li> <li>• Any liquid/fuel/oil storage is double bunded and stored in containers</li> <li>• Daily checks of site surfacing and spill kits.</li> <li>• Staff training / toolbox talks.</li> </ul>	Near zero
Electrical appliances and cabling	Faulty appliances or damaged/ exposed electrical cables may spark as a result of a power surge	Medium	<ul style="list-style-type: none"> <li>• Fixed wiring testing is carried out 5 years and portable appliances are PAT tested 12 months in accordance with Legislation.</li> <li>• Daily checks for dust and fluff on wiring / electrical appliances.</li> </ul>	Low
Discarded smoking materials	Risk of ignition of stored wastes from smoking materials which have not been fully distinguished	Low	<ul style="list-style-type: none"> <li>• Designated smoking area on site and smoking policy.</li> </ul>	Near-zero
Sparks from loading buckets/shovels	Scraping of loading buckets/shovels causing sparks which may ignite stored wastes	Low	<ul style="list-style-type: none"> <li>• No loading shovels to be used at the site.</li> </ul>	Low
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	Medium	<ul style="list-style-type: none"> <li>• No hot works proposed at the site.</li> </ul>	Low
Industrial heating	Industrial heaters and/or pipework used to heat internal areas on site which may, in turn, supply heat to stored wastes increasing the risk of combustion	Low	<ul style="list-style-type: none"> <li>• There are no industrial heaters (or associated pipework) used heat areas of the site.</li> </ul>	Low
Hot exhausts	Potential source of both primary and residual heat to stored wastes	High	<ul style="list-style-type: none"> <li>• Fire extinguishers are fitted in the cab of all loading plant.</li> <li>• Staff training / toolbox talks for continuous monitoring throughout the day to detect signs of a fire caused by dust settling on hot exhausts and engine parts.</li> <li>• Plant &amp; equipment daily checks and preventative maintenance of plant / equipment by manufacturer.</li> <li>• Out-of-hours storage of plant &amp; equipment away from combustible or flammable wastes.</li> <li>• Daily checks for dust and fluff on plant/equipment before and use of equipment.</li> </ul>	Low

Source	Risk	Magnitude of Risk / Likelihood	Brief outline of Mitigation (refer to Section 4 for storage/monitoring procedures)	Magnitude of risk / likelihood following mitigation
Build-up of loose combustible waste, dust and fluff	Light waste and ambient particulates with high combustibility settling and building up in key areas in and around plant/machinery and around exhausts	High	<ul style="list-style-type: none"> <li>• Fire extinguishers are fitted in the cab of all loading plant.</li> <li>• Staff training / toolbox talks for continuous monitoring throughout the day to detect signs of a fire caused by dust settling on hot exhausts and engine parts.</li> <li>• Plant &amp; equipment daily checks and preventative maintenance of plant / equipment by manufacturer.</li> <li>• Minimum daily checks for dust and fluff on plant/equipment before and use of equipment at the start/end of each working day.</li> </ul>	Low
Hot loads	Imported wastes which may contain materials which are above ambient temperature	High	<ul style="list-style-type: none"> <li>• All loads are inspected in accordance with strict waste acceptance procedures.</li> <li>• Quarantine area and rejected waste containers on site for quick isolation of load.</li> </ul>	Low
Overhead power lines	Any overhead power lines on or around the site may ignite in the event of a fire and worsen the effects	Low	<ul style="list-style-type: none"> <li>• There are no overhead power lines which traverse the site.</li> </ul>	Near-zero
Ignition sources	Activities or appliances which use a source of both primary and residual heat to treat waste or manufacturer material or plant/equipment	Medium	<ul style="list-style-type: none"> <li>• No hot works to take place at the site.</li> <li>• Mobile plant procedures shown in Section 2.6 regarding hot exhausts.</li> </ul>	Low
Batteries within waste deposits	Ignition of stored wastes via batteries within imported wastes	High	<ul style="list-style-type: none"> <li>• All loads are inspected in accordance with strict waste acceptance procedures including wastes received into satellite sites.</li> <li>• Quarantine area and rejected waste containers on site for quick isolation of load containing batteries.</li> </ul>	Medium
Reaction between wastes	Combustible waste piles may ignite in the event of a fire and worsen the effects if wastes react	High	<ul style="list-style-type: none"> <li>• All loads are inspected in accordance with strict waste acceptance procedures.</li> <li>• Quarantine area and rejected waste containers on site for quick isolation of load.</li> </ul>	Low
Leaks and spillages of oils and fuels	Fuels and combustible liquids leaking or trailing from site vehicles and ELVs can combust or cause accidents leading to combustion	High	<ul style="list-style-type: none"> <li>• Spill kits available throughout the site.</li> <li>• Suitable and sealed drainage system.</li> <li>• Vehicles visually inspected throughout the day with any noticeable leakages being depolluted as a priority.</li> <li>• Minimum daily checks for spillages around the site.</li> <li>• Staff training / toolbox talks.</li> </ul>	Low
“Tramp” metal	Metal could be hot from mechanical processing and interact with lighter waste causing a fire	High	<ul style="list-style-type: none"> <li>• No tramp metal to present at the site.</li> </ul>	Low

## **2.2 Fuel storage**

2.2.1 There will be no fuel storage on site; however, should the site store fuel, the following procedures will take place:

- 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.
- The tank is stored 6m away from any waste processing equipment.
- The tanks are clearly marked showing the product within and its capacity.

## **2.3 Other hazardous (non-waste) material storage**

2.3.1 The site will not store any gas cylinders, aerosols and there will be no chemicals present on site. 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.

## **2.4 Hot works procedure**

2.4.1 There will be no hot works at the site.

## **2.5 Smoking policy (including E-cigarettes)**

2.5.1 Employees who wish to smoke may do so in their own time during lunch breaks. Employees will not be permitted to smoke whilst carrying out their duties and responsibilities SMOKING IS ONLY PERMITTED IN THE DESIGNATED SMOKING AREAS as shown on Drawing No. VIE/2704/03.

2.5.2 Managers will be responsible for the promotion and maintenance of the policy by their staff. Managers will receive training and guidance regarding their responsibilities in relation to the policy and enforcement of it.

2.5.3 Employees should inform the appropriate manager of anyone who fails to comply with the policy.

2.5.4 Employees not complying with the policy will be referred to their manager for support subject to the usual disciplinary procedure.

2.5.5 Visitors not adhering to the policy will be asked to comply or leave the premises or site

2.5.6 All job applicants will be made aware of the policy via application packs, where a requirement to abide by it will be part of the person specification. Applicants will be reminded of the policy at interview stage.

2.5.7 A copy of the policy will form part of new employees' induction packs. Training and guidance on enforcing the policy will form part of new managers' induction process.

2.5.8 The policy will be reviewed every 12 months.

## **2.6 Mobile and fixed plant maintenance**

- 2.6.1 All items of plant and equipment listed in Section 1.5 (and any additional items of plant which may be hired in to cover busier periods) are subject to preventative maintenance checks to ensure their safe operation and to prevent any potential situations which may give rise to faults or malfunction. A Preventative Maintenance Checklist is shown in Appendix II of this FPMP which can be referenced by the operator.
- 2.6.2 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.
- 2.6.3 Separation distances of 6m will be observed between plant and stored material when the site is not staffed.
- 2.6.4 **Out-of-hours** – this will comprise a 30-minute interval before the start of each shift pattern and the two days per month full shutdown. Further shutdowns will be enforced in the event of an emergency situation i.e. third party complaints or plant breakdowns.
- 2.6.5 Within the 30 minutes shift pattern change there is ample time to inspect the equipment for any dust/fluff which will be removed using hoses or brushes and deposited into a mobile refuse/trade waste bin (emptied weekly). Plant which is not in use for any extended period and in any event at the end of the working day will be stored at least 6 metres from combustible wastes in the area shown on Drawing No. VIE/2704/03.
- 2.6.6 The locations of processing plant including routing and out-of-hours for mobile plant are clearly shown on Drawing No. VIE/2704/03.
- 2.6.7 All mobile plant and equipment will be fitted with fire extinguishers in the cab.
- 2.6.8 Fuels and combustible liquids from site vehicles will be checked prior to commencement of operations then ongoing throughout the day ensuring each vehicle has undergone the relevant inspection for the presence of leakages.

- 2.6.9 If spillages are reported or found on site following inspections, they will be 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

## **2.7 Site security**

- 2.7.1 The site's security measures are shown on Drawing No. VIE/2704/03 and considered suitable to prevent unauthorised vehicular or pedestrian access. It must be noted that operations in the building will be taking place 24/7 so there will always been staff present to prevent any risk of arson occurring. If the site is required to shutdown, all roller shutter doors and access points will be securely locked.
- 2.7.2 The site will benefit from 24-hour security with remotely accessible CCTV fitted with full site coverage and off-site supervision. The CCTV has been installed by ADT Security Services who also maintain and act as the third-party monitoring company CMS Security who will view any footage in the event an alarm and notify the site manager / TCM in any incidents. ADT Security Services UKAS accredited and provide a response time to any incident within 42 seconds which is the fastest in the industry.
- 2.7.3 The site security measures will be inspected on a daily basis and any defects which impair the effectiveness of the security will be repaired as soon as practicable. If this is not possible, temporary measures will be put in place to ensure no unauthorised access to the site can be gained until the proper repairs can be carried out.
- 2.7.4 If unauthorised access becomes apparent as a problem at the site the security measures will be reviewed and improvements implemented building which benefit from roller shutter doors that will be closed and locked if the site is not operational.

## **2.8 Electrical faults or damaged/exposed electrical cables**

- 2.8.1 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).
- 2.8.2 In terms of portable appliance testing (PAT), this will be serviced annually by qualified and certified electrical contractors.
- 2.8.3 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**

- 3.1.1 Strict waste acceptance procedures are in place at the site and detailed in the site's EMS. Details of when the waste was accepted, how long waste has been on site and how long other separated wastes are stored prior to removal from the site will be stored. This will ensure compliance with the maximum storage duration for specific wastes (as shown on the Waste Storage Table on the Site Layout and Fire Plan).
- 3.1.2 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.
- 3.1.3 Any wastes identified during the incoming waste inspections which do not conform to site acceptance criteria will not be accepted and/or removed and quarantined immediately to await safe removal from site.

## **3.2 Combustible waste reception**

3.2.1 Incoming wastes will be stored in the areas shown on Drawing No. VIE/2704/03 and will be as follows:

- **AREAS 1 - 4** comprising the reception and inspection area for wastes. The wastes in this area will be whole untreated plastic containers / drums / IBCs which present a very low risk of combustibility. This area will be used to manually sort hazardous and non-hazardous containers.
- **AREA 5** – will be the location where the suitable containers (following the above assessment) will be washed to ensure they are non-hazardous.
- **AREAS 6 - 7** will store non-hazardous plastic containers/drums once they have been inspected. The waste in this area will be then subject to mechanical treatment to turn it into a non-waste comprising mainly cleaning, washing, shredding and pelletising.
- **AREA 8** comprising mixed plastics in loose and baled format. The area will act as a holding area and be constantly moving throughout the day.
- **AREA 9** comprising virgin timber acting as feed for the biomass boiler and pelleting plant

3.2.2 In summary it is proposed that Unit 9 will not store and accept any hazardous waste into the site.

## **4 Managing waste storage to prevent self-combustion and the fire spreading**

### **4.1 Managing storage time**

4.1.1 Waste will be stored as shown on Drawing No. VIE/2704/03 and reference should be made to the 'waste storage table' in Section 4.3 which demonstrates how the waste will be stored and monitored within the guidelines of the NRW's FPMP document.

4.1.2 Fire break distances and pile locations are also shown on Drawing No. VIE/2704/03 and the surface areas and dimensions of each storage area is provided in the waste storage table in Section 4.3. All pile sizes, heights, widths, lengths, volumes and separation distances are in accordance with the NRW's FPMP guidance document.

4.1.3 As the waste arrives in form of whole containers/drums, there is very low risk of spontaneous combustion.

4.1.4 Storage on flat ground: Site surfaces where wastes are to be stored are flat, therefore reducing the risk of falling materials accelerating the spread of fire.

### **4.2 Monitoring and control of temperature**

4.2.1 Due to the waste types stored, it is considered that the temperature of waste will not increase. As processed waste will have been shredded, washed and pelletised into a product, it will not rise to a heat where it would combust.

### **4.3 Waste storage table**

4.3.1 The table overleaf is a summary of the waste storage details on site showing the maximum pile sizes and duration for all wastes stored on site.

Table 4.1 - Combustible waste storage table

Storage Area Details												
Plan Ref	Description	Storage type	Containment / type	Height of firewall (m)	Max width (m)	Max length (m)	Max height (m)	Max area (m)	Conversion factor used	Max volume (m <sup>3</sup> )	Max storage time	Comments
AREAS 1 - 3	Waste acceptance and inspection area for plastic containers	Unprocessed plastic containers /drums / IBC'S	N/A - Freestanding	N/A	15	10	1	150	1	150	<1 week	It must be noted that the containers/drums are likely to be empty so the actual tonnage will be low and the self-combustion risk is extremely low
AREAS 4	Hazardous plastic container storage	Unprocessed plastic containers /drums / IBC'S	N/A - Freestanding	N/A	15	10	1	150	1	150	<1 week	As above - containers deemed hazardous by the site chemist
AREA 5	Containing washing area	As above	As above	N/A	5	3	1	15	1	15	<10 hours	Containers undergo full inspection and washed of any hazardous residues; area clear out-of-hours
AREA 6	Non-hazardous plastic containers	Unprocessed plastic containers/drums	3-sided concrete firewall bay	3.2	10	7.5	2	75	1	150	<1 week	SEE AREA 1 – 4 comments
AREA 7	Non-hazardous plastic containers	Unprocessed plastic containers/drums	As above	3.2	10	7.5	3	75	1	150	<12 hours	As above and actual pile size would be much less as waste will constantly be moving
AREA 8	Non-hazardous plastic bales/bags	Mixture of mechanical sorting and processing	As above	3.2	10	7.5	3	75	1	150	<12 hours	N/A
AREA 9	Virgin timber / wood feed for biomass and pelleting plant (non-waste)	Mixture of mechanical sorting and processing	As above	3.2	10	7.5	3	75	1	150	<12 hours	N/A

4.3.2 In addition to the above storage areas, there will also be storage of outputs from the wash plant and pelletising plant but these will be fed directly into bags and then removed to the production / manufacturing area once full and an empty bag will then be placed. As fixed plant will not be storing any waste, it has not been considered to include this on the plan. The other storage areas on site comprising non-waste empty containers and plastic product all of which will be segregated from the main waste operations on site.

4.3.3 **Non-hazardous waste** - The site would look to accept <75,000 tonnes a year of non-hazardous waste which on average would equate to 200 tonnes a day. The throughput is based on the processing capability of the wash plant which can treat 8 tonnes per hour.

4.3.4 **Hazardous waste** - The site would look to accept <3,650 tonnes per annum of hazardous plastic containers which would equate to <10 tonnes per day and the site would not store >50 tonnes (50,000 containers) of any hazardous plastic containers at any one time.

## 5 Managing waste piles

### 5.1 Stored combustible waste/materials

5.1.1 The table below details the wastes stored on site and procedures to reduce the risk of combustion/ignition in line with the NRW's FPMP guidance (reference should be made to the Layout & fire Plan in Appendix 1 for details and locations for each of the storage areas).

**Table 5.1 – Storage/monitoring procedures – free-standing piles**

Pile Ref:	Storage/monitoring procedures to reduce the risk of fire
<p>AREAS 1 - 4</p> <p>Waste acceptance and inspection area for plastic containers inc. storage of hazardous containers</p>	<ul style="list-style-type: none"> <li>• This area comprises the main reception area for plastic containers.</li> <li>• The containers will be inspected and those which are empty and comprising non-hazardous will be moved to AREAS 6 -7 (if clear) or remain in these areas to await processing. Containers which cannot be processed following assessment by the site chemist (virtual or attended) will be segregated in the bay and removed off site. Containers which are hazardous will be stored in AREA 4 and suitably for will be washed in AREA 5. It is expected that over 95% of the containers will be non-hazardous but as it is not possible to determine due to the amount of containers received until an assessment of the waste has been made.</li> <li>• The containers are largely non-combustible but will be visually monitored continuously throughout the day and subject to strict waste acceptance procedures by personnel who will be trained via toolbox talks in recognition of fire.</li> <li>• Apart from the use of loading equipment no other mechanical processing of waste takes place within 6m of this area.</li> <li>• In addition to the CCTV, the waste will be visually monitored throughout the day by site operatives.</li> <li>• As the site is 24/7 operational, continuous monitoring by staff will also take place.</li> <li>• Although the containers are combustible, the risk of spontaneous or self-combustion on their own accord is very low even during exposure to sunlight.</li> </ul>
<p>AREAS 6 - 7</p> <p>Non-hazardous plastic containers</p>	<ul style="list-style-type: none"> <li>• This area comprises the main holding area for plastic containers.</li> <li>• Containers suitable for processing will be extracted from the south of the stockpile so the pile will move in a clockwise formation.</li> <li>• The containers will be stored inside a concrete legio block firewall.</li> <li>• The bay will be visually monitored continuously throughout the day and subject to strict waste acceptance procedures by personnel who will be trained via toolbox talks in recognition of fire.</li> <li>• Apart from the use of loading equipment no other mechanical processing of waste takes place within 6m of this area.</li> <li>• In addition to the CCTV, the waste will be visually monitored throughout the day by site operatives.</li> <li>• As the site is 24/7 operational, continuous monitoring by staff will also take place.</li> <li>• Although the containers are combustible, the risk of spontaneous or self-combustion on their own accord is very low even during exposure to sunlight.</li> </ul>

Pile Ref:	Storage/monitoring procedures to reduce the risk of fire
AREA 8  Non-hazardous plastic bales/bags	<ul style="list-style-type: none"> <li>• Plastic in this area will be delivered to the site loose or baled.</li> <li>• The waste will be tipped at the north of the stockpile and then extracted from the south into the shredder or if the shredder is not being used, the wash plant loading hopper.</li> <li>• Waste is stored within 3.2m high x 0.6m wide interlocking concrete legio block bays.</li> <li>• The bays will be visually monitored continuously throughout the day and subject to strict waste acceptance procedures by personnel who will be trained via toolbox talks in recognition of fire.</li> <li>• Apart from the use of loading equipment no other mechanical processing of waste takes place within 6m of waste piles.</li> <li>• Due to the low storage times, there are no proposals to take any temperature readings of the bales or the loose material. The aim is to process the waste on arrival.</li> <li>• No further monitoring of this waste is deemed necessary.</li> </ul>
AREA 9  Virgin timber / wood feed for biomass and pelleting plant (non-waste)	<ul style="list-style-type: none"> <li>• Although a different form of material, the same procedures apply as AREA 3.</li> <li>• It must also be noted that this is a storage bay for non-waste wood i.e. virgin timber which is purchased into the site as feed.</li> <li>• Wooden pallets will be directly processed into the internal shredder under the conditions of the Part B permit regulated by the Local Planning Authority.</li> </ul>

## 5.2 Processed waste

5.2.1 Once the plastic waste has been fed through the mechanical treatment, it will no longer be waste and will be exported to claim non-waste status on the material by way of a PRN. Although the material is combustible, it presents a very low risk of combustion as it will have been cooled during the wash process.

## 5.3 Temperature monitoring for stored waste

5.3.1 There are no proposals to carry out any monitoring using probes or thermal guns as an unprocessed plastic container will not self-combust and other storage on site will not be stored for a duration where self or spontaneous combustion could occur; even during exposure to direct sunlight.

5.3.2 **Processing plant** - All processing lines are installed with heat and pressure ranges which have been set by the manufacturer and the lines benefit from an automated cooling system in the event the plant overheats. The control panel system is linked to the manufacturers mobile and other remote software via 4G Sim Cards who are immediately alerted by the

plants control panel system and the Company can remotely access machinery to identify the fault and also shut down if necessary.

## **5.4 Stock rotation and seasonal variations**

5.4.1 Details of stock rotation are clearly shown throughout the above sections wastes which are stored and processed on site. In the event of destination site closures or seasonal demands for wastes leading to a longer storage duration, the operator can:

- Source additional mobile plant i.e. shredders, balers to size reduce the material in order to export off site quicker.
- Divert incoming waste and send stored waste to alternative sites. The operator can search for additional site's using NRW's 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. The operator has a number of contracts set up with other waste companies to send material too to avoid overs stockpiling.
- The site will only stop accepting waste if the processing lines fail.

5.4.2 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) Residues from the wash plant/water filtration system will be completely emptied every 6 weeks and disposed of to a suitably permitted site i.e. Enviroclear.
- b) Wastes unsuitable for processing will sent to a suitably permitted site as above.

5.4.3 The site will also be an approved packaging re-processor and would only accept waste material when they have an outlet to send the manufactured plastic to in order to claim PRNs. The site would not accept any waste without any outlet or an external order as it would not be financially viable for the business meaning plastic would not be stored at the site for longer than stated in this FPMP.

## 6 Prevent fire spreading

### 6.1 Fire walls and bays

6.1.1 Waste/material on site will be stored against concrete fire walls. The walls are constructed to the BS8110 Pt2 'Structural use of concrete Part 2 Code of practice for special circumstances' and BSEN1992-1-2 'Design of concrete structures. General rules. Structural fire design' and will be over 100mm (the walls installed are 800mm) in thickness and have a fire resistance of 1200°C for 4 hours. This ensures any concrete firewalls on site will:

- 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 6.1 – Fire wall details and specifications**

<b>Firewall manufacturer</b>	<b>Width</b>	<b>Site location / use</b>	<b>Specification</b>
Eco Block Crete Ltd	0.8m	AREAS 6 - 9	Concrete and aggregate used in blocks is BS EN 206 (Kitemark 736858) and BS EN 12620 meaning they are of class A1 in accordance with Clause 4.3 4.4 of EN:13369 meaning they are non-combustible, act as a thermal barrier and have a fire resistance period of at least 120 minutes to allow waste to be isolated to stop fire spreading and minimise radiant heat.

6.1.2 The walls installed at the site were installed in line with the manufacturers recommendations and 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.

6.1.3 For waste which is stored in and against walls, a suitable 1.0m 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.

## **6.2**     **Wind**

- 6.2.1     As can be seen from Drawing No. VIE/2704/03, all light wastes are stored within secure bays or within a building and are thus sheltered from the wind. The plastic containers will generally not be affected by the wind.

## **7 Site inspection programme**

### **7.1 Daily checks**

- 7.1.1 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.
- 7.1.2 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. VIE/2704/03.
- 7.1.3 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. VIE/2704/03 shows all fire exits for buildings, storage locations of firefighting equipment and escape routes.
- 7.1.4 The site undergoes a litter pick at least once daily to reduce the build-up of combustible materials on and off site. The materials recovered will be deposited into a mobile refuse bin which will be removed weekly by a trade waste collector. The location of wheelie bin will vary so it has not been included on the site plan.

### **7.2 Staff training**

- 7.2.1 Operational staff are 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.
- 7.2.2 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 the NRW. 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.

## **7.3 Toolbox talks**

- 7.3.1 All operational staff will receive fire awareness 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.

## **8 Quarantine area**

### **8.1 General**

- 8.1.1 As there are two sites operating under one permit boundary two quarantine areas have been provided and details for each are shown below and the position on Drawing No. VIE/2704/03.
- 8.1.2 **Unit 10** = The largest pile on Unit 10 comprises **AREAS 1, 2, 3 or 4** which would be 150m<sup>3</sup> of waste in each pile at full capacity meaning the quarantine area for this unit would need to hold 75m<sup>3</sup> of waste material. The quarantine area is positioned as shown on Drawing No. VIE/2704/03 and has a 6m clearance from any waste storage or anything which is at risk of combusting. This quarantine area for this unit measures 75m<sup>2</sup> and it is proposed to store wastes to a height of 1m in this quarantine area in the event of a fire which means the volume would be 75m<sup>3</sup> and able to hold 50% of **AREAS 5 – 8**.
- 8.1.3 **.Unit 9** = The largest pile on Unit 9 comprises **AREAS 5 - 8** which would be 150m<sup>3</sup> of waste in each pile at full capacity meaning the quarantine area for this unit would need to hold 75m<sup>3</sup> of waste material. The quarantine area is positioned as shown on Drawing No. VIE/2704/03 and has a 6m clearance from any waste storage or anything which is at risk of combusting. This quarantine area for this unit measures 37.5m<sup>2</sup> and it is proposed to store wastes to a height of 2m in this quarantine area in the event of a fire which means the volume would be 75m<sup>3</sup> and able to hold 50% of **AREAS 5 – 8**.
- 8.1.4 Both quarantine areas are located on an impermeable surface with sealed drainage meaning that any firewater used to tackle burning/smouldering waste would be contained within the site's drainage system and not escape off site.
- 8.1.5 Wastes will only be moved to the quarantine area if safe to do so following recommendation of the FRS.

## **9 Fire detection procedure**

### **9.1 Automated detection**

9.1.1 The building and wider site is fitted with an intruder alarm system for when the site is closed but as the site is operated 24/7, there will always be manned staff inside and outside the building therefore it is considered unnecessary to install any automated detection system.

9.1.2 The Processing Treatment Plants at the site are installed with heat and pressure ranges set by the manufacturer. The lines also benefit from automated cooling systems in the event that the plant overheats. The control panel system on the processing plant is linked up to the manufacturers 24/7 system in China via a 4G Sim Card; the manufacturer will be immediately alerted and will remotely access the plant to identify any fault and shut down if necessary.

### **9.2 Manual detection**

9.2.1 If a fire is detected or suspected by a member of staff during operational hour as a result of monitoring it must be immediately reported to the site manager, TCM or fire marshal. The relevant person will 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.

## **10 Fire response procedures**

10.1.1 Further to the above measures, the following procedure would apply if a large fire is detected:

- a) Call the Fire Response Service (FRS) immediately using 999.
- b) Call the NRW's Emergency Contact Number.
- c) Competent person to ensure suitably trained employee initiates the three penstock valves in the site's surface water drainage system shown on the Site Layout & Drainage Plan.
- 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) Ensure relevant site staff are standing by in a safe location to deploy additional surface water protection equipment under the direction of the FRS when they arrive (booms, etc.).
- j) 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.
- k) Implement pollution control measures (see Section 12) if safe to do so.

10.1.2 In the event of the site manager or TCM being absent from the site, the operator will ensure a suitable person is employed and familiar with the site.

## **10.2 Staff/Visitor Response Procedure**

10.2.1 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.

## **10.3 Evacuation of Staff (and Drill Procedure)**

10.3.1 An evacuation plan has been formulated for the site and all operational staff have been made aware of it (through site induction and refresher training). 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.

10.3.2 Fire drills will take place every 6 months and 1 month after site operations commence to ensure evacuation times are acceptable and that site staff remain informed of evacuation procedures.

10.3.3 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.

## **10.4 Access for emergency services**

- 10.4.1 The site is located at Units 9 & 10, Vauxhall Industrial Estate, Ruabon, Wrexham LL14 6HA and provides direct access to the site for the emergency services with the nearest fire station 1.2 miles away at situated of Gutter Hill to the north-west of the site. The response time is expected to be 5 minutes
- 10.4.2 The width of the surrounding roads and gateway exceeds the minimum required in Section 5 of the FRS (3.7m). The on-site traffic co-ordinator also ensures that the 3.7m access routes are maintained throughout the working day and before cessation of works.
- 10.4.3 Access routes for emergency services around the site are clearly shown on Drawing No. VIE/2704/03.

## **10.5 Notifying receptors**

- 10.5.1 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.
- 10.5.2 As it isn't feasible for a contact number to be provided for every individual residential receptor and individual business within 1km, the most sensitive receptors and closest business receptors have been included within the table at the beginning of this document.

- 10.5.3 The receptors will be contacted by a co-ordinated approach where staff from New Horizon Biofuel and Animal Bedding Co Ltd will contact them by phone and/or email.
- 10.5.4 Following discussions with from Wrexham County Borough Council and other Local Borough Councils, 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.
- 10.5.5 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.

## **11 Suppressing fires & water supply**

### **11.1 General**

11.1.1 Section 20 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.

11.1.2 Based on the above scenario, the largest pile of combustible waste on each site has been calculated to be 150m<sup>3</sup> which is one of the four areas storing waste at the site.

Table 11.1 - Water supply calculations

<b>Maximum pile volume in m<sup>3</sup></b>	<b>Water supply needed in litres per minute</b>	<b>Overall water supply needed over 3 hours in litres</b>	<b>Total water required</b>
150	150 x 6.67 = 1,000	1000 x 180	180,000 litres (180 m <sup>3</sup> )

### **11.2 Internal suppression/alternative measures**

11.2.1 As no waste will be stored inside the building other than waste produced on site comprising residues from the treatment plants, it is considered that an automated suppression system will not be required. In addition to this, the site will operate 24/7, the building has five access points and the treatment benefit from a cooling system and can be shut off by the manufacturers or operator via mobile phone in the event of them overheating. Once the plant raises an alarm signal.

### **11.3 Site-wide suppression**

11.3.1 There are a number of fire extinguishers located around the site which can be deployed in the event of an incident to tackle the fire or for fire suppression in the intervening time between discovery of the fire and the arrival of the FRS.

11.3.2 There will be access to hoses connected to the surface water mains providing suppression to all areas storing combustible waste in the building.

11.3.3 In the event of a fire, the site would rely on external supply in the form fire hydrants as shown in the next section.

## **11.4 External Suppression - Fire Hydrants**

11.4.1 There are 3 fire hydrants all within 150m from the site with the nearest being 70m from the access to the site. The FRS have confirmed all three hydrants are tested annually and are all functional.

11.4.2 Contact was made with both the FRS and Welsh Water and both are unable to provide a flow rate for the hydrants therefore the following guidance extracted from The Local Government Association (LGA) / Water UK National Guidance Document details the following flow rates which should be considered for this site:

- Recommended Minimum Flow Rates and Location of Fire Hydrants are:

### **Industry**

11.4.3 In order that an adequate supply of water is available for use by the Fire and Rescue Authority in case of fire it is recommended that the water supply infrastructure to any industrial estate is as follows with the mains network on site being normally at least 150 mm nominal diameter -

- Up to one hectare 20 litres per second.
- One to two hectares 35 litres per second.
- Two to three hectares 50 litres per second.
- Over three hectares 75 litres per second.

11.4.4 As the above site is considered in an area industry and over three hectares with the nearest the flow rate of the hydrant should be approximately 4,500 l/m which exceeds the required flows l/m for both sites and suitable for extinguishing the fire within 3 hours.

## 12 Managing fire water

### 12.1 Drainage

12.1.1 The site drainage is shown on Drawing No. VIE/2704/03 and in summary:

- The building in Unit 9 which houses the treatment plants is surfaced with concrete and any water escape points are sealed using a small lip i.e. to contain any spillages
- The external yard area for both Units 9 and 10 will drain into sealed underground storage tanks and the contents tankered away once full.
- Clean water from roofs or from areas of the site which do not store and treat waste connect to a separate surface system or soakaway naturally.
- Any foul water connections i.e. from toilets or welfare will directly discharge into the existing foul sewer system.

### 12.2 Containment of fire water

12.2.1 In the event of a fire arising from the combustion of waste which could only occur with the external yards of the site, both areas of the site (Units 9 & 10) are sealed by at least a 0.15m high kerb and the the only other escape point for fire water would be out of the site accesses. To prevent this, the operator would deploy 10m long, 0.16m high fire water booms as shown on Drawing No. VIE/2704/03 which would completely seal the sites. This would mean fire water would pool and create a lagoon. The containment area and volumes for the Units 9 & 10 are shown in the tables below and overleaf.

Table 12.1 - Firewater Containment Calculation Unit 9

Volume of Water (m <sup>3</sup> )	Containment Area (m <sup>2</sup> )	Containment Required	Total Containment On Site (m <sup>3</sup> )
180	1250 external yard surrounded by 0.15m high concrete kerb	$180 / 1,250 = 0.14$	0.15 (additional 0.01 containment available)

**Table 12.2 - Firewater Containment Calculation Unit 10**

<b>Volume of Water (m<sup>3</sup>)</b>	<b>Containment Area (m<sup>2</sup>)</b>	<b>Containment Required</b>	<b>Total Containment On Site (m<sup>3</sup>)</b>
180	2660 external yard surrounded by 0.15m high concrete kerb	$180 / 2,660 = 0.14$	0.07 (additional 0.08 containment available)

## **12.3 Fire water boom deployment procedure**

- 12.3.1 The fire water boom will be located within the office as shown on Drawing No. VIE/2704/03 and would be deployed in the event of a fire and positioned as per the plan to contain any fire water runoff. The booms have a 160mm diameter tube each side and using a standard water main i.e. the hose from the site could be filled and provide containment in <10 minutes based on the length of the boom (10m), the volume required and the 15 l/m from the standard hose.
- 12.3.2 A key member of senior staff will be responsible for arranging the deployment of the poly booms and will be trained in this procedure.
- 12.3.3 Upon confirmation that a significant volume of water is likely to be required for extinguishing a fire on site, the following deployment procedure for the poly booms will be observed:
- a) Take the boom roll from the site office;
  - b) Emplace the boom as shown on Drawing No. VIE/2704/03 by rolling the necessary length;
  - c) Use supplied cable ties (also available in the site office) to seal the front end of the boom;
  - d) Using a sharp knife, cut the laid-out section from the remaining roll;
  - e) Using the Hose Reel, begin filling the first of the two chambers of the boom being sure to elevate the 'fill' end to prevent the water leaving the tube;
  - f) Once the first chamber is filled, repeat in second chamber ensuring the 'fill' end is kept elevated to prevent escape of water;

- g) When both chambers are full the 'fill' end should be sealed using a cable tie thus completing deployment.
- h) Typically, one side of the roll would be filled which has a 160mm diameter,

12.3.4 Once deployed, the boom will be regularly checked during a fire event to ensure that they are providing effective containment and that there are no breaches. Secondary/additional lengths of boom can be deployed in addition to the compulsory locations using the same procedure (as above) if deemed necessary.

12.3.5 **Fire water boom specification** - The boom is the same as those issued to the FRS in their 'Grab Packs'. In the grab pack information, it states "*The boom is resistant to most chemicals but may be adversely affected by very aggressive solvents such as acetone*". The site will not accept any waste material containing acetone or any other solvents.

12.3.6 If there is any deviation from the above drainage arrangement, an amended FPMP will be submitted for approval by the NRW and FRS.

## **12.4 Removal of fire water**

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

## **12.5 Control of Combustion Products**

12.5.1 Combustion products likely to be associated with the waste stored at the site include fire water containing hazardous residues, 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.

12.5.2 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). In terms of firewater, the measures detailed in section 12.3 detail how no hazardous firewater would be released off

site in a manner which would cause harm to the environment or human health. All firewater would be contained and tankered off site.

## **13 During and after an incident**

### **13.1 Contingency Planning**

13.1.1 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 NRW's public register.

13.1.2 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.

### **13.2 Site decontamination**

13.2.1 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.
- b) Using all available resources, manually clean out the storage tank and gully removing 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 it is appropriate to remove the surface water protection measures, or repeat areas of the clean-up.

13.2.2 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) Remove any temporary bungs/valves
- 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.

13.2.3 The operator will liaise with the 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.

13.2.4 The operator receives all waste i.e. plastic packaging from agricultural operations or waste management companies meaning during site closure in the event of a fire, the waste can be diverted to another suitable facility using NRW's public register for waste permits search.

### **13.3 Post fire site recovery**

13.3.1 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.

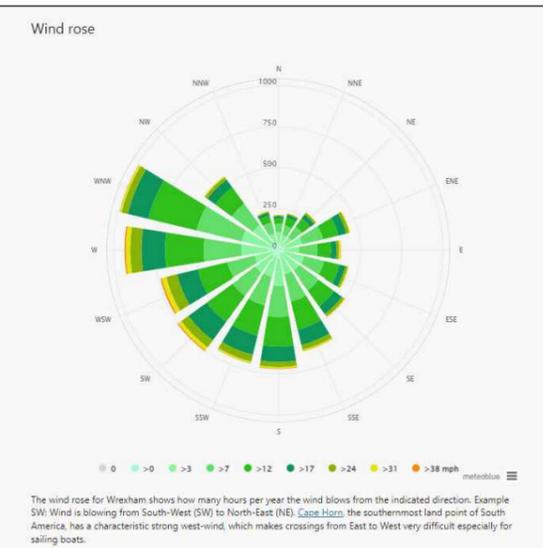
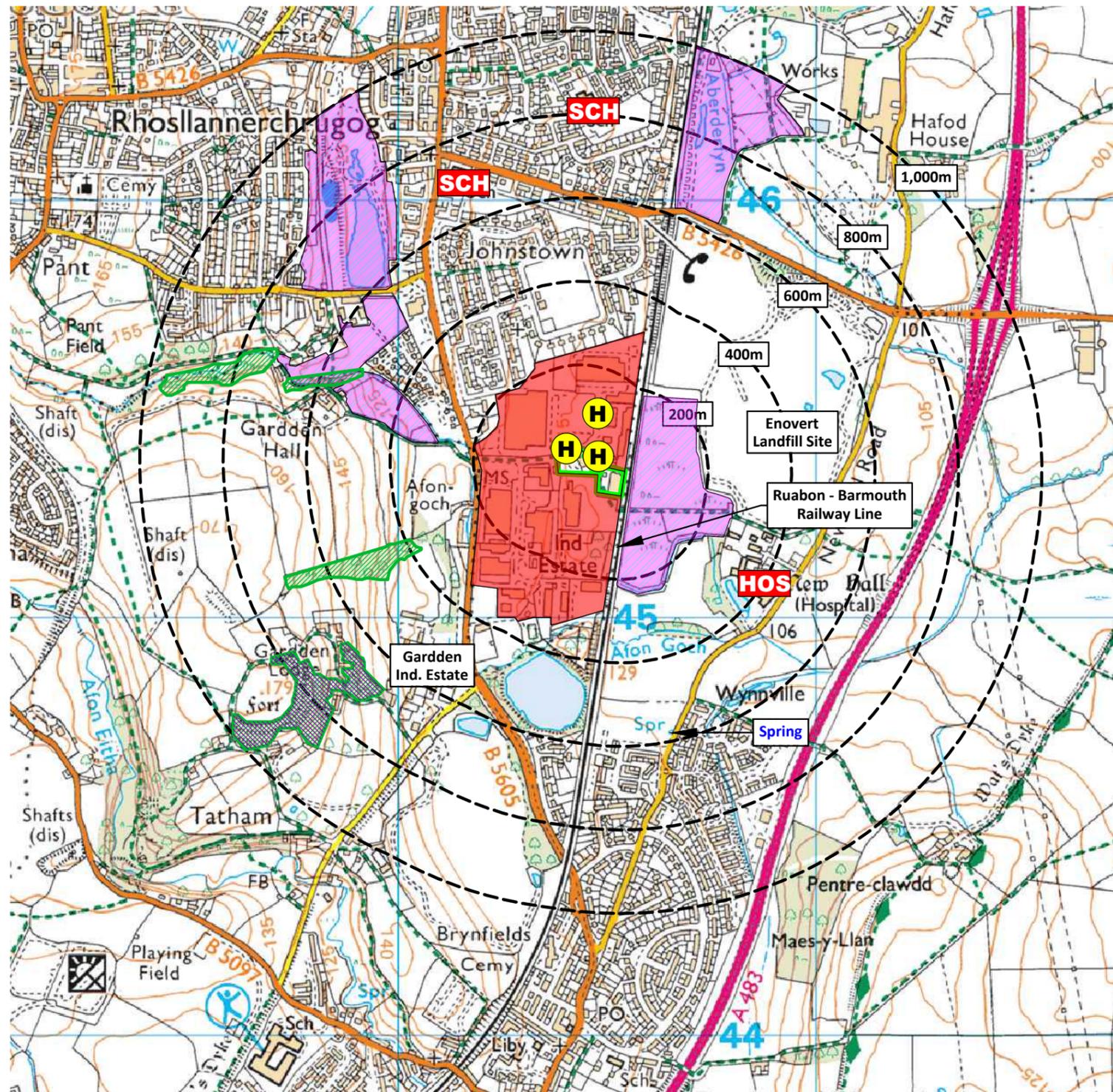
# Appendix I

## Drawings



**KEY:**

-  Permit boundary
-  Surface water (river / stream / beck)
-  Surface water (estuary / pond / pool / lake / sea)
-  Vauxhall Industrial Estate
-  Workplaces (includes agriculture industry, commerce and retail)
-  Residential blocks
-  Class A roads
-  Class B roads
-  Class C roads
-  Nearest fire hydrant
-  Railway line
-  Schools/nurseries
-  Hospitals/medical centres
-  Woodland areas
-  Protected sites - Johnstown Newtown Sites SAC & Stryd Las a'r Hafod SSSI
-  Gardden Fort Wood (LWS)
-  Priority Habitats - Areas of Ancient Semi Natural Woodland and Restored Ancient Woodland sites



Compass Wind Rose for Wrexham  
Period 1982 - 2022  
source: Meteoblue

Scale Bar (1:12,500)

0 km 500 m 1 km

**NOTES**

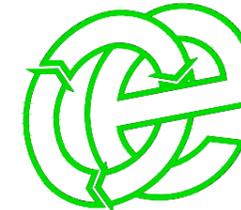
1. Boundaries are shown indicatively.
2. Wind rose data shows the prevailing wind direction from the west/north-west.

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**REVISION HISTORY**

Rev:	Date:	Init:	Description:
-	09.09.21	CP	Initial drawing
A	11.10.21	CP	Updated boundary
B	21.09.22	CP	NRW comments
C	11.11.22	CP	NRW comments
D	15.11.22	CP	NRW comments

**Oaktree Environmental Ltd**  
Waste, Planning and Environmental Consultants



**DRAWING TITLE**  
RECEPTOR PLAN

**CLIENT**  
New Horizon Biofuel and Animal Bedding Co Ltd

**PROJECT/SITE**  
Units 9 & 10, Vauxhall Industrial Estate, Ruabon, Wrexham LL14 6HA

**SCALE @ A3** 1:12,500      **JOB NO** 012      **CLIENT NO** 2704

**DRAWING NUMBER** VIE/2704/04      **REV** D      **STATUS** Issued

**DRAWN** CP      **CHECKED** --      **DATE** 15.11.22

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

# Appendix II

## Record Keeping Forms

<b>NEW HORIZON BIOFUEL AND ANIMAL BEDDING CO LTD SITE INSPECTION FORM (MINIMUM TWICE DAILY)</b>												
<b>DAY</b>												
<b>TYPE OF INSPECTION</b>												
<b>TIME OF INSPECTION (START)</b>												
<b>TIME OF INSPECTION (FINISH)</b>												
SITE ENTRANCE/NOTICE BOARD												
SECURITY - GATES												
SECURITY - FENCING												
SITE ROADS (CLEAR FROM HAZARDS)												
IMPERMEABLE CONCRETE AREAS (INTEGRITY)												
KERB AROUND CONCRETE PAD (INTEGRITY)												
STORAGE TANKS / INTERCEPTORS												
WASTE CONTAINMENT BAY WALLS												
WASTE STORAGE LIMITS   COMBUSTIBLE												
COMBUSTIBLE WASTES (AWAY FROM POTENTIAL IGNITION SOURCES)												
FIRE ALARM SYSTEMS												
REJECTED WASTE TYPES / STORAGE												
FIRES (ANY INCIDENTS REPORTED)												
QUARANTINE AREA CLEAR OF WASTE												
NO SMOKING SIGNS IN PLACE												
FIRE FIGHTING EQUIPMENT												
FIRE BREAKS IMPLEMENTED												
PLANT/EQUIPMENT MAINTENANCE CHECKS												
HOT EXHAUSTS FIRE WATCH (DUST/FLUFF CLEANED REMOVED)												
SPILLAGES OF OIL/LIQUIDS CLEARED												
OFFICE/WELFARE FIRE RISKS CHECKED												
ELECTRICAL APPLIANCES AND CABLING CHECK												
FUEL TANK/BUND												
LITTER												
DUST												
ODOUR												
VERMIN												
RECORDS												
COMPLAINTS RECEIVED												
OTHER (SEE NOTES BELOW)												
INSPECTION CARRIED OUT BY												
<b>NOTES/ACTION (CONTINUE ON A SEPARATE SHEET IF NECESSARY):</b>												
<b>CHECKED BY</b>					<b>SIGNATURE</b>							
<b>POSITION</b>					<b>DATE</b>							
<i>Sheet</i>					<i>of</i>							

**NEW HORIZON BIOFUEL AND ANIMAL BEDDING CO LTD - PREVENTATIVE MAINTENANCE CHECKLIST**

<b>CHECKED BY</b>	<b>POSITION</b>
<b>DATE</b>	<b>DATE OF LAST CHECKLIST</b>

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

**NEW HORIZON BIOFUEL AND ANIMAL BEDDING CO LTD  
 EMPLOYEE TRAINING NEEDS ASSESSMENT / REVIEW - NHB/RF/6**

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			
<b>NOTES AND ACTIONS:</b>							