

FIRE PREVENTION & MITIGATION PLAN

Unit 1 Abbey Road, Redwither Business Park, Wrexham, LL13 9RF

AST Plastic Containers UK LLP

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

CONTENTS

DOCUMENT HISTORY:	I
CONTENTS	II
LIST OF TABLES	IV
LIST OF APPENDICES:	V
SITE INFORMATION & KEY CONTACTS LIST	VI
KEY RECEPTOR CONTACT LIST	VII
1 INTRODUCTION	1
1.1 OVERVIEW OF SITE OPERATIONS	1
1.2 FIRE PREVENTION OBJECTIVES	1
1.3 REVIEWING AND MONITORING THIS FPMP	1
1.4 GENERAL SITE INFORMATION	3
1.5 STAFFING AND MANAGEMENT	4
1.6 PLANT AND EQUIPMENT	5
1.7 HOURS OF OPERATION	5
1.8 CORRESPONDENCE WITH FIRE AND RESCUE SERVICE	5
1.9 SENSITIVE RECEPTORS	6
2 MANAGING COMMON CAUSES OF FIRE	8
2.1 DETAILS	8
2.2 FUEL STORAGE	10
2.3 OTHER HAZARDOUS (NON-WASTE) MATERIAL STORAGE	10
2.4 HOT WORKS PROCEDURE	11
2.5 SMOKING POLICY (INCLUDING E-CIGARETTES)	11
2.6 MOBILE AND FIXED PLANT MAINTENANCE	12
2.7 SITE SECURITY	13
2.8 ELECTRICAL FAULTS OR DAMAGED/EXPOSED ELECTRICAL CABLES	14
3 WASTE ACCEPTANCE	15
3.2 ACCEPTED WASTE TYPES	16
3.3 COMBUSTIBLE WASTE RECEPTION	16
4 MANAGING WASTE STORAGE TO PREVENT SELF-COMBUSTION AND THE FIRE SPREADING	17
4.1 MANAGING STORAGE TIME	17
4.2 MONITORING AND CONTROL OF TEMPERATURE	17
4.3 WASTE STORAGE TABLE	17
5 MANAGING WASTE PILES	19
5.1 STORED COMBUSTIBLE WASTE/MATERIALS	19
5.2 PROCESSED WASTE	20
5.3 TEMPERATURE MONITORING FOR STORED WASTE	20
5.4 STOCK ROTATION AND SEASONAL VARIATIONS	21
6 PREVENT FIRE SPREADING	22
6.1 FIRE WALLS AND BAYS	22
6.2 WIND	23
7 SITE INSPECTION PROGRAMME	24
7.1 DAILY CHECKS	24
7.2 STAFF TRAINING	24

7.3	TOOLBOX TALKS.....	25
8	QUARANTINE AREA	26
8.1	GENERAL	26
9	FIRE DETECTION PROCEDURE	27
9.1	AUTOMATED DETECTION	27
9.2	MANUAL DETECTION	27
10	FIRE RESPONSE PROCEDURES.....	28
10.2	STAFF/VISITOR RESPONSE PROCEDURE	28
10.3	EVACUATION OF STAFF (AND DRILL PROCEDURE)	29
10.4	ACCESS FOR EMERGENCY SERVICES	29
10.5	NOTIFYING RECEPTORS.....	30
11	SUPPRESSING FIRES & WATER SUPPLY	32
11.1	GENERAL	32
11.2	INTERNAL SUPPRESSION/ALTERNATIVE MEASURES	32
11.3	SITE-WIDE SUPPRESSION	33
11.4	EXTERNAL SUPPRESSION - FIRE HYDRANTS.....	34
12	MANAGING FIRE WATER	35
12.1	DRAINAGE.....	35
12.2	CONTAINMENT OF FIRE WATER	35
12.3	REMOVAL OF FIRE WATER	35
12.4	CONTROL OF COMBUSTION PRODUCTS	35
13	DURING AND AFTER AN INCIDENT.....	37
13.1	CONTINGENCY PLANNING.....	37
13.2	SITE DECONTAMINATION	37
13.3	POST FIRE SITE RECOVERY	38

List of Tables

Table 1.1 Monitoring procedures	2
Table 1.2 - Plant and Equipment.....	5
Table 1.3 – Receptor Table	7
Table 2.4 - Common fire sources and mitigation.....	8
Table 4.1 - Combustible waste storage table	18
Table 5.1 – Storage & monitoring procedures for waste piles	19
Table 6.1 – Fire wall details and specifications.....	22
Table 11.1 - Water supply calculations (based on volume).....	32
Table 12.1 - Firewater Containment Calculation	35

List of Appendices:

Appendix I - Drawings

Drawing No. ABB/2789/03 – Site Layout & Fire Plan

Drawing No. ABB/2789/04 – Receptor Plan

Appendix II - Record Keeping Forms

Site Diary/Inspection Form

Preventative Maintenance Checklist

Training Needs Assessment

Appendix III - Hot Works – Permit to Work

Site Information & Key Contacts List

Site Address:	Unit 1 Abbey Road, Redwither Business Park, Wrexham, LL13 9RF		
Site Operator:	AST Plastic Containers UK LLP	National Grid Ref:	SJ 38169 50527

CONTACT	DESCRIPTION	OFFICE HOURS	OUT OF HOURS
Matthias Hochholzer	Managing Director	01978 661 590	01978 661 590
Gavin Shepherd	TCM and Site Manager	01978 661 590	07554 661 438
<u>Wrexham Maelor Hospital</u> Croesnewydd Road, Wrexham, LL13 7TD	Local NHS Hospital (Main)	01978 291100	999
	Accident & Emergency (A&E)	999	999
<u>Caia Park Surgery</u> Prince Charles Road, Wrexham, LL13 8TH	Local Doctor Surgery (GP)	01978 291129	999 or 112
<u>North Wales Police</u> Former Oriel Gallery, Rhosddu Road, Wrexham, LL11 1AU	Local Police Non-Emergency	0300 330 0101	999 or 112
<u>North Wales Fire & Rescue Service</u> Ambulance and Fire Services Resource Centre (AFSRC), Croesnewydd Rd, Wrexham LL13 7YU	Fire and Rescue Service (in Emergency Dial 999)	0300 1233249	999 or 112
<u>Natural Resources Wales (Nearest Office)</u> Chester Road, Buckley, CH7 3AG	Environmental Regulator	0300 065 3000	0300 065 3000
<u>Wrexham County Borough Council</u> 16 Lord Street, Wrexham, LL11 1LG	Local General Enquires	01978 292000	999 or 112
<u>Dwr Cymru (Welsh) Water</u>	Main's water and sewerage supplier	0800 052 0130	0800 783 4444
<u>Oaktree Environmental Ltd</u> - 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

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 Unit 1 Abbey Road, Redwither Business Park, Wrexham, LL13 9RF. The is operated as a physical treatment facility for 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 Reviewing and monitoring this FPMP

- 1.3.1 This document will be due for review two years from the date of approval, or, as a result of any incidents which may lead to the requirement for immediate review or the FPMP guidance changing, whichever is the sooner. The circumstances which would warrant a review are the following:

- Experiencing a fire incident.
- Additional combustible waste streams accepted on site.
- Increase waste volumes accepted.
- Development of site infrastructure – new buildings.
- Installation of new equipment or plant – baler/loading shovel/sort-line/ etc.

1.3.2 Reference should be made to Sections 7.2 and 7.3 which details procedures for staff training in the event of any changes in relations to the FPMP.

1.3.3 Reference should be made to the table below which details the methods and procedures to maintain compliance with Section 24 of the FPMP guidance.

Table 1.1 Monitoring procedures

STAFF TRAINING	
Item	Method
Ensure your FPMP is available and that all staff know where it is kept.	The FPMP will be kept within the off-site main office and also within the office/welfare area of the operational site
Ensure staff receive training to enable them to competently carry out the procedures and measures contained within your FPMP	<ul style="list-style-type: none"> • Staff will be suitably trained in how to raise a fire alarm and how to use the monitoring and extinguishing equipment. Managers will also ensure formal fire extinguisher training has been provided for anyone specifically designated to use such equipment. • A full understanding the procedures outlined in this FPMP document will be required to be demonstrated as part of the site induction for all new staff and any existing staff that are not familiar with the documents. In particular all staff will be trained to ensure that they know what to do in the event of a fire and more importantly how to undertake their work in a way that minimises the risk of a fire occurring. • A full test (drill) of the procedures in this document will be carried out every 6 months. The first test will take place within one month of the agreement of this document with the EA. The outcome and any follow up training for staff will be documented in the site diary and relevant forms in the EMS. The Site Inspection Form in Appendix II will also be used during the drill. • All operational staff will receive fire awareness and firefighting procedures training / tool box 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.

SITE MONITORING	
Item	Method
Site inspections before, during and after shifts	The daily inspection sheet and waste monitoring forms will be completed daily and staff will be suitably trained to identify ignition sources, mobile plant, electrical equipment is kept 6m from combustible or flammable material when the site is not operational
Waste stacks and separation distances are in accordance with your FPMP	Suitably trained operational staff will ensure all stockpiles are stored in line with Drawing No. ABB/2789/03. The site will not accept waste if fixed processing plant is down.

<p>Monitor, control and record temperature of waste stacks</p> <p>Monitor and record residence times of wastes on site</p>	<p>Due to the infra-red detection systems, nature and duration of the wastes stored, it is considered only visual checks are necessary which are carried out continuously when the site is operational. The operator will also complete the waste monitoring form daily which will include a full check of the wastes stored in each bay. It must also be noted that the wastes stored internally are a valuable commodity and it is not financially viable to hold stock.</p>
<p>Plant and equipment are adequately serviced and maintained by qualified personnel.</p> <p>Daily, weekly, monthly checks undertaken and records kept.</p>	<p>The site has a daily preventative mobile plant checklist shown in Appendix II where plant undergoes a daily check prior to use to ensure the item is fit for purpose and a full check prior to the site closing to ensure they are stored in the area shown on Drawing No. ABB/2789/03. The plant will also be subject to annual manufacturer maintenance. Suitably trained staff (via site management) will be responsible for ensuring the plant is suitable which will also include a check for dust/fluff and an extinguisher is located in the cab of the item.</p>
<p>Ensure periodic testing of fire prevention and mitigation equipment is carried out</p>	<p>The site will undergo a full testing of the FPMP every 6 months to ensure all fire-fighting equipment is suitable including containment. Any items which are considered damaged will be replenished as soon as practicable.</p>

1.4 General site information

- 1.4.1 This document considers the risks associated with fire on site at Unit 1 Abbey Road, Redwither Business Park, Wrexham, LL13 9RF. The site will be operated by AST Plastic Containers UK LLP (the operator) as a hazardous waste treatment facility involving the cleaning, washing and mechanical treatment of plastic drums/containers for recovery.

- 1.4.2 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. ABB-2789-A for its content.
- 1.4.3 The layout of the site is shown on Drawing No. ABB/2789/03 which appears in Appendix I of this document. This FPMP document will be kept in the site office located as shown on Drawing No. ABB/2789/03.
- 1.4.4 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. ABB/2789/04 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 1.2.1

1.5 Staffing and management

- 1.5.1 The site will require up to 12 staff to be fully operational to ensure the measures in this FPMP are met.
- 1.5.2 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 1.2.1 are met.

1.6 Plant and equipment

- 1.6.1 The table below details the mobile plant/equipment on site, fixed plant has not been included but is shown on Drawing No. ABB/2789/03. 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 1.2 - Plant and Equipment

Item	Number	Function
Fork lift	5	Loading/unloading/movement/sorting

1.7 Hours of operation

- 1.7.1 The site will operate on a 24/7 basis with approximately two days per month being shutdown to carry out a full housekeeping
- 1.7.2 In the event that 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.

1.8 Correspondence with Fire and Rescue Service

- 1.8.1 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.
- 1.8.2 AST Plastic Containers UK LLP 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.

1.9 Sensitive Receptors

- 1.9.1 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.
- 1.9.2 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.
- 1.9.3 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.

Table 1.3 – Receptor Table

Receptor	Receptor Type	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Risk Management
Numerous surrounding industrial and commercial uses on Wrexham 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. ABB/2789/04	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
Surface Waters inc. the Redwither Brook	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.
Other habitats and species inc. deciduous woodland	Protected sites and species	As above	As above	Air transport of smoke.	Low	Medium	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 2.4 - 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"> Appropriate site security infrastructure. Vehicle checks on arrival to the site. Plant & equipment daily checks and preventative maintenance of plant / equipment by manufacturer. Staff training / toolbox talks. 	Near-zero
Plant or equipment	Spillages of fuel, sparks from machinery or malfunction caused by ineffective maintenance	Medium	<ul style="list-style-type: none"> Plant & equipment daily checks and preventative maintenance of plant / equipment by manufacturer. Any liquid/fuel/oil storage is double bunded. Daily checks of site surfacing and spill kits. Staff training / toolbox talks. 	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"> Fixed wiring testing is carried out 5 years and portable appliances are PAT tested 12 months in accordance with Legislation. Daily checks for dust and fluff on wiring / electrical appliances. 	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"> Designated smoking area on site and smoking policy. 	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"> No loading shovels to be used at the site. 	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"> Only trained staff can use 'hot works' equipment i.e. oxy-acetylene. Staff and contractors follow safe working practices including a permit to works system when carrying out hot works. A 2-hour fire watch will be undertaken following any hot works or when plant/vehicles are shut down for the day or cessation of operations. 	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"> There are no industrial heaters (or associated pipework) used heat areas of the site. 	Low
Hot exhausts	Potential source of both primary and residual heat to stored wastes	High	<ul style="list-style-type: none"> Fire extinguishers are fitted in the cab of all loading plant. 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. Plant & equipment daily checks and preventative maintenance of plant / equipment by manufacturer. Out-of-hours storage of plant & equipment away from combustible or flammable wastes. Daily checks for dust and fluff on plant/equipment before and use of equipment. 	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"> Fire extinguishers are fitted in the cab of all loading plant. 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. Plant & equipment daily checks and preventative maintenance of plant / equipment by manufacturer. Minimum daily checks for dust and fluff on plant/equipment before and use of equipment at the start/end of each working day. 	Low
Hot loads	Imported wastes which may contain materials which are above ambient temperature	High	<ul style="list-style-type: none"> All loads are inspected in accordance with strict waste acceptance procedures. Quarantine area and rejected waste containers on site for quick isolation of load. 	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"> There are no overhead power lines which traverse the site. 	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"> Hot works procedures in place. 	Low
Batteries within waste deposits	Ignition of stored wastes via batteries within imported wastes	High	<ul style="list-style-type: none"> All loads are inspected in accordance with strict waste acceptance procedures including wastes received into satellite sites. Quarantine area and rejected waste containers on site for quick isolation of load containing batteries. All batteries on site stored in dedicated containers in suitable areas on site. 	Medium
Other combustible non-waste materials on or near the site not mentioned above i.e. gas cylinders /	Any combustible non-waste materials on or near the site may ignite in the event of a fire and worsen the effects	High	<ul style="list-style-type: none"> All loads are inspected in accordance with strict waste acceptance procedures. Quarantine area and rejected waste containers on site for quick isolation of load. Dedicated storage areas for cylinders on site. 	Low
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"> All loads are inspected in accordance with strict waste acceptance procedures. Quarantine area and rejected waste containers on site for quick isolation of load. 	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"> Spill kits available throughout the site. Suitable and sealed drainage system. Vehicles visually inspected throughout the day with any noticeable leakages being depolluted as a priority. All depollution would take place inside a building. Minimum daily checks for spillages around the site. Staff training / toolbox talks. 	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"> All loads are inspected in accordance with strict waste acceptance procedures including wastes received into satellite sites. Quarantine area and rejected waste containers on site for quick isolation of load containing batteries. Minimum daily checks on mechanically processed scrap metal at the start/end of each working day. 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. Infra-red / heat detection cameras in place providing full coverage over mechanically treatment and storage areas. 	Low

2.2 Fuel storage

2.2.1 Any fuel storage on site will be undertaken by the following measures:

- 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.

2.3.2 The site has on site generators and an engine room to power fixed plant but these are kept away from waste storage and treatment areas and 6m from any combustible or flammable material.

2.4 Hot works procedure

- 2.4.1 The site's hot working procedure are shown in Appendix III of this document.

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. ABB/2789/03.
- 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 one day per month full shutdown. Further shutdowns will be enforced in the event of an emergency situation i.e. third party complaints or plant breakdowns. Out of hours will comprise 19:00 – 07:00 Monday to Saturday and all-day Sundays and Bank Holidays.
- 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. ABB/2789/03.
- 2.6.6 The locations of processing plant including routing and out-of-hours for mobile plant are clearly shown on Drawing No. ABB/2789/03.
- 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. ABB/2789/03 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 Accepted waste types

3.2.1 The site will accept the following combustible wastes into the facility:

- 15 01 02 – HDPE plastic packaging comprising empty plastic drums/containers.
- 15 01 10* - HDPE packaging containing residues of or contaminated by hazardous substances.
- 19 12 04 – LDPE plastic packaging wastes

3.2.2 The site would look to accept a maximum of 15 – 20 tonnes per day of non-hazardous wastes i.e. 10 tonnes of plastic packaging /10 tonnes of containers and <10 tonnes a day of any hazardous wastes.

3.3 Combustible waste reception

3.3.1 Incoming wastes will be tipped in the areas shown on Drawing No. ABB/2789/03 and will be as follows:

- **AREA 1** comprising the main reception and inspection area for wastes which have been accepted. The wastes in this area will comprise untreated plastic containers / drums which present a very low risk of combustibility and also small quantities of loose and baled plastic packaging wastes. This area will be used to manually sort hazardous and non-hazardous containers. The contents of all containers will be inspected prior to being treated through the plant. The site will not accept a mixed load of plastic containers and plastic packaging, these waste types will be accepted separately.
- **AREA 2** 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 3** will store hazardous plastic containers/drums and will undergo the same process as above.
- **AREA 4** will store any rejected containers/drums and any small items of plastic found from treatment operations i.e. waste which has been generated on 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. ABB/2789/03 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. ABB/2789/03 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

Plan Ref	Description	Storage type	Max width (m)	Max length (m)	Max height (m)	Max area (m)	Conversion factor used	Max volume (m ³)	Tonnage	Max storage time	Comments
AREA 1	Waste acceptance and inspection area	Mixture of processed and unprocessed plastic packaging and containers / drums	11	10	3	110	1	330	50	<24 hours	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. Baled waste would comprise a maximum of 26 tonnes.
AREA 2	Non-hazardous plastic container storage	As above	11	10	3	110	1	330	25	<1 week	As above
AREA 3	Hazardous plastic container storage	As above	10	10	2	100	1	200	5	<11 hours	As above
AREA 4	Rejected / untreatable waste	As above	5	10	2	50	1	100	5	<48 hours	Area emptied every 48 hours
TOTAL			37			<350		<1,000	<60		

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.

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 for waste piles

Pile Ref:	Storage/monitoring procedures to reduce the risk of fire
AREA 1	<ul style="list-style-type: none"> • This area will store a mixture of empty plastic containers / drums and a mixture of loose and baled plastic packaging. • The containers / drums will be stored on one side of the pile with the packaging on the other. • The piles will be stored within a interlocking concrete block fire wall. • Plastic delivered to this area will be to right hand-side of the stockpile then once deemed acceptable for processing and the status i.e. haz or non-haz, it will be placed into AREA 2 or AREA 3 which both act as the infeed piles. • The plastic will be extracted from the left-hand side of the stockpile so the pile will move in a clockwise formation. • 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. • Each block is approximately 0.6m high so the operator would be able to identify the storage height from reviewing the joints. • Apart from the use of loading equipment no other mechanical processing of waste takes place within 6m of this area. • In addition to the CCTV, the waste will be visually monitored continuously throughout the day by site operatives. • The building will have infra-red / heat detection cameras which cover all storage and processing area of waste and non-waste material. • There will be some bales of plastic packaging wastes in this pile but as they will have undergone a strict waste acceptance procedure and not stored for a period exceeding 24 hours, it is not considered necessary to provide a sampling and testing protocol to ensure a representative number of bales (minimum 10%) are assessed during monitoring. • The volume of bales stored is not likely to exceed 50m³ per day and would comprise an articulated vehicle load which would be processed on the same day they arrive through the treatment plant. • As the site is 24/7 operational, continuous monitoring by staff will also take place.
AREAS 2 - 4	<ul style="list-style-type: none"> • AREAS 2 & 3 will store the non-hazardous and hazardous containers ready for processing and AREA 4 will store any containers not suitable for processing (as deemed by the chemist) and any residual material on site which isn't suitable for processing. • The same procedures will apply in terms of storage and monitoring as AREA 1.

5.2 Processed waste

- 5.2.1 Once the plastic has been fed through the treatment/pelleting process, the operator either look to manufacture the waste into a new container on or off site or the plastic will be exported to claim non-waste status on the material by way of a PRN or for re-use in the UK. Although the material is combustible, it presents a very low risk of combustion.

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.
- 5.3.2 **Infra-Red / Heat Detection System inside building** – The main processing building only due to the high value of processing equipment and non-waste containers for re-sale, will have infra-red/heat detection is installed as it is considered the main risk of fire would be from a plant malfunction. It must be noted that AST Plastic Containers UK LLP operate various other sites throughout Europe using the same equipment so all staff/engineers will be fully aware on the installation and maintenance of the plant to prevent potential malfunction.
- 5.3.3 The infra-red / heat CCTV system was installed and is maintained by UKAS accredited installer (ADT Security System) which consists of numerous overhead cameras (indicative locations shown on Drawing No. ABB/2789/03) which cover all waste, non-waste and processing, production and manufacturing areas of building. The system has a set trigger temperature and due to continuous movements inside the building, the system will regularly log a call to the monitoring centre who can view and contact the operator to see whether or not it was a false alarm. For waste storage, the trigger temperature is set at 65°C however it is envisaged that there will no storage of any waste inside the building which would rise to this temperature unless of arson or plant failure near the storage area.
- 5.3.4 **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 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.
- c) As all other waste will be a saleable product with contracts set up with Government Agencies i.e. the NHS, there will not be a shortage of demand for produce.

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 interlocking block 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 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

Firewall type	Width	Site location / use	Specification
Concrete firewalls	0.6m	AREAS 1 - 4	- Class A1 in accordance with Clause 4.3 4.4 of EN:13369 - <120 minutes

6.1.2 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. All joints will be checked daily to ensure they are fully sealed to prevent flames passing into adjacent bays.

6.1.3 For the waste stored against the fire 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. The waste storage proposed is 3m high, the wall installed will comprise 4.2m high and each block is approximately 0.6m high so 5 no. blocks will comprise 3m which site staff can use as a reference.

6.2 Wind

- 6.2.1 As can be seen from Drawing No. ABB/2789/03, all wastes are stored within secure bays within a building and are thus sheltered from 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. ABB/2789/03.
- 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. ABB/2789/03 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 In accordance with FPMP guidance a designated quarantine area has been provided as shown on Drawing No. ABB/2789/03. 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.
- 8.1.2 The largest pile on site is one of the stockpiles located in Area 1-3 and if full would have an approximate area of 150m² and volume of 450m³. The quarantine area proposed has an area of 80m² and a volume capacity of approx. 240m³ based on a 3m height which is more than 50% of the stockpile.
- 8.1.3 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.
- 8.1.4 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.
- 8.1.5 The waste would be moved using the site's mobile plant comprising forklifts. Further details regarding this is shown in sections 11.3.3 and 11.3.4.

9 Fire detection procedure

9.1 Automated detection

- 9.1.1 The site benefits from an L3 category fire alarm detection system in line with BS583-1:2017. The system is connected to a monitoring centre who are an ADT Security Services. Infra-red/heat detection cameras are installed within the building and site management will be notified immediately by the monitoring company of any issues.
- 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 Germany 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) Prior to the FRS arriving, inform all neighbouring premises likely to be affected.
- d) 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.
- e) Ensure access routes are clear.
- f) If safe to do so, site management will inspect the location of the fire, to identify immediate risks to surrounding premises and the FRS.
- g) 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.
- h) 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.).
- 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 (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 12 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 Unit 1 Abbey Road, Redwither Business Park, Wrexham, LL13 9RF and provides direct access to the site for the emergency services with the nearest fire station is

the Ambulance and Fire Services Resource Centre which is situated 6.6 miles away on Croesnewydd Road. The FRS have confirmed the expected response time approx. 20 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. ABB/2789/03.

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 AST Plastic Containers UK LLP will contact them by phone and/or email.
- 10.5.4 Following discussions with from Wrexham County Borough 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.
- 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 and comprises AREA 1 which would contain approximately 360m³ of material equating to approximately 50 tonnes of waste. A maximum of 26 tonnes of this would comprise waste in baled form which comprise approximately 10% of the volume s

Table 11.1 - Water supply calculations (based on volume)

Maximum pile volume in m³	Water supply needed in litres per minute	Overall water supply needed over 3 hours in litres	Total water available on/off site in litres
360	360 x 6.67 = 2,401.2	2,401.2 x 180	432,216 (432 m ³)

11.2 Internal suppression/alternative measures

11.2.1 The following alternative measures will ensure that the objectives set out in Section 1.1 are met:

- a) The risk of self-combustion or deep-seated fires is very low. All waste imported into the building will have been subject to strict waste acceptance procedures and monitoring by staff to ensure it is suitable for processing into a commodity.
- b) All operational staff on site will suitably trained in carrying out fire risk assessments to minimise the chance of a fire breaking out.
- c) The building has access via large roller shutter doors to remove waste at risk of combusting and all piles can be accessed for firefighting.
- d) The site has access to a number of on-site suppression measures which can be deployed in the event of a fire as an immediate response following the alarm being raised and the mobilisation of appointed fire contact(s) (if safe to do so). These are described further in the sections below.

- e) All processing lines benefit from a cooling system and can be shut off by the manufacturers in the event of them overheating.
- f) The material is not prone to self-combustion, does not overheat and is removed from the site daily as the site claims revenue for this material as part of their PRN accreditation or selling the items manufactured.

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 hose reel which is connected to the surface water mains providing suppression to all areas storing combustible waste in the building. The location of the reel is shown on Drawing No. ABB/2789/03.
- 11.3.3 Mobile plant such as forklifts can be used to move unburned material to the quarantine area and away from waste that is on fire to prevent it from spreading. The forklifts on site will have completely enclosed cabs including fire and heat protected hydraulic systems. The forklifts will also contain fire extinguishers inside the cab. Access routes into and out of buildings including out-of-hours plant storage is clearly shown on Drawing No. ABB/2789/03 which consist of two 4m wide roller shutter accesses and a 1.2m wide fire door.
- 11.3.4 Whilst the above methods may not fully extinguish a fire, they will provide a suitable interim period of suppression and prevention of a large-scale fire until the arrival of the emergency services which is expected to be approximately 10 minutes from notification. This procedure would only take place the under the supervision of the North Wales Fire and Rescue Service (NWFRS) Incident Commander.

11.4 External Suppression - Fire Hydrants

11.4.1 There is a fire hydrant situated on site which is <100m from the roller shutter door to the north of the building.

11.4.2 Contact was made with both the FRS and Welsh Water and both are unable to provide a flow rate for the hydrant on and off-site 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. ABB/2789/03 and as all operations which have the potential to create contaminated runoff will be contained within the sealed building, there are no measures for any additional infrastructure to be required.

12.1.2 Clean water from roofs or from areas of the site which do not store and treat waste also discharge to the existing surface water sewer system. 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 as all access points of the building are sealed with a minimum 0.1m high seal/ramp, there is adequate containment inside the building based on the largest stockpile as shown in the table below:

Table 12.1 - Firewater Containment Calculation

Volume of Water (m ³)	Containment Area (m ²)	Containment Required	Total Containment On Site
432	4,650 (building minus fixed plant)	$432 / 4,650 = 0.09$	0.1 (additional 0.01 containment available)

12.3 Removal of fire water

12.3.1 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.

12.4 Control of Combustion Products

12.4.1 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 and tyres.

- 12.4.2 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).

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, remove fire damaged waste for removal to landfill or permitted site.
 - c) Using a road sweeper, sweep the building (damp as required using the bowser) until all ash and clinker has been removed.
 - d) Wash the building down in entirety using clean water.
 - e) It is at this stage that site management should decide whether it is appropriate to repeat areas of the clean-up.

- 13.2.2 If the clean-up operation has been deemed complete, the operator will then ensure the following:
- a) Account for all consumables that have been used in the fire and re-order / replace immediately.
 - b) Restack, and re-locate all items used for the surface water protection during the fire to their storage locations ready for future deployment.
 - c) 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.

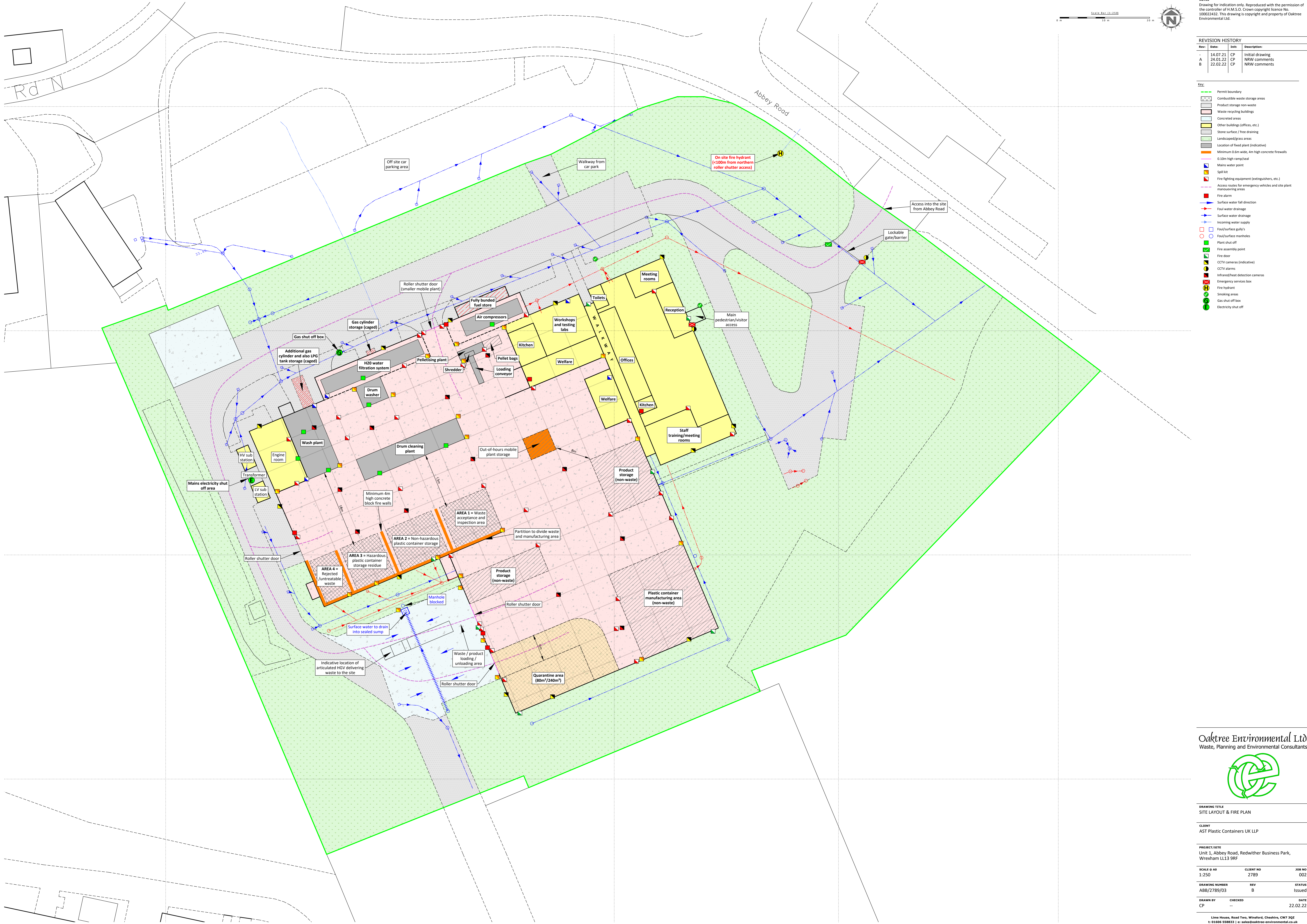
13.3 Post fire site recovery

- 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. Permitted sites would include the following who are all based within a 20km radius of the site:
 - **Enviroclear Site Services Ltd**, Hafod Industrial Estate Hafo, Hafod Rd, Ruabon, Rhostyllen, Wrexham LL14 6HF
 - **Tradbe Ltd** - Whittle Close, Sandycroft CH5 2QE
 - **FCC Environmental Ltd**, Bryn Lane, Wrexham LL13 9UT
 - 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 implemented.
- g) Ensure all fire equipment, where used, is replenished.
- h) Remove fire water to a permitted facility for disposal.

Appendix I

Drawings

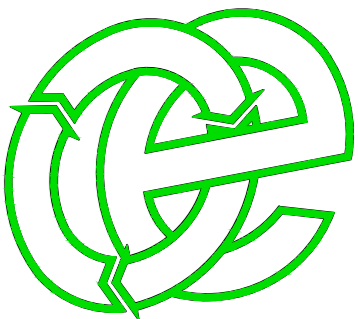


NOTES
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REVISION HISTORY			
Rev:	Date:	Init:	Description:
-	14.07.21	CP	Initial drawing
A	24.01.22	CP	NRW comments
B	22.02.22	CP	NRW comments

- Key:
- Permit boundary
 - Combustible waste storage areas
 - Product storage non-waste
 - Waste recycling buildings
 - Concreted areas
 - Other buildings (offices, etc.)
 - Stone surface / free draining
 - Landscaped/grass areas
 - Location of fixed plant (indicative)
 - Minimum 0.6m wide, 4m high concrete firewalls
 - 0.10m high ramp/seal
 - Mains water point
 - Spill kit
 - Fire fighting equipment (extinguishers, etc.)
 - Access routes for emergency vehicles and site plant manoeuvring areas
 - Fire alarm
 - Surface water fall direction
 - Foul water drainage
 - Surface water drainage
 - Incoming water supply
 - Foul/surface manholes
 - Plant shut off
 - Fire assembly point
 - Fire door
 - CCTV cameras (indicative)
 - CCTV alarms
 - Infrared/heat detection cameras
 - Emergency services box
 - Fire hydrant
 - Smoking areas
 - Gas shut off box
 - Electricity shut off

Oaktree Environmental Ltd
Waste, Planning and Environmental Consultants

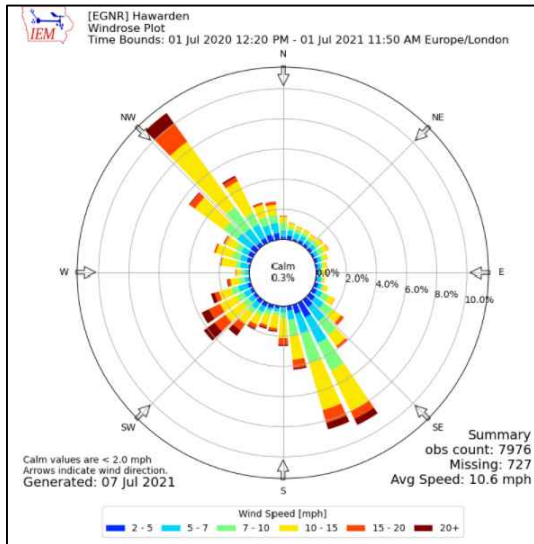
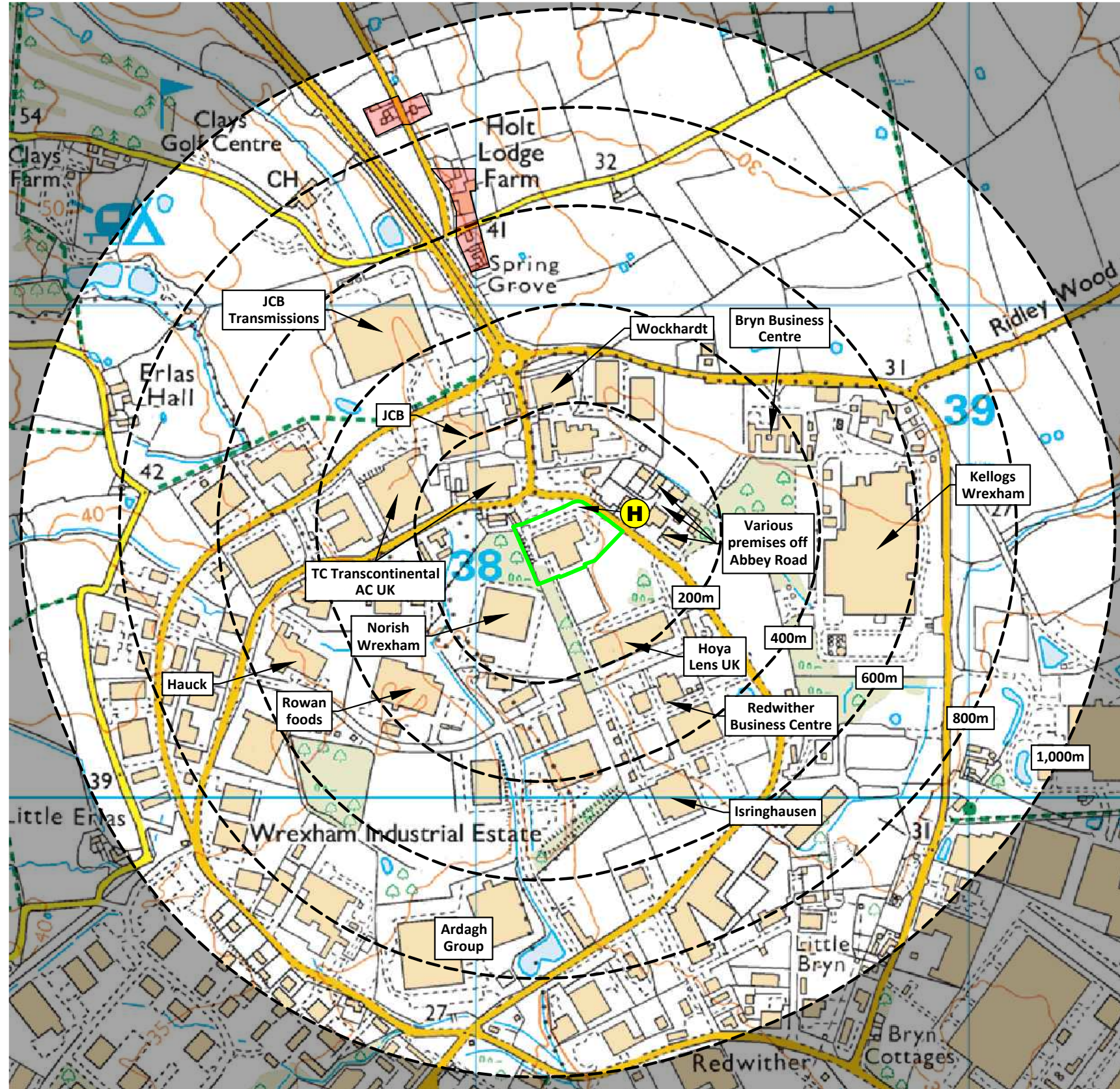
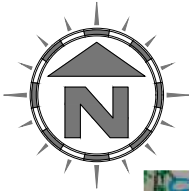


DRAWING TITLE		
SITE LAYOUT & FIRE PLAN		
CLIENT		
AST Plastic Containers UK LLP		
PROJECT/SITE		
Unit 1, Abbey Road, Redwither Business Park, Wrexham LL13 9RF		
SCALE @ A3	CLIENT NO	JOB NO
1:250	2789	002
DRAWING NUMBER	REV	STATUS
ABB/2789/03	B	Issued
DRAWN BY	CHECKED	DATE
CP	--	22.02.22

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

KEY:

- Permit boundary
- Surface water (river / stream / beck)
- Surface water (estuary / pond / pool / lake / sea)
- Workplaces (includes agriculture industry, commerce and retail)
- Residential blocks
- Class A roads
- Class B roads
- Class C roads
- H Nearest fire hydrant
- Railway line
- Woodland areas



Compass Wind Rose for Hawarden (EGNR) Period 2020 - 2021 - source: Iowa State University

NOTES

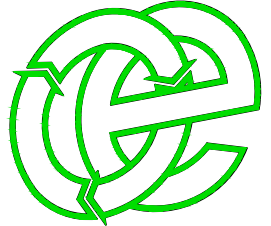
- Boundaries are shown indicatively.
- Wind rose data shows the prevailing wind direction to be blowing North-west.

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REVISION HISTORY

Rev:	Date:	Init:	Description:
-	07.07.21	CP	Initial drawing

Oaktree Environmental Ltd
Waste, Planning and Environmental Consultants



DRAWING TITLE
RECEPTOR PLAN

CLIENT
AST Plastic Containers UK LLP

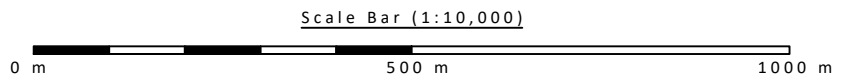
PROJECT/SITE
Unit 1, Abbey Road, Redwither Business Park,
Wrexham LL13 9RF

SCALE @ A3 1:10,000	CLIENT NO 2789	JOB NO 002
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DRAWING NUMBER ABB/2789/04	REV -	STATUS Issued
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DRAWN BY CP	CHECKED --	DATE 07.07.21
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Lime House, Road Two, Winsford, Cheshire, CW7 3QZ
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Appendix II

Record Keeping Forms

AST PLASTIC CONTAINERS UK LLP SITE INSPECTION FORM (MINIMUM TWICE DAILY)													
DAY													
TYPE OF INSPECTION													
TIME OF INSPECTION (START)													
TIME OF INSPECTION (FINISH)													
SITE ENTRANCE/NOTICE BOARD													
SECURITY - GATES													
SECURITY - FENCING													
SITE ROADS (CLEAR FROM HAZARDS)													
IMPERMEABLE CONCRETE AREAS (INTEGRITY)													
KERB AROUND CONCRETE PAD (INTEGRITY)													
SWALE TANK AND DRAINS FUNCTIONING CORRECTLY													
WASTE CONTAINMENT BAY WALLS													
WASTE STORAGE LIMITS													
COMBUSTIBLE													
COMBUSTIBLE WASTES (AWAY FROM POTENTIAL IGNITION SOURCES)													
FIRE DETECTION 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 - 6M FROM COMBUSTIBLE / FLAMMABLE MATERIAL													
MOBILE PLANT CHECK FOR DUST, FLUFF & LITTER													
PROCESSING PLANT CHECK FOR DUST, FLUFF & LITTER													
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													
NOTES/ACTION (CONTINUE ON A SEPARATE SHEET IF NECESSARY):													
CHECKED BY						SIGNATURE							
POSITION						DATE							
<i>Sheet</i>						<i>of</i>							

AST PLASTIC CONTAINERS UK LLP - 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						

AST PLASTIC CONTAINERS UK LLP

EMPLOYEE TRAINING NEEDS ASSESSMENT / REVIEW - APC/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			
NOTES AND ACTIONS:							

Appendix III

Hot Works – Permit to Work

Hot-work permits are required for any operation involving open flames or producing heat and/or sparks and must be prepared by a competent person. Hot works include brazing, torch cutting, grinding, soldering and welding.

Company Name			Project title		
Location			Project no.		
Supervisor			Permit no		
Equipment used					
Date of works		between	hrs	and	hrs
Precautions to be taken				Yes	No
Hot work must cease at least one hour before end of shift. Areas where hot works have been carried out should be checked before leaving site.					
Services affected must be isolated before work commences.					
Isolate smoke detectors in the vicinity of hot works.					
A suitable fire extinguisher must be available and be kept close at hand, at all times.					
Supervisors must ensure suitable personal protective equipment (PPE) is provided and worn by					
operatives.					
All cylinders must be transported and secured upright.					
Valves and hoses must be in good condition.					
All cylinders must have flashback arrestors fitted.					
When not in use, cylinders must be shut off and returned to store.					
LPG cylinders must not be left in the building overnight without formal approval.					
Arc welding equipment will comply with current standards.					
Spent welding rods must be immersed in a bucket of water.					
Minimum radius of hot work must be 2 m from other persons working. Screens should be erected					
if needed.					
Where hot works are required adjacent to combustible material, a fireproof protective mat should be					
placed between the material and the heat source during the hot works. (Check both sides of partition walls					
Precautions to be taken				Yes	No
understand the permit conditions and the fire and safety precautions					
be in possession of a permit at all times					
stop work if required to do so by an authorised person					
immediately report any hazard likely to affect the fire and safety precautions					
ensure satisfactory access to and egress from the work area.					

Confirmation by contractor's supervisor: I confirm that the precautions specified above will be complied with and I will ensure that the persons carrying out the work described above are fully briefed on the safe method of work.

Name		Position		Signature		Date	
-------------	--	-----------------	--	------------------	--	-------------	--

Confirmation by operator: I understand the precautions to be taken in carrying out the hot works.

Name		Position		Signature		Date	
-------------	--	-----------------	--	------------------	--	-------------	--

Site management authorisation: I certify that the above work can commence with the precautions listed above.

Cancellation of permit by operator: (Note: hot works must cease at least one hour before end of shift.) I confirm that the work has been completed and the area has been checked and is safe.

Name		Position		Signature		Date	
-------------	--	-----------------	--	------------------	--	-------------	--

Cancellation of permit by site management

Name		Position		Signature		Date	
-------------	--	-----------------	--	------------------	--	-------------	--

Inspection of area covered by hot-work permit by fire warden/site management after cancellation of permit	Inspection completed after		hr (s)
---	----------------------------	--	--------

e		Position		Signature		Date	
----------	--	-----------------	--	------------------	--	-------------	--

