ENVIRONMENTAL RISK ASSESSMENT

Unit 27 & The Former Scrapyard, Castle Park Industrial Estate, Flint, Flintshire CH6 5XA

New Horizon Plastics Co Ltd

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Document History:

Version	Issue date	Author	Checked	Description
1.0	05/12/2019	IA/CP	NHP	Application copy
1.1	14/04/2020	CP	--	NRW comments; refer to Schedule 5 Notice response for amended sections
1.2	27/04/2020	CP	--	NRW comments; amended noise/vibration section
1.3	07/05/2020	CP	NHP	NRW comments; addition column re. drainage to surface water and amended hydrocarbons column
1.4	11/05/2021	CP	--	Updated for permit variation
1.5	22/07/2021	CP	--	NRW comments
1.6	01/12/2021	CP	--	NRW comments; refer to Sch5 response document

CONTENTS

List of Appendices:

1 Introduction

1.1 This Environmental Risk Assessment (ERA) considers the potential and actual risks associated with the use of the site at Unit 27 & The Former Scrapyard, Castle Park Industrial Estate, Flint, Flintshire CH6 5XA as a plastics recycling facility to be operated by New Horizon Plastics Co Ltd.

1.2 All site staff should be provided with a copy of this ERA and be aware of where it is located on site.

1.3 All environmental risks identified in this document should be acted upon accordingly by site management to ensure all environmental risks can be appropriately managed/controlled.

1.4 This document primarily considers environmental risks associated with the site. This does not aim to provide detailed Health and Safety risk assessments as required separately through the necessary legislation.

1.5 The Environmental Permit is required for the storage (keeping) prior to removal, and treatment (all types of handling/processing) of waste. Waste treatment processes to be carried out on site may include the following:

- Compaction using 360° excavator.
- Manual sorting/separation with loading shovel, 360° excavator or by hand.
- Mechanical sorting/separation/screening by using appropriate mechanical screening plant and equipment)
- Crushing by using appropriate mechanical plant
- Drying using dehydrator
- Washing, shredding, granulation (by mechanical equipment)
- Baling (by use of balers)

1.6 Specified waste management operations include waste disposal and waste recovery operations listed Annex I and II of The Waste Framework Directive 2008/98/EC and are listed in summary below:

R3: Recycling or reclamation of organic substances.

R4: Recycling or reclamation of metals and metal compounds.

R5: Recycling or reclamation of other inorganic materials.

R12: Exchange of waste.

R13: Storage of waste pending recovery.

2 Site Receptors

2.1 A Sensitive Receptors Plan has been provided Appendix II of this document.

3 Environmental Risk Assessment Model

3.1 Fundamental Considerations

3.1.1 **Source/Hazard:** A property or situation that in particular circumstances could lead to harm.

3.1.2 **Consequences:** The adverse effects or harm as the result of realising a hazard which causes the quality of human health or the environment to be impaired in the short or long term.

3.1.3 **Risk:** A combination of the probability of occurrence of a defined hazard and the magnitude of the consequences of the occurrence.

3.2 Pathway

3.2.1 Important in the assessment of a particular risk(s) and to inform the subsequent management of the risk(s) is the identification of the pathway(s) through which the risk may affect the identified receptor(s). The following are examples of pathways:

- Air (windblown dust etc.)
- Ground (leaching of contaminants into underlying aquifers).
- Water (hydrocarbon run off into surface waters)
- Direct contact / exposure

3.3 Consequences

3.3.1 The following table highlights the consequences of the hazard(s) identified and the abbreviations for each as used in the Risk Assessment Table in Section 3:

Abbreviation	Consequences
A	Minor Injury
B	Major Injury
C	Death
D	Air Pollution
E	Water Pollution
F	Pollution of Land

3.4 Effects of Consequences

3.4.1 In order to quantify the level of risk and identify the appropriate management procedures, the potential effects must be considered, as outlined in the table below:

Abbreviation	Consequences	Management Requirements
S	SEVERE	In all cases
Mo	MODERATE	In most cases
Mi	MILD	Occasionally
N	NEGLIGIBLE	No

3.4.2 Note: “Management” is the action required to reduce the risk of a hazard causing a problem on site. Contingency measures are procedures which are in place to reduce the consequences of a hazard.

3.5 Risk Estimation and Evaluation (Probability/Frequency of Occurring Hazard)

3.5.1 The following table allows the likelihood of an occurrence of an identified risk to be assessed:

Abbreviation	Probability	Evaluation
1	Very likely	Could occur during any working day
2	Likely	Could occur regularly
3	Possible	Event possible
4	Unlikely	Event very unlikely

3.6 Risk Assessment Outcome (Combination of Probability & Consequence)

3.6.1 The following table shows the resultant risk of an identified hazard or potential situation. This uses the hierarchy of both probability and consequence to assess the level of risk. The level of risk determines what level of management would be required in order to reduce the risk of occurrence and/or scale.

		Consequence			
		S	**Mo**	**Mi**	**N**
Probability	**1**	High	High	Medium	Low
	2	High	Medium	Low	Near-Zero
	3	Medium	Low	Near-Zero	N/A
	4	Low	Near-Zero	N/A	N/A

3.6.2 Where the risk assessment outcome is high, first-level management of the risk is essential, i.e. removal of hazard, implementation of major infrastructure/structural design measures to contain the risk/hazard and company policy changes to incorporate the management of the risk. All risk management measures must be supplemented with detailed induction training, spot training and tool-box talks to ensure all site staff and users are made fully aware of the risk/hazard, all potential consequences and necessary management and contingency procedures.

3.6.3 Where the risk assessment outcome is medium, the management of the risk should be tackled by management or delegates. If removal of the hazard is not possible, management will normally be met through implementing minor structural design measures or by imposing procedures for the prevention of occurrences which will be conveyed to all site staff through the appropriate training, including any contingency measures/procedures.

3.6.4 Where the risk assessment outcome is low, the management of the risk can be done wholly through appropriate training to site staff including any contingency measures/procedures.

3.6.5 Where the risk assessment outcome is near-zero, site staff should be made aware of the possibility of an occurrence and contingency measures should be readily available to all staff should they be required.

4 Risk Assessment Table

4.1 The following pages contain the site-specific risk assessment for the site with appropriate remedial actions, recommendations and comments included for each identified hazard, potential contaminant or situation.

4.2 The table also contains references to the appropriate section(s) of the site's EMS for additional management procedures.

4.3 As discussed in Section 3.6 above, all situations which identify a risk from Low – High should be incorporated into the staff/visitor training schedule, where appropriate and acted on as required.

SEE TABLES OVERLEAF

Appendix I

RISK ASSESSMENT TABLES

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Dust / particulates	Formation of dust on site surfaces during dry and windy weather on both areas of the site. Waste delivery vehicles depositing and collecting potentially dusty waste during dry and windy weather conditions ('The Old Scrapyard') Processing of tyres via shredding on 'The Old Scrapyard' Storage of potentially dusty/waste material (AREAS 5 & 10) Settlement of dust of processing plant on both areas of the site. Breakdown of suppression systems linked to treatment plants Droughts or water bans leading to a water shortage	Air	Site personnel/ visitors Surrounding site users/occupiers Surface water to the north of the site Dee estuary SSSI, SAC, SPA & Ramsar Flora & fauna Welsh coastal path & Flint Castle Residential receptors or surrounding pedestrians on Welsh coastal path Culvert under the site linking the SSSI, SAC, SPA as shown on Drawing No. CAS/2570/03	A, B, D, E	Mo	3	Low	Suitable site perimeter infrastructure to prevent dust formation on and off-site comprising litter/dust netting as shown on Drawing No. CAS/2570/03 in Appendix I. Unit 27 will only store loose or baled plastic externally and all the shredded (finer) material is fed directly into the wash plant using covered conveyors then into the existing processing building which manufactures the pellet, therefore no dust should be attributed with this area of the site. The Old Scrapyard will process plastic in a covered area to reduce any potential dust emissions; however, plastic isn't considered to be a dusty waste, even when shredded. The tyre storage on this area of the site will be whole end-of-life tyres. The tyres will be loaded into the treatment plant where they will be and they will be shredded and granulated in an enclosed system fitted with dust sprays and all tyre shred/granulate will be fed directly into tonne bags using enclosed conveyors. It is considered the dust risk based on this will be low. All areas with store and treat waste benefit from an impermeable concrete surface with sealed drainage system. Reference should be made to Section 2.6 of the operator's FPMP in relation to preventative maintenance check to reduce the likelihood of fixed or mobile plant failure. Reference should be made to Section 4.5 of the EMS (Doc Ref. CAS-2570-A in terms of dust control but in addition, the site will implement the following measures to reduce the impact of dust: • Keep drop heights to minimum • Have a continuous monitoring regime during operational hours to identify any potential dust leaving the site boundary. • Cleaning of any spillages using wet cleaning i.e. hoses. • Keep any dusty wastes will be stored within the height of their storage bay or storage container and below the height of the perimeter infrastructure. • Ensure any potential dust outlets from processing plants are covered and all conveyors/drop points are enclosed • Use the complaint's procedure from the EMS (Section 4.10) to ensure any dust complaints are addressed and substantiated.

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Odour	Stored biodegradable waste on both areas of the site Cracks in concrete leading to trapped waste in both areas of the site Dry/hot weather conditions exceeding three dry days Prevailing wind to towards residential receptor locations Staff negligence leading to odour releases from unauthorised waste acceptance and treatment	Air	Site personnel/ visitors Surrounding site users/occupiers Residential receptors or surrounding pedestrians on Welsh coastal path	A, D	Mi to Mo	3	Low	Strict waste acceptance procedures into both areas of the site to identify potentially odorous wastes and their containment. The site does not receive any waste types which would be regarded as having significant odour potential. Any rejected wastes found on site to be removed off site as soon as practicable. Reference should be made to Section 2.6 of the operator's Fire Prevention & Mitigation Plan [FPMP (Doc. Ref. CAS-2570-B)] in relation to preventative maintenance checks to reduce the likelihood of fixed or mobile plant failure. Reference should be made to Section 4.6 of EMS with regards to odour control. Use the complaint's procedure from the EMS (Section 4.10) to ensure any odour complaints are addressed and substantiated. Low residence times for all wastes The properties of the waste types included in the variation are very similar to those wastes which are already permitted for acceptance, storage and treatment at the site and therefore no additional risk associated with odour is expected.

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Litter	Litter escaping from storage from AREAS 1, 6, 8 (external plastic stockpiles) Vehicles delivering / removing and waste during dry and windy weather conditions including unsheeted / poorly sheeted skips on delivery / removal vehicles Poor or faulty storage containment i.e. bays Poor housekeeping Staff negligence leading to litter escaping off site	AIR	Site personnel/ visitors Surrounding site users/occupiers Surface water to the north of the site Dee estuary SSSI, SAC, SPA & Ramsar Flora & fauna Welsh coastal path & Flint Castle Residential receptors or surrounding pedestrians on Welsh coastal path Culvert under the site linking the SSSI, SAC, SPA	A to C E,F	Mi to Mo	4	Low	Reference should be made to section 4.7 of the EMS which has a specific litter management plan Use the complaint's procedure from the EMS (Section 4.10) to ensure any litter complaints are addressed and substantiated.
Noise/ vibration	Fixed and mobile plant and machinery breakdowns or malfunctions Tipping / loading waste into vehicles, fixed and mobile plant in external areas of the site including but not limited to AREAS 1, 4 ,6 -12. Operating mechanical treatment plants in external areas of the site i.e. shredder, baler and wash plant (Unit 27), and shredder, tyre recycling plant at The Old Scrapyard Operating treatment plant in all areas of the site during weekends	Air or ground by vibration	Site personnel/ visitors Workers on adjacent sites Public Surrounding site users/occupiers Dee estuary SSSI, SAC, SPA & Ramsar Flora & fauna Welsh coastal path & Flint Castle Residential receptors or surrounding pedestrians on Welsh coastal path	A, D	Mo	3	Low	Reference should be made to the operator's Noise Impact Assessment / Noise Management Plan (CAS-2570-G) which references all noise sources and mitigation to reduce the impact of noise pollution. Reference should be made to Section 2.6 of the operator's FPMP in relation to preventative maintenance checks to reduce the likelihood of fixed or mobile plant failure. Use the complaint's procedure from the EMS (Section 4.10) to ensure any noise complaints are addressed and substantiated.

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Vermin causing leptospirosis and other respiratory diseases	Poor housekeeping Staff negligence leading to acceptance of unauthorised waste giving rise to pests Storing trade waste bins for excessive time periods	Water, direct contact with waste	Site personnel/ visitors Surrounding site users/occupiers Residential receptors or surrounding pedestrians on Welsh coastal path Workers on adjacent sites Public	A to C	Mi to Mo	4	Near zero	Wear PPE - gloves and masks as appropriate Site inspections daily Rejected waste procedures (Section 2.8 of EMS) Strict waste acceptance procedures (Sections 3.1 & 3.2 of EMS) Refer to Section 3.9.6 of in terms of daily inspections EMS Reference should be made to Section 4.8 of EMS with regards to pest control, however, the site does not receive any waste types which would be regarded as putrescible/ biodegradable and attract such pests. Pest controller called in the event of pests being present at the site or complaints received from receptors
Fire/ smoke / particulates	Refer to Section 2.1 of operator's FPMP	Air, direct contact	Site personnel/ visitors Surrounding site users/occupiers Surface waters surrounding the site Dee estuary SSSI, SAC, SPA & Ramsar Flora & fauna Welsh coastal path & Flint Castle Residential receptors or surrounding pedestrians on Welsh coastal path Release of fire water into the culvert under the site linking the SSSI, SAC, SPA	A to F	Mi to S	3	Medium	Reference should be made to the operator's FPMP which references all potential fire risks from the site including mitigation to reduce the impact pollution to human health and the environment. Reference should be made to Section 2.6 of the FPMP in relation to preventative maintenance checks to reduce the likelihood of fixed or mobile plant failure which is considered to be source of most fires from waste sites.

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Vehicle collision/ accidents including impacts and injury	Poor visibility Spillages of oils/fluids causing vehicles to skid Lack of PPE worn by staff Staff negligence i.e. mobile plant operators Excessive waste storage causing collapse of stored materials / falling materials and reducing accessibility around the site	Direct contact	Site personnel / visitors Vehicle users Pedestrians	A to F	Mi to S	3	Low	Good housekeeping (Refer to Section 3.9.6 of in terms of daily inspections EMS). Fuel storage procedures shown in Section 2.7 of the EMS and stored in double bunded tanks as shown on Drawing No. CAS/2570/03. Good vehicle management and refer to Section 2.6 of the operator's FPMP in relation to preventative maintenance check to reduce the likelihood of fixed or mobile plant failure. Ensure all free-standing waste storage areas are in the correct locations and access areas are kept clear as shown on Drawing No. CAS/2570/03. An accident logbook is kept in the site office so all new and existing staff members can review previous accidents. Encouragement for staff for greater number of "accident-free days" to encourage a safer working environment HSE compliant risk assessments and ISO 14001 EMS systems for all site activities to identify situations which may lead to harm for site users (employees, visitors and management) Appropriate signage throughout the site. All staff have radio's and use horns / alarms on equipment to alert them of their presence The operator has trained staff who control vehicle movements throughout the site. Vehicle movements on site restricted to 5mph. Dedicated staff & visitor parking areas as shown on Drawing No. CAS/2570/03. Staff training procedures shown in Section 6 of the EMS.

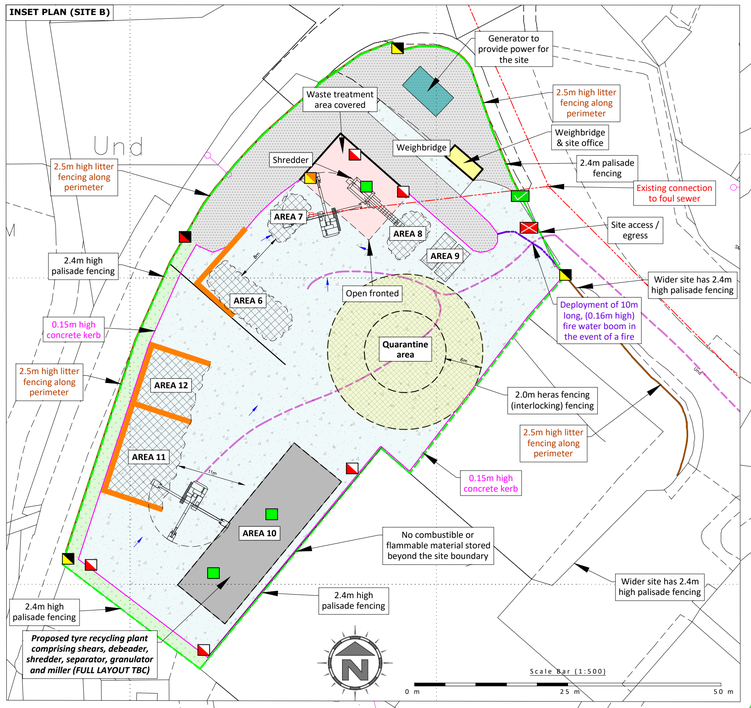
Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Leachate	Poor housekeeping Staff negligence leading to acceptance of unauthorised waste giving rise to leachate Overflowing trade waste bins Defects to the concrete surfaces storing waste	Ground	Surface waters surrounding the site Dee estuary SSSI, SAC, SPA & Ramsar Flora & fauna Release of leachate into the culvert under the site linking the SSSI, SAC, SPA	E, F	Mi to S	3	Low	Waste storage/treatment is undertaken on an impermeable concrete surface with sealed drainage and refer to Section 3.9.6 of the EMS in terms of daily inspections. The site does not receive waste types which are liable to give rise to contamination and Section 6.5 of the EMS details staff training procedures in recognition of accepted waste types. Regular (minimum daily) checks of site surface infrastructure (as above). Any spillages identified will be dealt with in accordance with the spillage procedures outlined in section 4.1 of the EMS. Dedicated mobile quarantine skip for intercepted leachable wastes found during initial inspections ensuring isolation and quick removal off site. The skip may be positioned in various positions of the site depending how operations permit (see Section 2.8 of EMS). Any wastes which are liable to give rise to contamination will be removed from site or placed into the quarantine skip/area (see Section 2.8 of EMS). Fuel storage procedures shown in Section 2.7 of the EMS and stored in double bunded tanks as shown on Drawing No. CAS/2570/03.

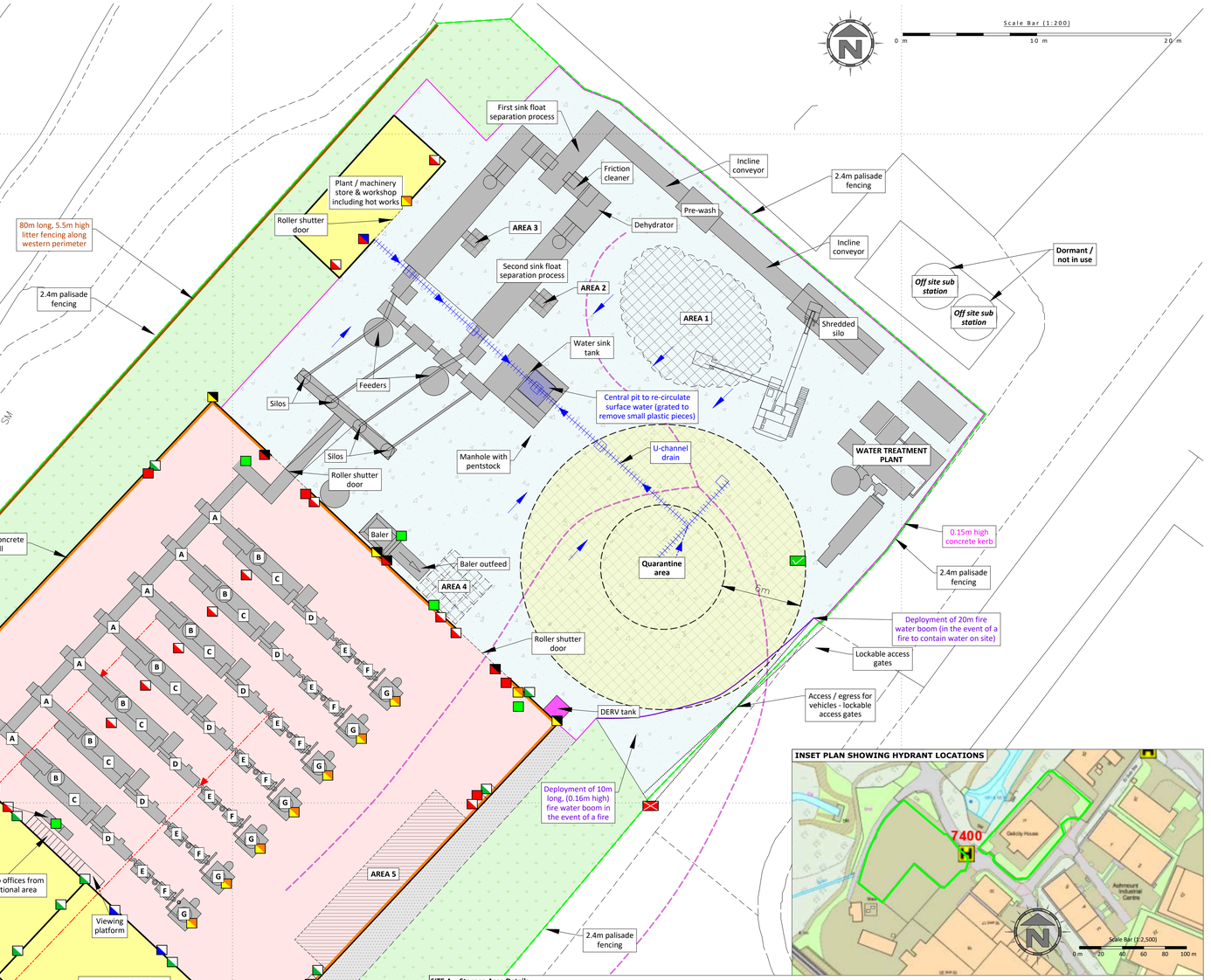
Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Hydrocarbons including release of gases/fumes/ vapours/ volatiles	Spills from fuel tanks Drips when refueling During delivery Leakage from stored drums Fixed and mobile plant malfunction Mixing of waste/ chemicals Spillage of chemicals Overturned vehicle plant/plant failure Reaction between stored wastes	Ground - direct contact, ingestion Inhalation (of volatiles)	Site personnel/ visitors Surrounding site users/occupiers Surface waters surrounding the site Dee estuary SSSI, SAC, SPA & Ramsar Flora & fauna Release of leachate into the culvert under the site linking the SSSI, SAC, SPA	A, B, D, E, F	Mi to S	3	Low	Fuel storage procedures shown in Section 2.7 of the EMS and stored in double bunded tanks as shown on Drawing No. CAS/2570/03. All plant manoeuvring takes place on an impermeable concrete surface with sealed drainage and refer to Section 3.9.6 of the EMS in terms of daily inspections. The site's existing drainage system on Unit 27 site a is sealed system draining to an underground tank with no discharge outlet into sewer or surface water. The Old Scrapyard discharges surface water directly to the foul sewer system. This prevents the release of hydrocarbons off site into the SSSI, SAC, SPA. Where plant is operated; drip trays will be available to ensure that fuels are contained. Spill kits kept close to source(s) of hazards as shown on Drawing No. CAS/2570/03. Reference should be made to Section 2.6 of the FPMP in relation to preventative maintenance checks to reduce the likelihood of fixed or mobile plant failure which is considered to be source of most fires from waste sites. Any spillages identified will be dealt with in accordance with the spillage procedures outlined in section 4.1 of the EMS. Dedicated mobile quarantine skip for intercepted l wastes found during initial inspections ensuring isolation and quick removal off site. The skip may be positioned in various positions of the site depending how operations permit (see Section 2.8 of EMS). Very little potential for hydrocarbons to be released from site given the wastes accepted and stored i.e. plastic and tyres do not present a high risk of hydrocarbons. Ensure all waste storage areas are stored as per the waste storage table and locations shown on Drawing No. CAS/2570/03 to reduce the risk reactions of stored waste, fire and collisions between plant causing release of fumes. No gas is stored at the site.

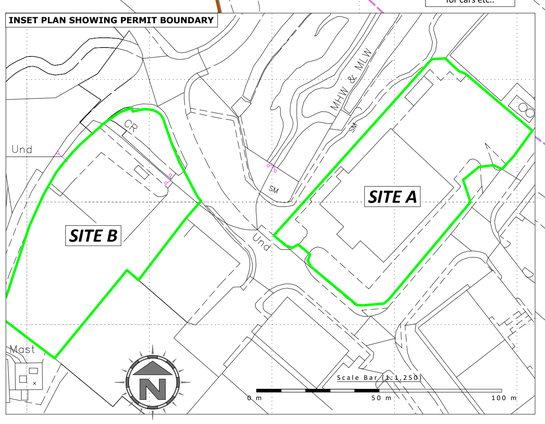
Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Contamination of surface / ground waters	Flooding of site - part of the site is within a low-risk area of flooding Release of fire water	Flood or fire waters if not contained will be washed off site and contaminate buildings / gardens / protected sites / natural habitats downstream	Site personnel/ visitors Surrounding site users/occupiers Surface waters surrounding the site Dee estuary SSSI, SAC, SPA & Ramsar Flora & fauna Release of contaminated water through ground by seepage into the culvert under the site linking the SSSI, SAC, SPA	A to F	Mi to S	3	Low	Reference should be made to Section 5.7 of the EMS which details contingency measures in the event of adverse weather conditions i.e. heavy rainfall which could lead to the site flooding. All waste storage takes place on an impermeable concrete surface with sealed drainage and refer to Section 3.9.6 of the EMS in terms of daily inspections. Flooding emergency plan kept in site office. Reference should be made to Section 12.2 of the FPMP which details fire water containment procedures in the event of a fire at the site.

Appendix II

SITE LAYOUT & FIRE PLAN AND RECEPTOR PLAN







NOTES

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REVISION HISTORY

Rev	Date	Init:	Description:
-	28.11.19	CP	Initial Drawing
A	29.11.19	CP	Client comments & re-issue
B	14.04.20	CP	NRW comments & re-issue
C	07.05.20	CP	Client comments
D	11/05/21	CP	Updated for EP variation

Key:

- Permit boundary
- Combustible waste storage areas
- Plant loading 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 0.3m - 0.6m concrete firewalls
- 0.15m high concrete kerbing/seal
- Mains water point
- Spill kit
- Fire fighting equipment (extinguishers, etc.)
- Fire water containment equipment i.e. booms, drain mats, drain plugs etc..
- Access routes for emergency vehicles and site plant manouevring areas
- Fire alarm
- Surface water fall direction
- Foul water drainage
- Surface water drainage
- Foul/surface gully's
- Foul/surface manholes
- Plant shut off
- Fire assembly point
- Fire door
- CCTV cameras (indicative)
- Infrared/heat detection cameras
- Emergency services box
- A Loading conveyor
- B Crushing and bagging area
- C Primary shredder
- D Secondary shredder (Onyx)
- E Dehydrator
- F Shaker screen
- G Hopper and bagging area

SITE A = 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 (m3)	Max storage time	Comments
AREA 1	Temporary plastic tipping, bulking and sorting area (acting as pre-processing pile)	Mechanically processed / shredded	N/A	N/A	13	10	3	130	0.333	130	<11 hours	Area clear 1 hour prior shutdown
AREAS 2 & 3	Residual (light organics) from wash process	Treated/washed	Container / Tonne Bag	N/A	1	1	1	1	1	1	<1-2 hours	Bags removed when full; on average 10 - 12 times per day
AREA 4	Temporary bale storage	Processed (baled)	N/A	N/A	4	4	2	16	1	32	<11 hours	Area clear 1 hour prior shutdown
AREA 5	Temporary storage of plastic flake and pellet product	Mechanically processed/tonne bags	N/A	N/A	15	4	1	60	1	60	<12 hours	Bags are removed to separate unit prior to being exported to claim PRNs (non-waste)

SITE B = 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	Approx. volume (m3) - out-of-hours	Max storage time	Comments
AREA 6	Reception and storage area for baled and loose plastic	Mixture of loose and baled	Concrete firewall (partial) / legio block	3.2	15	5	2	75	1	150	<2 weeks	Storage based on worst case scenario i.e. plant breakdowns
AREA 7	Temporary plastic storage prior to shredding	As above	N/A	N/A	5	8	2	40	1	80	<1-2 hours	Material transferred to shredder
AREA 8	Post-shred plastic	As above	N/A	N/A	5	8	2	40	1	80	<1-2 hours	Material transferred to adjacent containers
AREA 9	Containers of shredded plastic	Sorted and stored in open top skips	N/A	N/A	6.1	2.4	2.62	15	1	39	<1-2 hours	Containers dispatched to **SITE A** and replaced with empty ones when full
AREA 10	Various tonne bags comprising rubber in three grades; 50-60mm TDF, 1 - 4mm granule & 0.03 - 0.08mm mesh	Mechanically processed/tonne bags	N/A	N/A	1	1	1	10	1	10 (based on bags)	<1-2 hours	Bags removed when full; on average 10 - 12 times per day
AREA 11	End of life tyres (no rims)	Loose and baled	Concrete fire wall / legio block	3.2	15	10	2.4	150	0.75	270	<2 weeks	Storage based on worst case scenario i.e. plant breakdowns
AREA 12	Metal wire removed during treatment process	Loose and compacted	Concrete fire wall / legio block	3.2	10	10	2	100	0.75	150	<2 weeks	As above

CONVERSION FACTORS
Conversion factors for waste piles are worked out using the following methods set out by Natural Resources Wales
The maximum length & width of pile is based on the largest dimension – the volume of the pile has been calculated using the area x height x relevant conversion factor
Conversion of 1 for materials stored within containers, area of storage in stackable containers and waste/bale stacks
Conversion of rectangle + pyramid for waste stored within a bay (approx. 0.75)
Conversion of pyramid volume for waste stored in a free-standing stockpile (approx. 0.333)
For areas containing skips, conversion is calculated by volume of each skip x number of skips

Oaktree Environmental Ltd
Waste, Planning and Environmental Consultants

DRAWING TITLE
SITE LAYOUT & FIRE PLAN

CLIENT
New Horizons Plastic Co Ltd

PROJECT/SITE
Unit 27 & The Former Scrapyard, Castle Park Industrial Estate, Flint, Flintshire CH6 5XA

SCALE @ A1	JOB NO	CLIENT NO
1:200	008	2570
DRAWING NUMBER	**REV**	**STATUS**
CAS/2570/03	E	Issued
DRAWN	**CHECKED**	**DATE**
CP	NHP	03.12.21

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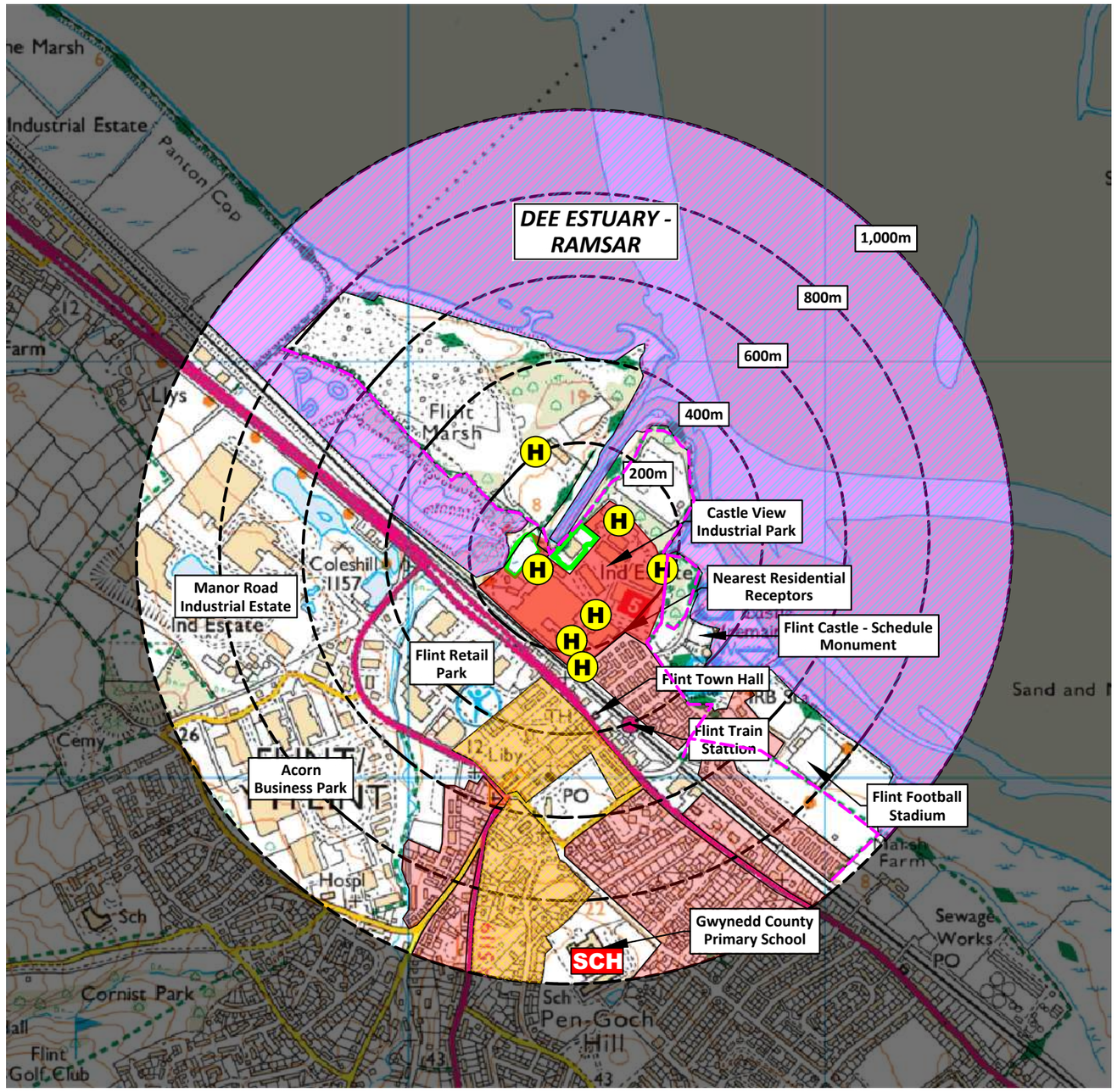
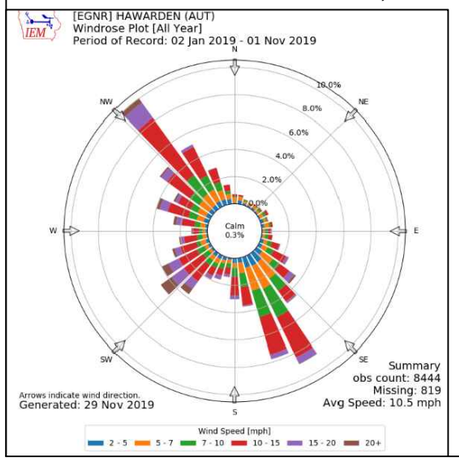
KEY:

- Permit boundary
- Surface water (river / stream / beck)
- Surface water (estuary / pond / pool / lake / sea)
- Castle View Industrial Park
- Workplaces (includes agriculture industry, commerce and retail)
- Areas with mix of residential, retail and commercial properties
- Residential blocks
- Class A roads
- Class B roads
- Class C roads
- Nearest fire hydrant
- Railway line
- School
- Woodland areas
- Protected sites (Ramsar, SSSI, SPA, SAC)
- Welsh coastal path



Compass Wind Rose for Hawarden (EGNR)
Period 2019- *source: Iowa State University*



NOTES

1. Boundaries are shown indicatively.
2. Wind rose data shows the prevailing wind direction to be NW and SE.

REVISION HISTORY

Rev	Date	Init:	Description:
-	29.11.19	CP	Initial Drawing
A	14.04.20	CP	Added receptor
B	11.05.20	CP	Updated for EP variation

Oaktree Environmental Ltd
Waste, Planning and Environmental Consultants

DRAWING TITLE
SITE LOCATION MAP

CLIENT
New Horizons Plastic Co Ltd

PROJECT/SITE
Unit 27, Castle Park Industrial Estate, Flint
CH6 5XA

SCALE @ A3	JOB NO	CLIENT NO
1:12,500	008	2570

DRAWING NUMBER	REV	STATUS
CAS/2570/04	B	Issued

DRAWN	CHECKED	DATE
CP	--	11.05.21

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