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Environmental Risk Assessment

Umbrella Environmental
9 Goldington Road
Bedford
MK40 3JY
Company Number:
13446157

Website: www.umbrella-environmental.co.uk
Email: andrew@umbrellaenvironmental.co.uk
Mob: 07498 671713



CIWM

Affiliated Organisation 2022

Together, we stand for a world beyond waste

Site Address:
Rock Solid Processing Limited
Bromborough South
Dock
CH62 4RY



Registered Office:
Unit 3 Grampound Road Industrial Units
The Square
Grampound Road
Cornwall
England
TR2 4DS

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CONTENTS

1 Introduction..... 6

 1.1 Scope 6

 1.2 Aims..... 6

2 Site Setting..... 7

 2.1 Location 7

 2.2 Humans and Property..... 8

 2.3 European Designated Receptors..... 8

 2.4 Non-Designated Receptors 8

 2.5 Geology 9

 2.6 Hydrogeology 9

 2.7 Hydrology 9

 2.8 Flood Risk..... 10

 2.9 Air Quality..... 10

 2.10 Nature of Risk Assessment 10

3 Methodology..... 11

 3.1 Hazard Identification 11

 3.2 Types of Waste Activity Hazards 11

 3.3 Identify Receptors..... 12

 3.4 Wind Rose 16

 3.5 Pathways 17

 3.6 Risk..... 18

 3.7 Management of Risk..... 19

Tables

Table 1 Geology..... 9

Table 2 Key Receptors..... 13

Table 3 Potential Pathways..... 17

Table 4 Probability of Exposure 18

Table 5 Consequence of Exposure..... 18

Table 6 Risk Matrix 18

Table 7 Activity Risks 19

Table 8 Fugitive Emissions (Air, Odour, Dust and other Particulate matter)..... 20

Table 9 Noise and Vibration..... 22

Table 10 Fugitive Emissions 24

Table 11 Accidents..... 31

Figures

Figure 1 Site Location..... 7

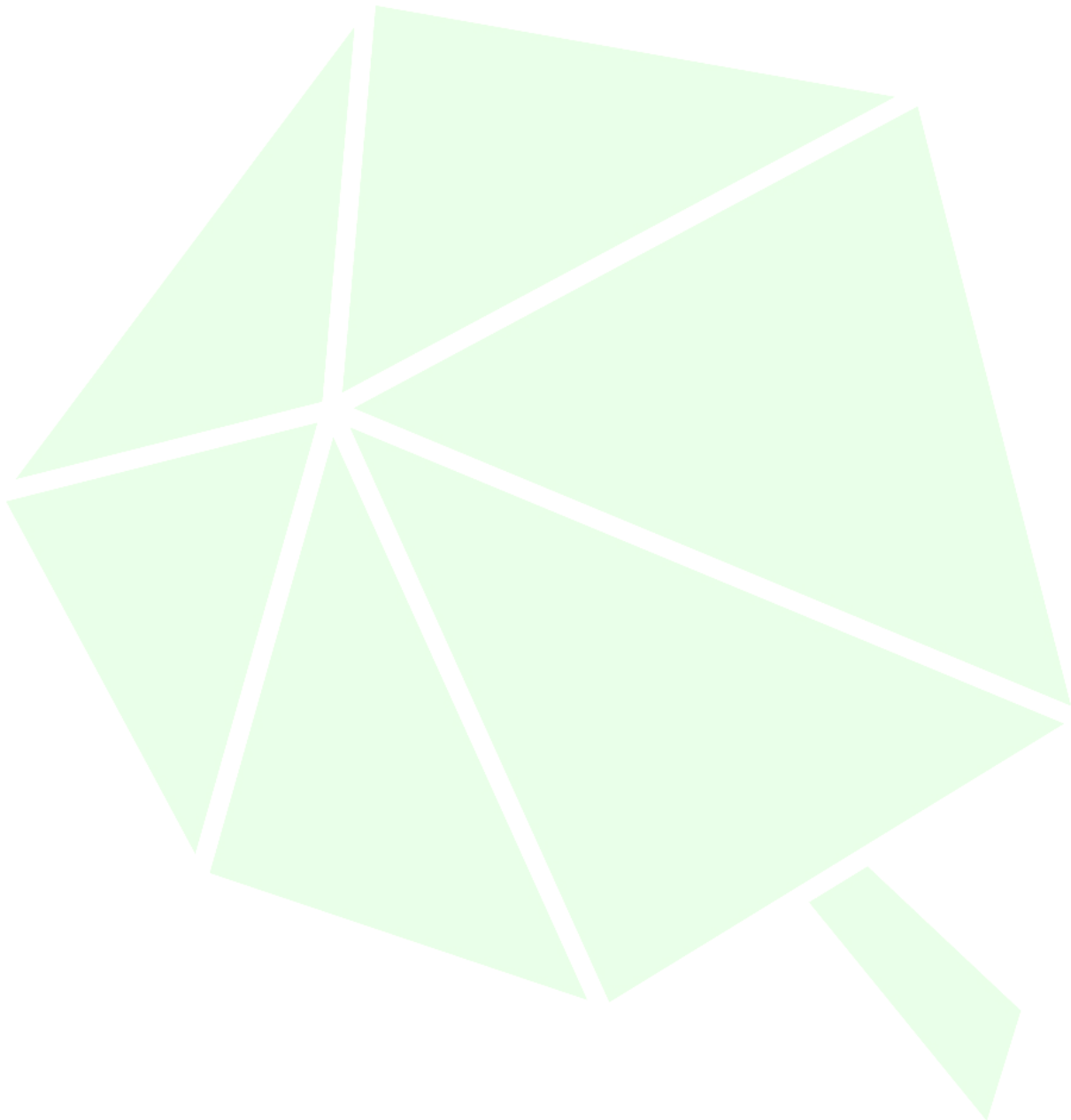
Figure 2 Wind Rose 17

Drawings

Title	Reference
Permit Boundary	016.1_09_001
Site Plan	100104167-MMD-00-00-DR-AR-1101- Proposed Site Block Plan
Sensitive Receptors 1 km Plan	016.1_09_002
Sensitive Receptors 2 km Plan	016.1_09_003
Sensitive Receptors 10 km Plan	016.1_09_004

Appendices

Appendices	Title
Appendix A	016.1_05_010 Sensitive Receptors Tale 2022 09 12



1 INTRODUCTION

This Environmental Risk Assessment (ERA) accompanies the application for a bespoke waste installation by Umbrella Environmental Limited on behalf of Rock Solid Processing Limited EPR/HP3444QP at Bromborough South Dock CH62 4RY. The site location is shown in Figure 1 Site Location

Rock Solid are contracted to reprocess the IBA arising from the Energy from Waste (EFW) plant at Protos, Grinsome Road, Chester CH2 4RB, Ince and Dublin Dublin Waste to Energy Facility, Pigeon House Road, Dublin 4. Eircode: DO4 N2 P2 . Rock Solid already hold a number of contracts of this type across the UK for the reprocessing of Incinerator Bottom Ash (IBA) to produce IBA aggregate (IBAA) and the recovery of ferrous and non-ferrous metals. The resultant products are suitable for use as recycled aggregates in place of virgin materials in unbound and bound applications. Rock Solid Processing Limited's parent company Rock Solid B.V. also have many years' extensive experience of reprocessing IBA and the production of resultant IBA aggregates in the Netherlands.

Waste that arrives via site from Ireland to dock side is unloaded via bucket loader deposited in to a trailer and is subsequently transported to the site (approx.. 200 m) for sorting and blending meaning the offload/handling of the IBA from the cargo ship onto the trailer is part of the overall transportation of the ship and the transfer of waste (change of legal ownership) does not happen until it is tipped in the permitted area, All activities waste activities will occur within the permit boundary. This document assess the risk to the environment and humans for the activity of processing Incinerator Bottom Ash (IBA) and producing Incinerator Bottom Ash Aggregate (IBAA) to use under Regulatory Position Statement (RPS) 247 solely as IBAA or a blended material. Scope

1.1 Scope

This risk assessment is based on the source-pathway-receptor approach. All potential sources of pollution associated with the acceptance, treatment and storage of permitted inert and non-hazardous waste activities have been assessed against the principle receptor types identified within the site's vicinity.

The requirement for risk management measures is then dependent on a viable pathway being present between the source and the receptor. Where such a pathway exists, management measures are required to reduce risk.

1.2 Aims

This assessment aims to consider potential environmental hazards associated with the activity, to identify sensitive receptors which these may impact, and determine the influence management practice has on reducing risk.

2 SITE SETTING

2.1 Location

The site is approximately 40174 m² and is located at Bromborough South Dock CH62 4RY.

The National Grid Reference (NGR) is SJ 34947 84720, Eastings and Northings 334947 , 384720 and What Three Words location, ladder.values.thick.

The wider industrial area is accessed by the A 41 and New Chester road located to the west of the site, with the site itself accessed by Dock road. The site is bounded to the north west by the Dibbinsdale Brook and Port Sunlight River Park, while to the north east by Mersey Wharf and the River Mersey. The south east boundary is bounded by warehouses operated by Mersey Wharf. The south west boundary is formed by Dock Road South.

Figure 1 Site Location



2.2 Humans and Property

There are various residential, commercial public use and sporting venues within 2 km of the site see Table 2 Key Receptors.

The prevailing wind direction is out across the River Mersey protecting those receptors down wind of the site.

2.3 European Designated Receptors

The closest European designation is 'New Ferry, approx. 26 m north east of the site and located in the River Mersey.

ID	Name	Distance	Direction
1	New Ferry	26	NE
2	Mersey Estuary	695	SE
3	New Ferry	83.5	NE
4	Dibbinsdale	1722	SW
5	DEE Estuary	6370	SW,W,NW
6	Heswall Dales	8837	W
7	Thurstaston Common	9837	W
8	Mersey Narrows	5983	N

New Ferry SSSI

"The site is in Unfavourable Recovering due to declines in Pintail by more than 50% compared to numbers at designation. Further investigation is required to understand decline in Pintail numbers across the whole estuary, however, historically New Ferry supported healthy numbers of Pintail. The mudflats within this unit provides an important feeding habitat for redshank, black-tailed godwit, curlew, dunlin, ringed plover and oystercatcher which feed here at low tide and roost on the exposed mudflats. There is no net loss of mudflat extent in this unit. Mudflat comprises of fine sand with a large expanse of mud at northern end of the shore. There is an increased cover of Spartina in the upper shore in this unit. Further surveys are required to monitor changes in mudflat/sandflat habitat."

2.4 Non-Designated Receptors

Receptors that are not recognised in Europe but are of importance to permitting.

	Non designated sites (but of impact to permitting)	Distance	Direction
1	Dibbinsdale Nature Reserve	1504	SSW
2	Deciduous wood land (priority habitat)	476	SSW
3	Deciduous wood land (priority habitat)	1144	SSW
4	Deciduous wood land (priority habitat)	1663	SSW
5	Deciduous wood land (priority habitat)	1691	WSW

6	Deciduous wood land (priority habitat)	879	W
7	Deciduous wood land (priority habitat)	805	NW
8	Deciduous wood land (priority habitat)	388	SSE
9	Deciduous wood land (priority habitat)	1034	SSE
10	Deciduous wood land (priority habitat)	1385	SSE
11	Deciduous wood land (priority habitat)	1603	SSE
12	Deciduous wood land (priority habitat)	1850	SSE

2.5 Geology

Table 1 Geology

Artificial Ground/Made Ground	Made ground
Superficial and Drift Geology	Superficial aquifer-Unproductive, these are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
Bedrock and Solid Geology	Bedrock aquifer-Principal, geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

2.6 Hydrogeology

Unproductive-These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.

Principal- Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

2.7 Hydrology

Surface waters

There are 23 surface water features within 250 m of the site see appendix A. Largest being the River Mersey.

2.8 Flood Risk

The very edges of the site are at a '**LOW**' risk of flooding whilst the centre of the site is not under **RoFRaS**. There are no historical flood events. Flood zone 3. Surface water flooding highest risk on site is 1 in 30 years even 0.3 m – 1.0 m. Groundwater flooding is risk rated as high for a 1 in 100 year event.

2.9 Air Quality

Not in an Air Quality Management (AQMA) Zone

2.10 Nature of Risk Assessment

This document provides a broad and general assessment of the risk factors considered to be of significance for the site, and an evaluation of the impact from the principle risk factors to receptors within the site vicinity.

3 METHODOLOGY

3.1 Hazard Identification

The Environment Agency’s ‘H1 Software Tool Version 2.78 April 2017’, has been used to undertake a series of risk assessments to reveal the potential impact of the sites waste activities of their releases upon the local environment.

3.2 Types of Waste Activity Hazards

Hazard		Sources	Risk	Further Assessment
Odour	<ul style="list-style-type: none"> • Odour from storage • Odour from processing • Odour from Transfer 	<ol style="list-style-type: none"> 1. Waste delivery 2. Storage 3. Treatment Process 4. Material dispatch 	<ul style="list-style-type: none"> • Non Conforming wastes 	<ul style="list-style-type: none"> • Table 8 Fugitive Emissions (Air, Odour, Dust and other Particulate matter)
Noise and Vibration	<ul style="list-style-type: none"> • Engine Noise (idling) • Noise from vehicle and plant movement. • Noise form reverse warnings • Noise form waste processing • Vibration from plant and vehicle movements 	<ol style="list-style-type: none"> 1. Waste delivery 2. Storage 3. Treatment Process 4. Material dispatch 	<ul style="list-style-type: none"> • Processing and storage occurs inside a building. 	<ul style="list-style-type: none"> • Table 9 Noise and Vibration
Fugitive Emissions	<ul style="list-style-type: none"> • Dust from waste processing • Dust from Stored Waste • Litter form waste storage and/or treatment • Litter from vehicle movements • Pest form waste storage 	<ol style="list-style-type: none"> 1. Waste delivery 2. Storage area run-off pre and post treatment 3. Treatment Process 4. Material dispatch 5. Fire Water 	<ul style="list-style-type: none"> • Dust and particulate matter liberated from external areas only during dry conditions. 	<ul style="list-style-type: none"> • Table 10 Fugitive Emissions

	<ul style="list-style-type: none"> • Runoff from site operations 			
Accidents	<ul style="list-style-type: none"> • Leak from onsite oil storage • Transfer of substances • Plant of Equipment Failure • Fire in waste materials • Flooding • Vandalism 	<ol style="list-style-type: none"> 1. Waste delivery 2. Storage 3. Treatment Process 4. Material dispatch 5. Fire Water 6. Flood risk from Rivers, Sea or surface water. 7. Unauthorised access 	<ul style="list-style-type: none"> • Loss of material during unloading, treatment and dispatch of waste. 	<ul style="list-style-type: none"> • Table 11 Accidents
Sensitive Areas	<ul style="list-style-type: none"> • Damage to protected ecosystems 	<ol style="list-style-type: none"> 1. Waste delivery 2. Storage 3. Treatment Process 4. Material dispatch 5. Fire Water 	<ul style="list-style-type: none"> • Loss of waste from vehicles 	<ul style="list-style-type: none"> • Table 8 Fugitive Emissions (Air, Odour, Dust and other Particulate matter) • Table 9 Noise and Vibration • Table 10 Fugitive Emissions • Table 11 Accidents

If a hazard has been identified by the H1 screening tool that is may have an environmental impact these have been identified had have been provided mitigation in Section 4 of this document.

3.3 Identify Receptors

Receptors are those sites/activities that are at risk form the hazards that a waste activity may have impact on and are defined as below:

- Protected sites and species
- Anywhere used to grow food or to farm animals or fish
- Drain and sewer systems
- Factories and other businesses
- Fields and allotments used to grow food
- Footpaths
- Groundwater, groundwater source protection zone
- Homes, or groups of homes (such as villages or housing developments)
- Playing fields and playgrounds
- Private drinking water supplies
- Regionally important geological
- Schools, hospitals and other public buildings
- Water, for example ponds, streams, rivers, lakes or the sea –
- Conservation and habitats protected areas and areas of scientific interest

The receptors most likely to be impacted by the waste sites activities are listed below in Table 2 Key Receptors

Table 2 Key Receptors

These are key receptors up to 1 km, for the full list up to 2 km and up to 10 km for designated sites see appendix A.

TYPE OF RECEPTOR	ID #	DESCRIPTION	DISTANCE FROM BOUNDARY (M) APPROX	DIRECTION
HUMANS AND PROPERTY		Site Workers	On site	-
		Site Visitors	On site	-
		COMMERCIAL		
	1	Mixed Commercial Light industrial, shipping etc.....	Adjacent	S
	2	Mixed Commercial Light industrial including shops and supermarkets	383-2000	S
	3	Mixed Commercial including UNI lever site	838	SW
	7	Commercial	591	NW
	8	Commercial	135	W
		RESIDENTIAL		
	1	Pool Lane, Ashton Way, Boniface Close, York Street, South View, The Green, Manor Place	185	S
	2	Bryce Drive, Bryce Close, Hesketh Way	1000	SW
	3	Church Road, Birch Road, Trafalgar Drives Andrews Road, Woodfield Road, Stanton Road, Quarry Avenue, Frairacres Road, High Croft Avenue	1000	SW
	5	New Chester Road, Shore Drive, Marine Drive, Woodhead Road, Lewisham Road, Wirral Circular Trail, Portbury Way, Bolton Road, Portbury Way. Corniche Road, Lodges Lane, Dock Road, Eccleshill Road, Embankment Road, Greylands Road, Lodge Lane. Lower Road, Primrose Hill, Brook Street, Windy Bank, Greendale Road, Queen Marys Drive and causeway close.	351	W
		Critical Infrastructure		
		ROADS & RAILWAYS		
		A41 New Chester road	721	W
		New Ferry By pass	725	W
		RECREATIONAL (Public Use)		
	1	Port Sunlight River Park	20	N

	2	Playing Field	742	NNW
	3	Shorefields Nature Park	948	N
	8	Playing Field	945	WNW
	13	Playing Field	433	S
	17	Maritime Cricket Club	128	S
		Public Use (schools, churches etc...)		
	1	Christ Church Port Sunlight	854	W
	2	Church Drive Primary School	917	W
	12	Hotel	956	W
		AGRICULTURAL		
		ALLOTMENTS		
		ATMOSPHERE		
WATER		SURFACE WATER		
		River Mersey	54	N,E
		Dibbinsdale Brook	10	NW
		Inland river not influenced by normal tidal action.	59	NW
		Inland river not influenced by normal tidal action.	83	NW
		Inland river not influenced by normal tidal action.	94	NW
		Inland river not influenced by normal tidal action.	128	NW
		Inland river not influenced by normal tidal action.	131	SW
		Inland river not influenced by normal tidal action.	167	NW
		Inland river not influenced by normal tidal action.	236	NW
		GROUNDWATER		
ENVIRONMENTALLY SENSITIVE		DESIGNATED SITES (European) SSSI, RAMSAR SPA etc...		
	1	New Ferry	26	NE
	2	Mersey Estuary	695	SE
	3	New Ferry	83.5	NE
		NON DESIGNATED SITES (but of impact to permitting)		
	2	Deciduous wood land (priority habitat)	476	SSW
	6	Deciduous wood land (priority habitat)	879	W
	7	Deciduous wood land (priority habitat)	805	NW
8	Deciduous wood land (priority habitat)	388	SSE	

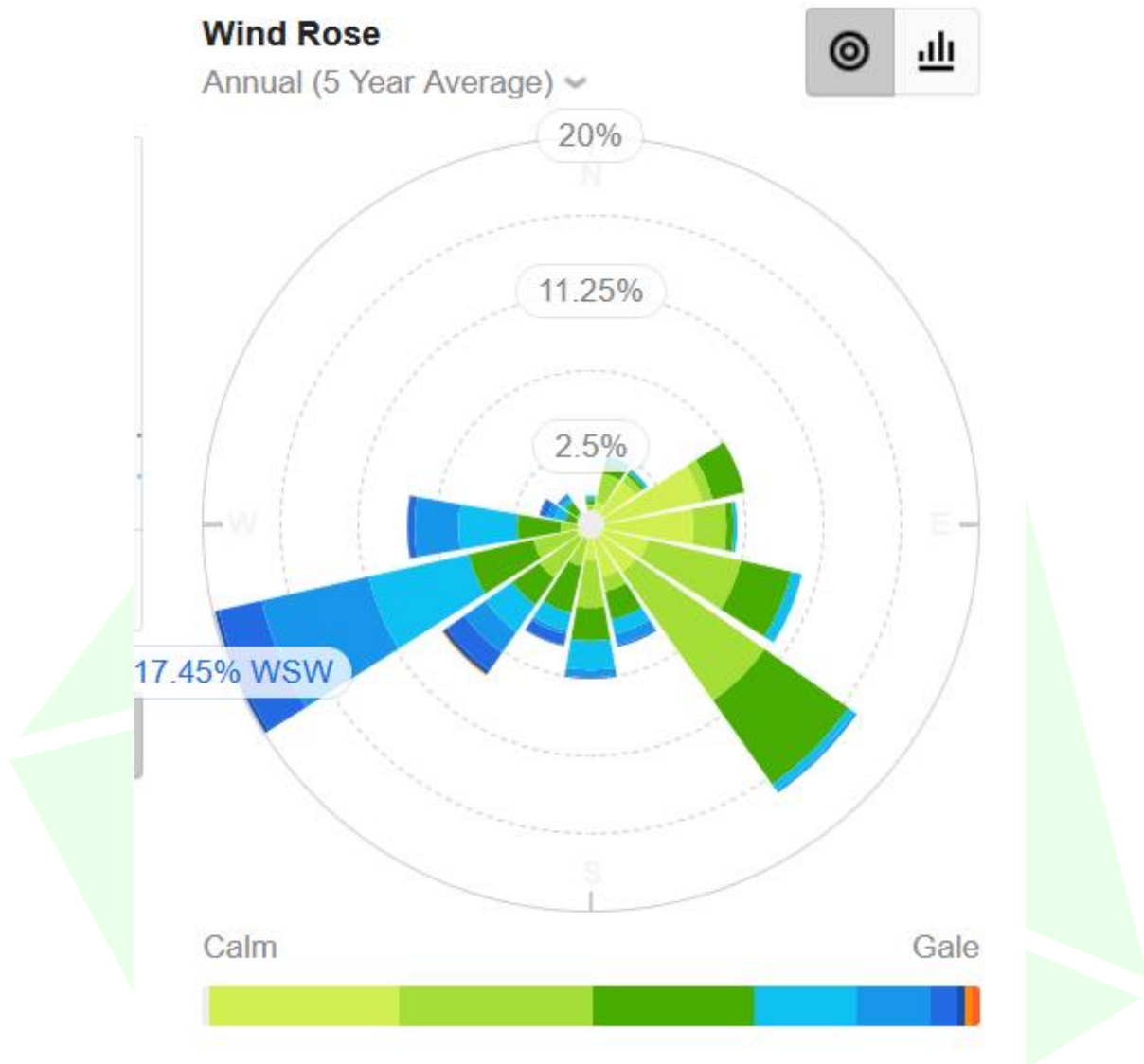
HERITAGE LOATIONS		LISTED BUILDINGS AND PARKS		
	1	UNICHEMA OFFICE BUILDING	382	SW
	2	10-16, YORK STREET	286	SSW
	3	18-24, YORK STREET	289	SSW
	4	26-32, YORK STREET	296	SSW
	5	GILES SHIRLEY HALL	324	S
	6	CHURCH OF ST MATTHEW	348	S
	7	THE ENTERPRISE CENTRE	373	S
	8	1 AND 2, THE GREEN	329	SSE
	9	17-23, MANOR PLACE	338	SSW
	10	25-31, MANOR PLACE	345	SSW
	11	33-37, MANOR PLACE	347	SSW
	12	39-45, MANOR PLACE	355	SSW
	13	47-53, MANOR PLACE	363	S
	14	46-52, MANOR PLACE	385	S
	15	38-44, MANOR PLACE	376	SSW
	16	22-28, MANOR PLACE	363	SSW
	17	14-20, MANOR PLACE	360	SSW
	18	324 AND 326, NEW CHESTER ROAD	725	W
	19	320 AND 322, NEW CHESTER ROAD	727	W
	20	314-318, NEW CHESTER ROAD	731	W
	21	310 AND 312, NEW CHESTER ROAD	731	W
	22	306 AND 308, NEW CHESTER ROAD	738	W
	23	302 AND 304, NEW CHESTER ROAD	742	W
	24	298 AND 300, NEW CHESTER ROAD	744	W
	25	294-296, NEW CHESTER ROAD	748	W
	26	288-292, NEW CHESTER ROAD	755	W
	27	284 AND 286, NEW CHESTER ROAD	758	W
	28	276-282, NEW CHESTER ROAD	764	W
	29	64-78, BOLTON ROAD	805	W
	30	1-7, WATER STREET	802	W
	31	9-21, WATER STREET	792	W
	32	60 and 62, Bolton Road, 2 and 4, Water Street, and 1, 3, and 5, The Ginnel	852	W
	33	7-23, THE GINNEL	872	W
	34	25-35, THE GINNEL	895	W
35	71-75, BOLTON ROAD	788	W	

36	268-274, NEW CHESTER ROAD	787	W
37	262-266, NEW CHESTER ROAD	796	W
38	256-260, NEW CHESTER ROAD	807	W
39	250-254, NEW CHESTER ROAD	815	W
40	244-248, NEW CHESTER ROAD	822	W
41	240 AND 242, NEW CHESTER ROAD	834	W
42	234-238, NEW CHESTER ROAD	849	W
43	230 AND 232, NEW CHESTER ROAD	856	W
44	224-228, NEW CHESTER ROAD	862	W
45	218-222, NEW CHESTER ROAD	877	W
46	1-5, CORNICHE ROAD	896	W
47	7-15, CORNICHE ROAD	913	W
48	17-23, CORNICHE ROAD	920	W
49	25-29, CORNICHE ROAD	909	W
50	31-35, CORNICHE ROAD	903	W
51	37-41, CORNICHE ROAD	890	W
52	43-47, CORNICHE ROAD	880	W
53	49-53, CORNICHE ROAD	873	W
54	55-59, CORNICHE ROAD	865	W
55	61-67, CORNICHE ROAD	862	W
56	61-69, BOLTON ROAD (See details for further address information)	851	W
57	THE BRIDGE INN	994	W
58	69-75, POOL BANK (See details for further address information)	990	W
59	12-20, LODGE LANE	975	W
60	2-10, LODGE LANE	939	W
61	212-216, NEW CHESTER ROAD	930	W
62	200-210, NEW CHESTER ROAD	942	W
63	192-198, NEW CHESTER ROAD	972	W
64	178-190, NEW CHESTER ROAD	997	WNW

3.4 Wind Rose

Wind rose shows the prevailing wind direction for the waste site. Which is west south westerly. The weather station this wind rose is taken from is Liverpool NW, L3 6, north north east of the site approx. 5 km from site.

Figure 2 Wind Rose



3.5 Pathways

Table 3 Potential Pathways

Hazard	Potential Receptors	Pathway
Odour	Humans/Property/ Sensitive Areas (Designated)	Atmosphere
Noise and Vibration		Atmosphere, Physical
Fugitive Emissions	Ground Water/Humans/Property/ Sensitive Areas (Designated)	Atmosphere, Physical
Fire, Spills and Contaminated surface water.		Atmosphere, Physical, Infiltration via the ground
Vermin, Birds, Insects	Humans/Property/ Sensitive Areas (Designated)	Atmosphere, Physical

3.6 Risk

Environmental Risk is the probability of an receptor being exposed to an environmental hazard and the impact of such exposure. The Primary risk is assessed with no mitigation in place such as managerial procedures and physical engineering.

To assess risk the probability and the consequence of exposure have to be assessed see below tables.

Table 4 Probability of Exposure

Probability of exposure
HIGH – exposure is probable: direct exposure likely with no / few barriers between hazard, source and receptor.
MEDIUM – exposure is fairly probable: feasible exposure possible, barriers to exposure less controllable.
LOW – exposure is unlikely: several barriers exist between hazards source and receptors to mitigate against exposure.
VERY LOW – exposure is very unlikely; effective, multiple barriers in place to mitigate against exposure.

Table 5 Consequence of Exposure

Consequences of Exposure
HIGH – the consequences are severe: sufficient evidence that short or long term exposure may result in serious damage.
MEDIUM – consequences are significant; sufficient evidence that exposure to hazard may result in damage that is not severe in nature and reversible once exposure ceases (e.g. irritant).
LOW – consequences are minor; damage not apparent though reversible adverse changes may occur.
VERY LOW – consequences are negligible; no evidence of adverse changes following exposure.

Application of the probability and consequences of an hazard gives a risk rating as shown by the matrix below in

Table 6 Risk Matrix

		Consequences			
		Very Low	Low	Medium	High
Likelihood	High	Low	Medium	High	High
	Medium	Low	Medium	Medium	High
	Low	Low	Low	Medium	Medium
	Very Low	Very Low	Low	Low	Low

3.7 Management of Risk

For all the hazards identified in section 3.2 above, managerial procedures and hard infrastructure engineering have been developed in accordance with relevant guidance documents¹²³⁴

Residual risk will remain and these are detailed in the activity risk tables.

Table 7 Activity Risks

Reference	Process
AR1	Waste receipt
AR2	Waste storage pending treatment or recovery/disposal
AR3	Waste treatment processes
AR4	Material dispatch for recovery/disposal

¹ <https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit#odour-management-plan>

² Sector Guidance Note S5.06: Recovery and disposal of hazardous and non-hazardous waste

³ H3 Noise Assessment and Control (Part 2)

⁴ H1 Software Tool Version 2.78 April 2017'

Table 8 Fugitive Emissions (Air, Odour, Dust and other Particulate matter)

Odour							
Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	Receptor	Pathway	Probability of exposure	Consequence	Overall risk	Risk Management	Residual risk
<i>Potential to cause harm?</i>	<i>What's the risk? What do I wish to protect?</i>	<i>Route of hazard to the receptor?</i>	<i>Likelihood of this contact?</i>	<i>Harm that can be caused?</i>	<i>Remaining Risk</i>	<i>Measures to reduce the risk?</i>	<i>Residual risk after the application of managerial procedures?</i>
AR1 Reception (delivery of waste to the site) Vehicle Movements (waste delivery, movement of waste within the site and transfer of waste out of site) AR2 Storage (Secure Storage) AR3 Treatment processes (Treatment consisting	Humans & Property Protected Nature Conservation Sites Atmosphere <i>Inhalation of particles.</i> <i>Deposition of dust/particles on property and land.</i>	Air	LOW	MEDIUM	MEDIUM	<ul style="list-style-type: none"> Waste arrives damp. Waste creates a cementitious crust when stored reducing dust potential. Reduced drop heights will be observed as best practice when operationally possible. Waste is not known as being odorous. Vehicles and plant on site will obey a speed limit of 10 mph to reduce dust and particulate matter generation. Upwards facing exhausts on site mobile plant Regular housekeeping, cleaning of site surface and plant will reduce dust and 	LOW

<p>only of sorting, separation, screening, crushing and blending of waste for recovery as a soil, soil substitute or aggregate). AR4 Material Dispatch (Recovery/disposal)</p>						<p>particulate matter build up.</p> <ul style="list-style-type: none"> • Localised dust suppression can be applied to processing equipment if required when waste is processed. • All waste transfers are overseen by a competent person • Emissions Management Plan implemented on site 016.1_05_005 	
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Table 9 Noise and Vibration

Noise and Vibration							
Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	Receptor	Pathway	Probability of exposure	Consequence	Overall risk	Risk Management	Residual risk
<i>Potential to cause harm?</i>	<i>What's the risk? What do I wish to protect?</i>	<i>Route of hazard to the receptor?</i>	<i>Likelihood of this contact?</i>	<i>Harm that can be caused?</i>	<i>Remaining Risk</i>	<i>Measures to reduce the risk?</i>	<i>Residual risk after the application of managerial procedures?</i>
AR1 Reception (delivery of waste to the site) Vehicle Movements (waste delivery, movement of waste within the site and transfer of waste out of site) AR2	Noise sensitive locations⁵ Protected Nature Conservation Sites	Air, Land	MEDIUM	MEDIUM	MEDIUM	<ul style="list-style-type: none"> • Site operations are only undertaken during permitted hours • Plant and equipment are inspected and maintained to manufacturers' specifications to ensure smooth operation • Site speed limit 10 mph. • Site is located within an industrial area. • All site plant equipped with white noise reversing 	LOW

⁵ **Notes:** Noise-sensitive location defined in H3 *Horizontal Guidance for Noise Part 2 – Noise Assessment and Control* published by the Environment Agency as - 'Any dwelling, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity, which for its proper enjoyment requires the absence of noise at nuisance levels'. Part 1 of H3 suggests that 'commercial premises may be [noise sensitive], depending upon the activities undertaken there'.

<p>Storage (Secure Storage) AR3 Treatment processes (Treatment consisting only of sorting, separation, screening, crushing and blending of waste for recovery as a soil, soil substitute or aggregate). AR4 Material Dispatch (Recovery/disposal)</p>						<p>beacons.</p> <ul style="list-style-type: none"> See Noise and Vibration Management Plan (NVMP) 016.1_05_006. 	
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Table 10 Fugitive Emissions

Litter and Debris							
Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	Receptor	Pathway	Probability of exposure	Consequence	Overall risk	Risk Management	Residual risk
<i>Potential to cause harm?</i>	<i>What's the risk? What do I wish to protect?</i>	<i>Route of hazard to the receptor?</i>	<i>Likelihood of this contact?</i>	<i>Harm that can be caused?</i>	<i>Remaining Risk</i>	<i>Measures to reduce the risk?</i>	<i>Residual risk after the application of managerial procedures?</i>
AR1 Reception (delivery of waste to the site) Vehicle Movements (waste delivery, movement of waste within the site and transfer of waste out of site) AR2 Storage (Secure Storage) AR3 Treatment processes (Treatment consisting	Humans & Property Protected Nature Conservation Sites <i>Litter Nuisance</i>	Air; windblown, physical transport and deposition	LOW	MEDIUM	MEDIUM	<ul style="list-style-type: none"> • Only two waste streams, pre booked loads • Waste streams not containing litter/light particulates as arrives damp and creates a cementitious crust. • Site surface concrete provides stable work surface and reduces litter. • Regular housekeeping daily/weekly and ad- hoc as required to ensure site is clean and tidy. • Training provided to staff, required to litter • Pick on a 'see it, pick it up' basis • Where litter is identified on the site boundary the site supervisor and management 	LOW

Litter and Debris							
Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	Receptor	Pathway	Probability of exposure	Consequence	Overall risk	Risk Management	Residual risk
<i>Potential to cause harm?</i>	<i>What's the risk? What do I wish to protect?</i>	<i>Route of hazard to the receptor?</i>	<i>Likelihood of this contact?</i>	<i>Harm that can be caused?</i>	<i>Remaining Risk</i>	<i>Measures to reduce the risk?</i>	<i>Residual risk after the application of managerial procedures?</i>
only of sorting, separation, screening, crushing and blending of waste for recovery as a soil, soil substitute or aggregate). AR4 Material Dispatch (Recovery/disposal)						will immediately organise the collection of litter by site staff The source of litter will be investigated and removed to a covered container ready for disposal <ul style="list-style-type: none"> All waste transfers are overseen by a competent person 	

Water							
Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	Receptor	Pathway	Probability of exposure	Consequence	Overall risk	Risk Management	Residual risk
<i>Potential to cause harm?</i>	<i>What's the risk? What do I wish to protect?</i>	<i>Route of hazard to the receptor?</i>	<i>Likelihood of this contact?</i>	<i>Harm that can be caused?</i>	<i>Remaining Risk</i>	<i>Measures to reduce the risk?</i>	<i>Residual risk after the application of managerial procedures?</i>
<p>AR1</p> <p>Reception (delivery of waste to the site)</p> <p>Vehicle Movements (waste delivery, movement of waste within the site and transfer of waste out of site)</p> <p>AR2</p> <p>Storage (Secure Storage)</p> <p>AR3</p> <p>Treatment processes (Treatment consisting only of sorting, separation,</p>	<p>Protected Nature Conservation Sites</p> <p>Surface Water</p> <p>Groundwater</p> <p><i>Contamination</i></p>	<p>Land, water, runoff</p>	<p>LOW</p>	<p>HIGH</p>	<p>MEDIUM</p>	<ul style="list-style-type: none"> Raw materials stored with secondary containment (localised). Impermeable site surface and sealed drainage system with storage tank. Spill kits located on site. Awareness and training provided on: dealing with spillages of potentially polluting substances; storage and handling of waste materials; potentially polluting substances; and site drainage All waste storage on an impermeable site surface and within a sealed drainage system. The integrity of surfaces and drainage systems will be checked and kept clear 	<p>LOW</p>

Water							
Identifying the harm and what could be harmed		Assessing the risk			Managing the risk		
Hazard	Receptor	Pathway	Probability of exposure	Consequence	Overall risk	Risk Management	Residual risk
<i>Potential to cause harm?</i>	<i>What's the risk? What do I wish to protect?</i>	<i>Route of hazard to the receptor?</i>	<i>Likelihood of this contact?</i>	<i>Harm that can be caused?</i>	<i>Remaining Risk</i>	<i>Measures to reduce the risk?</i>	<i>Residual risk after the application of managerial procedures?</i>
screening, crushing and blending of waste for recovery as a soil, soil substitute or aggregate). AR4 Material Dispatch (Recovery/disposal)						as part of weekly site inspections <ul style="list-style-type: none"> • Good housekeeping - site is tidied and checked prior to closing for the day • All waste transfers are overseen by a competent person 	

Mud and Debris							
Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	Receptor	Pathway	Probability of exposure	Consequence	Overall risk	Risk Management	Residual risk
<i>Potential to cause harm?</i>	<i>What's the risk? What do I wish to protect?</i>	<i>Route of hazard to the receptor?</i>	<i>Likelihood of this contact?</i>	<i>Harm that can be caused?</i>	<i>Remaining Risk</i>	<i>Measures to reduce the risk?</i>	<i>Residual risk after the application of managerial procedures?</i>
<p>AR1 Reception (delivery of waste to the site)</p> <p>Vehicle Movements (waste delivery, movement of waste within the site and transfer of waste out of site)</p> <p>AR4 Material Dispatch (Recovery/disposal)</p>	<p>Humans & Property</p> <p><i>Amenity impact</i></p>	<p>Direct deposition</p>	<p>LOW</p>	<p>MEDIUM</p>	<p>MEDIUM</p>	<ul style="list-style-type: none"> • Vehicles will be checked in wet conditions – any vehicles found carrying mud or debris on the wheels or chassis will be cleaned down prior to exiting the site • Daily mud and debris monitoring – where issue is identified this will be recorded in the site diary along with any corrective or preventative actions • Due to cementitious crust migration of waste material whilst being stored is reduced. • Regular housekeeping, maintaining site cleanliness. • Concrete site surface reducing generation of mud 	<p>LOW</p>

Mud and Debris							
Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	Receptor	Pathway	Probability of exposure	Consequence	Overall risk	Risk Management	Residual risk
<i>Potential to cause harm?</i>	<i>What's the risk? What do I wish to protect?</i>	<i>Route of hazard to the receptor?</i>	<i>Likelihood of this contact?</i>	<i>Harm that can be caused?</i>	<i>Remaining Risk</i>	<i>Measures to reduce the risk?</i>	<i>Residual risk after the application of managerial procedures?</i>
						and debris. • All waste transfers are overseen by a competent person	

Pest, Vermin, Scavengers							
Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	Receptor	Pathway	Probability of exposure	Consequence	Overall risk	Risk Management	Residual risk
<i>Potential to cause harm?</i>	<i>What's the risk? What do I wish to protect?</i>	<i>Route of hazard to the receptor?</i>	<i>Likelihood of this contact?</i>	<i>Harm that can be caused?</i>	<i>Remaining Risk</i>	<i>Measures to reduce the risk?</i>	<i>Residual risk after the application of managerial procedures?</i>
N/A - Given types of wastes accepted at site unlikely to give rise to	Humans & Property Protected Nature	Air; Ground depending on vector	LOW	MEDIUM	MEDIUM	• Daily site inspections and good housekeeping procedures will be maintained • If an increase in a pest	LOW

significant pest issues.	Conservation Sites					<p>population is observed, the source will be investigated in order to undertake the most effective mitigation measures and a pest control contractor appointed if required</p> <ul style="list-style-type: none"> Waste streams not associated with pest, vermin, scavengers. 	
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Table 11 Accidents

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	Receptor	Pathway	Probability of exposure	Consequence	Overall risk	Risk Management	Residual risk
<i>Potential to cause harm?</i>	<i>What's the risk? What do I wish to protect?</i>	<i>Route of hazard to the receptor?</i>	<i>Likelihood of this contact?</i>	<i>Harm that can be caused?</i>	<i>Remaining Risk</i>	<i>Measures to reduce the risk?</i>	<i>Residual risk after the application of managerial procedures?</i>
TRANSFERRING SUBSTANCES							
AR1 Reception (delivery of waste to the site) Vehicle Movements (waste delivery, movement of waste within the site and transfer of waste out of site) AR2 Storage (Secure Storage) AR3 Treatment processes (Treatment consisting	Humans & Property Protected Nature Conservation Sites Surface Water Groundwater Atmosphere <i>Adverse impact</i>	Land, air, water	LOW	MEDIUM	MEDIUM	<ul style="list-style-type: none"> All vehicles delivering and collecting materials to/from the site are covered All waste transfers are overseen by a competent person The storage and treatment of waste occurs upon an impermeable surface and sealed drainage system. Waste is stored in designated containers and in areas served by a sealed drainage system Spill kits on site and employees trained in their use See Environment 	LOW

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	Receptor	Pathway	Probability of exposure	Consequence	Overall risk	Risk Management	Residual risk
<i>Potential to cause harm?</i>	<i>What's the risk? What do I wish to protect?</i>	<i>Route of hazard to the receptor?</i>	<i>Likelihood of this contact?</i>	<i>Harm that can be caused?</i>	<i>Remaining Risk</i>	<i>Measures to reduce the risk?</i>	<i>Residual risk after the application of managerial procedures?</i>
only of sorting, separation, screening, crushing and blending of waste for recovery as a soil, soil substitute or aggregate). AR4 Material Dispatch (Recovery/disposal)						Management System 016.1_05_002 for Accident and Prevention Management.	

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	Receptor	Pathway	Probability of exposure	Consequence	Overall risk	Risk Management	Residual risk
<i>Potential to cause harm?</i>	<i>What's the risk? What do I wish to protect?</i>	<i>Route of hazard to the receptor?</i>	<i>Likelihood of this contact?</i>	<i>Harm that can be caused?</i>	<i>Remaining Risk</i>	<i>Measures to reduce the risk?</i>	<i>Residual risk after the application of managerial procedures?</i>
PLANT OR EQUIPMENT FAILURE							
AR1 Reception (delivery of waste to the site) Vehicle Movements (waste delivery, movement of waste within the site and transfer of waste out of site) AR2 Storage (Secure Storage) AR3 Treatment processes (Treatment consisting only of sorting, separation,	Humans & Property Protected Nature Conservation Sites Surface Water Groundwater Atmosphere <i>Adverse impact</i>	Land, air, water	LOW	MEDIUM	MEDIUM	<ul style="list-style-type: none"> Critical spares held on site Planned maintenance programme limits failure of key process plant and equipment Daily inspections of plant, equipment and infrastructure Raw materials stored away from vehicle traffic areas with concrete barriers, steel barriers or legio blocks. See Environment Management System 016.1_05_002 for Maintenance. 	LOW

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	Receptor	Pathway	Probability of exposure	Consequence	Overall risk	Risk Management	Residual risk
<i>Potential to cause harm?</i>	<i>What's the risk? What do I wish to protect?</i>	<i>Route of hazard to the receptor?</i>	<i>Likelihood of this contact?</i>	<i>Harm that can be caused?</i>	<i>Remaining Risk</i>	<i>Measures to reduce the risk?</i>	<i>Residual risk after the application of managerial procedures?</i>
screening, crushing and blending of waste for recovery as a soil, soil substitute or aggregate). AR4 Material Dispatch (Recovery/disposal)							

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	Receptor	Pathway	Probability of exposure	Consequence	Overall risk	Risk Management	Residual risk
<i>Potential to cause harm?</i>	<i>What's the risk? What do I wish to protect?</i>	<i>Route of hazard to the receptor?</i>	<i>Likelihood of this contact?</i>	<i>Harm that can be caused?</i>	<i>Remaining Risk</i>	<i>Measures to reduce the risk?</i>	<i>Residual risk after the application of managerial procedures?</i>
FLOODING							

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	Receptor	Pathway	Probability of exposure	Consequence	Overall risk	Risk Management	Residual risk
<i>Potential to cause harm?</i>	<i>What's the risk? What do I wish to protect?</i>	<i>Route of hazard to the receptor?</i>	<i>Likelihood of this contact?</i>	<i>Harm that can be caused?</i>	<i>Remaining Risk</i>	<i>Measures to reduce the risk?</i>	<i>Residual risk after the application of managerial procedures?</i>
Entire Process	<p>Humans & Property</p> <p>Protected Nature Conservation Sites</p> <p>Surface Water Groundwater Atmosphere Adverse impact</p>	<p>Water</p> <p>LOW risk of river and coastal flooding. Surface water flooding 1 in 100 year event.</p>	HIGH	MEDIUM	HIGH	<ul style="list-style-type: none"> All storage will be carried out on impermeable surfaces with a sealed drainage system The drainage system can be isolated using shut off valves to avoid the loss of potentially contaminated water to surrounding land. Drainage system is designed to cope with a 1 in 100 year event and provide 6 hours of capacity Monitoring of flood alerts/ EA warnings Fuels/oils or any other potentially polluting liquids are stored in appropriate containers with secondary containment 	LOW

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	Receptor	Pathway	Probability of exposure	Consequence	Overall risk	Risk Management	Residual risk
<i>Potential to cause harm?</i>	<i>What's the risk? What do I wish to protect?</i>	<i>Route of hazard to the receptor?</i>	<i>Likelihood of this contact?</i>	<i>Harm that can be caused?</i>	<i>Remaining Risk</i>	<i>Measures to reduce the risk?</i>	<i>Residual risk after the application of managerial procedures?</i>
VANDALISM							
Entire Process	Humans & Property Protected Nature Conservation Sites Surface Water Groundwater Atmosphere <i>Adverse impact</i>	Land, air, water	LOW	HIGH	MEDIUM	<ul style="list-style-type: none"> • Site is part of a wider industrial development area. • Site security is visually inspected every night • 24-hour CCTV coverage of entire site, during processing campaigns • Landscaped bund protecting northern and eastern boundary • Site is accessed by security gates which are secured when the site is unoccupied 	LOW

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	Receptor	Pathway	Probability of exposure	Consequence	Overall risk	Risk Management	Residual risk
<i>Potential to cause harm?</i>	<i>What's the risk? What do I wish to protect?</i>	<i>Route of hazard to the receptor?</i>	<i>Likelihood of this contact?</i>	<i>Harm that can be caused?</i>	<i>Remaining Risk</i>	<i>Measures to reduce the risk?</i>	<i>Residual risk after the application of managerial procedures?</i>
FIRE							
<p>AR1 Reception (delivery of waste to the site)</p> <p>Vehicle Movements (waste delivery, movement of waste within the site and transfer of waste out of site)</p> <p>AR2 Storage (Secure Storage)</p> <p>AR3 Treatment processes (Treatment consisting only of sorting, separation,</p>	<p>Humans & Property</p> <p>Protected Nature Conservation Sites</p> <p>Atmosphere</p> <p><i>Loss of life and property, loss of habitat, destruction and loss of amenity</i></p>	<p>Spread through physical contact; fanned by winds</p>	<p>LOW</p>	<p>MEDIUM</p>	<p>MEDIUM</p>	<ul style="list-style-type: none"> Waste accepted non-combustible, as classified as IBA. CCTV-Covering whole site. All employees are provided with training on fire safety and the correct use of fire extinguishers Fire extinguishers checked weekly and serviced annually The operational section of the site is a no smoking area All areas are subject to daily housekeeping – working areas are swept and cleared to remove debris 	<p>LOW</p>

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	Receptor	Pathway	Probability of exposure	Consequence	Overall risk	Risk Management	Residual risk
<i>Potential to cause harm?</i>	<i>What's the risk? What do I wish to protect?</i>	<i>Route of hazard to the receptor?</i>	<i>Likelihood of this contact?</i>	<i>Harm that can be caused?</i>	<i>Remaining Risk</i>	<i>Measures to reduce the risk?</i>	<i>Residual risk after the application of managerial procedures?</i>
screening, crushing and blending of waste for recovery as a soil, soil substitute or aggregate). AR4 Material Dispatch (Recovery/disposal)						and minimise fire risks <ul style="list-style-type: none"> • Ferrous and non-ferrous material sorted whilst processing is sorted in to bays and removed from site when full. Bays are fire resistant to 120 mins. • Permit to Work system implemented when Hot Works are required. • See Fire Prevention Plan (FPP) 016.1_05_015. 	



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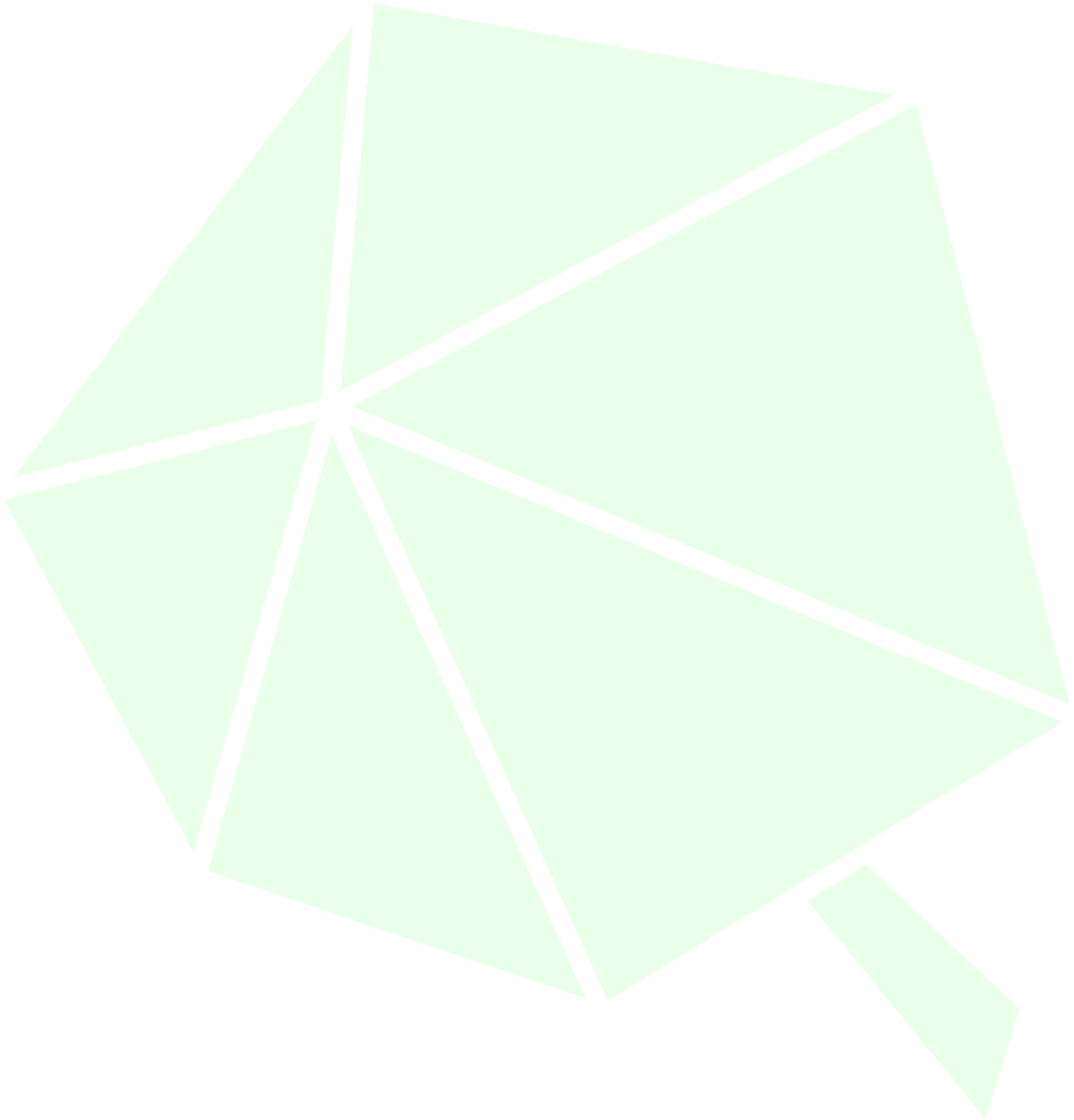
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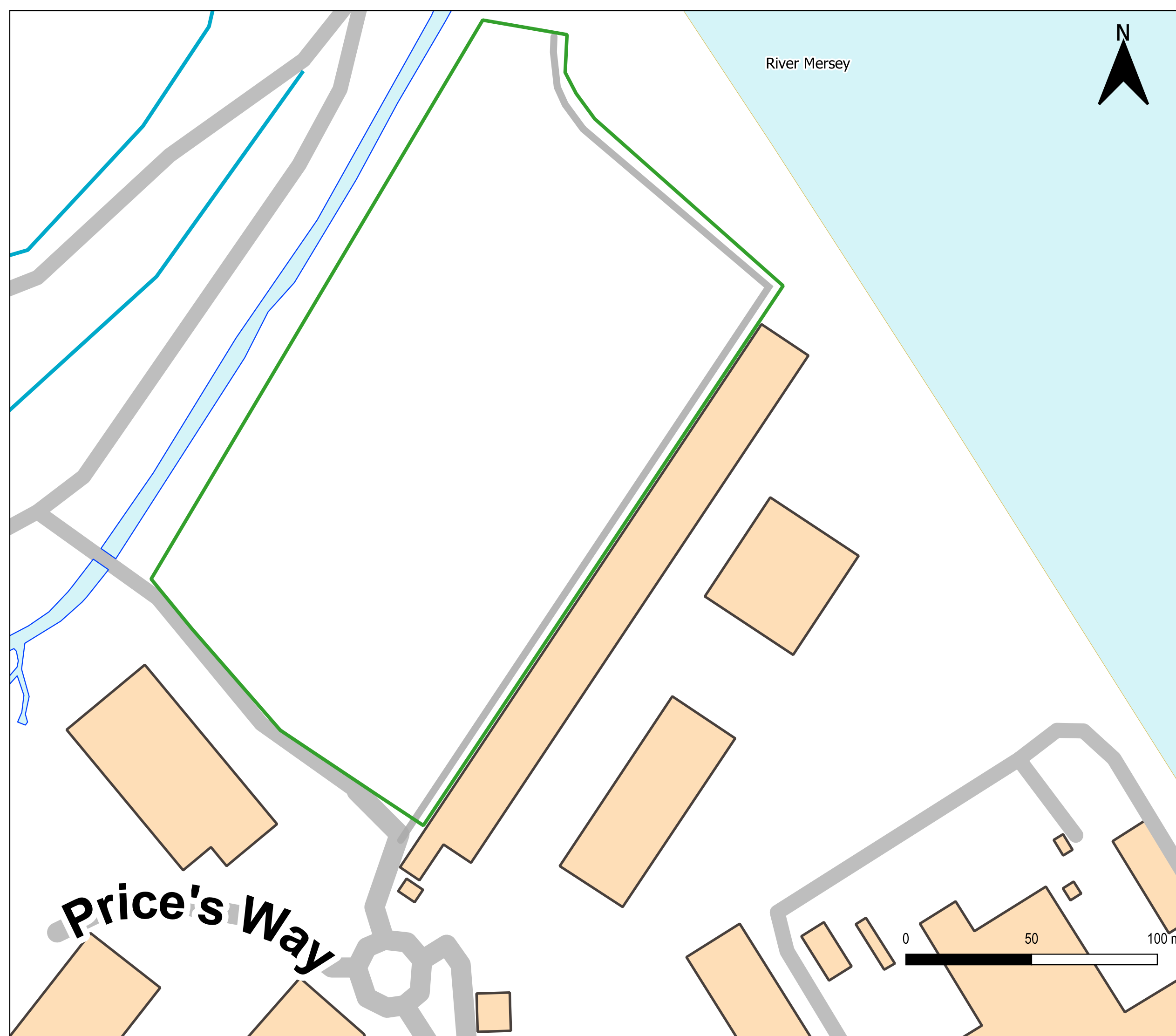
www.umbrella-environmental.co.uk


andrew@umbrellaenvironmental.co.uk

Mob: 07498 671713

Drawings





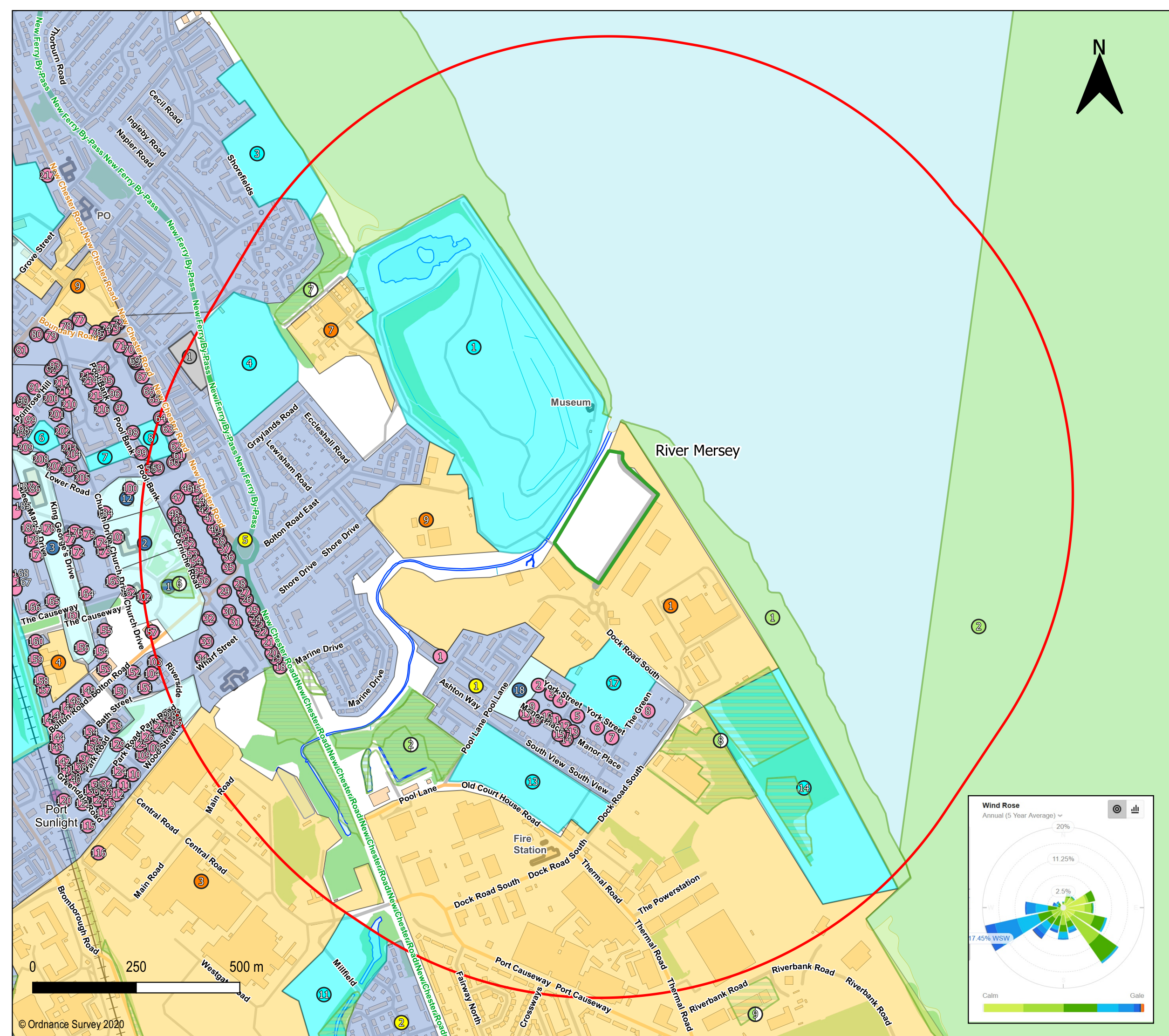
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Revision: REVA
Drawn By: AIL
Address: Rock Solid Processing Ltd, Bromborough South Dock

Changelog:
 - N/A

RockSolid
 FROM WASTE TO VALUE



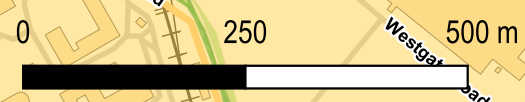
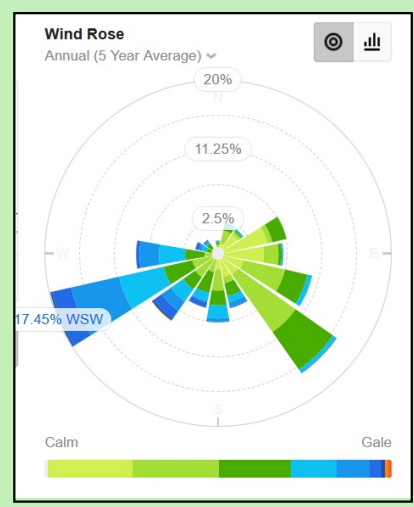


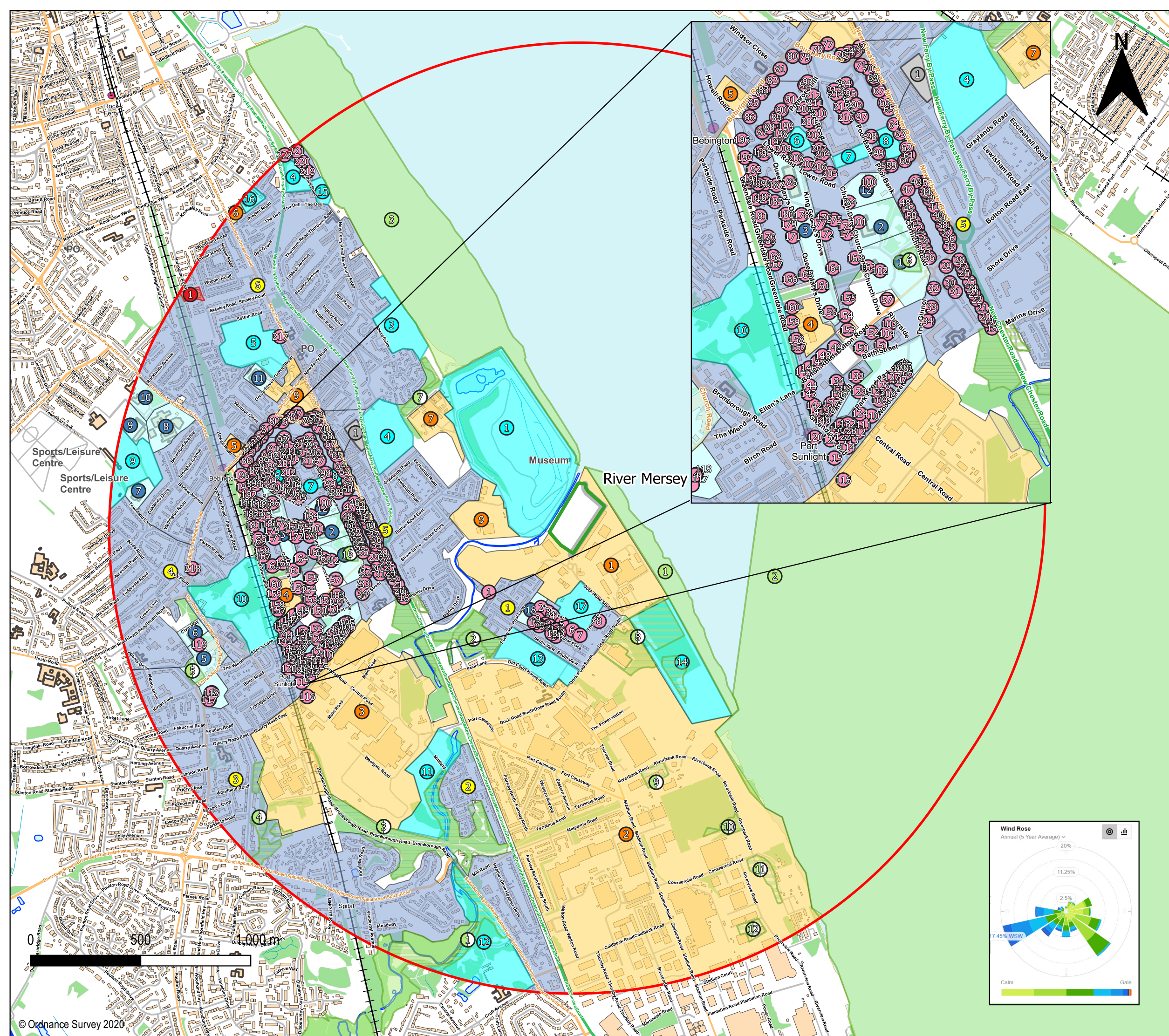
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 - Designated Site Area
 - Commercial ID
 - Commercial Area
 - Recreational ID
 - Recreational Areas
 - Public Use ID
 - Public Use Area
 - Agricultural ID
 - Agricultural Area
 - Residential ID
 - Residential Area



Drawing Title: Sensitive Receptors 1 km
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Revision: REV A
Drawn By: AIL
Address: Bromborough South Dock CH62 4RY

Changelog:
- N/A

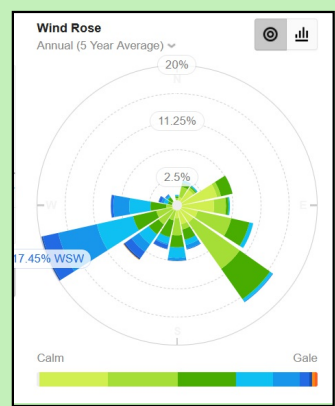




- Key:
- Permit Boundary
 - 2 Km Buffer
 - Heritage ID
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 - Non Designated Site Area
 - Critical Infrastructure ID
 - Critical Infrastructure Area
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 - Residential Area

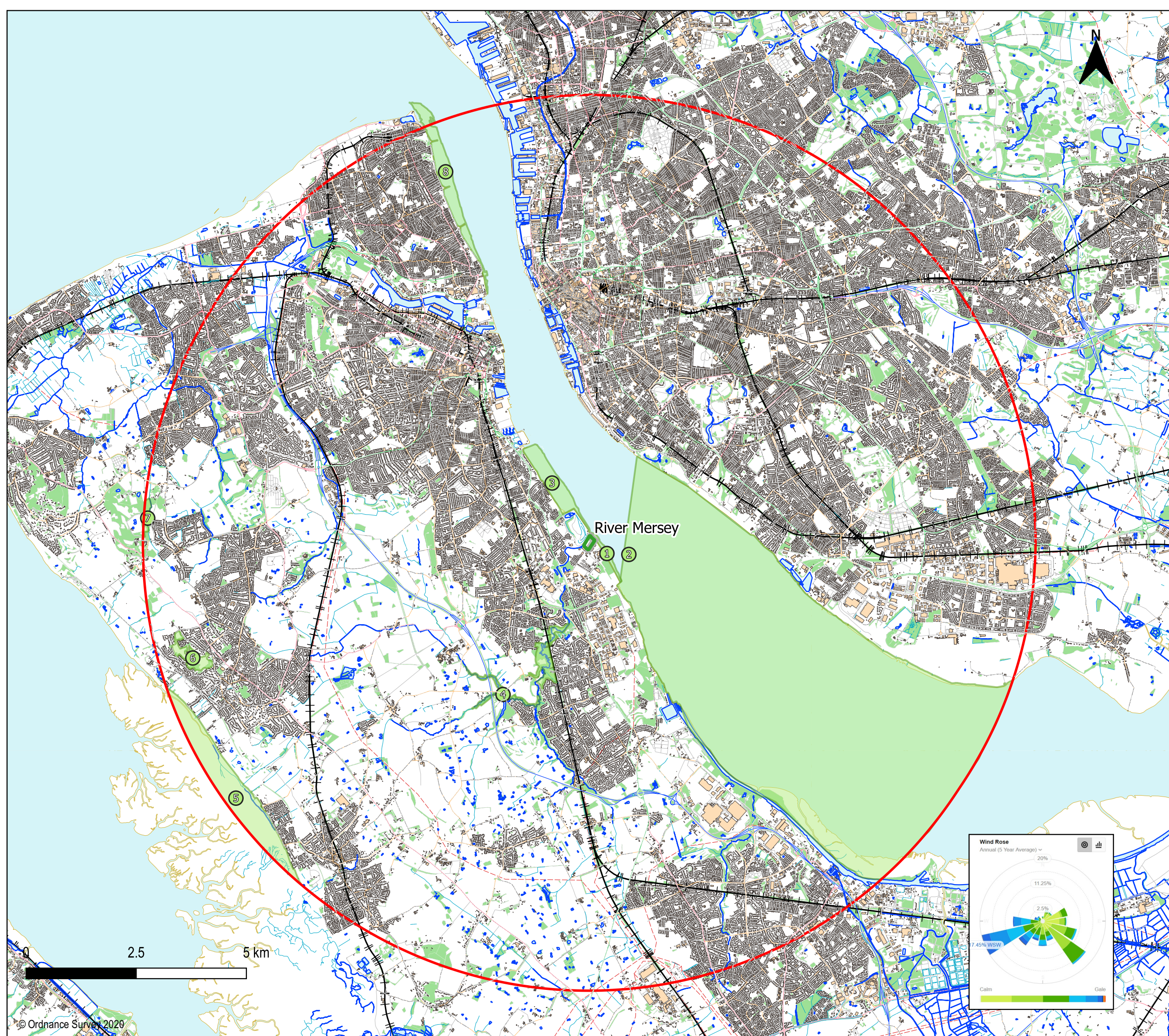
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 Drawn By: AIL
 Address: Bromborough South Dock CH62 4RY

Changelog:
 - N/A



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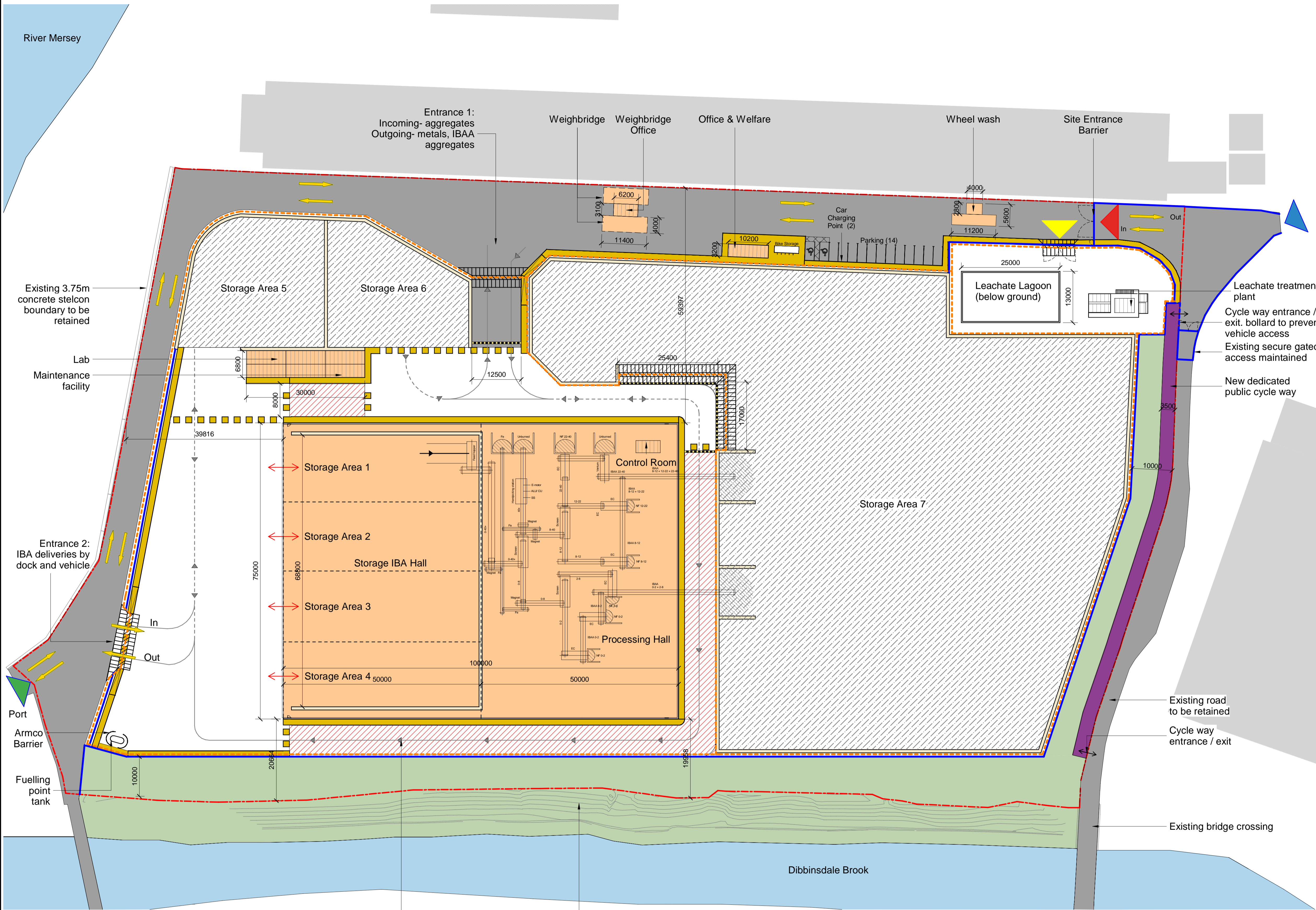
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 - 10 Km Buffer
 - Designated Site ID
 - Designated Site Area

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Ref: 016.1_09_004
Scale: 1:79895 (A3)
Date: 2022-11-30
Revison: REVA
Drawn By: AIL
Address: Bromborough South Dock CH62 4RY

Changelog:
- N/A

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- Notes**
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 - All dimensions are in millimetres unless otherwise stated.
 - This drawing is indicative only. This drawing is based upon information presented to Mott MacDonald for the purposes of RIBA Stage 2 Concept Design. Mott MacDonald are not responsible for the accuracy of the information. Any drawing errors or discrepancies should be brought to the attention of Mott MacDonald.
 - The designs shown are subject to detailed site survey, investigations, the CDM Regulations and the comments and/or approval of various relevant Local Authority Officers, Statutory Undertakers, etc.
 - Any areas shown are approximate only and have been measured off preliminary drawings as the likely measured areas of the current design. These may be affected by future design development and construction tolerances.
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 - This drawing is to be read in conjunction with all relevant documents and drawings, including those from other disciplines.
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Key to Symbols

	Site boundary		250mm high impermeable bund
	Security fence		Entrance and exit to storage building
	Existing site entrance by road		New public cycle way
	Existing site entrance from the port		1.5m wide pedestrian path with 600mm armco type safety barriers
	Service entrance to treatment plant		River/ Brook
	Proposed building		Emergency/maintenance access
	3.8m high push walls (Legioblock)		Vehicle barrier
	Storage areas		Vehicle rollover bund
	Roadway		
	Landscaping/ BNG zone		
	Buildings adjacent to site		
	Direction of travel		

- Reference Drawings**
- IBA route through site: Ship - Storage Hall - Processing Hall - Processed - Remove Maximum metals - metals divided up into storage bays next to Storage Hall - IBA aggregates stored in large bays - Aggregate collected as required
 - Stockpiles are approximately 8-10m high
 - IBA is transferred from the Port to the Storage Hall by a 6-wheel industrial CAT dumper
 - IBA is transferred from Storage Hall to Processing Hall by level load shovel truck
 - IBA when transported by lorry has a typical load of about 30 tonnes per lorry, this would require an Arctic lorry measuring approximately 2.55m wide x 16.5m long, vehicle tracking has been carried out for the site
 - Location of fire water tank and pumps to be confirmed

Rev	Date	Drawn	Description	Ch'k'd	App'd
P2	29/09/2022	CM	For Review and Comment	CB	DC
P1	22/09/2022	CM	For Review and Comment	CB	DC

Status Stamp

PLANNING

St Vincent Plaza
319 St Vincent St
Glasgow, G2 5LP
United Kingdom

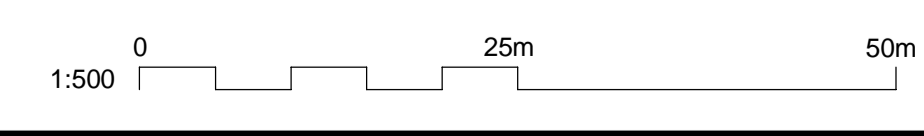
T +44 (0)141 222 4500
F +44 (0)141 221 2048
W www.mottmac.com

Client
Covanta

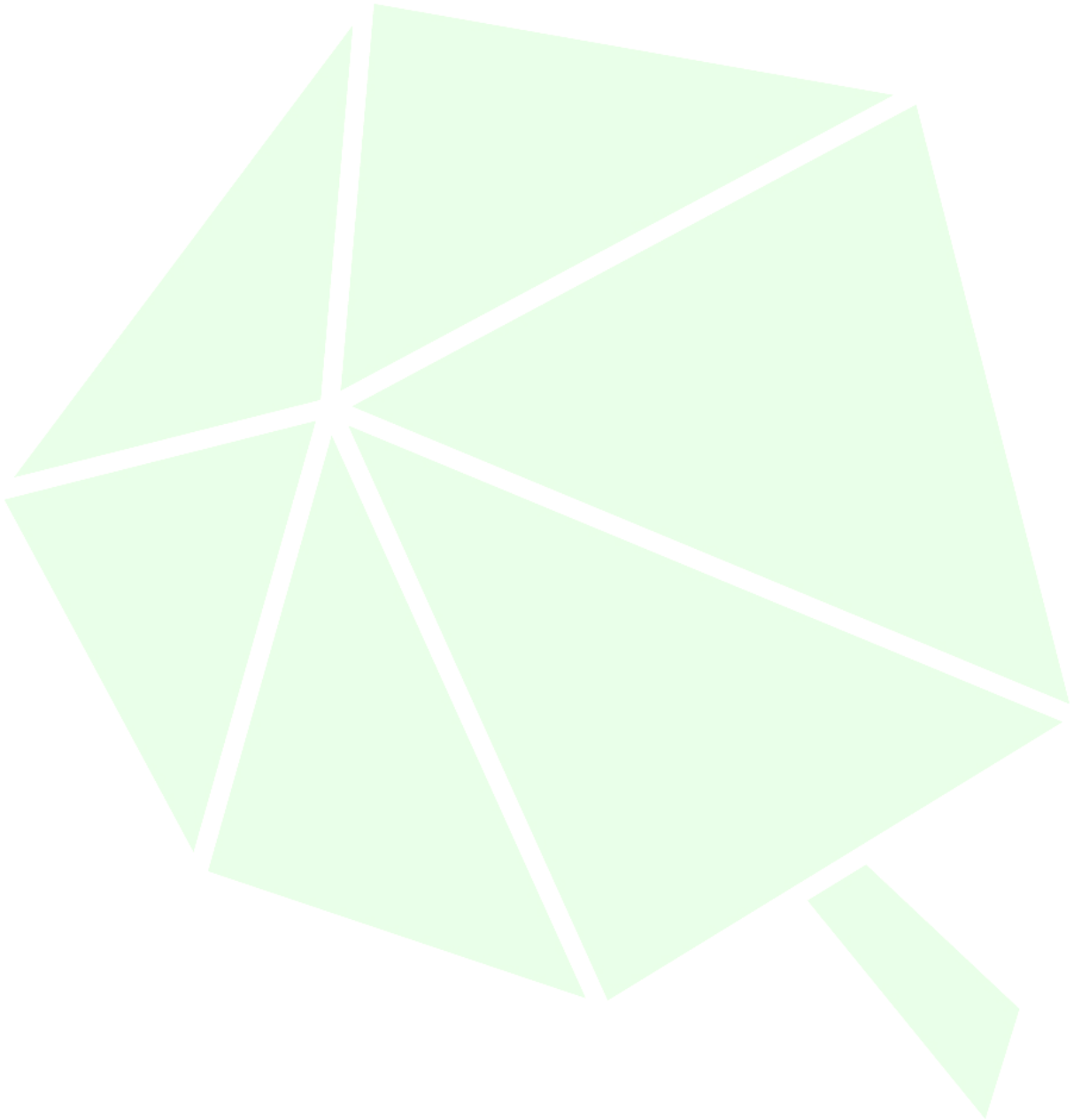
Title
**Bromborough Dock IBA Processing Facility
Proposed Site Block Plan**

Designed	C. McLeod	LB	Eng. Check		
Drawn	C. McLeod	CM	Coordination	L. Baxter	LB
Dwg. Check	C. Beale	CB	Approved	D. Tetlow	DT
MMD Project Number	100104167	Scale at A1	1:500	Seq. Number	STD
Suitability Description	For Review and Comment				Suit. Code
					S3
Drawing Number	100104167-MMD-00-00-DR-A-1101				Rev
					P2

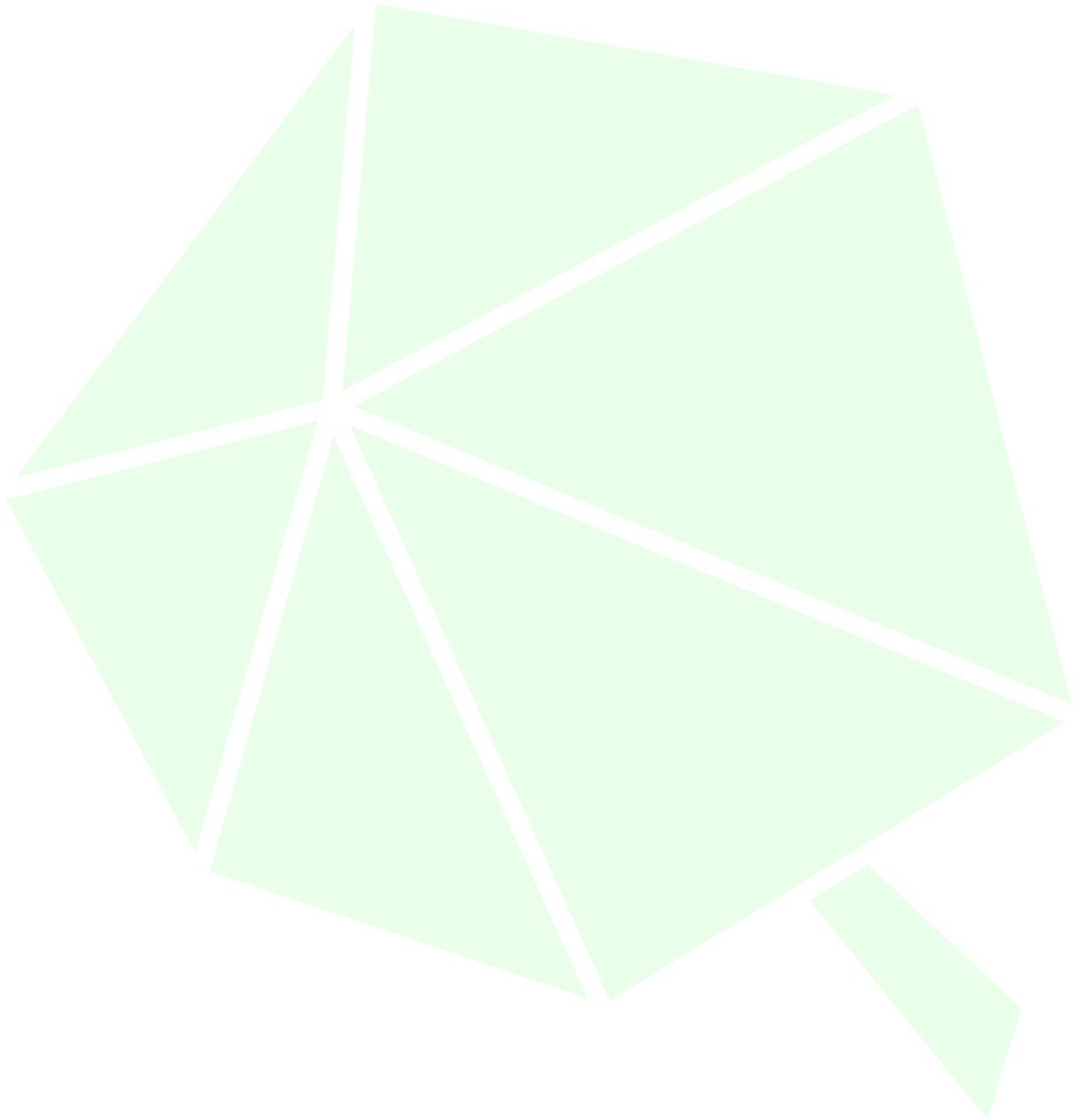
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Appendices



App A



TYPE OF RECEPTOR	ID #	DESCRIPTION	DISTANCE FROM BOUNDARY (M) APPROX	DIRECTION
		SITE		
		Site Workers	On site	-
		Site Visitors	On site	-
		COMMERCIAL		
	1	Mixed Commercial Light industrial, shipping etc.....	Adjacent	S
	2	Mixed Commercial Light industrial including shops and supermarkets	383-2000	S
	3	Mixed Commercial including UNI lever site	838	SW
	4	Port Sunlight Garden Centre	1167	W
	5	Aldi	1433	WNW
	6	Stage Coach	1961	NW
	7	Commercial	591	NW
	8	Commercial	135	W
	9	Light commercial shops and pubs.	1179	NW
		RESIDENTIAL		
	1	Pool Lane, Ashton Way, Boniface Close, York Street, South View, The Green, Manor Place	185	S
	2	Bryce Drive, Bryce Close, Hesketh Way	1000	SW
	3	Church Road, Birch Road, Trafalgar Drives Andrews Road, Woodfield Road, Stanton Road, Quarry Avenue, Frairacres Road, High Croft Avenue	1000	SW
	4	Abbots Drive, Highcroft Gardens, The higher Croft, Heath Road, Green Lane, Greenville Close, Acreville Road, Higher Bebington, Acres Road, Richmond Road, Anscot Avenue, Bereton Avenue, Parkside Road, Townfield Lane	1381	W
	5	New Chester Road, Shore Drive, Marine Drive, Woodhead Road, Lewisham Road, Wirral Circular Trail, Portbury Way, Bolton Road, Portbury Way. Corniche Road, Lodges Lane, Dock Road, Eccleshill Road, Embankment Road, Greylands Road, Lodge Lane. Lower Road, Primrose Hill, Brook Street, Windy Bank, Greendale Road, Queen Marys Drive and causeway close.	351	W

HUMANS AND PROPERTY	6	Oakland Drive, Wellington Road, Barlow Avenue, Stonehill Avenue, Old Chester Road, Rocklands Avenue, College Drive, Rydal Bank, Hulme Wood, Larking Close, Eliot Close, Masefield Close, Coleridge Drive, Longfellow Road, Grove Square, Beta Close, Boundary Road, Circular Drive, Osbourne Close, Pool Bank, Mayfield South, Beaconsfield Road, Winstanley Road, Egerton Road, Browntow Road, Salisbury Drive, New Ferry Road, Mersey Bank Rod, Shorefields, Pollitt Square, Field Close, Wirral Circular Trail, Woodford Road, Ingleby Road, Beverly Road, Napier Road, Easton Road, Boulton Avenue, Tilstock Avenue, Dells Grove, The Dell, Proctor Road, Delta Road West, Hassal Road, Woodward Road, Power Road, Coulthard Road, Courtney Road, Woodin road, Woodward Road, Stanley Road, Sefton Road, Springwood Way, Rocklands Avenue, College Drive, Rydal Bank, Hulmewood, Oaklands Drive, Wellington Road, Townfield Lane and Barlow Avenue.	1189	NW
	PUBLIC RIGHTS OF WAY (PROW)			
		None	-	-
	Critical Infrastructure			
	1	Electricity Sub Station	1887	NW
	ROADS & RAILWAYS			
		A41 New Chester road	721	W
		New Ferry By pass	725	W
		Boundary Road	1327	NW
		Railway (Mersey rail)	1357	W
		Various local roads	0-2000	N,E,S,W
	RECREATIONAL (Public Use)			
	1	Port Sunlight River Park	20	N
	2	Playing Field	742	NNW
	3	Shorefields Nature Park	948	N
	4	Playing Fields	1819	N
	5	New Ferry Park	1420	NW
	6	Playing Field	1217	WNW
	7	Playing Field	1044	WNW
	8	Playing Field	945	WNW
	9	Athletic Track	1774	WNW
10	Mayer Park	1295	W	
11	Open Area	1000	SW	
12	Dibbinsdale Nature Reserve	1504	SSW	
13	Playing Field	433	S	

	14	Open Space	389	SSE	
	15	The Rock Ferry Promenade UK	1702	NW	
	16	Cammell Laird Football Club	2000	NW	
	17	Maritime Cricket Club	128	S	
	18	Rainbow Corner Park	237	SW	
	Public Use (schools, churches etc...)				
	1	Christ Church Port Sunlight	854	W	
	2	Church Drive Primary School	917	W	
	3	Lady Lever Art Gallery, Port Sunlight Museum and Port Sunlight Cen	1148	W	
	4	St Andrews Church	1626	SW	
	5	Bebington Civic Centre	1565	WSW	
	6	Civic Medical Centre	1615	WSW	
	7	Saint Andrews Cof E School	1804	W	
	8	St John Blessington Catholic Secondary School	1671	W	
	9	Wirral Met College and Athletic Stadium	1861	W	
	10	St Johns Aided Catholic Infant School	1822	WNW	
	11	Grove Street Primary School and New Ferry Day Nursery	1429	NW	
	12	Hotel	956	W	
	AGRICULTURAL				
		None	-	-	
	ALLOTMENTS				
	1	Mayfield Street	943	NW	
	ATMOSPHERE				
		Not in an Air Quality Management Zone (AQMA)	-	-	
WATER	SURFACE WATER				
		River Mersey	54	N,E	
		Dibbinsdale Brook	10	NW	
		Inland river not influenced by normal tidal action.	59	NW	
		Inland river not influenced by normal tidal action.	83	NW	
		Inland river not influenced by normal tidal action.	94	NW	
		Inland river not influenced by normal tidal action.	128	NW	
		Inland river not influenced by normal tidal action.	131	SW	
		Inland river not influenced by normal tidal action.	167	NW	
		Inland river not influenced by normal tidal action.	236	NW	
		GROUNDWATER			
			Superficial aquifer-Unproductive, these are rock layers or drift deposi	On site	-
			Bedrock aquifer-Principal, geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers	On site	-

ENVIRONMENTALLY SENSITIVE	DESIGNATED SITES (European) SSSI, RAMSAR SPA etc...			
	1	New Ferry	26	NE
	2	Mersey Estuary	695	SE
	3	New Ferry	83.5	NE
	4	Dibbinsdale	1722	SW
	5	DEE Estuary	6370	SW,W,NW
	6	Heswall Dales	8837	W
	7	Thurstaston Common	9837	W
	8	Mersey Narrows	5983	N
	NON DESIGNATED SITES (but of impact to permitting)			
	1	Dibbinsdale Nature Reserve	1504	SSW
	2	Deciduous wood land (priority habitat)	476	SSW
	3	Deciduous wood land (priority habitat)	1144	SSW
	4	Deciduous wood land (priority habitat)	1663	SSW
	5	Deciduous wood land (priority habitat)	1691	WSW
	6	Deciduous wood land (priority habitat)	879	W
	7	Deciduous wood land (priority habitat)	805	NW
	8	Deciduous wood land (priority habitat)	388	SSE
	9	Deciduous wood land (priority habitat)	1034	SSE
	10	Deciduous wood land (priority habitat)	1385	SSE
	11	Deciduous wood land (priority habitat)	1603	SSE
	12	Deciduous wood land (priority habitat)	1850	SSE
	LISTED BUILDINGS AND PARKS			
	1	UNICHEMA OFFICE BUILDING	382	SW
2	10-16, YORK STREET	286	SSW	
3	18-24, YORK STREET	289	SSW	
4	26-32, YORK STREET	296	SSW	
5	GILES SHIRLEY HALL	324	S	
6	CHURCH OF ST MATTHEW	348	S	
7	THE ENTERPRISE CENTRE	373	S	
8	1 AND 2, THE GREEN	329	SSE	
9	17-23, MANOR PLACE	338	SSW	
10	25-31, MANOR PLACE	345	SSW	
11	33-37, MANOR PLACE	347	SSW	
12	39-45, MANOR PLACE	355	SSW	
13	47-53, MANOR PLACE	363	S	
14	46-52, MANOR PLACE	385	S	
15	38-44, MANOR PLACE	376	SSW	

16	22-28, MANOR PLACE	363	SSW
17	14-20, MANOR PLACE	360	SSW
18	324 AND 326, NEW CHESTER ROAD	725	W
19	320 AND 322, NEW CHESTER ROAD	727	W
20	314-318, NEW CHESTER ROAD	731	W
21	310 AND 312, NEW CHESTER ROAD	731	W
22	306 AND 308, NEW CHESTER ROAD	738	W
23	302 AND 304, NEW CHESTER ROAD	742	W
24	298 AND 300, NEW CHESTER ROAD	744	W
25	294-296, NEW CHESTER ROAD	748	W
26	288-292, NEW CHESTER ROAD	755	W
27	284 AND 286, NEW CHESTER ROAD	758	W
28	276-282, NEW CHESTER ROAD	764	W
29	64-78, BOLTON ROAD	805	W
30	1-7, WATER STREET	802	W
31	9-21, WATER STREET	792	W
32	60 and 62, Bolton Road, 2 and 4, Water Street, and 1, 3, and 5, The	852	W
33	7-23, THE GINNEL	872	W
34	25-35, THE GINNEL	895	W
35	71-75, BOLTON ROAD	788	W
36	268-274, NEW CHESTER ROAD	787	W
37	262-266, NEW CHESTER ROAD	796	W
38	256-260, NEW CHESTER ROAD	807	W
39	250-254, NEW CHESTER ROAD	815	W
40	244-248, NEW CHESTER ROAD	822	W
41	240 AND 242, NEW CHESTER ROAD	834	W
42	234-238, NEW CHESTER ROAD	849	W
43	230 AND 232, NEW CHESTER ROAD	856	W
44	224-228, NEW CHESTER ROAD	862	W
45	218-222, NEW CHESTER ROAD	877	W
46	1-5, CORNICHE ROAD	896	W
47	7-15, CORNICHE ROAD	913	W
48	17-23, CORNICHE ROAD	920	W
49	25-29, CORNICHE ROAD	909	W
50	31-35, CORNICHE ROAD	903	W
51	37-41, CORNICHE ROAD	890	W
52	43-47, CORNICHE ROAD	880	W
53	49-53, CORNICHE ROAD	873	W
54	55-59, CORNICHE ROAD	865	W
55	61-67, CORNICHE ROAD	862	W

56	61-69, BOLTON ROAD (See details for further address information)	851	W
57	THE BRIDGE INN	994	W
58	69-75, POOL BANK (See details for further address information)	990	W
59	12-20, LODGE LANE	975	W
60	2-10, LODGE LANE	939	W
61	212-216, NEW CHESTER ROAD	930	W
62	200-210, NEW CHESTER ROAD	942	W
63	192-198, NEW CHESTER ROAD	972	W
64	178-190, NEW CHESTER ROAD	997	WNW
65	170-176, NEW CHESTER ROAD	1026	WNW
66	158-168, NEW CHESTER ROAD	1044	WNW
67	148-156, NEW CHESTER ROAD	1072	W
68	142-146, NEW CHESTER ROAD	1099	WNW
69	134-140, NEW CHESTER ROAD	1100	WNW
70	128-132, NEW CHESTER ROAD	1128	WNW
71	10-16, BOUNDARY ROAD	1150	WNW
72	HESKETH HALL	1178	WNW
73	45 AND 47, BOUNDARY ROAD	1183	WNW
74	37-43, BOUNDARY ROAD	1200	WNW
75	35, BOUNDARY ROAD	1209	WNW
76	CAREERS OFFICE	1216	WNW
77	13-31, BOUNDARY ROAD	1267	WNW
78	3-11, BOUNDARY ROAD	1288	WNW
79	2-8, BOUNDARY ROAD	1313	WNW
80	45-55, BEBINGTON ROAD	1347	WNW
81	57-65, BEBINGTON ROAD	1368	WNW
82	67-79, BEBINGTON ROAD	1378	WNW
83	67-79, BEBINGTON ROAD	1395	WNW
84	89-97, BEBINGTON ROAD	1399	WNW
85	99-109, BEBINGTON ROAD	1414	WNW
86	3 AND 4, BROOK STREET	1414	WNW
87	5-10, BROOK STREET	1368	WNW
88	52-56, PRIMROSE HILL	1350	WNW
89	40-50, PRIMROSE HILL	1337	WNW
90	30-38, PRIMROSE HILL	1328	WNW
91	16-28, PRIMROSE HILL	1310	WNW
92	6-14, PRIMROSE HILL	1283	WNW
93	2-16, CIRCULAR DRIVE (See details for further address information)	1275	WNW
94	1-7, POOL BANK (See details for further address information)	1175	WNW
95	9-17, POOL BANK	1147	WNW

HERITAGE LOCATIONS

96	19-25, POOL BANK	1120	WNW
97	27-39 Pool Bank	1095	WNW
98	41-53, POOL BANK	1051	WNW
99	55-67, POOL BANK	1019	W
100	SUNLIGHT LODGE	1032	W
101	CHURCH DRIVE PRIMARY SCHOOL	1054	W
102	CHRIST CHURCH	1001	W
103	1-8, RIVERSIDE	1007	WSW
104	3-33, BATH STREET (See details for further address information)	1022	WSW
105	52, PARK ROAD (See details for further address information)	1009	WSW
106	49-55, WOOD STREET	1014	WSW
107	37-47, WOOD STREET	1039	WSW
108	27-35, WOOD STREET	1093	WSW
109	3-9, BRIDGE STREET	1124	WSW
110	16-22, BRIDGE STREET (See details for further address information)	1166	WSW
111	17-23, WOOD STREET	1201	WSW
112	9-15, WOOD STREET	1218	WSW
113	1-7, WOOD STREET	1248	WSW
114	97-100, GREENDALE ROAD	1271	WSW
115	GLADSTONE HALL	1315	WSW
116	LEVER HOUSE	1333	WSW
117	SUNDIAL APPROXIMATELY 13.5 METRES TO SOUTH OF ST ANDREW	1724	WSW
118	CHURCH OF ST ANDREW	1719	WSW
119	Bebington Central Library	1672	WSW
120	LEVER CLUB	1337	WSW
121	SILVER WEDDING FOUNTAIN	1305	WSW
122	National Westminster Bank and Heritage Centre	1263	WSW
123	FIRE STATION	1263	WSW
124	14-22, PARK ROAD	1186	WSW
125	26, PARK ROAD (See details for further address information)	1111	WSW
126	28-36, PARK ROAD	1097	WSW
127	38-48, PARK ROAD	1054	WSW
128	50, PARK ROAD	1021	WSW
129	BRIDGE OVER THE DELL	1161	WSW
130	89-92, GREENDALE ROAD	1273	WSW
131	2 AND 4, PARK ROAD	1253	WSW
132	6-12, PARK ROAD	1232	WSW
133	THE LYCEUM	1150	WSW
134	8-14, BRIDGE STREET	1210	WSW
135	BRIDGE COTTAGE	1209	WSW

136	19 AND 21, PARK ROAD	1221	WSW
137	9-17, PARK ROAD	1250	WSW
138	1-7, PARK ROAD	1268	WSW
139	88 AND 88A, GREENDALE ROAD	1292	WSW
140	PAIR OF K6 TELEPHONE KIOSKS OUTSIDE POST OFFICE	1293	WSW
141	83-87, GREENDALE ROAD	1299	WSW
142	79-82, GREENDALE ROAD	1298	WSW
143	75-78, GREENDALE ROAD	1300	WSW
144	71-74, GREENDALE ROAD	1287	WSW
145	1, BOLTON ROAD	1292	WSW
146	5 AND 7, BOLTON ROAD	1271	WSW
147	9-13, BOLTON ROAD	1242	WSW
148	15, BOLTON ROAD	1221	WSW
149	FLATS	1181	WSW
150	1-9, CROSS STREET (See details for further address information)	1109	WSW
151	Sphinx on lawn in front of nos. 5 to 19 (odd) Bath Street	1048	WSW
152	22-42, BOLTON ROAD	1064	WSW
153	HULME HALL	1140	WSW
154	1-7, JUBILEE CRESCENT	1126	WSW
155	8-15, JUBILEE CRESCENT	1107	WSW
156	TERRACE WALL AND ORNAMENTAL ARCH TO ROSE GARDEN	1169	WSW
157	64-70, GREENDALE ROAD	1290	WSW
158	59-63, GREENDALE ROAD	1283	WSW
159	54-58, GREENDALE ROAD	1284	WSW
160	49-53, GREENDALE ROAD (See details for further address informat	1274	W
161	Port Sunlight War Memorial	1178	W
162	LYCH GATE TO CHRIST CHURCH	1034	W
163	5-7, THE CAUSEWAY (See details for further address information)	1070	W
164	1-4, KING GEORGES DRIVE AND 8-12, THE CAUSEWAY	1139	W
165	1-9, CAUSEWAY CLOSE (See details for further address informati	1220	W
166	44-48, GREENDALE ROAD (See details for further address informat	1272	W
167	40-43, GREENDALE ROAD	1306	W
168	33-39, GREENDALE ROAD	1310	W
169	30-32, GREENDALE ROAD	1322	W
170	25-29, GREENDALE ROAD	1326	W
171	31-46, QUEEN MARYS DRIVE	1249	W
172	5-20, KING GEORGES DRIVE	1152	W
173	6-13, CHURCH DRIVE	1088	W
174	14-16, CHURCH DRIVE	1094	W
175	23 AND 24, WINDY BANK	1127	W

176	19-22, WINDY BANK	1157	W
177	RESIDENTS CLUB AND NUMBERS 21 AND 22	1180	W
178	POND AND FOUNTAIN TO SOUTH OF LADY LEVER ART GALLERY	1224	W
179	23-30, QUEEN MARYS DRIVE	1261	W
180	12-18, WINDY BANK	1270	W
181	18-24, GREENDALE ROAD	1346	W
182	11-17, GREENDALE ROAD	1358	W
183	NUMBERS 2 AND 4 WITH FLANKING SCREENS	1341	W
184	K6 TELEPHONE KIOSK, CHURCH DRIVE, BEBINGTON	1086	W
185	6-11, WINDY BANK	1307	W
186	LADY LEVER ART GALLERY	1266	W
187	LEVERHULME MEMORIAL AT JUNCTION WITH QUEEN MARY'S DRIVE	1303	W
188	15-22, QUEEN MARYS DRIVE (See details for further address information)	1336	W
189	NUMBERS 1 AND 3 AND FLANKING SCREENS	1357	W
190	8-10, GREENDALE ROAD	1383	W
191	6K AND 7, GREENDALE ROAD	1413	WNW
192	6A-6H, GREENDALE ROAD	1379	WNW
193	55 AND 57, PRIMROSE HILL (See details for further address information)	1399	WNW
194	47-53, PRIMROSE HILL	1361	WNW
195	NUMBERS 10 TO 14 AND SCREEN WALL	1351	WNW
196	DUKE OF YORK COTTAGES AND LAUNDRY	1423	WNW
197	1-7, LOWER ROAD	1323	WNW
198	37-45, PRIMROSE HILL	1315	WNW
199	23-35, PRIMROSE HILL	1303	WNW
200	2-14, CENTRAL ROAD INCLUDING, 1-13, LANCASTER CLOSE AND	1264	WNW
201	16-24, CENTRAL ROAD AND SCREEN WALL	1240	WNW
202	26-34, CENTRAL ROAD	1217	WNW
203	36-44, CENTRAL ROAD	1194	WNW
204	46-64, CENTRAL ROAD	1181	WNW
205	51-59, LOWER ROAD INCLUDING 66-72, CENTRAL ROAD	1150	W
206	35-49, LOWER ROAD	1184	W
207	29-33, LOWER ROAD	1218	W
208	15-27, LOWER ROAD	1256	W
209	9-13, LOWER ROAD	1296	W
210	15-27, CENTRAL ROAD	1218	WNW
211	5-13, CENTRAL ROAD	1237	WNW
212	1-9, PRIMROSE HILL (See details for further address information)	1250	WNW
213	2-6, POOL BANK (See details for further address information)	1196	WNW
214	8-14, POOL BANK	1186	WNW
215	16-22, POOL BANK	1161	WNW

216	24-34, POOL BANK	1139	WNW
217	LODGE TO NEW FERRY PARK	1484	NW
218	25, THE VILLAGE	1625	W
219	OAKLEA	1876	NW
220	TOFTCOMBS	1926	NW
221	NUMBER 19 WITH GATEPIERS TO STREET	1980	NW
222	NUMBERS 20 AND 21 WITH GATEPIERS TO NUMBER 21	2000	NW