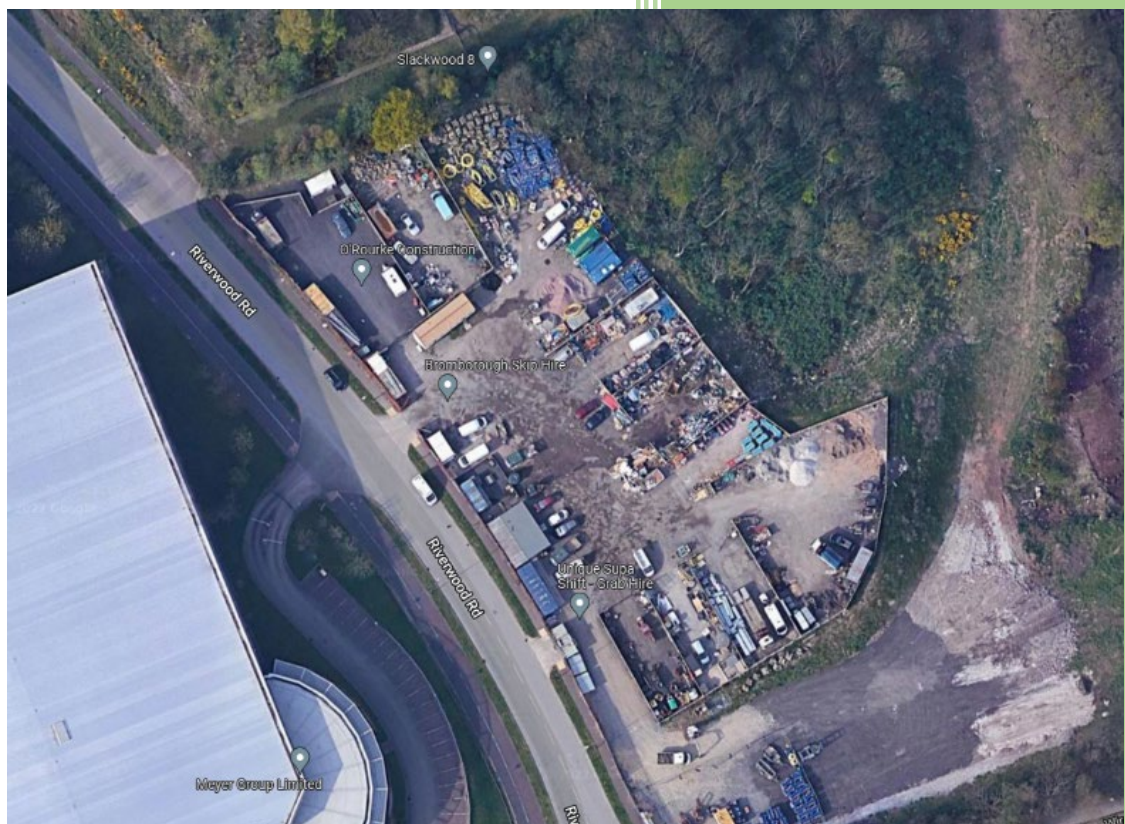




AC
ENVIRONMENTAL
CONSULTING

Odour Management Plan



Bromborough Skip & Recycle Ltd

Slackwood, 8 Riverview Road,
Bromborough, CH62 3RL

November 2022

Bromborough Skip & Recycle Ltd

Ref: BS.PT.OMP.1122.v2

AC Environmental Consulting Ltd,

Environment House,

Werrington Road,

ST2 9AF

Reference & Revision	Issue	Prepared	Approved
BS.PT.OMP.1122	First Issue	DA	
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1. INTRODUCTION

AC Environmental Consulting Ltd, on behalf of Bromborough Skip & Recycle Ltd, have prepared an Odour Management Plan for the Bromborough Skip & Recycle Ltd site located at Slackwood, 8 Riverview Road, Bromborough, CH62 3RL.

This Odour Management Plan has been developed to manage and mitigate the potential impacts of odour from site operations. It identifies the possible receptors of odour and advises the control measures to put in place that are able to deal with any issues arising. The position of the sensitive receptors is shown in Appendix D.

Routine monitoring for odour is a central part of the plan and forms part of the Site Inspection Procedure. The response to complaints is key and these shall be dealt with promptly in accordance with the Complaints Procedure. In all cases a review of odour events and complaints shall form part of the ongoing management review and shall be discussed at management meetings.

This Odour Management Plan is necessary for the Bromborough Skip & Recycle Ltd site to effectively control and mitigate the risk of odour occurring from site activities and operations.

The site is located within a predominantly industrialised area, surrounded by additional industrial and commercial properties with the River Mersey running approximately 70m to the east. The site is immediate bordered by further industrial and commercial properties to the south and west, and woodland to the north, with undeveloped land and the River Mersey to the east. Access to the site is provided from Riverview Road. The site operates as a skip hire and waste transfer station and accepts up to 15,000 tonnes per annum of a range of predominantly domestic skip wastes.

2. POTENTIAL SOURCES

Waste accepted on site will mainly originate from domestic, commercial and industrial customers and will not include single stream food waste, therefore the waste on site is not expected to be odorous. However, due to the variable nature of such wastes, there is the potential for odorous waste to contaminate loads. Further detail on the odour sources is shown in Table 2.1. An identification of the possible sources of odour, pathways taken by odour and receptors affected by odours produced on site have been displayed in Table 2.2.

The potential for odour is linked to the inspection procedure on arrival and the length of storage of wastes on site. The site will accept up to 15,000 tonnes of waste per annum. Daily tonnages will vary but on average this will be around 0-75 tonnes per day.

Table 2.1 Odour Sources

Parameter	Site Details
Source Description	Domestic, commercial & industrial skip wastes
Odorous Materials	Putrescible waste contamination
Containment / release point	General
Odour Description	Food waste
Intensity at or near the point of release (0 no detected to 6 extremely strong)	Variable due to weather conditions experienced by the site (0 to 4).
Pattern of release	Expected to peak during waste receipt, other waste activities and during certain weather conditions.
Potential for problems	Equipment failures or excessive waste inputs could result in extended holding times of accepted waste.

Table 2.2 Source-Pathway-Receptor routes

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Storage	Contamination of odorous wastes. Evaporation of odorous chemicals	All	Unpleasant odour for surrounding receptors	Maintain the integrity of the enclosure of stockpiles and skips to prevent odours from

	and subsequent atmospheric dispersion.			escaping. Maintain sufficient humidity and surface temperature in the immediate environment to reduce evaporation rates.
Unloading and loading	Contamination of odorous wastes. Disruption of odorous chemicals and subsequent atmospheric dispersion.	All	Unpleasant odour for surrounding receptors	Thorough inspection of the waste prior to unloading. Reduce drop heights to reduce the disruption of possible odorous chemicals within the waste.

3. CONTROL MEASURES

The nature of the waste types accepted at the site means that odour is unlikely to become an issue. However, specific control measures will be put into place to minimise the risk of odour becoming an issue. Implementing control measures to minimise the risk of odours arising is the key to odour management. This is done by ensuring site operations are conducted in accordance with the Environmental Management System and procedure SWP015 of the Site Working Procedures Manual.

3.1 Managing Inventory

The waste streams accepted on site that have the potential to contain odorous contaminants are displayed in Table 3.1 below. These waste streams consist of green waste, mixed domestic waste, and potential food contaminants on plastic packaging within plastic waste. The daily tonnages of each waste stream are subjective and so approximate tonnages have been given below whilst considering the other waste streams accepted on site that do not have the potential for odorous contaminants, such as scrap metal. As stated in Section 2, the approximate daily tonnages range from 0 – 75 tonnes. In the unlikely event that odorous contaminants are identified within the loads accepted on site, they will be separated from the load immediately and transferred to the quarantine area where they will be retained for a maximum of 24 hours pending removal to a suitable permitted facility. The site predominantly accepts domestic mixed skip waste with occasional loads of builder's materials, and therefore the risk of odorous materials being accepted on site is significantly low.

Odorous and potentially odorous material (any solid, liquid or gas)	Odour potential High Risk / Medium Risk / Low Risk	Approx. maximum quantity of waste stream on site at any given day (tonnes per day or litres per day)	Maximum time held on site (hours or days)	Location of identified odorous materials on site	Additional comments
Contaminants within green waste	Medium	10	24 hours	Quarantine area	Single source waste with contract in place
Contaminants within mixed domestic waste	High	10	24 hours	Quarantine area	Single source waste with contract in place

Contaminants within plastic waste	Medium	10	24 hours	Quarantine area	Single source waste with contract in place
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Odour control begins on receipt of loads with each load being inspected on arrival. Waste will be inspected on collection by the driver and on receipt to ensure that the waste meets the following criteria:

- i) EWC Code on the waste transfer note conforms to the waste inside the container.
- ii) Permit waste acceptance criteria – waste meets with the criteria of the environment permit and planning permission for example, waste accepted would be within the permissible tonnage and waste type acceptance criteria.
- iii) The waste is not odorous – waste is likely to be odorous if it has elements of putrescible waste and food residue.

Waste accepted onto the site from 3rd parties will be visually inspected upon reception to the site in order to ensure that the waste is compliant with the site's permitted waste types and EWC Code description given by the produce/holder as listed on the waste transfer description. Any wastes that do not comply with the site's permitted waste types shall be reloaded, rejected, and recorded in the rejection log.

There will not be any food waste accepted on site and waste entering the site will be mixed domestic, commercial, and industrial skip waste only. In the event that any food waste enters the site, within a mixed load, the food waste will be quarantined immediately and removed from the site within 24 hours. Quarantined material will be stored within the quarantine area as shown on Drawing Ref: 221120BSR101.

The monitoring of incoming waste will be thorough and consistent through the immediate inspection of all loads accepted onto site. Records of any identified odorous contaminants will be kept in the site office at all times, and will be available to the site staff, the Environment Agency and the Local Authority.

No hazardous waste is permitted to be accepted on site.

Deodorising equipment is made available on site which consists of a Knapsack Sprayer and stored propriety deodorising chemicals which will be deployed to deal with the odours in the intervening period. A mobile mister can also be obtained and used if necessary.

3.2 Controlling Evaporation

Reducing the rate of evaporation of odorous chemicals is a valuable control measure in limiting the risk of foul odours being produced on site. It is crucial to note that all waste processing is undertaken within the shed and all waste storage is enclosed within the shed and the skips or bays in the external yard.

Using the onsite hose to dampen and lower the temperature of waste stockpiles will reduce the water evaporation rate and prevent the release of dissolved odorous chemicals. In addition to this, the dampening of the waste from the hoses will maintain an increased humidity in the immediate environment, which further reduces evaporation rates.

3.3 Containment and Abatement

There is the potential for odour to be produced from food residue within the waste accepted on site, meaning that completely avoiding odorous air is not feasible, therefore containment methods are necessary to treat the emissions. It is most appropriate to choose containment and treatment methods together to ensure coordinated management of ventilation rates.

Keeping the containment at a local level reduces the volume of odorous air. All waste processing is undertaken within the shed and is entirely enclosed within the industrial building. All waste storage is enclosed within Unit 1 and the trailers in the external yard. The immediate removal of food residue if detected during the inspection upon arrival will reduce the exposure time of the potential odour on site. The transferal of the contaminated food residue to the quarantine area will ensure the enclosure of any potential odours and significantly reduce the risk of potential odours spreading offsite to neighbouring properties.

3.4 Transport and Dispersion

Due to the nature of waste accepted on site, the potential for offensive odour is highly unlikely. However, the site design has considered potential impacts on neighbours. The site will be sensitive to the timings of the waste processing, meaning that the site will avoid peak impacts through operating during adverse weather condition such as temperature inversions. The site will also be considerate of strong winds and monitor whether the prevailing winds are directed towards the nearest sensitive receptors to the west during waste deliveries and processing.

3.5 Actions in the Event of an Issue

Due to the nature of waste accepted on site, the potential for offensive odour is highly unlikely. However, it is crucial to consider the actions that would be undertaken in the unlikely event that odour

becomes an issue. The site will have an impermeable concrete surface, therefore making the site easy to sweep and clean in the event of an incident to ensure the risk of odour becoming an issue for nearby receptors remains significantly low.

The site predominantly accepts mixed skip waste from domestic sources, with some loads of builder's materials. The site will not accept any food waste, and therefore the risk of odour becoming an issue is significantly low. However, there are some waste streams that may have the potential to contain odorous contaminants. These waste streams include green waste, mixed domestic waste, and plastic packaging with minimal food residue within plastic waste.

The site will operate in strict accordance with the following procedures in the event of an accident, emergency and other abnormal events which may result in odour pollution:

- 1) If odorous contaminants are identified upon initial inspection prior to accepting the load on site, the entire load will be rejected.
- 2) If odorous contaminants are identified within a load on site, they will be separated from the load immediately and transferred to the quarantine area for a maximum of 24 hours pending removal to a suitable permitted facility.
- 3) If odorous contaminants cannot be separated from a load, the entire load will be transferred to the quarantine area for a maximum of 24 hours pending removal to a suitable permitted facility.
- 4) Hiring a mobile mister to dampen stockpiles in the event that odour is detected during regular monitoring of stockpiles.
- 5) Hiring a mobile mister to dampen stockpiles in the event that odour arises from stockpiles high temperatures.
- 6) Covering stockpiles with tarpaulin in the event that odour is detected during regular monitoring of stockpiles.
- 7) Covering stockpiles with tarpaulin in the event that odour arises from stockpiles being exposed to high temperatures.
- 8) Use of deodorising chemicals on stockpiles in the unlikely event odour remains an issue following the dampening and covering of stockpiles.
- 9) The concrete surface will ensure that the site can be easily hosed down and swept in accordance with a strict cleaning regime provided within Appendix 5.
- 10) In the unlikely event that odour still remains an issue after implementing the above actions, the site will cease to operate.

The above procedures will be used alongside each other, if necessary, in the event of an odour issue arising to ensure the risk of odour becoming an issue for sensitive receptors remains significantly low.

3.6 Responding to Complaints

All complaints will be recorded in a complaint register, a copy of which is attached in Appendix 2, and reported to the Site Manager, who will investigate the circumstances and ensure that the necessary corrective measures are taken. A prompt response will be made to the complaint and a record, including copies of all correspondence and telephone file notes, will be made in the complaints register.

Relevant authorities e.g. County Council and the Environment Agency will be notified by e-mail or phone call on the day that the complaint is made, and will be informed on the identity/location of the complaint, the type of odour and the details of the findings of the Bromborough Skip & Recycle Ltd management investigations as regards to the source of the odour and what corrective action has been taken.

If it is necessary to substantiate the odour, a sniff test will be taken by trained staff. In the event of any substantiated complaint, the effectiveness of the Odour Management Plan will be reviewed.

3.7 Ceasing or Reducing Operations

Due to the nature of waste accepted on site, it is highly unlikely for offensive odour to be produced, therefore, the need to cease operations is significantly reduced. However, the site will reduce operations in the event of weather conditions or a mechanical failure relating to containment in order to prevent an adverse impact on the surrounding environment and receptors.

3.8 Accident Management Plan

The odour risk assessment below will guide the action to be taken in response to any odour event. In the first instance the aim will be to remove odour causing materials from the site as soon as possible. In the interim site management shall deploy the existing odour control unit to minimise or eliminate the odour.

Where odours develop from materials already on site through degradation of the waste, the waste shall be removed from site at the earliest possible opportunity and site odour control equipment shall be deployed in the interim.

4. MONITORING AND RESPONSE

The following table details in the numerous actions that can be taken on site to control the unlikely event of odour, their triggers and who will undertake such actions. Permanent actions in place include enclosing all waste processing within the industrial building and maintaining all waste storage within the industrial building and the trailers in the external yard.

Monitoring Method	Trigger	Action	Instigated by
Meteorological	Prevailing winds blowing towards residential housing detected.	On site and off site sniff test	COTC holder, site management or suitably trained site staff.
Sniff test	Odour detection through sniff test	Checking the integrity of the inspection upon arrival for food residue. Immediate removal of contaminated food residue from loads if detected to quarantine area.	Site management
Offsite walk over survey	Odour detection complaint	Checking the integrity of the inspection upon arrival for food residue. Immediate removal of contaminated food residue from loads if detected to quarantine area.	Site management

APPENDIX 1 – SNIFF TEST FORM

Appendix 1 - Sniff Test Form

Odour report form					Date
Time of test					
Location of test e.g. street name etc					
Weather conditions (dry, rain, fog, snow etc):					
Temperature (very warm, warm, mild, cold, or degrees if known)					
Wind strength (none, light, steady, strong, gusting) Use Beaufort scale if known					
Wind direction (e.g. from NE)					
Intensity (see below)					
Duration (of test)					
Constant or intermittent in this period or persistence					
What does it smell like?					
Receptor sensitivity (see below)					
Is the source evident?					
Any other comments or observations					

Sketch a plan of where the tests were taken, the potential source(s).

Intensity 0 No odour 1 Very faint odour 2 Faint odour 3 Distinct odour	4 Strong odour 5 Very strong odour 6 Extremely strong odour Ref: German Standard VDI 3882, Part 14	Receptor sensitivity Low (e.g. footpath, road) Medium (e.g. industrial or commercial workplaces) High (e.g. housing, pub/hotel etc)
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APPENDIX 2 – ODOUR COMPLAINT REPORT FORM

Appendix 2 - Odour Complaint Report Form

Odour Complaint Report Form	
Time and date of complaint:	Name and address of complainant:
Telephone number of complainant:	

Date of odour:	
Time of odour:	
Location of odour, if not at above address:	
Weather conditions (i.e., dry, rain, fog, snow):	
Temperature (very warm, warm, mild, cold or degrees if known):	
Wind strength (none, light, steady, strong, gusting):	
Wind direction (eg from NE):	
Complainant's description of odour:	
o What does it smell like?	
o Intensity (see below):	
o Duration (time):	
o Constant or intermittent in this period:	
o Does the complainant have any other comments about the odour?	
Are there any other complaints relating to the installation, or to that location? (either previously or relating to the same exposure):	
Any other relevant information:	
Do you accept that odour likely to be from your activities?	
What was happening on site at the time the odour occurred?	
Operating conditions at time the odour occurred (eg flow rate, pressure at inlet and pressure at outlet):	
Actions taken:	
Form completed by:	Date Signed

Intensity

- | | | |
|--------------------|------------------|--------------------------|
| 0 No odour | 3 Distinct odour | 5 Very strong odour |
| 1 Very faint odour | 4 Strong odour | 6 Extremely strong odour |
| 2 Faint odour | | |

APPENDIX 3 – ODOUR DIARY

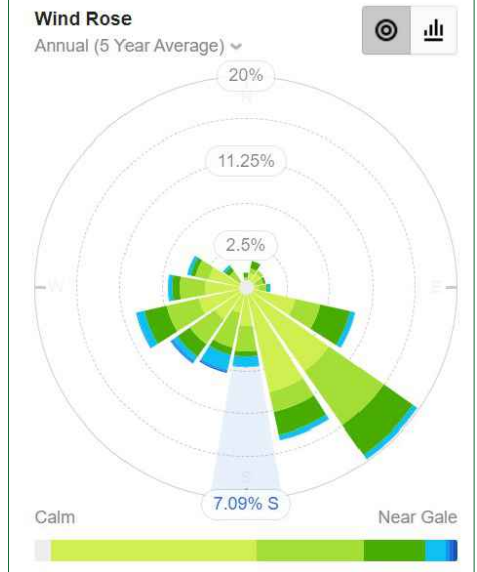
Appendix 3 - Odour Diary

Odour Diary						
Name:		Address:				
Telephone Number:						
Date of odour:						
Time of odour:						
Location of odour, if not at above address (indoors, outside):						
Weather conditions (dry, rain, fog, snow etc):						
Temperature (very warm, warm, mild, cold or degrees if known):						
Wind strength (none, light, steady, strong, gusting):						
Wind direction (eg from NE):						
What does it smell like? How unpleasant is it? Do you consider this smell offensive?						
Intensity – How strong was it? (see below 1-5):						
How long did go on for? (time):						
Was it constant or intermittent in this period:						
What do believe the source/cause to be?						
Any actions taken or other comments:						

Intensity

- | | | |
|--------------------|------------------|--------------------------|
| 0 No odour | 3 Distinct odour | 5 Very strong odour |
| 1 Very faint odour | 4 Strong odour | 6 Extremely strong odour |
| 2 Faint odour | | |

APPENDIX 4 – SENSITIVE RECEPTORS



- Residential
- Commercial / Industrial
- Road
- Mersey Estuary Sites of Special Scientific Interest
- Mersey Estuary Ramsar
- Mersey Estuary Special Protection Area

CLIENT
Bromborough Skip and Recycle Ltd

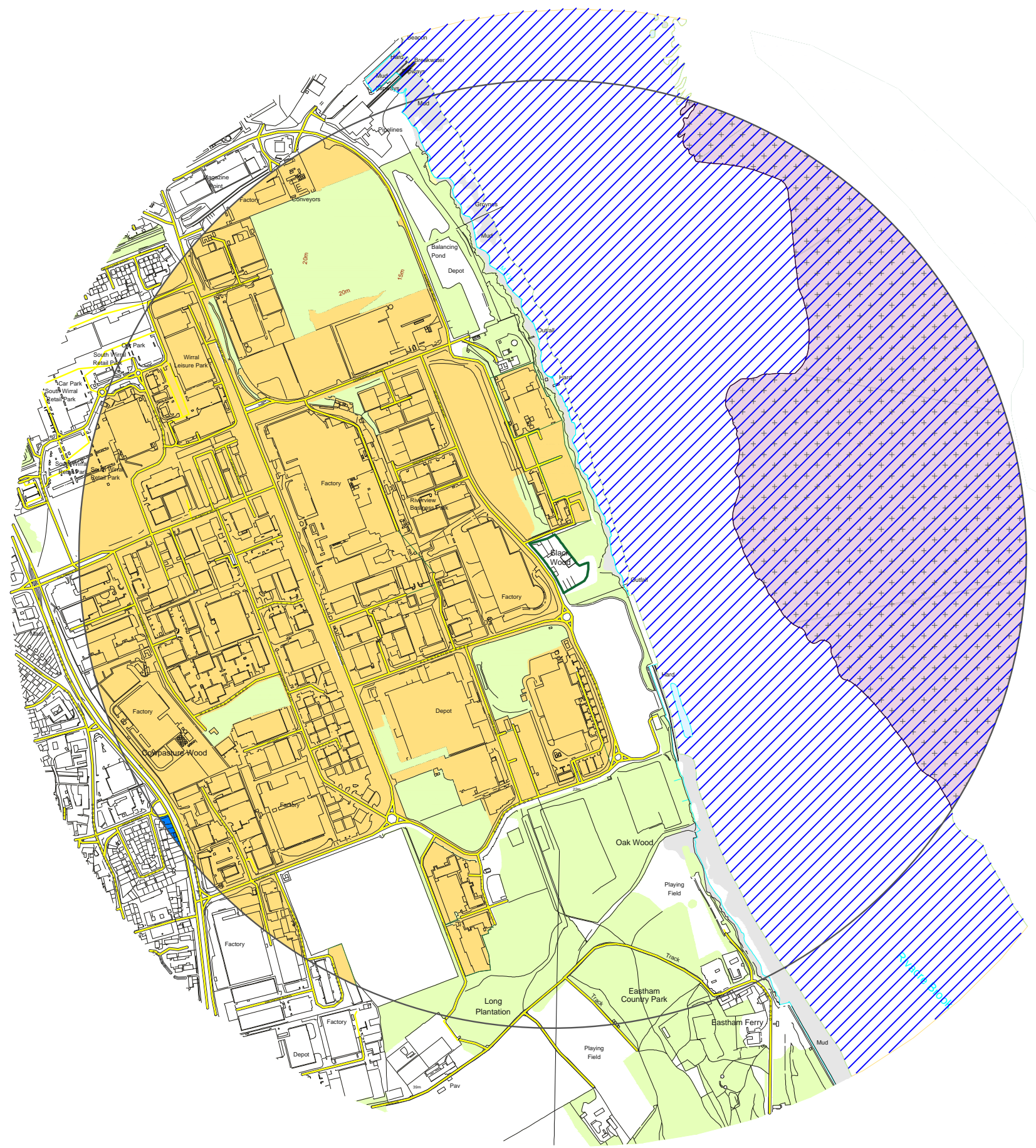
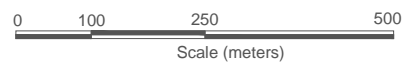
SITE
8 Riverview Road,
Bromborough
CH62 3RL

PROJECT
PERMIT APPLICATION

TITLE
KEY RECEPTOR PLAN

SCALE @A3	DATE	DRAWN BY	CHECKED BY
1:10000	Nov 2022	T Kearns	D Alcock
DRAWING NO		REVISION	
221120BSR103			

REV	DATE	DETAIL



APPENDIX 5 – CLEANING SCHEDULE

Area	Bromborough Skip & Recycling Ltd						
	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
Site Surfaces							
Access Roads							
Vehicles							
Mobile Plant							