

ENVIRONMENTAL RISK ASSESSMENT

Moss Lane, Worsley, Manchester, M28 3LY

UBU Environmental Ltd

Version:	1.0	Date:	05 September 2024		
Doc. Ref:	MOSS-3448-C	Author(s):	EG	Checked:	CP
Client No:	3448	Job No:	001		



Oaktree Environmental Ltd
Waste, Planning & Environmental Consultants



Oaktree Environmental Ltd, Lime House, 2 Road Two, Winsford, Cheshire, CW7 3QZ
Tel: 01606 558833 | Fax: 01606 861183 | E-Mail: sales@oaktree-environmental.co.uk | Web: www.oaktree-environmental.co.uk
REGISTERED IN THE UK | COMPANY NO. 4850754

Document History:

Version	Issue date	Author	Checked	Description
1.0	05/09/2024	EG	CP	Application copy

CONTENTS

DOCUMENT HISTORY:	I
CONTENTS	II
LIST OF APPENDICES:	III
1 INTRODUCTION	1
2 SITE LOCATION AND SENSITIVE RECEPTORS	3
2.1 SITE LOCATION	3
2.2 SENSITIVE RECEPTORS	3
3 ENVIRONMENTAL RISK ASSESSMENT MODEL	5
3.1 FUNDAMENTAL CONSIDERATIONS	5
3.2 PATHWAY	5
3.3 CONSEQUENCES	5
3.4 EFFECTS OF CONSEQUENCES	6
3.5 RISK ESTIMATION AND EVALUATION (PROBABILITY/FREQUENCY OF OCCURRING HAZARD)	6
3.6 RISK ASSESSMENT OUTCOME (COMBINATION OF PROBABILITY & CONSEQUENCE)	6
4 RISK ASSESSMENT TABLE	8

List of Appendices:

Appendix I - Risk Assessment Table

Appendix II - Drawings

Drawing No. MOSS/3448/03 – Site Layout Plan

Drawing No. MOSS/3448/04 – Sensitive Receptors Plan

1 Introduction

- 1.1.1 This Environmental Risk Assessment (ERA) has been prepared by Oaktree Environmental Ltd on behalf of UBU Environmental Ltd (the Operator) to support an Environmental Permit variation application at Moss Lane, Worsley, Manchester, M28 3LY.
- 1.1.2 Current site operations comprise of the physical treatment of non-hazardous construction and demolition waste and street cleaning residues via dewatering, settlement and physical sorting or separation, activity ref. 1.16.12 in accordance with the Environment Agency Charging Scheme.
- 1.1.3 The Operator is proposing to vary the permit with the following:
- Include blending, crushing and screening in the list of activities authorised under the physical treatment of non-hazardous waste activity ref. 1.16.12.
 - Add new physical and chemical treatment of waste activity ref. 1.16.14 and the following treatment activities
 - Washing
 - Centrifuging
 - De-watering
 - The throughput of the physical and chemical treatment activity (1.16.14) will be less than 75,000 tonnes per annum.
 - The total combined throughput will be 185,000 tonnes per annum for the two activities combined.
 - Amend the description of EWC code 17 09 04 in the physical treatment activity (1.16.12) to “Mixed C&D waste arising only from 17 01 and 17 05 codes” as no combustible waste is accepted at the site.
 - Include additional waste types and amend the description of various waste types already permitted to be accepted (full details can be found in the Non-Technical Summary).

- 1.1.4 This ERA considers the potential risks associated with the proposed changes (listed in point 1.1.3 above) only. This ERA does not aim to provide detailed Health and Safety risk assessments as required separately through the necessary legislation.
- 1.1.5 All site staff should be provided with a copy of this ERA and be aware of where it is located on site.
- 1.1.6 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.

2 Site Location and Sensitive Receptors

2.1 Site Location

- 2.1.1 The site is located at Moss Lane, Worsley, Manchester, M28 3LY, national Grid Reference (NGR) SD 74270 03644 and is accessed via Moss Lane.
- 2.1.2 Land immediately surrounding the vicinity of the site includes the wider Linnyshaw Industrial Estate to the north and residential dwellings to the south.

2.2 Sensitive Receptors

- 2.2.1 Sensitive receptors within 1km of the site are illustrated on Drawing No. MOSS/3448/03, see Appendix II.
- 2.2.2 Table 2.1 shows the approximate distance and orientation of sensitive receptors from the site.

Table 2.1 Sensitive Receptors

No.	Receptor	Receptor Type	Direction from Site	Approx distance from the site boundary to the receptor boundary (m)
1	Linnyslaw Industrial Estate	Industrial / Commercial	North / East	0
2	Residential dwellings (Moss Lane)	Residential	South	10
3	Blackleach Reservoir / Blackleach Country Park	Surface water feature / Nature reserve	West	160
4	St Pauls C of E Primary School	School	Southwest	325
5	M61	Infrastructure	North	390
6	Lyon's Industrial Estate	Industrial / Commercial	North	620
7	Solar Power Farm	Utility / infrastructure	Northeast	625
8	St Paul's CE Primary School	School	Southeast	660
9	Residential Dwellings (Mossfield Road)	Residential	Northeast	670
10	Christ the King RC Primary School	School	South	680
11	St Mary's Park	Habitat	West	790

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	Negligible
	3	Medium	Low	Negligible	N/A
	4	Low	Negligible	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 negligible, 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	Release of dust via one of the following channels: - Waste delivery vehicles depositing and collecting potentially dusty waste during dry and windy weather conditions - Storage of potentially dusty/waste material externally - Crushing of inert wastes - Screening of inert wastes	Air	Local human population, including industrial units, neighboring businesses, and residential dwellings and surface water features, specifically: - Site workers and visitors - Residential dwellings (Moss Lane) - Linnyshaw Industrial Estate	Harm to human health – respiratory irritation and illness A, B, D, E	Mo	4	Low	No dust will be produced from the washing activities as this is a wet process. Potentially dusty waste that has been stockpiled will be dampened regularly in dry and windy conditions. This reduces the amount of dust which could be suspended and therefore the amount of dust that has the potential to reach nearby receptors. Strict waste acceptance procedures are in place to ensure that loads comprising mainly dust, powders or loose fibres are not accepted on site. All vehicles delivering and exporting waste will be sheeted. Vehicles will be visually inspected before upon arrival and exit to check that loads are safe and that no mud is carried through the site which could spill off from wheels or bodies of HGVs. Visual inspections of the vehicle running surfaces at the site will also be carried out daily and staff will report any problems with mud or debris on the site roads immediately to the site manager. Drop heights will be minimized as far as reasonably practicable. Adjacent to the area of site where crushing operations are proposed to take place is a 5m high concrete wall for noise attenuation which will also act as a barrier from wind transporting dust off site. Waste stored in bays will be stored with a minimum freeboard of 1m to prevent the stockpile of material becoming wind whipped and escaping the confines of the bay. Waste stored in freestanding stockpiles will not be stockpiled higher than the perimeter boundary. Site operatives will continuously monitor dust emissions whilst the site is in operation and will report back to the site supervisor for advice if required. The site supervisor will make a formal visual inspection of dust emissions at least three times per day. Results of monitoring will be entered into the site diary/record forms. Further methods of dust management are included in the Dust Management Plan.

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Odour	Stored biodegradable waste on 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 transport then inhalation	Local human population, including industrial units, neighboring businesses, and residential dwellings, specifically: - Site workers and visitors - Residential dwellings (Moss Lane) - Linnyshaw Industrial Estate	A, D	Mi to Mo	4	Low	The additional waste codes to be added to the permit are not putrescible, as such it is considered there is no additional risk to odour. Waste imported onto the site will be checked to ensure that it does not contain malodorous materials. This is controlled by strict waste acceptance procedures. If malodorous waste is found on site, it will be rejected in accordance with the waste rejection procedure or quarantined and removed within 24 hours.
Waste, litter and mud on local roads	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	Vehicles entering and leaving the site Air transport (windblown)	Local human population and neighboring businesses within close vicinity of the site, including: - Site workers and visitors - Moss Lane - Linnyshaw Industrial Estate	A to C E,F	Mi to Mo	4	Low	Incoming waste is handpicked to remove waste types that may generate litter. Litter that has been handpicked from the waste will be securely stored and disposed of appropriately. Given the nature of waste accepted at the site, the risk of litter escaping the site boundary is deemed negligible. The greatest risk of litter would be during windy conditions. The site will be operated to a lesser degree during these conditions giving due regard to the potential effects of windblown litter. Site inspections including litter checks will take place on a regular basis to identify and remove any litter from the site. The Operators wider business consists of deploying road sweepers, in the event that mud or litter is tracked on local roads one of the Operators own road sweeper vehicles can be deployed.

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
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 Operating mechanical treatment plants in external areas of the site i.e. crusher	Noise through the air or vibration through the ground	As above	A, D	Mo	3	Low	A 5mph speed limit is enforced on site. All plant and equipment (including the proposed wash plant) will be maintained in accordance with the manufacturers' recommendations to minimise noise generation. Plant and equipment (including the proposed wash plant) will only be operated when necessary. Operational hours for plant and equipment are restricted to those outlined in the Noise Management Plan. The proposed crushing / screening area of the site is surrounded by a 5m concrete wall which will offer acoustic screening and noise attenuation. The requirements of a Noise Management Plan are implemented on site. Noise monitoring will be undertaken on site to ensure limits outlined in the Noise Impact Assessment are not exceeded.
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	Local human population, including industrial units, neighboring businesses, and residential dwellings, specifically: - Site workers and visitors - Residential dwellings (Moss Lane) - Linnyslaw Industrial Estate	A to C	Mi to Mo	4	Negligible	It is considered the additional waste codes to be included in the permit will not attract any further vermin than waste types already accepted. Washing activities will disturb the waste and deter stockpiles from becoming breeding and or nesting grounds for vermin. Strict waste acceptance procedures at the site reduce the likelihood of non-conforming wastes being accepted. All maintenance/housekeeping are listed on daily record/inspection forms. The inspection form will be completed by a person who is familiar with the requirements of the EMS and EP for the site. All details of defects, problems and repairs carried out will be recorded on the form on the day that each event occurs. Detailed comments may also be recorded in a site diary. All repairs will be carried out as soon as practically possible. Pest controller called in the event of pests being present at the site or complaints received from receptors.

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Fire/ smoke / particulates	Plant failure Unauthorised waste causing reaction Arson Staff negligence	Air transport of smoke	As above	A to F	Mi to S	3	Low	The proposed additional waste types to be accepted at the site are not considered to be combustible. Strict waste acceptance procedures at the site reduce the likelihood of non-conforming wastes being accepted. All maintenance/housekeeping are listed on daily record/inspection forms. The inspection form will be completed by a person who is familiar with the requirements of the EMS and EP for the site. All details of defects, problems and repairs carried out will be recorded on the form on the day that each event occurs. Detailed comments may also be recorded in a site diary. All repairs will be carried out as soon as practically possible. There is no burning of waste at the site. All staff are fully trained in recognition of early fire signs and trained to prevent negligence. Fire-fighting equipment on site including water and extinguishers are available on site
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	Ensure all free-standing waste storage areas are in the correct locations and access areas are kept clear as shown on Drawing No. MOSS/3448/03. An accident logbook is kept in the site office so all new and existing staff members can review previous accidents. Appropriate signage throughout the site. All staff have radios 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 are restricted to 5mph.

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 Water through ground from mobile dust suppression and rainwater	Ground	See dust receptors	E, F	Mi to S	3	Low	The site has impermeable concrete surfacing with sealed drainage which is checked by site operatives regularly to ensure it is in good condition. Any defects or faults will be reported to the site manager. Any wastes which are liable to give rise to contamination will be removed from site or placed into the quarantine skip/area.
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 Overtured vehicle plant/plant failure Reaction between stored wastes	Ground - direct contact, ingestion Inhalation (of volatiles)	See dust receptors	A, B, D, E, F	Mi to S	3	Low	There is very little potential for hydrocarbons to be released from site given the waste types accepted and stored on site. Fuel storage procedure shown in Section 2.7 of the EMS and stored in double bunded tanks as shown on Drawing No. MOSS/3448/03. Where plant is operated, spill kits will be available to ensure that fuel spillages are cleared. All site surfaces will be inspected daily for the presence of spillage when the site is in operation. Debris will be swept as required and placed in a skip for further processing on site and sent to a suitably permitted site. Impermeable pad with sealed drainage system will reduce the impacts of any spills.

Appendix II

SITE LAYOUT PLAN & RECEPTOR PLAN



NOTES

Drawing for indication only. Reproduced with the permission of the controller of HMSO. Crown copyright license no. 100022432. This drawing is copyright and property of Oaktree Environmental Ltd.

REVISION HISTORY

Rev:	Date:	Int:	Description:
-	05.09.24	JH/CP	Initial drawing

KEY:

Permit boundary

Impermeable concrete surfaces

Freely draining hardstanding surfaces

Waste storage area

Non-waste storage area

Gully

Manhole

Inspection cover

Drainage flow direction

Silt trap

Pit

Interceptor

Surface water fall direction

Surface drainage

Foul drainage

ACO drain

Storage bays (height/size vary)

Buildings

Washplant	
Number	Description
①	Oversize Aggregate
②	Trommel
③	Conveyor
④	Recovered metals
⑤	Logwash
⑥	Aggregates
⑦	Pipe bedding
⑧	Sand
⑨	Sand
⑩	Flocculant added
⑪	Centrifuge
⑫	Filter cake
⑬	Effluent tank

TITLE:

SITE LAYOUT PLAN

CLIENT:

UBU Environmental Ltd

PROJECT/SITE:

Moss Lane, Worsley, Manchester M28 3LY

SCALE @ A0:

1:250

CLIENT NO:

3448

JOB NO:

001

DRAWING NO:

MOSS-3448-03

REV:

-

STATUS:

Issued

DATE:

05.09.24

DRAWN:

JH/CP

CHECKED:

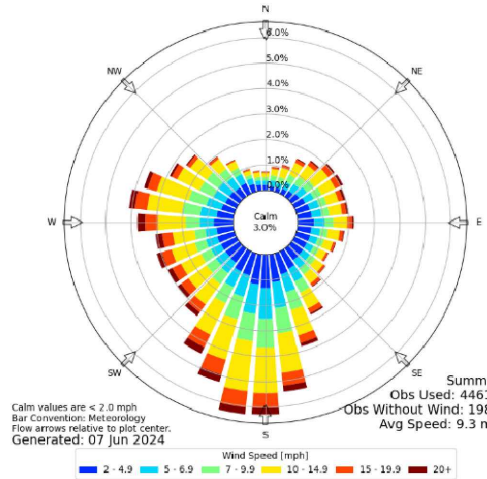
-



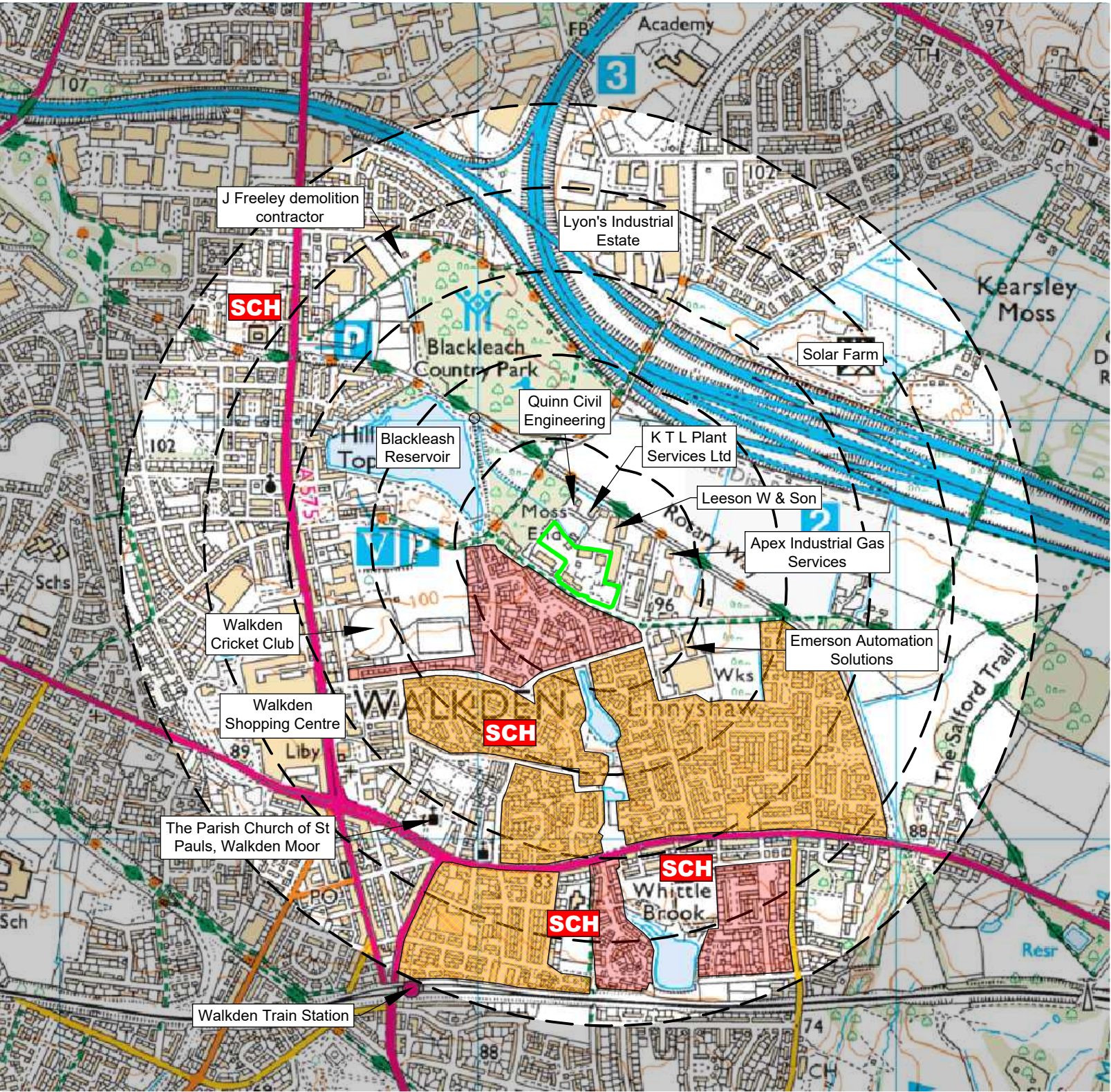
KEY:

- Permit boundary
- Main River
- Surface water body (river / stream / pond / pool / lake)
- 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
- SCH School
- Woodland areas
- Protected sites (Ramsar, SSSI, SPA, SAC)
- Nature reserves

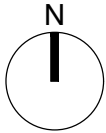
Windrose Plot for [EGCC] Manchester
Obs Between: 01 Jan 1973 12:00 AM - 07 Jun 2024 08:50 AM Europe/London



Compass Wind Rose for Manchester
International Airport (EGCC) Period 1972-2018
- source: Iowa State University



Scale Bar (1:12,500)
0 100 200 300 400 500m



NOTES
Drawing for indication only. Reproduced with the permission of the controller of H.M.S.O. Crown copyright licence No. 100022432. This drawing is copyright and property of Oaktree Environmental Ltd.

REVISION HISTORY

Rev:	Date:	Init:	Description:
-	05.09.24	EG	Initial drawing

TITLE:
RECEPTOR PLAN

CLIENT:
UBU Environmental Ltd

PROJECT/SITE:
Moss Lane, Worsley, Manchester, M28 3LY

SCALE @ A4: 1:12,500
CLIENT NO: 3448
JOB NO: 001

DRAWING NO: MOSS-3448-04
REV: -
STATUS: Issued

DATE: 05.09.24
DRAWN: EG
CHECKED: CP

