

DUST MANAGEMENT PLAN

Unit 13 Rawreth Industrial Estate, Rawreth Lane, Rayleigh, Essex, SS6 9RL

T J Cottis Transport Limited

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1 Introduction

1.1 Site history / background

1.1.1 Oaktree Environmental Ltd have been instructed by T J Cottis Transport Limited to prepare a Dust Management Plan (DMP) for their site situated at Unit 13 Rawreth Industrial Estate, Rawreth Lane, Rayleigh, Essex, SS6 9RL.

1.1.2 All references to the site in this Dust Management Plan (DMP) shall mean the permitted boundary extracted from the EP.

1.1.3 This DMP will allow T J Cottis Transport Limited to implement an action plan should the site operatives detect the presence of excessive airborne dust escaping beyond the site boundary, receive complaints from local business or residents and should the EA suspect dust emissions from the site during an inspection.

1.2 Site location

1.2.1 The site is located at Unit 13 Rawreth Industrial Estate, Rawreth Lane, Rayleigh, Essex, SS6 9RL.

1.2.2 **AQMA** – The site is not located within an AQMA area.

1.3 Facility overview

1.3.1 The site is currently operated under a bespoke permit (A11 activity) to accept non-hazardous wastes. The non-hazardous wastes accepted at the site will undergo further treatment by way of screening to further define the waste.

1.3.2 The main issue of dust could arise from, but not limited to the following:

- i) Waste reception and tipping areas;
- ii) Manoeuvring of vehicles tracking dust
- iii) Operation of mechanical treatment plant

iv) Storage and loading areas comprising potentially 'dusty' wastes.

1.3.3 In addition to this document, the site will also operate in accordance with a number of site-specific documents; namely an Environmental Management System (EMS).

1.3.4 All relevant operational staff will be suitably trained to ensure they understand the purpose of this DMP and understand what actions need to be taken in event of a complaint. Training will be taken by the site manager, technically competent manager/s (TCM/s) or third-party Dust / Air Monitoring Consultant.

2 Sensitive Receptors

2.1 Receptor Plan

2.1.1 A sensitive receptors plan (SRP) has been produced to accompany this DMP. The receptors highlighted are those which are considered to be at risk by dust and dust particles generated by the site.

2.1.2 The wind rose used has been taken from London City Airport which is the closest available data. The topography of the site is flat and similar to that at the airport; so given its proximity and topography it is deemed that this wind rose diagram is the most suitable for the site.

2.2 List of receptors

2.2.1 The receptors listed from the SRP are also shown in the table below with approximate distances to these properties.

Table A – Distances to Selected, Representative Sensitive Locations

Boundary	Receptor	Approximate distance from site boundary (m)
East / north east / south east / south	Residential dwellings off Victoria Avenue and beyond	20<

2.3 Other dust and emission sources

2.3.1 Other dust/particulate emitting operators are shown on Drawing No. 3110-001-04 and tabulated below in the table below.

Table B – Other Dust/Particulate Emitting Operators

Company	Address	Type of Business	Approximate distance from site boundary (m)
RRR Recycling Solutions Ltd	Rawreth Industrial Estate, SS6 9RL	Waste recycling	Adjacent / South
Franklin Waste Transfer Station	Rawreth Industrial Estate, SS6 9RL	Waste recycling	150m / North
Select Scaffolding	Rawreth Industrial Estate, SS6 9RL	Commercial	45m / West
Surrounding Industrial/Commercial Units	Rawreth Industrial Estate, SS6 9RL	Industrial/Commercial	Surrounding

3 Site Operations

3.1 Waste deliveries/removals

3.1.1 Waste will be delivered to the site via Rawreth Lane. Upon arrival, an operative will direct the driver to the relevant area on site for storage or processing.

3.1.2 Waste will arrive and depart at/from the site primarily consisting of T J Cottis Transport Limited's own vehicles/contracts and all loads are either sheeted or contained upon delivery and removal.

3.1.3 Any third-party deliveries to the site will be advised that any potentially dusty loads be suitably sheeted. If the customer has the capability to wet down potentially dusty loads prior to coming to the site, they will be asked to do this. If a customer is unable to place a dust sheet on a vehicle or wet a load they will be prohibited from loading/unloading until either the load is wetted down, or suitable containment has been provided. No loads will be tipped at the site until they have been wetted down.

3.1.4 Following initial inspection of the load, if any loads are found to be containing high levels of powders, it will be rejected in accordance with the site's rejected waste procedure.

3.2 Site infrastructure

3.2.1 The site infrastructure is clearly detailed on Drawing No. 3110-001-03 which is shown in Appendix I of this DMP. The drawing illustrates the following areas on site:

- i) Site surfacing
- ii) Location of buildings
- iii) Reception and storage areas of waste
- iv) Reception and storage areas for virgin aggregates/materials
- v) Location of fuel storage area (if applicable)

3.3 Wastes with dust potential

3.3.1 The following common waste which will be present on the site have the potential to create dust will be:

Table C – EWC Codes/descriptions with dust potential

EWC Code	Description
01 04 08	waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	waste sand and clays
17 01 07	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
17 05 04	soil and stones other than those mentioned in 17 05 03
17 08 02	gypsum-based construction materials other than those mentioned in 17 08 01
17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
19 12 09	minerals (for example sands, stones)
19 12 12	treated bottom ash including IBA and slag other than that containing dangerous substances only
20 01 41	wastes from chimney sweeping
20 02 02	soil and stones
20 03 03	street-cleaning residues

3.3.2 The wastes listed above are the waste types that are accepted at the site, and also deemed to be the wastes that have the potential to generate dust. The site may eventually accept other wastes listed in the permit but currently the site is only accepting the above.

3.3.3 Dusty wastes are classified as wastes which have the potential to generate dust. There is no trigger for these wastes as all wastes accepted at the site have dust potential and therefore each waste is classified as a 'dusty waste'; all wastes are handled, treated and stored in line with the control measures and procedures detailed throughout this DEMP.

3.4 Overview of site operations

3.4.1 Once the wastes have been accepted at the site the load will be separated into the appropriate fractions. Loads which are known to be non-hazardous will be accepted at the site and will be directly loaded into the feed hopper of a mobile screen. The material is discharged via conveyor directly into a stockpile which will then be transferred to the appropriate storage area at the site. At present, the site will not use a picking line. Conveyors are not covered as the site has suitable alternative suppression measures in place which are detailed in this DEMP.

- 3.4.2 Once materials have been put through the treatment process then are either directly loaded into a vehicle for export off site or securely stored in the storage bays.
- 3.4.3 All wastes stored within bays will be stored to create a >0.5m freeboard. During high winds (>30mph) stockpile heights are reduced further to create a larger freeboard.
- 3.4.4 Continuous visual monitoring will be undertaken by site staff to ensure that stockpile heights are compliant and that freeboards are retained.

3.5 Processed waste types/product

- 3.5.1 Once waste has been subject to screening, it will consist of the following common EWC codes or product which all have the potential to cause dust:
- i) 19 12 09 - Minerals
 - ii) 19 12 12 - Mechanically processed soil
 - iii) 19 12 12 - Aggregates
 - iv) 17 05 04 - Soils & stones
 - v) 20 02 02 - Soils & stones
 - vi) The various products i.e. 6f2, 6F5, Type 1, recycled ballast, etc.

3.6 Mobile plant and equipment

- 3.6.1 All mobile and fixed plant on site including vehicles in the fleet are subject to annual manufacturer maintenance to ensure proper working order in the form of service contracts.
- 3.6.2 Site management will undertake or delegate additional preventative maintenance checks on a more frequent basis i.e. daily, before, during and 1 hour at the end of each working day using a checklist similar to that in Appendix II to ensure the following:
- Machinery is mechanically sound for use and no presence of black fumes or trailing liquids visible prior to use or following shutoff of plant/equipment.
 - All plant engines and/or generators will be powered-down and completely shut off prior to cessation of operations on any given day.

- Plant which is not in use for any extended period is stored at least 6 metres from waste.
- All plant and equipment vehicles are fitted with fire extinguishers in the cab. Rubber strips are not considered appropriate as they are usually removed via uneven and bumpy ground.
- Dust from processing operations on site can settle throughout the working day onto processing plant, plant exhausts and engine parts so a fire-watch will be implemented after cessation of works and equipment powered down for 1 hour each day to remove any dust/fluff using brushes, hoses etc... Any build of dust/fluff will be removed from the equipment and deposited into a container to await removal from site and site management informed.

3.6.3 A 'no-idling' policy is in place which ensures that engines are switched off when vehicles or plant are not in use. This policy will ensure that tail pipe emissions are significantly reduced.

4 Dust Management & Control Measures

4.1 Responsibility for implementation of the DMP

4.1.1 The site manager and TCM (site management) will be responsible for the implementation of the DMP. Deputy site managers and senior plant operatives will also be identified in order to support the site manager. Full job roles at the site are clearly demonstrated in the operator's Environmental Management System.

4.1.2 Site management will ensure the DMP is reviewed annually or sooner in the event of complaints/dust issues; whichever is the soonest, with any amendments or alterations put in place as soon as reasonably possible.

4.1.3 The above staff with the aid of Oaktree Environmental Ltd (if required) will be responsible in providing training to relevant operational staff to ensure they are deemed competent and understand the contents of this DMP. Staff will undergo refresher training every 12 months, or in the event of a dust complaint / issue, or prior to the implementation operational changes. If deemed necessary, a suitable Dust/Air Monitoring Consultant may be contacted to train staff regarding third-party monitoring i.e. Ambient Air Monitoring.

4.2 Sources of fugitive dust/ emissions

4.2.1 The main dust/emission sources which arise from site are detailed in the following table below:

Table D – Dust emission source table

Source/Plan Ref	Description
Reception Area	The main tipping area or waste reception area
Loading of waste into mechanical plant	Loading waste into the screener
Various sources	Output and storage of waste arising from treatment
Various sources	Vehicles accessing/aggressing the site tracking dust on to or off the site
Various sources	Dust being blown around from site surfaces or dusty wastes not contained
Various sources (sorted waste bays)	Loading waste materials back on to vehicles for export from site
Various sources	Particulate emissions from the exhaust of vehicles/plant/machinery on site (NO ₂).

4.3 Control Measures (staff training/daily inspections)

- 4.3.1 Good housekeeping and site practices are vital to ensure that the impacts from fugitive dust and debris impacts are controlled. The site undertakes regular inspections throughout the day for the presence of dust/debris with corrective actions taking place upon discovery i.e. wetting down stockpiles/surfaces, using a road sweeper and reducing stockpile heights. Operational staff are suitably trained in procedures to keep the levels of dust /debris to a minimum including prevention and mitigation. The visual inspections will be once-a-day minimum and more frequent during dry/windy/warm weather conditions (i.e. morning, afternoon and evening). The site supervisor will also make a formal visual inspection of dust emissions at least three times per day and record the results of monitoring in the site diary/record forms. Inspection points may vary on site so are not included in this DMP.
- 4.3.2 The areas listed in the table above (i.e. where dusts arise or build up) will be continuously monitored throughout the working day and cleaned on a daily basis; paying special attention to the machines where dust is more likely to build up.
- 4.3.3 Dust from processing/treatment operations on site can settle at the end of the shift / working day so an end of day inspection of plant/equipment/machinery will be implemented after cessation of works and any build-up of dust/fluff will be removed using on-site hoses and rags and deposited into a wheelie bin and comments noted in the daily inspection sheet.
- 4.3.4 The machinery used at the site are mobile, and at the end of each working day they are manoeuvred to an alternative area of the site; this allows any areas that dust has accumulated beneath to undergo a rigorous clean using the same methods as above.
- 4.3.5 The operator will avoid fugitive dust emissions by committing to the following housekeeping (inclusive of frequency):

1. Maintain a clean, well-organised site (Continuous)
2. Use of suppression to dampen down wastes (Daily)
3. Jet spray and disinfect storage bays when emptied (Monthly)
4. Clean equipment that has been in contact with dust generating materials (Daily)
5. Carry out a deep clean of the reception area and other external areas once a quarter and record this in the site diary (Quarterly)
6. Site surfaces dampened to prevent adsorption of dust producing residues. (Daily)

4.4 Control measures (boundary/containment)

4.4.1 **Waste reception and storage areas** – The waste reception/tipping area and storage locations are either contained by perimeter walls or situated within bays (walled) or within a building and in dedicated stockpiles. The walls are considered to act as wind barriers and are therefore considered a suitable measure to reduce the potential for dust escaping beyond the site. Dusty wastes (defined as a waste which has the potential to generate dust) stored in the bays will be stored 0.5m below the height of tallest concrete/perimeter walls and will be monitored as part of the visual inspections.

4.4.2 **Site Perimeter** – The site perimeter comprises the following and is shown on Drawing No. 3110-001-03:

- 3.9m high steel sheet panels
- 3m high sleeper wall
- 4m high concrete walls/sleeper walls with 1.9m micro dust netting above
- Site Buildings

4.4.3 It is also worth noting that the screening activities and operations will be undertaken within the onsite building as detailed on Drawing No. 3110-001-03, the site also has several external waste storage areas which typically benefit from concrete walls and dust netting as detailed on Drawing No. 3110-001-03. The control measures detailed throughout this section will ensure potential dust is controlled at the site.

4.4.4 As seen on the wind rose diagram on Drawing No. 3110-001-04 the prevailing winds are predominantly from the south-west. The aforementioned walls (with dust netting above) along the part of western perimeter and entire southern perimeter (*covering the entire south-western corner*); and the building along with 3m high steel walls along the northern

perimeter will provide sufficient screening from the prevailing winds by acting as wind barriers to reduce wind whipping which will prevent dust from escaping beyond the site boundary.

4.4.5 During times of high winds (>30mph) the stockpiles on site will be further reduced in height to a 1.0m freeboard below the height of the perimeter walls (with dust netting). The stockpiles will be further dampened down using the onsite suppression systems to ensure potential dust doesn't escape beyond the boundary.

4.4.6 As previously stated, the boundaries will prevent wind-whipping which ensures that dust does not escape from the site. The site also has sufficient suppression/mitigation measures in place which are detailed in this section to ensure that dust is not generated at or beyond the site.

4.5 Control Measures – site surfaces and vehicle movements

4.5.1 The site surface comprises an impermeable concrete surface. The extent of the concrete surface and drainage is detailed on Drawing No. 3110-001-03. The control measures implemented by site management to minimise the risk of dust and debris emissions from dusty site surfaces and vehicle movements include:

- A permanent water supply in the form of a sprinklers and hosepipes will be made available on site during dry weather conditions to ensure that the dust suppression systems can function effectively.
- All site surfaces used for the tracking and running of vehicles and/or plant and all stockpiles of wastes which have the potential to be dust-forming are inspected morning and pre-end of shift, six days per week to remove any build-up of debris.
- The site also has access to a shovel and brushes in order to clean the site surface on a daily basis (end of each day). The site and surrounding roads will be cleaned using a sweeper (hired-in weekly), shovel (daily) where it is evident that mud/dust have been carried onto the roads (particularly during dry/windy conditions).

- Vehicle speed on site is restricted to 5 miles per hour. Signs are erected at relevant areas of the site, including the main access gates, to advise drivers of the speed limit. This will reduce the re-suspension of dust and particulate matter.
- Exiting vehicles will leave the site and will avoid all areas where wastes are stored or stockpiled. All vehicles will be checked before they leave the site to ensure no mud/dust can stretch beyond the site access. All incoming/outgoing vehicle loads will be sheeted.
- Any mud/dust deposited onto the public highways will be treated as an emergency and cleaned by operatives or by way of a road sweeper which would be hired-in within 1 hour of the supplier being contacted.
- Any dust/fluff cleared from mobile plant or other areas where dust/fluff could idle, the material will be deposited into one of various mobile wheelie bins which are located in several areas which do not restrict vehicle movements.

4.5.2 The site surfaces will be swept and cleared (daily) at the end of each day using the onsite shovel and brushes. This ensures that the site surface and haul road are cleared immediately to prevent dust and mud being carried onto the surrounding highways. In the unlikely event that mud has been tracked off site onto the surrounding highway, it will be treated as an emergency and a road sweeper will be hired-in immediately (within 1 hour).

4.6 Control Measures – site suppression

4.6.1 **Hosepipes/vehicle & wheel cleaning**– There are hoses on site which can be attached to mains water; these can be utilised to dampen down surfaces and stockpiles; these can also be used to wash down vehicles prior to egressing from the site. These will be stored in the site office when not in use.

4.6.2 Before exiting the site, all vehicles will be stopped and visually inspected by trained staff to reduce the risk of dust/mud/debris being tracked off-site. If the member of staff inspecting the vehicle is satisfied, the vehicle is suitable to egress and will be directed to the exit. If the vehicle is not suitable to egress, the staff member will instruct site operatives to use the onsite hosepipes to wash down the wheels and bodies of vehicles. Following this, a final inspection will be carried out by the trained staff member before any vehicle can leave the

site. If the vehicle still contains traces of mud and debris the process will be repeated until the vehicle is clear and the potential of mud being tracked onto roads is eliminated.

4.6.3 **Sprinkler System** – The site benefits from a high-level sprinkler system on the perimeter which provides coverage to all external yard areas. This system ensures that stockpiles are controlled with moisture to prevent the materials becoming friable and therefore reduces potential dust levels at the site.

4.6.4 The sprinkler system will locally suppress dust at the site and provide full coverage of onsite stockpiles by spraying/dampening piles to reduce potential dust levels.

4.6.5 **Treatment Plant Suppression** – All waste loaded into the mechanical treatment plant will pre-wetted / sprayed using the sprinklers before they are treated. The treatment plants themselves i.e. screener also benefit from feed sprays bars which are utilised when the plant is in use.

4.6.6 The water for suppression is taken from mains water and don't require the use of a pump.

4.6.7 Site management will be responsible for ensuring that all suppression techniques mentioned above are used appropriately and effectively to ensure potential dust levels are being reduced.

4.6.8 All site suppression, prevention and mitigation techniques are used continuously throughout the day as standard practice with exception of a road sweeper which is triggered and hired-in when dust and mud escapes beyond the site boundary onto surrounding highways.

4.7 **Control measures – water supply**

4.7.1 A permanent water supply will be made available on site during all weather conditions to ensure that the dust suppression can function effectively. All external water pipes will be lagged to prevent frost damage during winter months and the operator will set up a notification alert system with the Met Office in the event of a drought being imminent. This

will enable the operator to source water in the short and long term and store in tanks prior to a potential water ban.

4.7.2 The supply and drainage of the water is provided from the sewerage undertaker who can be contacted in the event of low water pressure to ensure the issue is rectified so suppression techniques are not compromised.

4.8 Control Measures – storage/handling of waste

4.8.1 The control measures implemented by site management to minimise the risk of dust and debris emissions from the continuing storage of wastes and the loading/unloading of these include:

- Stockpiles of dusty waste will be kept to 0.5metres below the site perimeter or containment structure (whichever is highest) which is considered appropriate for this type of facility given the nature surrounding receptors.
- If required, stockpiles will be sprayed with water during periods of dry/windy weather to prevent excessive drying and dust formation.
- Drop heights will be kept to a minimum (i.e. 1 – 2m) to prevent dust emissions where adjustment permits.
- As standard, the removal of material from stockpiles will be carried out from the most sheltered location adjacent to the containment walls or on the lee-side of free-standing stockpiles. Stockpiles will be pre-wetted and sprayed during loading operations.
- For potentially dusty wastes, a suitable freeboard of 0.5m (i.e. area between the crown of the stored waste and the top of the perimeter containment structure) will be observed to prevent the waste exceeding the height of the containment structure and to minimise wind-whipping of these materials.

4.9 Control measures – vehicle movements and mobile plant

4.9.1 All HGVs and plant have the latest Euro 6 engines and are serviced by main agents under contract to ensure any particulate emission impact is reduced to an absolute minimum.

4.9.2 As discussed in this DEMP, a no idling policy is in place which ensures that engines are switched off when vehicles or plant are not in use. This policy will ensure that tail pipe emissions are significantly reduced.

4.9.3 The site will follow the first in first out principle to reduce additional movements. In summary, waste will be tipped from the HGV into waste reception areas, the oldest material will be extracted from the rear of the pile and scooped into the mobile processing plant and the same HGV will collect the processed material and remove off site. It is unlikely that vehicles will access/egress the site unladen.

4.10 Control measures - Loading and unloading vehicles

4.10.1 The operator of the loading plant will direct vehicles to a position and location which reduces wind whipping of loaded material i.e. the lee side of the loading plant. Should the loading and unloading be carried out during periods of dry or windy weather or if the material is considered finer/dusty material, stockpiles will be further dampened down prior to and during loading operations.

4.11 Control measures – Standard practice / Triggered

4.11.1 All site suppression, prevention and mitigation techniques are used continuously throughout the day as standard practice to ensure dust is not generated at the site.

4.11.2 The above methods, and in particular a road sweeper will also be triggered for more frequent use (i.e. in windy/dry/warm weather) or in an emergency in the unlikely event that dust and mud escapes beyond the site boundary.

5 DUST MANAGEMENT RISK ASSESSMENT MODEL

5.1 Fundamental considerations

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

5.1.2 **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.

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

5.2 Pathway

5.2.1 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
- Ground
- Water
- Direct contact / exposure

5.3 Consequences

5.3.1 The following table highlights the consequences of the hazard(s) identified and the abbreviations for each as used in the Risk Assessment Table.

Table E – Consequences

Abbreviation	Consequences
A	MINOR INJURY
B	MAJOR INJURY
C	DEATH
D	AIR POLLUTION
E	WATER POLLUTION
F	POLLUTION OF LAND

5.4 Effects of consequences

5.4.1 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:

Table F – Potential effects

Abbreviation	Effect of Consequences	Management Required?
S	SEVERE	In all cases
Mo	MODERATE	In most cases
Mi	MILD	Occasionally
N	NEGLIGIBLE	No

5.4.2 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.

5.5 Risk estimation and evaluation (probability/frequency of occurrence of hazard)

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

Table G – Likelihood

	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

5.6 Risk assessment outcome (combination of probability & consequence)

5.6.1 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.

Table H – Risk assessment outcome

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

- 5.6.2 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 management and contingency procedures.
- 5.6.3 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.
- 5.6.4 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.
- 5.6.5 Where the risk assessment outcome is near-zero, site staff should be made aware of the possibility of an occurrence and contingency measures should be readily available to all staff should they be required.

5.7 Risk assessment table

- 5.7.1 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.
- 5.7.2 As discussed in the section 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.
- 5.7.3 The table below details the relevant pathways and receptors for each individual dust/emission source and relevant measures required to break these linkages. The control measures outlined in Section 4 will be included within these tables as well as additional specific measures.

SEE TABLES OVERLEAF

Table I – Source, pathway, receptor, abatement tables

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments	Assessment Outcome following action /recommendation
Dust / Particulates	Unsheeted vehicles accessing/ egressing to/from the site	Air	Site personnel / visitors Surrounding site users / occupiers Surface waters Flora & fauna Residential receptors Surrounding businesses	Air Pollution Water Pollution	Moderate	3	Med	Management will ensure that all site vehicles are adequately sheeted before accessing and leaving the site. The site will ensure the surrounding highway is maintained in good state of repair to prevent unnecessary dust being generated through correspondence with the Local Authority. A maximum speed limit of 5mph will be maintained. Any mud/dust deposited onto the public highway will be treated as an emergency and cleaned by operatives or by way of a road sweeper which should management observe significant dust build up or generation along the access road.	Low
Dust / Particulates	Vehicles tipping into waste reception/ storage areas	Air	Site personnel / visitors Surrounding site users / occupiers Surface waters Flora & fauna Residential receptors Surrounding businesses	Air Pollution Water Pollution	Moderate	2	High	Drop heights will be kept to a minimum to prevent dust emissions i.e. 1m – 2m above ground. The onsite suppression will offer additional suppression. The operator will avoid doubling handling of waste and may directly load from vehicle directly into the treatment plant if feasible.	Low
Dust / Particulates	Loading of waste into treatment plants	Air	Site personnel / visitors Surrounding site users / occupiers Surface waters Flora & fauna Residential receptors Surrounding businesses	Air Pollution Water Pollution	Moderate	2	High	Drop heights will be kept to a minimum to prevent dust emissions i.e. 1m – 2m maximum above the hopper. Waste loaded into the hopper will be pre-sprayed/dowsed prior to loading during dry/windy conditions The onsite suppression will offer additional suppression during extreme weather conditions	Low

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments	Assessment Outcome following action /recommendation
Dust / Particulates	Waste storage areas	Air	Site personnel / visitors Surrounding site users / occupiers Surface waters Flora & fauna Residential receptors Surrounding businesses	Air Pollution Water Pollution	Moderate	3	Low	Drop heights will be kept to a minimum to prevent dust emissions i.e. 1m – 2m above ground. Stockpiles will be sprayed with water to prevent excessive drying and dust formation. All dust generating materials will be stored within bays or stockpiles benefitting from containment walls which will help reduce wind whipping and dust generation. Staff will ensure there is suitable space in the bay/stockpile to ensure the waste can be deposited and safely contained. The onsite suppression will offer additional suppression during extreme weather conditions	Low
Dust / particulates	Prolonged periods of dry/warm or windy weather conditions	Air	Site personnel / visitors Surrounding site users / occupiers Surface waters Flora & fauna Residential receptors Surrounding businesses	Air Pollution Water Pollution	Moderate	2	Medium	Additional visual assessment / monitoring will be onsite and undertaken around the site perimeter in order to ensure dust is not escaping beyond the site. The onsite suppression will offer additional suppression during extreme weather conditions	Low

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments	Assessment Outcome following action /recommendation
Dust / Particulates	Wastes accepted on site	Air	Site personnel / visitors Surrounding site users / occupiers Surface water Flora & fauna Residential receptors Surrounding businesses	Air Pollution Water Pollution	Moderate	2	Medium	<p>Management will ensure that all site vehicles are adequately sheeted before accessing and leaving the site.</p> <p>Drop heights for the unloading/loading of wastes will be kept to a minimum to prevent dust emissions i.e. 1m – 2m maximum above the hopper or ground</p> <p>Waste loaded into the storage areas or the hopper of treatment plants will be pre-sprayed/dosed prior to loading/unloading</p> <p>All dust generating materials will be stored within bays or stockpiles benefitting from containment walls which will help reduce wind whipping and dust generation.</p> <p>The process is ongoing and therefore waste is unlikely to remain at the site for any significant length of time</p> <p>The onsite suppression will offer additional suppression during extreme weather conditions</p> <p>Additional visual assessment / monitoring will be onsite and undertaken around the site perimeter in order to ensure dust is not escaping beyond the site</p>	Low – Very low

6 Monitoring and contingency measures

6.1 Monitoring and recording

- 6.1.1 **Visual assessment** – Site management and site operatives will make visual inspections of dust emissions around the entire site and perimeter at the beginning, middle and end of the working day. Results of visual inspections will be recorded on the daily inspection forms. Additional monitoring may be carried out during times of dry/windy weather conditions or should trained operatives observe significant levels of dust. The monitoring will be carried out while the site is operational, should it be observed that dust is being emitted from the site, notes will be made as to the amount, direction and source of the dust. Site Management will review all feedback from the monitoring/inspections on a weekly basis (unless a complaint has occurred which will be dealt with in accordance with this DEMP) and take the required action to mitigate the issue to ensure it doesn't happen again. If dust is detected, site management and operatives will act immediately by dousing the problematic area, covering it with tarpaulin and using a (hired in) mechanical sweeper.
- 6.1.2 In the event of dust being visible off-site operations will reduce and contingency measures will be put in place until the situation abates. If, after the reduction of operations and implementation of contingency measures, excessive dust beyond the site boundary is still observed, then the operation should cease until the problem is fully rectified.
- 6.1.3 The operator will obtain prior notifications from the Met Office in advance of problematic weather conditions including high wind speeds and direction, droughts, etc. to see whether the dust suppression techniques need to be increased ahead of these events to reduce the likelihood of complaints.
- 6.1.4 The operator will carry out an inspection of the site and site perimeter at the beginning, middle and end of the working day to pick up if any dust or mud is present beyond the site boundary. The site undertakes the following proactive measures to ensure that dust does not escape the site prior to cessation of works i.e. reduce stockpile heights during dry/windy weather periods, dampening of wastes and general housekeeping (refer to housekeeping).

- 6.1.5 If any dust is present at the end, middle or start of the day then the site will implement further reactive measures i.e. sourcing the road sweeper immediately, reducing stockpiles heights further, increasing the site perimeter height (if necessary; typically within <7days), using tarpaulin to cover stockpiles or further dampening down of stockpiles.
- 6.1.6 Out-of-hours monitoring will not be regularly required as it is deemed that the processing and loading of the material is likely to give rise to the highest levels of dust emissions i.e. from use of the treatment plant. However, should it become apparent that out-of-hours monitoring is required i.e. due to stockpiles giving rise to dust that escapes beyond the boundary, site management will take the reactive measures detailed above.
- 6.1.7 The results of monitoring exercises and any remedial action taken will be entered into the site diary, inspection forms or logbook which is available for the EA to inspect upon request. The name of the employee undertaking the inspection will be recorded in the site diary / inspection form for each day of operation.
- 6.1.8 Should the monitoring conclude that a certain activity is giving rise to dust which is migrating offsite, steps will be made to reduce the impact of this activity. These may include (but are not limited to): increase in the height of the walls/netting, further reduction of stockpile size, increased dust suppression systems and suspension of the work until high wind speeds have abated.
- 6.1.9 The site supervisor will be suitably trained to carry out these duties. Further information regarding training and technical competence is provided within the site's EMS.
- 6.1.10 Site management will also be required to make a note of any unavoidable events such as bad weather in the site diary, rather than just actual complaints received. This will ensure that if complaints are received retrospectively from either the local authority or directly, any circumstances which led to that complaint as a result of elements outside of the operator's control would be able to be attributed (or, at least, in part) to the cause of the complaint.

6.2 Staff shortages

6.2.1 In the event of unforeseen staff shortages arising from illness, suspension or no-shows, the operator will make a judgement whether to reduce the number of incoming loads, thus reducing processing frequency and divert material to an alternative site. The operator will then seek further employment within a timely manner to ensure the site can continue to operate at its required capacity.

6.3 Weather conditions

6.3.1 The site will subscribe to the Met Office to receive updated weather alerts for the following weather conditions which could cause a potential on or off site dust complaint:

- High winds >30mph
- Dust escaping beyond the site boundary
- Droughts or periods of hot weather exceeding 3 major dry days which could lead to water shortages, hosepipe bans and excessive dust.

6.3.2 The site will install the following preventative measures to avoid serious dust pollution:

HIGH WINDS

- There will be no sorting, processing or treatment of any wastes which are likely to be blown around during conditions of high winds; high winds would be where it is evident where dust is escaping beyond the site.
- Vehicles leaving the site will be sheeted to comply with the requirements of the Duty of Care legislation.
- Stockpiles will be reduced to a suitable height to prevent the material escaping beyond the site boundary i.e. below the heights of boundary walls.
- Stockpiles may be covered with tarpaulin in the event the above procedures are not considered effective.
- Stockpiles will be further wetted down using the onsite suppression measures.

- In the event of extreme winds, the site will deploy the above measures and may be forced to close operations until conditions have improved.

DROUGHTS/WARM, DRY WEATHER

- In extreme cases such as a hosepipe ban or water shortage, the site will ensure there is additional water available i.e. tanks which can be used to ensure suppression techniques can still function.
- The site will contact the water company in the event of an emergency to see if the water pressure can be increased.
- Where dust is becoming a major concern then the operator will stop processing the material and cover the piles using tarpaulin until conditions or dust suppression techniques are considered effective.

6.4 Operational failure

- 6.4.1 The manager will be contacted by staff in the event of any operational failure such as the breakdown of plant, suppression equipment or other equipment and will decide whether operations are to continue or be suspended prior to corrective action being taken. Serious operational failures, which result in the closure of the site, will be recorded in the site diary. It is likely that, in the event of any recorded failure in mobile/loading plant, the manufacturers' engineers work in relevant locations in the UK and will be contacted to ensure alternative parts can be sourced and item the item fixed in a timely manner.
- 6.4.2 If there was a significant power failure or power cut, the site would not operate, doors would manually shut and no dust would be created. The site's local EA officer or department will be notified in the event of any serious operational failures to agree a suitable course of action.
- 6.4.3 If the site is closed and dust is still evident and leaving the site, the operator would source a back-up generator.

6.5 Liaison with Neighbours

- 6.5.1 In the extreme event of significant but temporary dust issues during normal operations, neighbours will be contacted to advise them of the situation and the action being taken. The EA will also be notified.
- 6.5.2 An open-door policy will be encouraged by the operator to enable any complaints from neighbouring premises (if received) to be dealt with immediately. The complainant will then be supplied with remedial actions taken and any procedures or measures put in place by the operator to reduce or ideally eradicate the likelihood of a subsequent complaint.
- 6.5.3 If any dust complaints are received, the complaint will be assigned to an operative familiar with the site's operation who will complete a 'complaints and events log', detailed individually on the complaints form (in Appendix II), both of which will be kept for inspection on request by the EA. Details of information to be completed are: dates, nature of complaint, weather conditions at the time of the complaint, investigation details, action taken and a signature (as a minimum). Dust issues or dust complaints will be investigated and responded to within 24 hours or sooner and suitably reviewed by the site manager who is ultimately responsible.

7 Actions when complaints are received

7.1 Complaints procedure

- 7.1.1 If any dust complaints are received, the relevant operator will complete a 'complaints and events log' and detailed individually on the complaints form (in Appendix II), both of which will be kept for inspection on request by the EA. Details of information to be completed are dates, nature of complaint, weather conditions at the time of the complaint, investigation details, action taken and a signature (as a minimum).
- 7.1.2 The operator would also be required to make a note of any unavoidable events plant/equipment malfunctions in the site diary, rather than just actual complaints received. This will ensure that if complaints are received retrospectively from either the Council/EA or directly, any circumstances which led to that complaint as a result of elements outside of the operator's control would be able to be attributed to the cause of the complaint.
- 7.1.3 If the source cannot be ascertained with 100% confidence, the site manager, compliance manager or TCM will either suspend or reduce the likely dust/particulate-generating activities, i.e. the loading of waste into the mechanical treatment plants.
- 7.1.4 If the source is within the site's control, the site manager, compliance manager or TCM will take appropriate action in terms of dust/particulate abatement, to ensure that the alarm is not re-activated. This may take the form of the following:
- a) Investigating the source of the dust/particulates to prevent a re-occurrence.
 - b) Suspending operations which are not being conducted using best-practice controls.
 - c) Additional use of the dust abatement measures.
 - d) Logging findings of a – c in the site diary / complaints form and also in the reporting template within the EP.
 - e) Report actions to the complainants and/or EA
- 7.1.5 If following the above complaints are still being received, the site will cease operations until the issues have been rectified.

7.2 Complaints recording

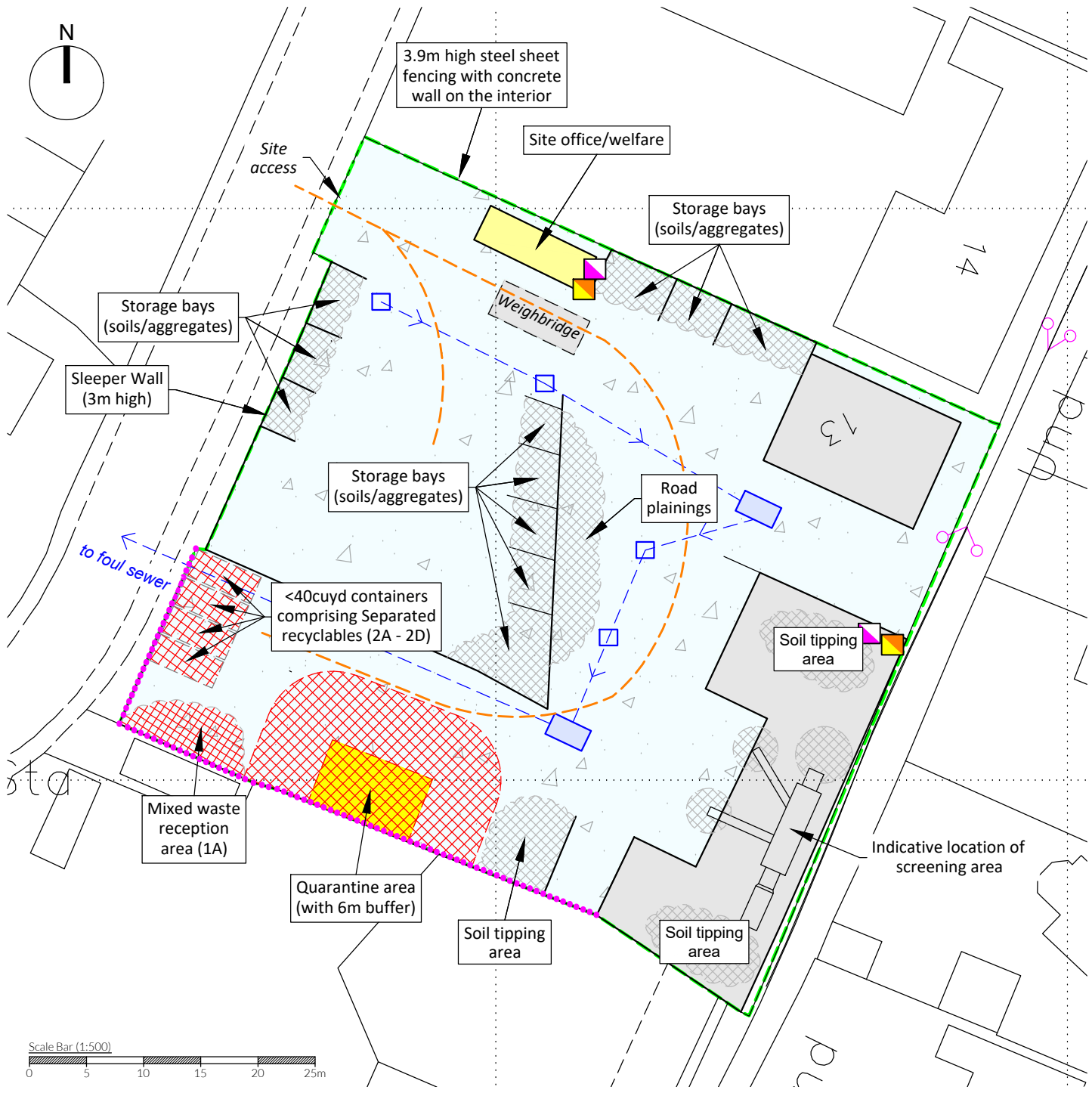
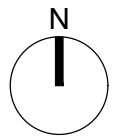
7.2.1 Any complaints received in relation to dust will be recorded on the form shown in Appendix II by the person in receipt of the complaint:

7.2.2 The following details as a minimum will be completed on the form.

- a) The name, address and telephone number of the caller will be requested.
- b) Each complaint will be given a reference number.
- c) The caller will be asked to give details of:
 - the nature of the complaint;
 - the time;
 - how long it lasted;
 - how often it occurs;
 - is this the first time the problem has been noticed; and,
 - what prompted them to complain.
- d) The person completing the form will then, if possible, make a note of:
 - the weather conditions at the time of the problem (rain snow fog etc.)
 - strength and direction of the wind; and,
 - the activity on the installation at the time the noise, dust or odour was detected, particularly anything unusual.
- e) The reason for the complaint will be investigated and a note of the findings added to the report.
- f) The caller will then be contacted with an explanation of the source of the complaint if identified and the action taken to prevent a recurrence of the problem in future.
- g) If the caller is unhappy about the outcome or unwilling to identify themselves the caller will be referred to the appropriate department of the EA or Local Council.
- h) Following any complaint, the complaints procedure will be reviewed to see if any changes are required or if new procedures need to be put in place.

Appendix I

Drawings



NOTES
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REVISION HISTORY

Rev:	Date:	Init:	Description:
-	13.07.22	IA	Initial drawing
A	05.01.23	IA	Drawing updates
B	12.04.24	IA	Operational changes
C	17.04.24	IA	Operational changes
D	05.06.24	IA	Drainage added

- KEY:**
- Permit boundary
 - Concrete surface
 - Combustible waste storage areas
 - Denotes perimeter wall comprising approximately 4m high concrete wall or sleeper wall with approximately 1.9m high micro-dust netting above.
 - - - - - Access route for emergency vehicles
 - Spill kit
 - Firefighting equipment (extinguishers, booms etc.)
 - - - - - Drainage
 - Surface water drain
 - Interceptor

TITLE:
 SITE LAYOUT PLAN

CLIENT:
 T J Cottis Transport Limited

PROJECT/SITE:
 Unit 13 Rawreth Ind Estate, Rawreth Lane, Rayleigh, Essex, SS6 9RL

SCALE @ A4: 1:500 **CLIENT NO:** 3110 **JOB NO:** 001

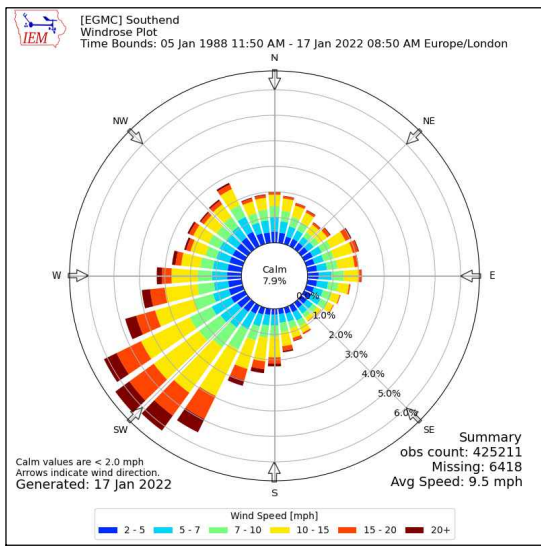
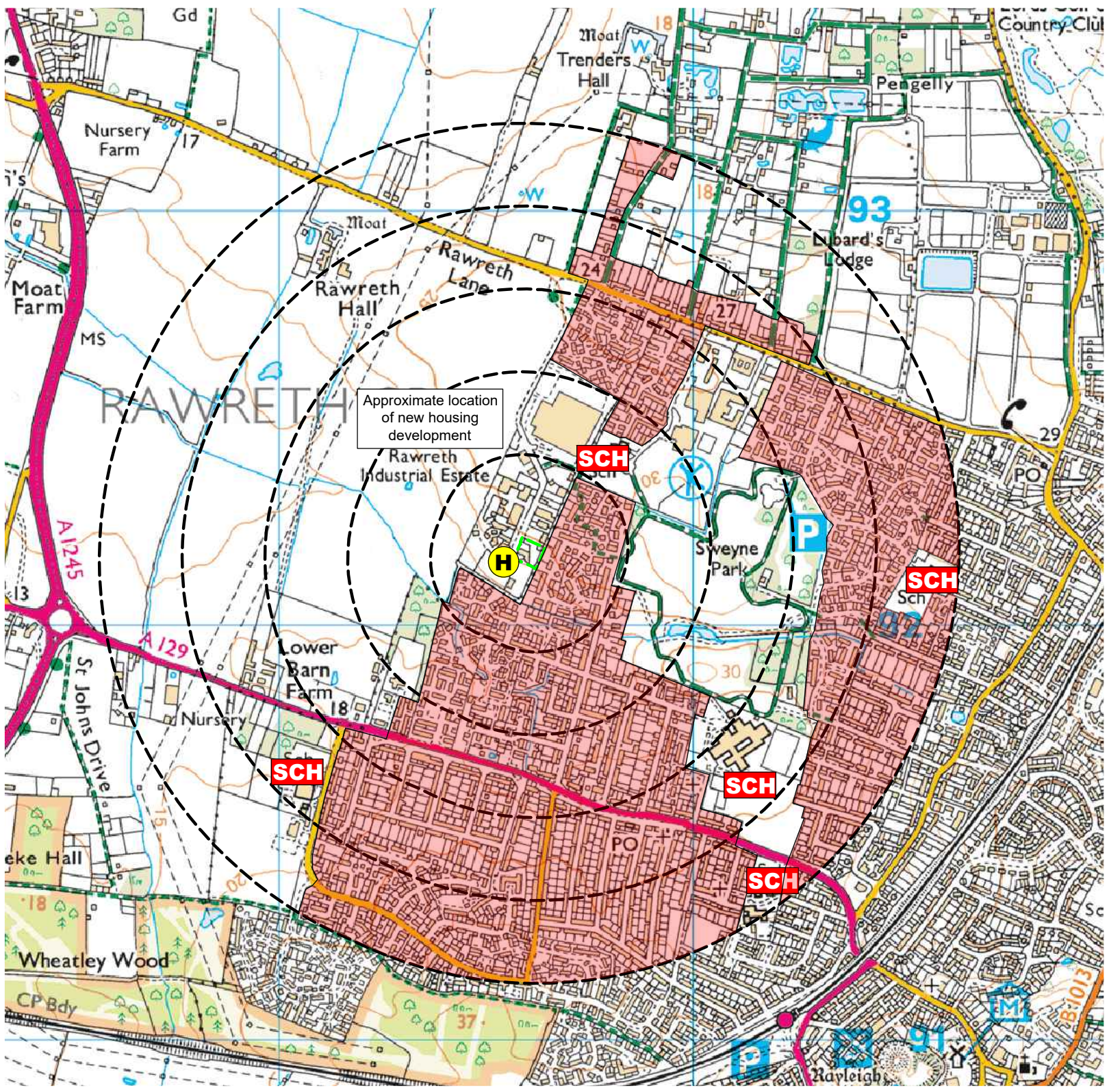
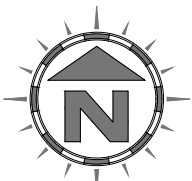
DRAWING NO: 3110-001-03 **REV:** D **STATUS:** Issued

DATE: 05.06.24 **DRAWN:** IA **CHECKED:** IA



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
- H Nearest fire hydrant
- Railway line
- SCH School
- Woodland areas
- Protected sites (Ramsar, SSSI, SPA, SAC)
- Nature reserves



Compass Wind Rose for Southend (EGMC) Period 1988-2022
- source: Iowa State University

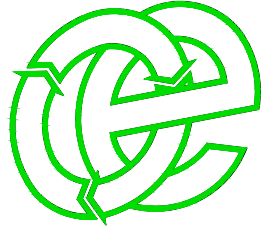
- NOTES**
1. Boundaries are shown indicatively.
 2. Wind rose data shows the prevailing wind direction to be Southerly.

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REVISION HISTORY

Rev:	Date:	Init:	Description:
-	13.07.22	IA	Initial drawing
A	12.04.24	IA	EA comments

Oaktree Environmental Ltd
Waste, Planning and Environmental Consultants



DRAWING TITLE
RECEPTOR PLAN

CLIENT
T J Cottis Transport Limited

PROJECT/SITE
Unit 13 Rawreth Ind Estate, Rawreth Lane, Rayleigh, Essex, SS6 9RL

SCALE @ A3	CLIENT NO	JOB NO
1:12,500	3110	001

DRAWING NUMBER	REV	STATUS
3110-001-04	A	Issued

DRAWN BY	CHECKED	DATE
IA	-	12.04.24

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

Appendix II

Complaints recording form

Complaints Report Form	
Date Recorded	Reference Number
Name and address of caller	
Telephone number of caller	
Time and Date of call	
Nature of complaint (noise, odour, dust, other) (date, time, duration)	
Weather at the time of complaint (rain, snow, fog, etc.)	
Wind (strength, direction)	
Any other complaints relating to this report	
Any other relevant information	
Potential reasons for complaint	
The operations being carried out on site at the time of the complaint	
Follow Up	
Actions taken	
Date of call back to complainant	
Summary of call back conversation	
Recommendations	
Change in procedures	
Changes to Written Management System	
Date changes implemented	
Form completed by	
Signed	
Date completed	

Appendix III

Dust monitoring form

Dust Monitoring

Weather	Date						
	Time						

Observation point

Key: No dust issue - N Dust escaping Y							
	Day	Mon	Tue	Wed	Thu	Fri	Sat
Waste storage/processing areas							
Site entrance gates							
Rawreth Lane							
Loading areas into treatment plant							
Site Perimeter							

Dust prevention

Key: Suppression on - Y Suppression off - N Maintenance being done - M							
	Day	Mon	Tue	Wed	Thu	Fri	Sat
Suppression Systems (If applicable)							
Road Sweeper (Hired in when required)							

Completed by Monday	
Actions to take	

Completed by Tuesday	
Actions to take	

Completed by Wednesday	
Actions to take	

Completed by Thursday	
Actions to take	

Completed by Friday	
Actions to take	

Completed by Saturday	
Actions to take	