



# Dust & Emissions Management Plan

Thanet Grab Hire - Little Cliffsend Farm

January 2024

**Waterman Infrastructure & Environment Limited**

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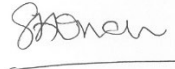


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### Quality Assurance – Approval Status

This document has been prepared and checked in accordance with  
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

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**Comments**

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## Disclaimer

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## **Contents**

## 1. Introduction

### 1.1 The Brief

Waterman Infrastructure & Environment Limited (“Waterman”) is instructed by Thanet Grab Hire Limited (TGH) to prepare an Environmental Permit (EP) application to the Environment Agency (EA). The application seeks a bespoke EP based on standard rules SR2008No11\_75kte<sup>1</sup>. Including because this is a bespoke application a Dust & Emissions Management Plan (DEMP) is required. The activities will take place at Little Cliffsend Farm, Chalk Hill, Cliffsend, Ramsgate CT12 5HP.

### 1.2 Report Context and Structure

The waste management activity has the potential to emit dust and particulates. Potentially these could impact offsite receptors. Including the Sandwich Bay ecologically important site to the south of the site, residents, and workers within the vicinity of the site.

The DEMP sets out the dust risk assessment and will establish the means and methods by which these risks will be managed for lifetime of the EP.

In line with guidance emissions, including the following, were considered:

- dust;
- particulates; and
- mud and debris (as a source of dust).

Sections of the template may be omitted due to not being applicable to the specific waste activity. In these cases, the omitted section and reasoning for omission will be explained. Due to the activities taking place at this facility this document will mainly focus on prevention and containment of dust and airborne particulate emissions, from:

- waste management activities;
- associated activities;
- equipment, plant and vehicle exhaust emissions.

The EA’s DEMP guidance includes a template<sup>2</sup>, which has been used as the basis of this report. The DEMP will be in place as part of the operator’s Environmental Management System (EMS). The DEMP will be active for the life of the EP. A copy will be available at the site office. The local authority for the facility is Thanet District Council (TDC).

### 1.3 Limitations and Constraints

This report has been prepared in accordance with the scope agreed between Waterman and TGH, as documented in Waterman’s fee letter (WIE19228-100-220422-SO-Fee dated 22 April 2022) and with Waterman’s standard Terms of Appointment.

The benefit of this report is made to TGH.

Waterman has endeavoured to assess all information provided to them during this investigation, but makes no guarantees or warranties as to the accuracy or completeness of this information. The conclusions resulting from this study are not necessarily indicative of future conditions or operating practices at or adjacent to the site.

The scope of this investigation does not include an assessment for the presence of asbestos containing materials within or below buildings or in the ground at the facility.

<sup>1</sup> “Inert and excavation waste transfer station with treatment”.

<sup>2</sup> Dust & Emission Management Plan (DEMP), version 10, released October 2018. Obtained directly from the EA at [air.quality@environment-agency.gov.uk](mailto:air.quality@environment-agency.gov.uk).

## 2. Site Setting and Sensitive Receptors

### 2.1 Overview of the Site

Little Cliffsend Farm has pursued a process of farm diversification over the last couple of decades. It now includes farmland in use for arable agriculture and horsiculture<sup>3</sup>. The farmyard has transitioned to an estate of mixed uses. The application site is centred at approximate National Grid Reference TR 3577 6448 and located in the northeastern part of the former farmyard. It is approximately 0.15 hectare (ha) in area. Access is gained to it from the public highway at Chalk Hill Road, then by means of a private access road.

The site is relatively sheltered. The surrounding land falls from north to south. In order to create a level site, the land has been cut into the slope and so the land to the north is several metres above ground level on site, with ground level on the land to the east gradually reducing from several metres higher than site ground level to match it. An established hedge of conifers is present along these boundaries. Stables are present to the immediate south and a warehouse is present to the west.

A plan showing the EP application boundary can be found in Appendix A.

### 2.2 Surrounds and Sensitive Receptors

The surroundings are predominately agricultural. To the:

- north lies land in agricultural use (arable), extending to the A299 and the residential periphery of Ramsgate;
- east lies land in horsiculture use, extending to Pegwell Road and Ramsgate;
- south lie residential users, and a stables. Further, at the cliff edge and beyond lies Sandwich Bay (which enjoy national and international ecological designations); and
- west lie commercial and industrial uses, and a private reservoir (including for use by the farm enterprise). Further west lies arable land, extending to Sandwich Road and the residences of Cliffsend village.

The nearest population centres are Ramsgate (570m east) and Cliffsend (380m west).

We tabulate, in summary below.

Table 1: Summary of surrounding land uses

Location	Description
North	Agricultural
East	Animal husbandry (horsiculture), residential
South	Animal husbandry (horsiculture), residential, public amenity (England Coastal Path), Sandwich Bay ecologically important site
West	Commercial, industrial, reservoir, agricultural, and residential

#### 2.2.1 Receptors within 500m

The main concern of this DEMP include ecological and human receptors in close proximity to the site. In this particular DEMP there will be a focus on a number of ecological designations recorded over the coastal environment to the south, as well as the local residents and workers in particular within 150m of the site. Further detail regarding these sensitive receptors may be found in the section below.

<sup>3</sup> Arable.



A plan showing the location of potentially sensitive receptors to dust (within 500m of the site) is included in Appendix A with the receptors tabulated in Appendix B.

### 2.2.2 Ecological Designations

The site is within 500m of the boundary of Sandwich Bay ecologically important site. It enjoys the following statutory designations:

- Ramsar site - Thanet Coast and Sandwich Bay;
- Site of Special Scientific Interest (SSSI) - Sandwich Bay to Hacklinge Marshes;
- Special Area of Conservation (SAC) - Thanet Coast; Sandwich Bay;
- Special Protection Areas (SPA) - Thanet Coast & Sandwich Bay.

### 2.2.3 Residential properties

South of the site:

- Little Cliffsend Farmhouse; and
- Numbers 1 and 2 Little Cliffsend Farm Cottages.

### 2.2.4 Workers

South-west and west of the site:

- haulage, office use, parcel distribution, upholstery (repair) and vehicle maintenance (all lying within the bounds of Little Cliffsend Farm).

### 2.2.5 Is the site within an AQMA?

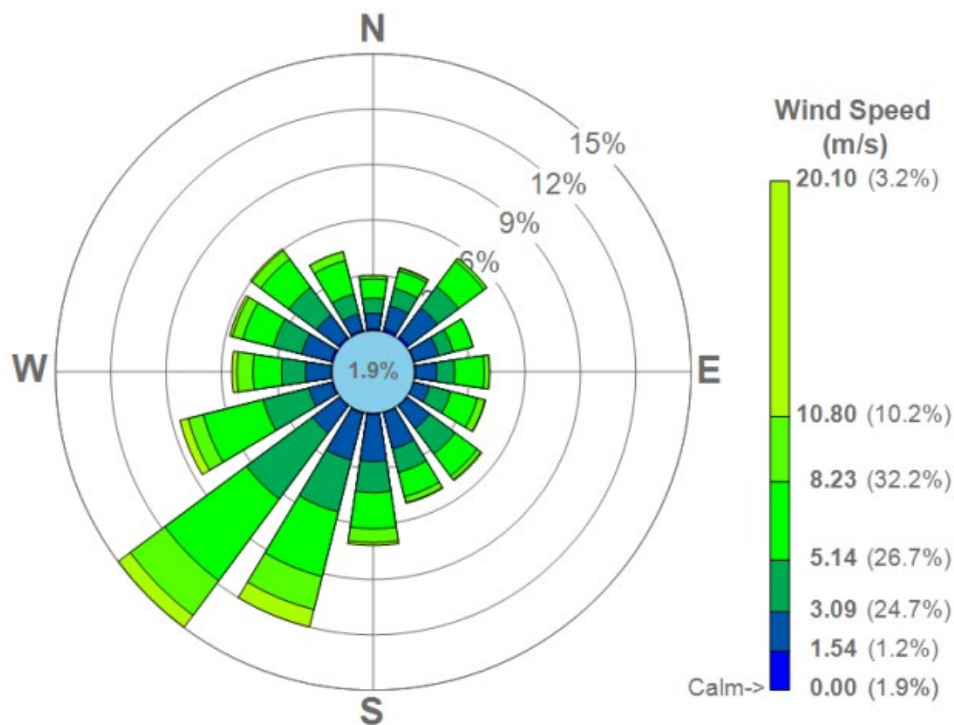
The site is not located within an Air Quality Management Area (AQMA)<sup>4</sup>.

### 2.2.6 Prevailing wind direction

A wind rose is presented below. The weather station lies approximately 1.5km to the northwest. The prevailing wind direction is shown to be south westerly and, typically, between 3.09m/s and 8.23m/s.

<sup>4</sup> AQMAs Declared by Thanet District Council, accessible at [https://uk-air.defra.gov.uk/aqma/local-authorities?la\\_id=280](https://uk-air.defra.gov.uk/aqma/local-authorities?la_id=280) (accessed September 2023)

Figure 1: Manston Airport Windrose



### 2.3 Other Potential Emitters of Dust in the Local Area

Other potential emitters include:

- activities at Little Cliffsend Farm, including:
  - directly from the undertakings identified at section 2.2.4 above – for example resulting from actions such as cutting, grinding, sawing; and
  - directly from vehicles accessing and egressing those undertakings for the businesses purpose;
  - indirectly, such as staff attending / leaving their work base;
- activities taking place on agricultural land, including:
  - when working soils, such as drilling, disking and ploughing;
  - when harvesting;
  - tracking debris and mud on to the private access road, with that material being dry / or becoming dry then resuspended as dust when subsequently tracked over; and
- the agricultural land itself, such as from areas of bare / exposed earth subject to wind-whip.

### **3. Operations**

#### **3.1 Waste Deliveries**

Primarily, waste will be delivered by tipper lorry. These heavy goods vehicles (HGVs) will generally be from the applicant's own fleet. With these – almost exclusively - being grab hire lorries. Predominantly the HGVs will be of EURO VI emission standard.

#### **3.2 Proposed Waste Management Activities**

Waste activities include:

- reception and storage;
- processing: sorting, separation, crushing and screening.

#### **3.3 Site Surfacing**

The site will be surfaced in compacted hardstanding, and therefore permeable.

No drainage system is installed or proposed.

#### **3.4 Sources of Dust**

The wastes proposed for acceptance are listed in the table below. So that the reader can easily distinguish, waste additional to that included in SR2008No11\_75kte is shown in *italicised* text. The additional waste type will be limited as detailed in the third column of the table.

Table 2: Wastes to be accepted

<b>EWC</b>	<b>Description</b>	<b>Proposed Limitation for waste types additional to those permitted by standard rules SR2008No11_75kte (shown in italics)</b>
17 01	Concrete, bricks, tiles and ceramics	
17 01 01	Concrete	
17 01 02	Bricks	
17 01 03	Tiles and ceramics	
17 01 07	Mixtures of concrete, bricks, tiles and ceramic other than those mentioned in 17 01 06	
17 02	Wood, glass and plastic	
17 02 02	Glass	
17 03	Bituminous mixtures, coal tar and tarred products	
17 03 02	Bituminous mixtures other than those mentioned in 17 03 01	
17 05	Soil (including excavated soil from contaminated sites), stones and dredging spoil	
17 05 04	Soil and stones other than those mentioned in 17 05 07	
17 05 08	Track ballast other than those mentioned in 17 05 07	
17 09	<i>Other construction and demolition waste</i>	
17 09 04	<i>Mixed construction and demolition wastes including other than those mentioned in 17 09 01, 17 09 02 and 17 09 03</i>	<i>Limited to excavation waste arising from the activities of utilities contractors and others involved in the excavation of roads, car parks etc. (i.e. mixtures of tarmac, sub-base, soils etc.). Accordingly, will comprise mixed construction and demolition wastes (including only 17 01 01, 17 03 02, and 17 05 04). No mixed skip waste to be accepted.</i>
20 02	Garden and park wastes (including cemetery wastes)	
20 02 02	Soil and stones	

Note also that materials resulting from processing the above wastes<sup>5</sup> will also be potential sources of dust.

### 3.5 Overview of Waste Processing, Dust, and other Emission Controls

#### 3.5.1 Waste storage bays

Waste will be stored within bays (as shown on the layout plan).

Bay walls will stand at 3.2m high and waste will be stored no higher than the height of the bay walls.

<sup>5</sup> And which of course would be sent out as Chapter 19 code wastes (“Waste from waste management facilities...”).

### 3.5.2 Crusher and screener enclosure

The crusher and screener when in use will be (at least partially) sited behind an enclosure. A primary reason for the enclosure is that, being dense and tall, it offers a degree of acoustic mitigation. But, in being solid, it will also help to interrupt air flow and inhibit the escape of dust from the site. The southern boundary of the enclosure will stand not less than 3.2m high.

### 3.5.3 Handling of materials

Waste (in storage bays) will be profiled to minimise wind whip. When transferring materials minimum drop heights will be adopted. Double handling will be kept to a minimum.

### 3.5.4 Site surfacing and access road

The site surface will be maintained, including being swept of debris and dust, and with a view to repairing ruts and potholes (to prevent the build of dust and debris in difficult to reach areas). The access road will be inspected each day and cleaned by road sweeper as required.

### 3.5.5 Dust suppression equipment

Dust suppression equipment will include:

- dry brushing (manual / or machine); and
- a road sweeper used to clean the site access road (i.e. used as a vacuum sweeper), and also having additional capabilities – spray bar (e.g. to use to dampen site surface), spray lance (e.g. to use if spot treatment required on underbody areas) and hose (e.g. use to dampen down stockpiles).

The crusher will have onboard dust suppression sprays which will be supplied by connection to the sites water supplies.

The TCM will direct when dust suppression equipment should be used.

### 3.5.6 Contingency arrangements and additional measures

Replacement road sweepers are readily available to hire in the local area in the event of breakdown that cannot be swiftly repaired.

Two sources of water will be available – mains supply and the farm's water storage reservoir to the west.

In the event the primary measures set out above (section 3.5.5) are insufficient, short term additional measures could include cessation of waste treatment activities and the use of additional hoses and spray equipment borrowed from the farm. Longer term measures could include fixed misting systems (for stockpiles) or the use of dust suppressants (site surface).

### 3.5.7 Out of hours

No water-based systems will be left running when the site is unattended. The TCM will consider the overnight and over weekend weather forecast towards the end of the working day and implement dampening down measures when windy and / or dry conditions are forecast.

Other businesses at Little Cliffsend Farm operate during weekends. Informal arrangements exist such that if visible dust release from the site is occurring, the TCM will be contacted and will make arrangements for additional dampening down to be undertaken.

### 3.5.8 Site diary checklist

Various monitoring, management and maintenance activities are proposed. A Site Diary Checklist will be used to record the activities. See Appendix C.

### 3.6 Activities with the Potential for Dust Emission

Use of equipment, plant and vehicles:

- debris:
  - waste falling from:
    - laden vehicles (from the load itself),
    - underbody areas of vehicles ;
    - equipment and plant during handling and during the act of processing;
- dust suspended by plant and vehicles tracking over yard areas covered with debris and dust (including from dried out mud);
- dust suspended by exhausts venting downwards; and
- particulate emissions – exhaust emissions.

Waste handling:

- loading and unloading waste:
  - into and from vehicles, and
  - into crusher / screener.

Waste storage:

- stockpiles – dust may be suspended during formation;
- wind-whip from stockpiles in bays ; and

Waste processing:

- separation (by hand or machine);
- crushing of hard materials; and
- screening of materials.

Site maintenance

- dust suspended by dry brushing / vacuum sweeping when undertaking cleaning.

Emissions sources, potential pathways to receptors and methods to sever pathways or abate the emission are set out elsewhere in this document.

### 3.7 Equipment and Mobile Plant

Generally, equipment and mobile plant will be diesel powered.

Types of Non-Road Mobile Machinery (NRMM):

- 360° excavator<sup>6</sup>; and
- crusher;
- loading shovel; and
- screener<sup>7</sup>.

<sup>6</sup> Likely to be hired.

<sup>7</sup> Likely to be owned.

Equipment and plant will be subject to a maintenance strategy.

The Operator will maintain a list of NRMM (it will likely be subject to change as time goes by).

The facility will operate a no idling policy. A maximum speed limit of 5 miles per hour will be enforced.

#### Operator's Maintenance Strategy

- The operator employs a mechanic on site and able to undertake many of the maintenance and repair activities;
- Equipment and plant will be maintained and serviced according to manufacturer's instructions, or otherwise be subject to a Planned Preventative Maintenance (PPM) procedure; and
- an emergency breakdown contingency plan will be in place to expedite the repair of critical equipment, plant and vehicles.

## **4. Dust and Particulate Management**

### **4.1 Responsibility for Implementation of this Plan**

#### **4.1.1 Responsible persons and training**

The Operator will:

- be the Technically Competent Manager (TCM);
- implement and maintain the DEMP for the duration of the permit; and
- be responsible for the day-to-day management of the site.

The TCM will have relevant training on minimising dust and suppression techniques. Records of training will be kept, securely stored and reviewed periodically (including to ensure that competence is maintained).

#### **4.1.2 Review of DEMP**

The DEMP will be reviewed if any of the following conditions are met:

- a year has passed since the last review; or
- equipment, plant or vehicles are subject to material change; or
- a substantiated fugitive emissions related complaint is received.



Table 3: Dust and particulates risk assessment

Dust and particulates						
Hazards	Receptor	Pathway	Risk management techniques	Probability of exposure (without risk management techniques)	Consequence	Overall risk
<p>Sources of dust:</p> <p>Road vehicles and mobile plant moving around the site.</p> <p>Road vehicles tipping waste.</p> <p>Mobile plant handling waste including loading road vehicles.</p> <p>Crushing and screening plant</p> <p>Wind-whipping from the surface of stockpiles</p> <p>Release from site surfaces</p> <p>Release from road vehicles carrying waste on public highway.</p> <p>Mud as a source of dust (when dried out). Mud tracked from the site.</p>	<p>Sandwich Bay ecologically important site</p> <p>Local residents and workers</p>	Airborne	<p>The yard surface will be swept by road sweeper on a regular basis.</p> <p>In dry conditions, if necessary, vehicle circulation areas to be dowsed.</p> <p>Site speed limit of 5mph</p> <p>Drop heights will be minimised.</p> <p>Crusher will have onboard dust suppression systems.</p> <p>Stored waste will be dampened down as necessary.</p> <p>Stockpiles will be maintained and profiled to prevent wind-whipping.</p> <p>Stockpiles will be stored in bays, at least 0.5m below the height of the containment wall.</p> <p>Materials with a high propensity for dust emission will be moved as little as possible.</p> <p>If visible dust is likely to be, or its noted as being, liberated from the site boundary relevant areas will be dowsed to abate the emission.</p> <p>Vehicles carrying waste will be sheeted or otherwise contained.</p> <p>Vehicle circulation will be kept free of debris and dust (generally by use of road sweeper).</p>	Medium	<p>Smothering of nearby vegetation. Potentially leading to inhibition of biological processes.</p> <p>Human health and nuisance impacts.</p>	Low

Dust and particulates						
Hazards	Receptor	Pathway	Risk management techniques	Probability of exposure (without risk management techniques)	Consequence	Overall risk
			<p>Vehicles should be assessed before leaving the facility for debris and mud. Cleaned by dry brushing. Spray lance used if necessary.</p> <p>The distance between the site and public highway is large enough to ensure that material tracked from the site will not become a public nuisance. The site access / egress apron and the private access road will be swept by sites own road sweeper to ensure debris and dust emission is minimised.</p> <p>Daily and weekly site inspections to ensure that dust abatement procedures and dust suppression equipment is functioning correctly</p>			
Sources of particulate emissions: vehicle exhaust emissions (road going vehicles and NRMM)	<p>Sandwich Bay ecologically important site.</p> <p>Local residents and workers</p>	Airborne	<p>Use of modern vehicles and NRMM (meeting Euro Standard Emission class).</p> <p>Planned preventative maintenance procedures in place to ensure plant and vehicles are functioning correctly.</p> <p>No idling.</p>	Medium	<p>Nutrient enrichment, toxic contamination</p> <p>Human health impacts</p>	Low

Table 4: Debris and mud risk assessment

Debris and Mud						
Hazards	Receptor	Pathway	Risk management techniques	Probability of exposure (without risk management techniques)	Consequence	Overall risk
<p>Road vehicles travelling to the site.</p> <p>Road vehicles travelling from the site with debris and mud on chassis and / or tyres, or with insecure load.</p> <p>Mud on the public highway or site surfaces can turn to dust on drying out</p>	Road users	<p>Debris falling from vehicles.</p> <p>Tracked onto public highway</p>	<p>Vehicles carrying waste will be sheeted or otherwise contained.</p> <p>Vehicles should be assessed before leaving the facility for debris and mud. Cleaned by dry brushing. Spray lance used if necessary.</p> <p>The yard surface will be cleaned by road sweeper on a regular basis.</p> <p>In dry conditions, if necessary, vehicle circulation areas to be dowsed.</p> <p>The distance between the site and public highway is large enough to ensure that material tracked from the site will not become a public nuisance. The site access / egress apron and the private access road will be swept by sites own road sweeper to ensure debris and dust emission is minimised.</p> <p>Site housekeeping including daily and weekly checks of the permitted area</p>	Low	<p>Nuisance (e.g. mud on local resident's cars)</p> <p>Road accidents</p>	Low

Table 5: Abatement measures

“Abatement measure” and “description / effect” taken from guidance.

Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
<b>Preventative Measures</b>			
Enclosure within a building	Creating a solid barrier between the source of dust and particulates and receptors is likely to be the most effective method of control, provided that the building entrances and exits are well managed.	The site is not in an AQMA. There are no plans to construct a building to enclose waste management activities	N/A
Negative pressure extraction	Within enclosed buildings, controlled extraction can be undertaken to ensure a constant negative pressure relative to the outside air. This system should prevent the emission of particulates from any openings in the building. Extracted air should be treated through a suitable filtration system prior to discharge to atmosphere. This method is more frequently applied for odour control.	As above.	N/A
Dust extraction system	A large variety of abatement technologies exist for the removal of dust and particulates from a flowing gas and have typically been applied to combustion plants and other sites where controlled emissions of particulates occur. These include Electrostatic Precipitators (ESPs), wet scrubbers, baghouses (bag filters), viscous media (e.g. oil) filters and gravitational settling. Although not all of these may be appropriate for dust and particulate suppression at waste management sites, and they cannot be applied to controlling external fugitive emissions, they may be effective when coupled with local exhaust extraction, ventilation or negative pressure extraction systems from enclosed buildings to remove dust and particulates from the airstream.	As above.	N/A
Site / process layout in relation to receptors	Locating particulate emitting activities at a greater distance and downwind from receptors may reduce receptor exposure, provided that emissions from the source are not dispersed over significant distances.	The most sensitive receptors identified in section 2 lie upwind of potential particulate emitting activities. Crushing and screening plant is located as far away from residential properties as possible.	There is no trigger condition.  This abatement measure will be implemented at all times. .

Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
<b>Preventative Measures</b>			
<p>Site speed limit, no idling policy and minimisation of vehicle movements on site</p>	<p>Reducing vehicle movements and idling should reduce emissions from vehicles. Procurement policy to only purchase clean burn road vehicles and non-road going mobile machinery. Enforcement of a speed limit may reduce re-suspension of particulates by vehicle wheels.</p>	<p>Vehicle operators are trained (staff induction) and refreshed on operational policies to ensure:</p> <ul style="list-style-type: none"> <li>• waste is moved as efficiently as possible;</li> <li>• no idling as far as is practicable;</li> <li>• 5mph speed limit is observed</li> </ul>	<p>There is no trigger condition.</p> <p>This abatement measure will be implemented at all times.</p> <p>The effectiveness of these measures requires vigilance from operators and maintenance through training e.g. tool box talks and site induction information for visiting drivers. Persistent non-compliance is a disciplinary matter.</p>
<p>Minimising drop heights for waste.</p> <p>Use of enclosed chutes for waste drops/end of conveyor transfers and covered skips / storage vessels.</p>	<p>Minimising the height at which waste is handled should reduce the distance over which debris, dust and particulates could be blown and dispersed by winds.</p> <p>Enclosing processes will further reduce dispersion.</p>	<p>Operators of mobile plant (loading shovel / excavator) minimise drop heights and are aware of the advantages of this, in terms of accuracy of work, and minimising dust dispersion.</p> <p>Bay walls to be maintained, and stockpile storage heights to not exceed the bay heights.</p>	<p>There is no trigger condition.</p> <p>This abatement measure will be implemented at all times, as long as the permit is active.</p> <p>The effectiveness of these measures requires vigilance from operators and maintenance through training e.g. toolbox talks. Persistent non-compliance is a disciplinary matter.</p>
<p>Limiting exposure to wind-whipping</p>	<p>Stockpiles are maintained and profiled to minimise wind whipping.</p>	<p>Operator will maintain and profile stockpile as necessary – e.g. seal faces with back of excavator bucket.</p>	<p>There is no trigger condition.</p> <p>This abatement measure will be implemented at all times.</p> <p>The effectiveness of these measures requires vigilance from operators and maintenance through training e.g. toolbox talks.</p>

Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
<b>Preventative Measures</b>			
Good housekeeping	Having a consistent, regular housekeeping regime that is supported by management, will ensure site is regularly checked and issues remedied to prevent and remove dust and particulate build up.	<p>This measure can be separated into four key aspects:</p> <ul style="list-style-type: none"> <li>• daily inspections.</li> <li>• maintenance of equipment and plant.</li> <li>• routine and proper use of dust suppression equipment.</li> <li>• site surface integrity and management. Use of road sweeper.</li> </ul>	<p>There is no trigger condition.</p> <p>This abatement measure will be implemented at all times.</p> <p>The effectiveness of these measures requires vigilance from operators and maintenance through training e.g. toolbox talks.</p>
Sheeting of vehicles	Prevents the escape of debris, dust and particulates from vehicles as they travel.	This measure is incorporated into ways of working. Waste entering or leaving the permitted area must be sheeted or otherwise contained.	<p>There is no trigger condition.</p> <p>This abatement measure will be implemented at all times.</p> <p>The effectiveness of these measures requires the vigilance of the Operator and maintenance through training e.g. toolbox talks. Persistent non-compliance is a disciplinary matter.</p>
Hosing of vehicles on exit	May remove some dirt, dust and particulates from the lower parts of vehicles although likely to be less effective than a more powerful wheel wash.	A spray lance will be used if necessary (attachment on road sweeper).	A visual inspection of vehicles exiting the facility will determine the necessity for this measure.
Ceasing operation during high winds and/or prevailing wind direction	Mobilisation of dust and particulates is likely to be greater during periods of strong winds and hence ceasing operation at these times may reduce peak pollution events.	This task will fall to the TCM to interpret wind direction and control the activities of waste operatives under them.	Waste handling and waste processing will stop during high winds where the risk of dust being detected at the boundary is present.
Installed wheel wash	Provides a high-pressure wash of vehicle wheels and lower parts (including under body) using a series of jet sprays.	Not present at this facility. Other	N/A

Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
<b>Preventative Measures</b>			
	More effective if vehicles drive through the wheel wash slowly in order that there is sufficient time for dirt to be removed.	measures are in place.	
Easy to clean concrete impermeable surfaces	Creating an easy to clean impermeable surface, using materials such as concrete as opposed to unmade (rocky or muddy) ground within the site and on site haul roads. This should reduce the amount of dust and particulate generated at ground level by vehicles and site activities.	Not present at this facility. Hard standing and onsite road sweeper in place.	N/A
Minimisation of waste storage heights and volumes on site	Minimising the height at which waste is handled should reduce the distance over which debris, dust and particulates could be blown and dispersed by winds. Reducing storage volumes should reduce the surface area over which particulates can be mobilised.	Waste stockpile heights will not exceed the height of the storage bays.	There is no trigger condition. This abatement measure will be implemented at all times. The effectiveness of these measures requires the vigilance of the Operator and maintenance through training e.g. toolbox talks.
Reduction in operations (waste throughput, vehicle size, operational hours)	Reducing the amount of activity on site, including no tipping, shredding, chipping or screening of high risk loads during windy weather as well as associated traffic movements should result in reduced emissions and re-suspension of dust and particulates from a site.	This task will fall to the TCM to interpret windy weather and control the activities of waste operatives under them.	There is no trigger condition. This abatement measure will be implemented at all times.
<b>Remedial measures</b>			
Netting/ micro netting around equipment	Erecting netting around equipment that could give rise to large amounts of dust and particulates may be effective within the site boundary and prevent their dispersion off-site / their re-suspension within the site.	Not present at this facility.	N/A
On-site sweeping	Sweeping could be effective in managing larger debris, dust and particulates but may also cause the mobilisation of smaller particles.	Site surfacing will be routinely washed with the Operators own road sweeper. Vehicle circulation areas are picked	Routine sweeping will take place periodically. Additional sweeping will take place when necessary, including

Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
<b>Preventative Measures</b>			
	<p>Road sweeping vehicles damp down dust and particulates whilst brushing and collecting dust and particulates from the road surface, particularly at the kerbside.</p> <p>This may generate dust and particulate movement that may become a Health and Safety issue if the filters and spray bars on the sweepers are not maintained.</p>	<p>free of debris on a regular basis.</p> <p>Daily inspection will identify if debris and spillages require further action, or if further sweeping is necessary for site surfacing.</p>	<p>in response to the presence of debris, spillages, accumulated dust or as an action following daily inspection.</p>
Site perimeter netting/ micro netting	Erecting netting around the site perimeter may capture released debris and dust and particulates prior to it being dispersed off-site.	Not present at this facility.	N/A
Water suppression with hoses & water jets	Damping down of site areas using hoses can reduce dust and particulate re-suspension and may assist in the cleaning of the site if combined with sweeping.	<p>The road sweeper has hose attachment that can be used on stockpiles.</p> <p>Additional hoses are also available for use as a contingency measure (where primary methods are insufficient).</p>	N/A
Water suppression with mist sprays	Installation of mist sprays around sites, at building entrances/exits and within buildings at point source emissions like conveyors, trommels etc. It can also assist in the damping down of dust and particulates, therefore, reducing emissions from site.	Not proposed. Decision will be revisited should dust escape from the site boundary become a notable issue.	N/A
Water suppression with bowser	Using bowzers is a quick method of damping down large areas of the site with large water jets. This method could also be used on easy-to-clean, impermeable concrete surfaces.	In dry conditions, if necessary, vehicle circulation area may be dowsed by the road sweeper that has spray bar and hose attachments.	Dust suppression may be implemented in response to the continued presence of debris or accumulated dust following dry brushing. This may take place following a visual inspection by the TCM.
Dust and particulate monitor with	Installation of a dust and particulate monitor with specified	No monitors proposed at the facility.	N/A



Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
<b>Preventative Measures</b>			
trigger alarm	alarm trigger level can alert site staff when short-term particulate concentrations are elevated in order that site practices can be reviewed or application of mitigation measures increased.		
Shaker grids	Similar to cattle grids, these are installed at a site entrance and exit. The movement of vehicles over the grids shakes dust and particulates from the wheels, thus removing them before vehicles enter the site.	Not present at this facility. Other wheel washing arrangements in place.	N/A
Water cannons	Water cannons provide a means for delivery of powerful water streams from a water truck. With variable nozzles, the spray pattern can be controlled and varied between jet and fog. Typical water flows are up to 5000 litres per minute. Water cannons are most often used for fire protection, mining operations, heavy machinery wash down, cleaning and dust and particulate abatement.	Not present at this facility. Impractical and unnecessary for small area site.	N/A
Screening of buildings/ reducing large apertures using plastic strips	N/A	There are no buildings other than the office in the EP area.	N/A
Application CMA/ chemical suppressant	Diluted Calcium Magnesium Acetate (CMA) or other chemical based dust suppressant is regularly applied by spraying using a back-pack applicator for small areas or by road sweeper to cover larger areas. CMA acts as a suppressant with the aim of reducing dust and particulate re-suspension and hence ambient concentrations.	Not currently proposed for the site. Other measures are considered sufficient. It would be considered if the site surface was found to be a persistent source of dust not readily controlled by primary measures.	N/A
Heavy water	Heavy water is used to improve the compaction and stability and reduce dust and particulates on unsealed roads or areas of land. Ideally it is blended into the road construction material as the road is constructed, but where this is not possible it can be sprayed onto the top of the road. Heavy water combines fast acting wetting agents with polymer binders, to allow penetration deep into the material and to 'agglomerate' the dust and particles together.	As above.	N/A

Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
<b>Preventative Measures</b>			
Foam Suppression	The aggregate and mining industries frequently use foam suppression for the control of dust and particulate emissions, mixing the foam with broken material to increase efficiency. Foaming agents can be added to increase the efficiency of dust and particulate reduction. Foam suppression has seen increased attention in recent years and has previously been applied to waste transfer facilities where crushing of waste occurs. If using foam suppression to control dust and particulates from waste drops, the foam must be entrained within the waste material and as such must be injected prior to dropping the waste rather than at the bottom of the drop.	As above.	N/A

## 4.2 Other Considerations

### 4.2.1 Water usage/availability

The site has access to mains water supply.

Additional water for dust suppression is also available from the reservoir to the west. This will often be the main source of water used by the road sweeper.

## 4.3 Visual Dust Monitoring

Regular site inspections for dust and other emissions will be conducted on a daily basis by the TCM.

The inspection includes the following checks:

- the appearance of the facility i.e. no visible dust raising;
  - an inspection of the site boundary. The presence of dust should be recorded, and appropriate remedial action taken;
  - stockpiles checked to ensure compliance, such as correct height, placement and profile; and
  - check for debris, dust, and mud – clean up and dampen down (where appropriate).

If visible dust is detected mitigation measures (e.g. dampening) will be implemented. A pause in operations will be considered.

The TCM will complete a check sheet (Site Diary Checklist – Appendix C) after the inspection:

- to confirm whether:
  - dust levels were compliant with the DEMP at the time of inspection;
  - dust and emission controls were being utilised and / or maintained at the time of inspection;
  - only suitable equipment was observed on site;
- to record any actions required.

It is acknowledged that crushing and screening is a potential source of dust. Therefore, more frequent routine monitoring will be undertaken at the times that these activities are operational.

### 4.3.1 Out of hours

Out of hours, there will be no routine visual dust monitoring.

## 5. Reporting and Complaints Response

### 5.1 Engagement with the Community

The Operator enjoys a cordial relationship with its Landlord. And that Landlord enjoys control over the entirety of Cliffs End Farm, including all residents and undertakings. In the event that fugitive emissions are being emitted as a result of an incident, neighbours will be alerted.

### 5.2 Reporting of Complaints

Dust complainants should be directed to the TCM. He will record the details on a Complaint Form.

Within 24 hours of receiving the complaint the TCM will investigate the likely cause. The investigation will conclude whether the complaint is substantiated, and the outcome should be relayed to the relevant complainants by telephone or email.

If the investigation substantiates the dust complaint, remedial action will be taken to resolve the issue. Unless there are exceptional circumstances, actions should be initiated within 7 days. See section 3.5.6.

After a substantiated dust complaint has been resolved through remedial action, the EMS, the DEMP and any related procedure documents should be reviewed within two weeks. Improvements identified during the review process should be undertaken in accordance with a programme of works and be subject to a timetable.

The EA should be notified if events transpire that may cause significant fugitive emissions, these events include:

- breakdown or failure of dust suppression equipment;
- breach of an emissions limit;
- malfunction; and
- accident.

The EA will be notified verbally or in writing:

- telephone call to EA national incident hotline on 0800 80 70 60; or
- telephone call to the relevant EA regulatory officer; or
- email to the EA regulatory officer (referencing attempts made by telephone).

Records of the telephone call / email notifications should be made in the Site Diary.

### 5.3 Management Responsibilities

The TCM will investigate each complaint. Should the complaint be substantiated, the TCM will arrange appropriate remedial abatement actions and record these in the Site Diary. See Table 5 for examples of remedial actions.

The TCM should also respond to complainants and inform them of actions taken. The TCM will collate and review complaints on a periodic basis.

## 6. Summary

The objective of this plan is to:

- identify dust and emission risks to surrounding receptors that could arise from the proposed waste management activities;
- provide abatement controls to manage dust and emission related risks; and
- be incorporated into the EMS.

The control measures for preventing and managing dust from each source on site are set out in Tables 3-5.

Management responsibilities are outlined in sections 4.1 and 5.3.

Details of when the DEMP should be reviewed are in section 4.1.2.

### 6.1 Omitted sections

The table below shows the sections of EA DEMP template that are not been included in this report, along with a reason for the omission.

Table 6: Omitted sections and reasoning

EA DEMP Template Section	Reason for Omission
Enclosure of Waste Processing & Storage Areas	Total enclosure is unnecessary. Alternative measures can be adopted which eliminate, prevent, abate or minimise the emission.
Particulate Matter Monitoring	The site is not located within an AQMA. Receptors potentially sensitive to dust and particulates do not lie within 500m downwind of the site.

## **APPENDICES**

### **A. Plans and Drawings**

- Site Layout Plan (19228-WIE-ZZ-XX-DR-V-80002)
- 500m Sensitive Receptors Plan (WIE19228-100\_GIS\_EPA-2A)

This drawing should not be scaled. Dimensions to be verified on site.  
 Any discrepancies should be referred to the Engineer prior to work being put in hand.

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### GENERAL NOTES

- PERMIT BOUNDARY
- LEGATO BLOCK WALL

Rev	Date	Description	By	Chk
P01	13.02.23	INFORMATION ISSUE	MC	RA

Amendments

Project  
**THANET GRAB HIRE, LITTLE CLIFFSEND FARM**

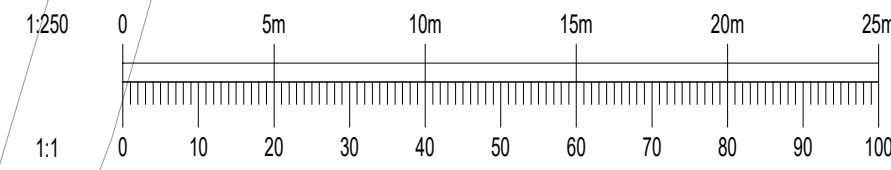
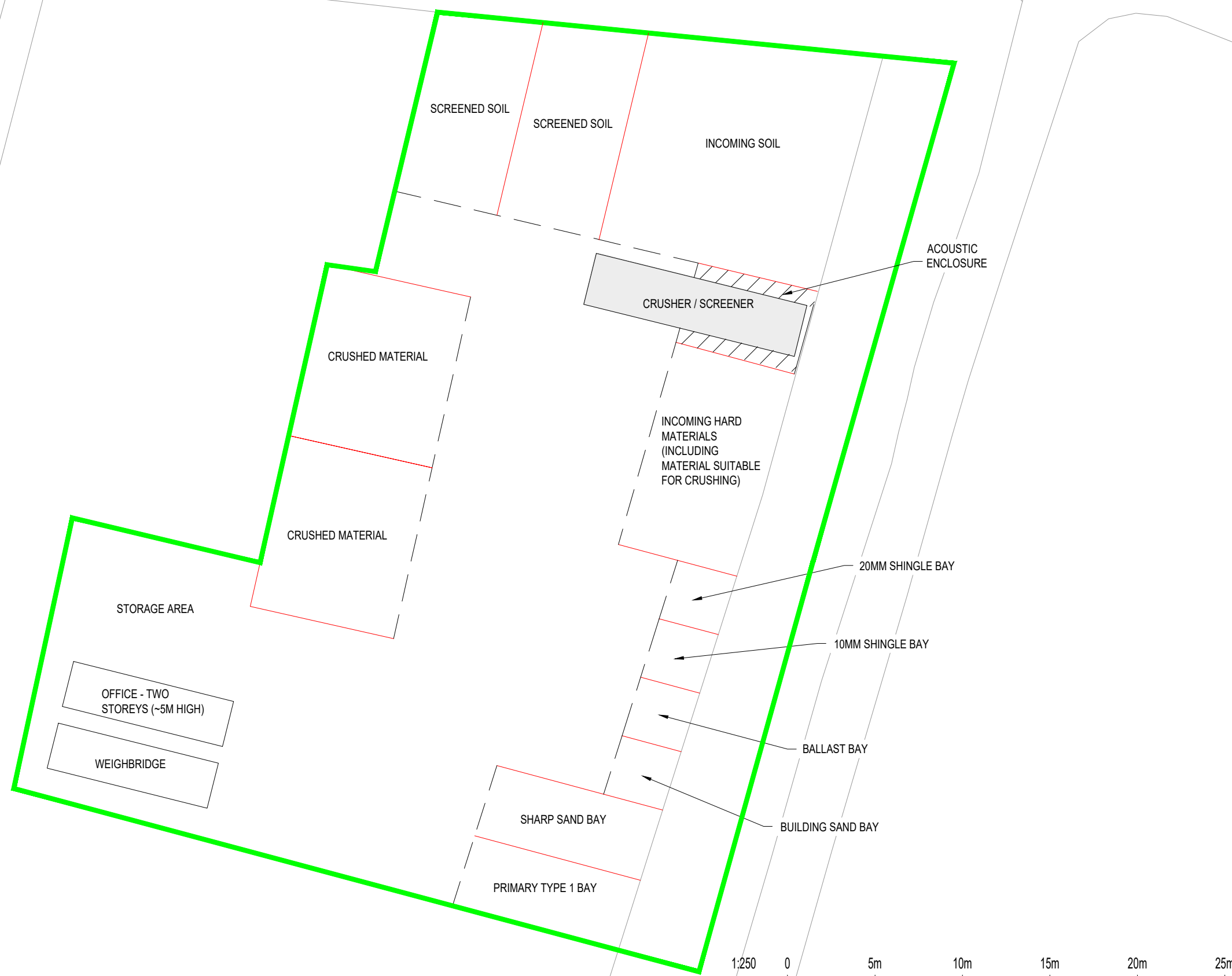
Title  
**SITE LAYOUT PLAN**

Client

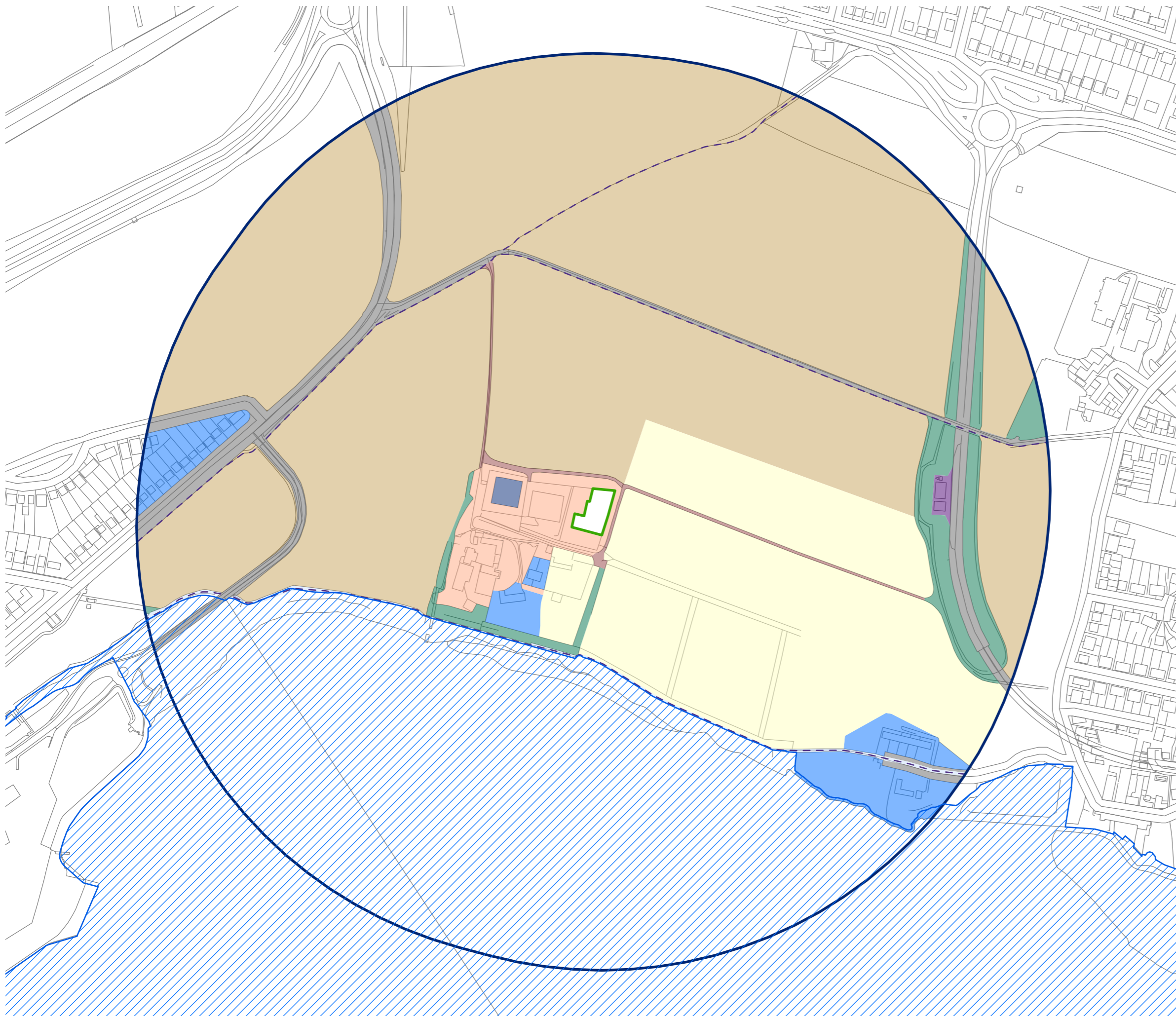


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INFORMATION				S2
Designed By	RA	Director	SO	Waterman Ref WIE19228
Drawn By	MC	Date	FEBRUARY 2023	Scales @ A3 1:250
Project - Originator - Volume - Level - Type - Role - Number				Revision
19228-WIE-ZZ-XX-DR-V-80002				P01

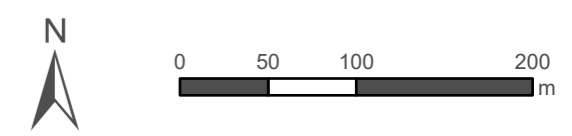


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- Permit Boundary
- 500m Study Area
- Agricultural
- Commercial Industrial / Non-residential
- England Coast Path Route
- Animal Husbandry
- Private Access Road
- Public Highways
- Reservoir
- Residential
- Utilities
- Woodland
- Public Rights of Way
- Conservation Statutory Designations\*

\* The designation boundaries have been combined in this plan for the sake of clarity. The designation boundaries are shown separately in the Environment Agency's Nature and Heritage Conservation Screening Report: Bespoke Waste (reference EPR/LB3037AU/A001) dated 6 May 2022."



Project Details	WIE19228-100: Thanet Grab Hire, Little Cliffsend Farm
Figure Title	Figure 2: Environmental Receptor Plan
Figure Ref	WIE19228-100_GIS_EPA_2A
Date	March 2023
File Location	N:\Projects\WIE19228\100\9_GIS\WIE19228-100_GIS_WAI



## B. Table of Relevant Sensitive Receptors Within 500m

Receptor Name	Receptor Type	Direction from site	Approximate distance from site boundary (m)
Animal husbandry	Horsiculture	North-east, east, southeast, south	14
Agricultural	Arable	North	23
Numbers 1 and 2 Little Cliffsend Farm Cottages	Residential	Southwest	43
Little Cliffsend Farmhouse	Residential	Southwest	90
Agricultural	Arable	West	133
Sandwich Bay ecologically important site	Ecological	South	142

### Appendices

**C. Site Diary Checklist**

<b>MONDAY - FRIDAY</b>	<b>Date</b>			
<b>PLEASE COMPLETE A SHEET FOR EACH DAY OF THE WEEK</b>				
<b>Staff and Visitors must sign in and out</b>				
<b>Name</b>		<b>Time in</b>	<b>Time out</b>	
<b>Weather - start and end of day</b>				
<b>Time</b>	<b>Wind Direction (from N, S etc.)</b>	<b>Dry? Rain? Sunny?</b>		
<b>DUST</b>		<b>Y/N</b>	<b>Time</b>	<b>Name</b>
Start of day check - visible dust at risk of leaving boundary?				
Lunchtime check - visible dust at risk of leaving boundary?				
End of day check - visible dust at risk of leaving boundary?				
If dust suppression has been necessary (either because of visual inspection findings or because of weather forecast), please describe (e.g. road sweeper to dampen site surface)				
<b>NOISE - site perimeter walk round 15 min duration at different times each working day</b>		<b>Y/N</b>	<b>Time</b>	<b>Name</b>
North boundary - excessive noise?				
East boundary - excessive noise?				
South boundary - excessive noise?				
West boundary - excessive noise?				
Any excessive or unusual noise noted during day?				
If yes, record details and actions				

ACCESS ROAD check	Time	Name	Comment (e.g. road sweeper used)	
Access road check 1				
Access road check 2				
<b>Daily Planned Preventative Maintenance (initial when completed)</b>				
Item	Initials	Comment		
Fencing/gates				
Mobile plant				
Dust suppression equipment				
Site surfacing - debris / waste removed if present				
<b>OTHER ISSUES - as they arise such as:</b> e.g. Complaints, non-compliant waste found or rejected, spillage of oils, equipment breakdowns, pests or vermin found.				

<b>SATURDAY</b>		Date		
<b>Staff and Visitors must sign in and out</b>				
		<b>Name</b>	<b>Time in</b>	<b>Time out</b>
<b>Weather - start and end of day</b>				
<b>Time</b>	<b>Wind Direction (from N, S etc.)</b>	<b>Dry? Rain? Sunny?</b>		
<b>DUST</b>		<b>Y/N</b>	<b>Time</b>	<b>Name</b>
Start of day check - visible dust at risk of leaving boundary?				
Lunchtime check - visible dust at risk of leaving boundary?				
End of day check - visible dust at risk of leaving boundary?				
If dust suppression has been necessary (either because of visual inspection findings or because of weather forecast), please describe (e.g. road sweeper to dampen site surface)				
<b>NOISE - site perimeter walk round 15 min duration at different times each working day</b>		<b>Y/N</b>	<b>Time</b>	<b>Name</b>
North boundary - excessive noise?				
East boundary - excessive noise?				
South boundary - excessive noise?				
West boundary - excessive noise?				
Any excessive or unusual noise noted during day?				
If yes, record details and actions				

<b>Weekly Noise Checks - mobile plant and treatment plant</b>			
	<b>Y/N</b>	<b>Time</b>	<b>Name</b>
Impulsive noises			
Squeaks / whirring			
Defective exhaust / silencers			
If excessive noise noted, summarise actions (grease / lubricate, repair, replace)			
<b>ACCESS ROAD check</b>	<b>Time</b>	<b>Name</b>	<b>Comment (e.g. road sweeper used)</b>
Access road check 1			
Access road check 2			
<b>Daily Planned Preventative Maintenance (initial when completed)</b>			
<b>Item</b>	<b>Initials</b>	<b>Comment</b>	
Fencing/gates			
Mobile plant			
Dust suppression equipment			
Site surfacing - debris / waste removed if present			
<b>Weekly PPM (Saturday) (initial when complete)</b>			
Site surface pot holes - repair if found			
Litter check and collect within site			
Emergency kit - spills, fire, first aid			
Notice board condition			
Check acoustic enclosure walls (height, gaps)			
<b>OTHER ISSUES - as they arise such as:</b> e.g. Complaints, non-compliant waste found or rejected, spillage of oils, equipment breakdowns, pests or vermin found.			

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