

Dust Management Plan
Eastern Transfer Station
For Hertfordshire County Council



Dust Management Plan

Quality Management				
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1 Introduction

- 1.1 The Eastern Transfer Station (ETS) facility is located at Westmill Road, Hertfordshire, SG12 0ES. The recycling facility handles a maximum of 140,000 tonnes per annum of dry non-hazardous household, commercial and industrial waste. The facility will be regulated by the Environment Agency (the Agency) under an Environmental Permit.
- 1.2 RPS was commissioned by Hertfordshire County Council (HCC) to prepare a Dust Management Plan (DMP) for the ETS.
- 1.3 The ETS will be a central hub at which a range of local wastes collected by waste management contractor(s) on behalf of HCC will be consolidated and transferred in bulk to other facilities for appropriate treatment or disposal.
- 1.4 The aims of this DMP are to:
- describe the management and operational actions the site will use to deal with both anticipated (e.g. forecast) and actual high-risk conditions (e.g. measured dry dust winds above moderate breeze).
 - describe the conditions under which dust is most likely to pose a nuisance risk at sensitive receptors close to the site and set trigger levels which, when exceeded, would require further dust control measures to be implemented (i.e. over and above the routine measures).
- 1.5 The scope and content of this DMP is based on the Institute of Air Quality Management (IAQM) recommendations and also has due regard for the Environment Agency's Dust Emissions Management Plan v10 template.
- 1.6 The structure of this DMP is as follows:
- A process description, particularly describing dusty, or potentially dusty, activities or materials used, and materials handling, storage and use of equipment;
 - A description of waste activities and their respective limits including the identification of all the significant dust release points for the operations or materials together with a description of waste acceptance, storage and retention practices;
 - Identification of the sensitive receptors within the area of influence that could be impacted (with reference to a map/plan);
 - A description of the routine mitigation/control measures that would be used day-to-day under normal operating conditions in the absence of any unusual risk factors, together with information on how it will be ensured that any dust control equipment is designed, operated and maintained such that it operates effectively to control dust;

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- A description of the additional measures that will be applied during these periods to manage dust emissions should actual or forecast trigger levels be exceeded, other risk factors occur, or should routine visual observations show high dust emissions;
- A description of what would trigger the further action/additional measures, such as:
 - The results of planned routine checks/inspections/surveys on site, e.g. visual inspections; and
 - Receiving a dust complaint.
- A description of procedures to check these further dust controls have been effective and, if necessary, escalate the level of additional control or modify or temporarily suspend site operations to prevent dust nuisance;
- A description of procedures, to investigate and take appropriate action to prevent recurrence on receipt of complaints of dust nuisance or on any elevated dust levels being present from the aforementioned checks/inspections/surveys or monitoring; and
- A description of management procedures describing the roles and responsibilities of personnel on site, staff training and competence, planned maintenance and repair, and regular review of the effectiveness of dust controls (including reviewing and updating the DMP itself).

2 Process Description

Site Description

- 2.1 The site is located within the administrative area of East Hertfordshire District Council (EHDC) and Hertfordshire County Council (HCC), the latter being the minerals and waste planning authority.
- 2.2 The ETS site is located on a former landfill site approximately 1.9 km north west of Ware, Hertfordshire (national grid reference: 534182E, 215988N). The site is located approximately 3.8 km north east of Hertford and approximately 12.1 km south east of Stevenage. The main area of the site, excluding the existing access road from the public highway, is approximately 1.4 ha in size. The proposed development lies immediately to the east of the newly operational Ware Recycling Centre (RC), approximately 0.8 km north of the A10 dual carriageway which delimits the outskirts of Ware.
- 2.3 The site has commercial and light industrial premises to the north and west of the site. The nearest residential receptors are located approximately 170 m to the -west of the site. The area to the south is largely agricultural with the town of Ware beyond. To the west is the now operational Ware RC. Beyond this is the A602 Westmill Road, across which is the Westmill Farm site which has several commercial units, a golf course, a go-karting track, a caravan/camping site and several fishing lakes.
- 2.4 The site location and local sensitive receptors are shown in Figure 1.
- 2.5 Other potential contributors of dust local to the site include the Biffa Waste Services site that operates as a landfill approximately 40 m to the south of the site and the Cemex Westmill Quarry approximately 75 m to the north. The locations of Biffa Waste Services and Cemex Westmill Quarry can be seen in Figure 1 as Receptors 1 and 5 respectively.
- 2.6 EHDC has currently designated three Air Quality Management Areas (AQMAs) comprising several properties in Bishops Stortford, central Hertford and Sawbridgeworth and the sections of the M4, M25 and M40 motorways that pass through the district. The Hertford AQMA, encompassing several properties in central Hertford, is the closest AQMA to the Eastern Transfer Station and is located approximately 3 km to the south-west.

Waste Operations

- 2.7 The following activities will be undertaken at the ETS:
- Storage and bulking of waste;
 - Minimal treatment of waste, some shredding may take place with mobile equipment within the main building.

- 2.8 During waste operations, potential sources of dust include:
- haulage;
 - tipping; and
 - wind erosion from storage of deposited wastes.
- 2.9 Emissions from vehicle movements to and from the site can also affect air quality. Dust and mud can be tracked in and out by road vehicles visiting or leaving the site or arise from waste in uncovered vehicles entering site. Any mud brought to the site is cleared away and cleaned by site staff manually using brushes. If extreme circumstances arise then a mechanical sweeper will be utilised to clear all mud and debris as soon as possible.
- 2.10 Front end loader vehicles will be used within the transfer station buildings to move and compact tipped waste into bays and to load it onto HGVs for transfer off-site.

Waste Acceptance

- 2.11 Only wastes that are listed in Table 2.1 below will be accepted at the ETS. The site will only up to a total of 140,000 tonnes per year.
- 2.12 No wastes consisting solely or mainly of dusts, powders or loose fibres are accepted on site. The site layout can be seen in Figure 2.

Table 2.1: Accepted Wastes at Eastern Transfer Station

EWC Chapter	Waste description
15	Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified
15 01	15 01 packaging (including separately collected municipal packaging waste)
5 01 01	paper and cardboard packaging
15 01 02	plastic packaging
15 01 03	wooden packaging
15 01 04	metallic packaging
15 01 05	composite packaging
15 01 06	mixed packaging
15 01 07	glass packaging
15 01 09	textile packaging
16	Wastes not otherwise specified in the list
16 01	end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)
16 01 03	end-of-life tyres
16 01 17	ferrous metal

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EWC Chapter	Waste description
16 01 18	non-ferrous metal
16 01 19	Plastic
16 01 20	Glass
16 05	Gases in pressure containers and discarded chemicals
16 05 05	gases in pressure containers other than those mentioned in 16 05 04
16 06	batteries and accumulators
16 06 01*	lead batteries
16 06 02*	Ni-Cd batteries
16 06 03*	mercury-containing batteries
16 06 04	alkaline batteries (except 16 06 03)
17	Construction and demolition wastes (including excavated soil from contaminated sites)
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 ceramics other than those mentioned in 17 01 06
17 02	Wood, glass and plastic
17 02 01	Wood
17 02 02	Glass
17 02 03	Plastic
17 04	Metals (including their alloys)
17 04 01	copper, bronze, brass
17 04 02	Aluminium
17 04 03	Lead
17 04 04	Zinc
17 04 05	iron and steel
17 04 06	Tin
17 04 07	mixed metals
17 04 11	cables other than those mentioned in 17 04 10
17 06	Insulation materials and asbestos-containing construction materials
17 06 04	insulation materials other than those mentioned in 17 06 01 and 17 06 03
17 08	Gypsum-based construction material
17 08 02	gypsum-based construction materials other than those mentioned in 17 08 01
18	Wastes from human or animal health care and/or related research (except kitchen and restaurant wastes not arising from immediate health care)

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EWC Chapter	Waste description
18 01	wastes from natal care, diagnosis, treatment or prevention of disease in humans
18 01 01	sharps (except 18 01 03)
18 01 03*	wastes whose collection and disposal is subject to special requirements in order to prevent infection
18 01 04	wastes whose collection and disposal is not subject to special requirements in order to prevent infection(for example dressings, plaster casts, linen, disposable clothing, diapers)
18 01 06*	chemicals consisting of or containing hazardous substances
18 01 07	chemicals other than those mentioned in 18 01 06
18 01 08*	cytotoxic and cytostatic medicines
18 01 09	medicines other than those mentioned in 18 01 08
18 01 10	amalgam waste from dental care
18 02	Wastes from research, diagnosis, treatment or prevention of disease involving animals
18 02 01	sharps (except 18 02 02)
18 02 02*	wastes whose collection and disposal is subject to special requirements in order to prevent infection
18 02 03	wastes whose collection and disposal is not subject to special requirements in order to prevent infection
18 02 05*	chemicals consisting of or containing hazardous substances
18 02 06	chemicals other than those mentioned in 18 02 05
18 02 07*	cytotoxic and cytostatic medicines
18 02 08	medicines other than those mentioned in 18 02 07
20	Municipal Wastes (Household Waste and Similar Commercial, Industrial and Institutional Wastes) Including Separately Collected Fractions
20 01	Separately collected fraction (except 15 01)
20 01 01	paper and cardboard
20 01 02	glass
20 01 08	biodegradable kitchen and canteen waste
20 01 10	clothes
20 01 11	textiles
20 01 27*	paint, inks, adhesives and resins containing hazardous substances
20 01 28	paint, inks, adhesives and resins other than those mentioned in 20 01 27
20 01 33*	Batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators containing these batteries
20 01 34	Batteries and accumulators other than those mentioned in 20 01 33
20 01 35*	Discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components
20 01 36	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35
20 01 37*	Wood containing dangerous substances
20 01 38	wood other than that mentioned on 20 01 37

EWC Chapter	Waste description
20 01 39	plastics
20 01 40	metals
20 02	Garden and park wastes (including cemetery waste)
20 02 01	Biodegradable waste
20 02 02	soil & stones
20 02 03	Other non-biodegradable waste
20 03	Other municipal wastes
20 03 01	Mixed municipal waste
20 03 07	Bulky waste

*denotes hazardous waste pursuant to Directive 91/689/EEC.

Waste Storage and Retention

2.13 The main wastes that are accepted on site and details on how they are stored at the site, are summarised in Table 2.2 below:

Table 2.2: Waste Storage

Waste Stream / Source	Storage on site and pollution prevention measures
Mixed 'black bag' residual municipal waste	Unloaded, stored and re-loaded within transfer station buildings. Waste will be managed on a first-in, first-out basis (organised using bays within the transfer buildings) and typically stored for up to 24 hours before onward transfer.
Bulky waste or recyclables	Unloaded, stored and re-loaded within transfer station buildings. A shredder may be used for bulky waste, within the building. Any recyclable waste streams would be stored separately to mixed residual waste, utilising the secondary transfer building.
Green waste and food waste	Unloaded, stored and re-loaded within transfer station buildings. Any green or food waste streams would be stored separately to mixed residual waste, utilising the secondary transfer building.
Construction and demolition waste	Unloaded, stored and re-loaded within transfer station buildings in designated bays.
Batteries	Stored within quarantine area within sealed plastic containers for removal off site.
Low level clinical waste	Clinical waste accepted at the site would be that classified as 'lower level clinical waste', delivered in dedicated vehicles in a double bagged format (or specialised sealed containers), which would then be bulked in the wheeled eurobins for transfer using a dedicated vehicle. The clinical waste would therefore be handled separately from the local authority waste in the secondary transfer building and would not be mixed with it.

2.14 All wastes will be deposited into the large bunkers within the buildings providing secure storage. This will therefore help to contain the waste and help reduce the potential for litter generation. In the event of a significant litter problem including complaints from the client or neighbouring facilities, this will be reported as an incident in accordance with documented operating protocols/procedures and recorded in the site diary, with corrective and preventative actions taken. Any litter that escapes beyond the site boundary will be retrieved as soon as practicable.

- 2.15 If hazardous waste is deposited on site, it will be cordoned off and kept separate from customers and other wastes. Arrangements will be made to collect this waste within a week or as soon as reasonably practicable using specialist contractors.
- 2.16 Waste and recyclables will be stored in their respective storage bunkers and will be serviced on demand when the bunker is full either by HCC or their third party off takers. When full, no bunkers will be stored for more than 7 working days (4 working days for clinical waste) with the majority being serviced in 24 hrs.
- 2.17 Outside of these hours there is no waste delivery or activity on site reducing any likelihood of dust emissions. If a member of the public has a complaint regarding dust on site, they can contact HCC through the complaints procedure listed in Section 7.

Waste Acceptance Procedure

- 2.18 The ETS facility will provide suitable areas to segregate and store different waste streams for removal off-site. The site will not be open to the general public and would accept primarily local authority waste, including that from the adjacent RC.
- 2.19 On entering the site, waste delivery vehicles will be weighed at the weighbridge station and waste acceptance checks carried out. This would involve checking that the waste consignment/transfer notes are present, correctly completed, and indicates that the waste is a type that can be accepted by the facility.
- 2.20 A waste consignment that is identified at this point as not being acceptable would be rejected and returned to its origin. Should any unacceptable waste be identified after unloading, it would be stored in the designated quarantine area, separated from other waste, until it can be collected and transported for treatment or disposal by an appropriately licensed waste carrier.
- 2.21 Only 'lower-level clinical waste' will be accepted at the site. This will be delivered in dedicated vehicles in a double-bagged format (or specialised sealed containers), which would then be bulked in the wheeled eurobins for transfer using a dedicated vehicle. The clinical waste would therefore be handled separately from the local authority waste and would not be mixed with it. No treatment (shredding) of hazardous or clinical waste will take place.
- 2.22 Waste procedure for outgoing loads:
- All waste for despatch is inspected and loaded by site operatives/contractors to confirm its description and composition.
 - All loads will be secured and sheeted where required.
 - All loads will be weighed on exit.
- 2.23 If a member of site staff notices an item of waste that is non-conforming they will inform the person in charge of the site. Site staff will then take the following action;

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- Identify the material and whether it can be managed on site.
 - If the material can be managed on site (i.e. it is a waste type that the site is permitted to accept), it will be safely removed and placed in the correct storage container elsewhere on site.
 - If the material cannot be identified and is suspected to be hazardous OR if the material cannot be managed on site, the area will be cordoned off to all waste movements to ensure operative and public safety.
 - The Site Manager will get advice on how best to deal with the material and manage it accordingly.
 - All non-conforming wastes will be kept separate on site from other wastes and moved (providing it is safe to do so) to a designated quarantine area.
 - All non-conforming wastes will be removed from site within 7 working days, or as soon as reasonably practicable using specialist contractors.
 - All instances of non-conforming waste will be recorded in the site diary.
 - All instances of non-conforming waste will also be notified to the Operations Manager to allow for preventative actions to be put in place.
 - If required, the Environment Agency will be notified.
- 2.24 Records will be kept of all wastes accepted at the site and for all wastes leaving site for recovery or disposal elsewhere.

3 Sensitive Receptors where Impacts could Occur

- 3.1 The site is located within the administrative area of EHDC and HCC, the latter being the minerals and waste planning authority.
- 3.2 The site is located on Westmill Road and has commercial and light industrial premises to the north and west of the site. The nearest residential receptors are located approximately 300 m to the north-east of the site. The area to the south of the recycling centre is largely agricultural with the town of Ware beyond. To the east of the site is a quarry. Figure 1 shows the site boundary and sensitive receptors in the immediate surroundings.
- 3.3 Dust is the generic term used to describe particulate matter in the size range 1-75 μm in diameter [1]. Particles greater than 75 μm in diameter are termed grit rather than dust.
- 3.4 Dusts can contain a wide range of particles of different sizes. The normal fate of suspended (i.e. airborne) dust is deposition. The rate of deposition depends largely on the size of the particle and its density; together these influence the aerodynamic and gravitational effects that determine the distance it travels and how long it stays suspended in the air before it settles out onto a surface. In addition, some particles may agglomerate to become fewer, larger particles; whilst others react chemically.
- 3.5 The effects of dust are linked to particle size and two main categories are usually considered:
- PM_{10} particles, those up to 10 μm in diameter, remain suspended in the air for long periods and are small enough to be breathed in and so can potentially impact on health; and
 - Dust, generally considered to be particles larger than 10 μm which fall out of the air quite quickly and can soil surfaces (e.g. a car, window sill, laundry). Additionally, dust can potentially have adverse effects on vegetation and fauna at sensitive habitat sites.
- 3.6 Concentration-based limit values and objectives have been set for the PM_{10} suspended particle fraction but no statutory or official numerical air quality criterion for dust annoyance has been set at a UK, European or World Health Organisation (WHO) level. Dust assessments have tended to be risk based, focusing on the appropriate measures to be used to keep dust impacts at an acceptable level.
- 3.7 The national PPG provides little detailed guidance on identifying dust-sensitive receptors; therefore definitions and examples described in the IAQM *Guidance on the Assessment of Mineral Dust Impacts for Planning* [2] (referred to hereafter as the IAQM minerals guidance) have been used. This includes, amongst others, homes, schools, hospitals, car parks/showrooms, places of work and footpaths.

- 3.8 In terms of establishing the extent of the area likely to be affected by nuisance dust effects, the IAQM minerals guidance suggests that disamenity dust impacts are not usually experienced beyond 400 m of the sources and the main impacts are within 100 m.
- 3.9 On this basis, to ensure a worse-case scenario, consideration has been given to sensitive receptors within 1000 m of the site boundary, as seen in Figure 1. Receptors are of course present at greater distances, but these are unlikely to be affected by nuisance dust effects during the operation of the ETS and associated waste activities.
- 3.10 Table 3.1 gives details of the sensitive receptors located within the 1000 m boundary.
- 3.11 Table 3.2 summarises potential sources of dust emissions and their pathways. Potential receptors have been identified and mitigation measures chosen to reduce the effectiveness of pathways and any subsequent dust impacts.

Table 3.1: Summary of Closest Local Sensitive Receptors within 1000 m of the Site

Receptor Name	Receptor Type	Receptor Sensitivity	Approximate Distance and Direction from Development Site
Landfill site operated by Biffa Waste Services Limited	Industrial	Low	50 – south of ETS
Top Pots	Commercial	Medium	110 m – west of ETS
CEMEX Westmill Quarry	Industrial	Low	60 m – north of ETS
Westmill Farm	Residential	High	170 – west of ETS
Westmill 2	Residential	High	280 m – north west of ETS
Westmill House	Residential	High	290 – north west of ETS
The Well House	Residential	High	700 – north west of ETS
Chelsing Lodge	Residential	High	750 – north of ETS
Home Wood	Residential	High	540 – east of ETS
Poles Lane	Residential	High	860 - east of ETS
Westmill Road	Residential	High	630 – south of ETS
Gentlemens Field	Residential	High	690 - south-east of ETS
Greyfriars	Residential	High	850 - south-east of ETS
Wheatsheaf Drive	Residential	High	870 – south-east of ETS
Crouchfields	Residential	High	930 – west of ETS

- 3.12 Meteorological data collected at Stansted, located approximately 20 km north-east of the Application Site, has been used to establish the prevailing wind direction in compiling this DMP. The wind rose for Stansted is shown in Figure 3. The prevailing wind direction is south westerly, so any receptors to the north east of the site are at greatest risk.

Table 3.2: Source, pathway, receptor and proposed mitigation

Hazard/ Contaminant	Source	Pathway	Receptors	Mitigation Measures
Dust/Particulates	Delivery/pick up of waste	Airborne Track out from muddy/dusty vehicles	Site Personnel/visitors Businesses and residential receptors within proximity of the site (see Table 3.1)	<ul style="list-style-type: none"> • All traffic carrying surfaces to be paved • All loaded vehicles to be enclosed/sheeted • Speed controls to be implemented and enforced. • Vehicles to avoid residential streets • Frequent manual sweeping of access roads and site. In extreme cases a road sweeper to be used • All vehicles to switch off engines when stationary. • Use of trees and shrubs around perimeter
Dust/Particulates	Movement of waste onsite	Airborne	Site Personnel/visitors Businesses and residential receptors within proximity of the site (see Table 3.1)	<ul style="list-style-type: none"> • No wastes consisting solely or mainly of dusts, powders or loose fibres are accepted on site. • Any non-conforming wastes to be removed from site as soon as practicably possible. • Hazardous wastes will be accepted providing they meet the site's acceptance criteria. These hazardous wastes will be stored securely until a sufficient quantity has built up to then transfer off site • All traffic carrying surfaces to be paved • All loaded vehicles to be enclosed/sheeted • Speed Controls to be implemented and enforced. • All drop heights to be minimized • Frequent manual sweeping of access roads and site. In extreme cases a road sweeper to be used • All vehicles to switch off engines when stationary. • Use of trees and shrubs around perimeter • All waste off-loading and loading will take place within a building with the doors closed at all times other than for access

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Dust/Particulates	Wind erosion of stored waste materials	Airborne	Site Personnel/visitors Businesses and residential receptors within proximity of the site (see Table 3.1)	<ul style="list-style-type: none"> • No wastes consisting solely or mainly of dusts, powders or loose fibres are accepted on site. • Any non-conforming wastes to be removed from site as soon as practicably possible. • Hazardous wastes will be accepted providing they meet the site's acceptance criteria. These hazardous wastes will be stored securely until a sufficient quantity has built up to then transfer off site. All wastes to be kept in the bunkers within the buildings. • When bunkers are at capacity the waste will be emptied and removed within 7 days. • Use of trees and shrubs around perimeter • Waste storage and treatment (shredding of certain waste) will undertaken within a building. The building doors will remain shut at all times except for access
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4 Routine Mitigation/Control Measures

- 4.1 The air quality section of the national PPG advises that “*mitigation options where necessary will be locationally specific, will depend on the proposed development and should be proportionate to the likely impact*”. In accordance with that guidance, the appropriate dust management and mitigation measures for this site have been selected taking into account the dust sources on site; the location and proximity of sensitive receptors and their sensitivity to dusts; and the weather conditions.
- 4.2 The potential for dust impacts is highest when the site is operational. The hours of operation at the site are:
- 5:00 am to 9:00 pm Monday to Friday;
 - 7:30 am to 4:00 pm on Saturdays; and
 - 7:30 am to 12:00 noon on Sundays (in practice facility will mostly operate on weekdays, as weekend operation will be to make up for backlog from bank holidays).
- 4.3 No significant dust effects are anticipated when the site is not in operation.
- 4.4 No wastes consisting solely or mainly of dusts, powders or loose fibres are accepted on site; therefore, dust suppression systems are not used on site.
- 4.5 The baseline mitigation/control measures (i.e. those measures that would be used day-to-day under normal operating conditions in the absence of any unusual risk factors) that will be employed at the site are listed below:

Description of Baseline Mitigation/Control Measure	Yes/No
All traffic carrying surfaces will be paved.	Yes
All loaded vehicles will be enclosed or sheeted.	Yes
Speed controls will be implemented and enforced.	Yes
Where practical, vehicles will not use residential streets.	Yes
Frequent road sweeping to ensure that access roads remain clean at all times. Site management procedures should ensure that a road sweeper is readily available when required and that sufficient resource is available to ensure it can be operated at these times.	Yes (manual sweeping)
Provision of a wheel-wash facility.	No
All drop heights will be minimised.	Yes
Use of windbreaks, screens, trees, shrubs and semi-permeable fences around perimeter.	Yes (Palisade fencing/trees/shrubs)
Ensure all vehicles switch off engines when stationary. There should be no idling vehicles on site	Yes

- 4.6 Wastes will be stored in bunkers within the buildings separated by waste type. The building doors will remain shut at all times except for access.
- 4.7 Any dusty constituent wastes within the larger loads (dusts/powders/loose fibres) brought to the site will be cleared away and cleaned by site staff manually using brushes. If extreme circumstances arise then a mechanical sweeper will be utilised to clear all mud and debris as soon as possible.
- 4.8 The site will not separately accept dusty wastes (dusts, powders/loose fibres) and no high-dust generation activities will take place with the exception of the minimal shredding activities which will only take place within the main building with the doors closed. Therefore there will be no wheel wash on site. If small amounts of dust found in larger collection containers or abnormal operations contribute to an issue with dust management any dust will be cleared away and cleaned by site staff manually using brushes. If extreme circumstances arise then a mechanical sweeper will be utilised to clear all dust, mud and debris as soon as possible.
- 4.9 Although the site does not control moisture content, in the instance that any stored materials are at risk of becoming friable then they will be removed from site as soon as practicably possible to avoid dust impacts.
- 4.10 The schedule of housekeeping measures and their frequency is shown in Table 4.1. Housekeeping and cleaning procedures are kept under continual review through the recording of daily site inspections and associated monitoring of the effectiveness of any procedures applied.

Table 4.1: Eastern Transfer Station - Housekeeping Schedule

Housekeeping Procedure	Frequency
Site housekeeping inspection	Daily
Visual dust inspection	Daily
Site sweeping and removal of mud/dust (manual)	Daily
Site sweeping and removal of mud/dust (mechanical)	As required
Litter/waste retrieval and disposal	Daily

5 Additional Mitigation/Control Measures

- 5.1 Trigger levels have been devised based on the outcome of our risk assessment of nuisance dust impacts undertaken using a source-pathway-receptor approach. If any of these trigger levels are exceeded, further mitigation measures will be implemented. Any of the following conditions at the ETS would trigger additional dust controls:
- Routine visual checks/inspections/surveys identify evidence of dust off or on-site; or
 - A dust complaint is received;
 - Failure of dust-critical equipment, plant or infrastructure.
- 5.2 HCC has advised that all waste is contained in bunkers within the buildings and there is limited dust production on-site. The usual trigger value for dust-raising meteorological conditions (e.g. winds that are, or are forecasted to be, above a moderate breeze (Beaufort Scale force 4 or speed 6 to 8 m.s⁻¹)) is not considered necessary.
- 5.3 If any of the above trigger levels are exceeded, any of the following additional controls can be employed:
- Increase frequency of use of the road sweeper, both on-site and on local roads;
 - Temporary cessation of the activities responsible for causing the dust impact until the trigger level is no longer exceeded;
 - In the event of an equipment or control failure, access to the site will be prevented until the issue is resolved or a spillage is cleaned-up.
- 5.4 A suitable and sufficient application of the above additional measures (either singly or in combination) will be applied as necessary to effectively control dust emissions, as evidenced by the visual and monitoring checks described in the next section.
- 5.5 The Site Manager will be responsible for implementing these risk management measures in accordance with procedures.

6 Procedures to Check the Dust Controls/Mitigation are Effective

- 6.1 The Site Manager is responsible for the implementation of the DMP. In practice some tasks may be delegated to other members of staff; however, the ultimate responsibility lies with the Site Manager. If the Site Manager is not on site, the responsibility for the implementation of the DMP will be delegated to a nominated deputy.
- 6.2 The Site Manager will be responsible for the continual review and update of the DMP. It is anticipated that this will be done on an annual basis; however, this does not preclude a necessary update at other times.

Monitoring

- 6.3 The Site Manager will make daily inspections at the site boundary to ensure that visible dust is not leaving the site. Particular attention will be given to the northern part of the site boundary, closest to the residential properties identified as being most susceptible to nuisance dust.
- 6.4 The results of the inspections will be recorded in a site log and using the visual monitoring form shown in Table 6.1. The prevailing weather conditions and the activities undertaken at the time of the inspection will also be recorded in the site log.
- 6.5 If any of the trigger levels in section 5 are exceeded and additional measures are employed, the frequency of the visual site boundary inspection will increase to twice daily until such time as no dust is visible at the site boundary. If after two days, the results of monitoring indicate that the additional control measures are not effective, the Site Manager will instruct all site operatives that the operations will cease until the issue can be resolved.

Table 6.1: Daily Dust Inspections Sheet

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

Monitoring Dust Complaints

- 6.6 Quite separate from the procedural response to a received complaint (covered later in section 7) is the monitoring of complaints levels. Reliable complaints should be considered a form of monitoring and complaints should be treated as if they were monitoring data.
- 6.7 Complaints are a very important indicator of community dissatisfaction (although not the only one) and the technique of complaints monitoring is a powerful tool. However, it is important to bear in mind that complaints are only a symptom of annoyance or nuisance; there are various reasons why complaint level is not an exact indicator of dust annoyance or nuisance itself. Nevertheless, the collection, maintenance and analysis of complaints records is an important method of indicating the effectiveness or otherwise of measures implemented to reduce nuisance due to dust.
- 6.8 HCC will implement a system of complaints monitoring and analysis. Complaints are collected, registered and validated as described in Section 7 of this DMP. The record of complaints received at the end of each calendar quarter will be reviewed with a view to identifying:
- trends, in terms of the subject, cause or origin of complaints; and
 - aspects experienced at one location that could apply to other locations.
- 6.9 Any action deemed necessary as a result of the analysis shall be identified and discussed in order to programme a course of corrective actions.

7 Complaints Action Procedure

Receipt of a Complaint

- 7.1 If any complaint is made by a member of the public about any matter associated with the facility, HCC will give notice in writing to the Environment Agency no later than the next working day after the complaint is received. This written notification will normally be in the form of an email. The notification will include a description of the complaint, the name and address of the person making the complaint and the action proposed as a result. Depending on the nature of the complaint, it will not always be possible to resolve the matter within this short timescale. In such cases an indication will be given that further investigations are necessary.
- 7.2 Once a complaint has been received, the complaint details will be registered.

Complaint registration

- 7.3 Complainants can make a complaint by:
- By telling a member of staff. This may be a member of staff who has been involved in providing the service directly to the customer or their line manager
 - By going online and completing the form at www.hertfordshire.gov.uk/complaints
 - By telephoning 0300 123 4047 or by emailing contact@hertfordshire.gov.uk.
- 7.4 The customer service manager can also be contacted directly using the following details;

Allison Short (Customer Services Manager)

Environment and Infrastructure Department

CHN115

1st Floor North West Block, County Hall, Pegs Lane, Hertford SG13 8DN

Telephone: 01992 555211

Email: environment.customerservices@hertfordshire.gov.uk

- 7.5 Complaints will be acknowledged within three working days of receiving it. The complainant will be told who is going to be looking into it and when you should receive a response. This is usually within 10 working days although sometimes longer may be needed. The complainant will be told if this is the case and how long it will take to give a response.

Investigation of Dust Complaints

- 7.6 A manager will review complaints and provide a response. This can be by letter or email or, if preferred, a telephone call.
- 7.7 This part of the procedure is called stage 1. If the complainant is not happy with the outcome, a request can be made to consider the complaint at stage 2. In some serious cases, the complaint may be referred to stage 2 immediately.
- 7.8 For each complaint the dust Complaint Report Form shown in Table 7.1 will be filled out for submission to the Customer Services Manager and retained.
- 7.9 If multiple complaints are received, the following additional controls will be employed until the dust impact has ceased:
- Increase frequency of use of the road sweeper, both on-site and on local roads;
 - Temporary cessation of the activities responsible for causing the dust impact until the trigger level is no longer exceeded;
 - In the event of an equipment or control failure, access to the site will be prevented until the issue is resolved or excess dust is removed.

Table 7.1: Dust Complaint Report Form

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

Date Recorded:	
Time Recorded:	
Location of Dust/emissions	
Weather conditions (i.e., dry, rain, fog, snow):	
Temperature (very warm, warm, mild, cold or degrees if known):	
Wind strength (none, light, steady, strong, gusting):	
Wind direction (eg from NE):	
Duration (time):	
Constant or intermittent in this period:	
Does the complainant have any other comments?	
Are there any other complaints relating to the installation, or to that location? (either previously or relating to the same exposure):	
Any other relevant information:	
Do you accept that the dust/emissions are likely to be from your activities?	
What was happening on site at the time the dust/emissions occurred?	

Operating conditions at time the dust/emissions occurred	
Actions taken:	
Form completed by:	Date

Further investigation of the complaint

- 7.10 Requests for complaints to go to stage two should be made in writing to the customer services manager using the contact details shown in paragraph 7.4 above, no later than 28 working days after you receive the Stage 1 response. An acknowledgement will be received within 3 working days of receipt that the complaint is being investigated further.
- 7.11 The Customer Services Manager will offer to meet with the complainant to discuss the complaint. The Customer Services Manager will also meet members of staff who have been involved and anyone else who has relevant information about the complaint.
- 7.12 A report will be produced by the Customer Services Manager and sent to the Director of Environment and Infrastructure. The report will say whether the complaint has been upheld (in whole or in part) or not. It will contain recommendations for action to put things right if the complaint has been upheld. The Director of Environment and Infrastructure will write to the complainant to say whether he agrees with the report and recommendations and what action will be taken.
- 7.13 Stage 2 will be completed within 25 working days of receipt of the request that the complaint go to stage 2. If for any reason this is not possible, the Customer Services Manager will contact the complainant within that period to explain the reason for the delay and inform them when Stage 2 will be completed.
- 7.14 If the complainant is not satisfied with the outcome of Stage 2 they can ask the Local Government and Social Care Ombudsman to investigate. The Ombudsman is completely independent of the Council. Complainants can contact the Ombudsman’s advice line on 0300 061 0614; or submit their complaint online at the website www.lgo.org.uk.

8 Management Procedures

Roles and responsibilities

- 8.1 The Site Manager is responsible for the implementation of the DMP. In practice, some tasks may be delegated to other members of staff; however, the ultimate responsibility lies with the Site Manager. If the Site Manager is not on site, the responsibility for the implementation of the DMP will be delegated to a nominated deputy.
- 8.2 The Site Manager will be responsible for the regular review and update of the DMP. It is anticipated that this will be done on an annual basis; however, this does not preclude any necessary updates at other times.

Training and competence

- 8.3 All staff on the site will be made fully aware of the need to be constantly vigilant with regard to site dust control and management procedures. New staff will be trained to deal with dust management issues and will be made aware of the DMP during the induction process. All staff will be made aware of the details of changes to the DMP.
- 8.4 The Site Manager will maintain a statement of training requirements for each operational post and keep a record of the training received by each person whose actions may have an impact on the environment.
- 8.5 Any sub-contractors working on site will be made aware of the DMP and will be expected to comply with the DMP at all times.

Maintenance and repair

- 8.6 A list of approved repair contractors will be kept in the site office and relevant site operatives will be made aware of the existence and the location of the list. Where appropriate, essential spare parts will be kept on site.

Glossary

Deposited Dust	Dust that has settled out onto a surface after having been suspended in air.
DMP	Dust Management Plan
Dust	Solid particles suspended in air or settled out onto a surface after having been suspended in air
Effect	The consequences of an impact, experienced by a receptor
EPUK	Environmental Protection UK
HGV	Heavy Goods Vehicle
IAQM	Institute of Air Quality Management
Impact	The change in atmospheric pollutant concentration and/or dust deposition. A scheme can have an 'impact' on atmospheric pollutant concentration but no effect, for instance if there are no receptors to experience the impact.
LGV	Light Goods Vehicle
R&A	Review and Assessment
Receptor	A person, their land or property and ecologically sensitive sites that may be affected by air quality
Risk	The likelihood of an adverse event occurring
Trackout	The transport of dust and dirt from the construction/demolition site onto the public road network, where it may be deposited and then re-suspended by vehicle using the network

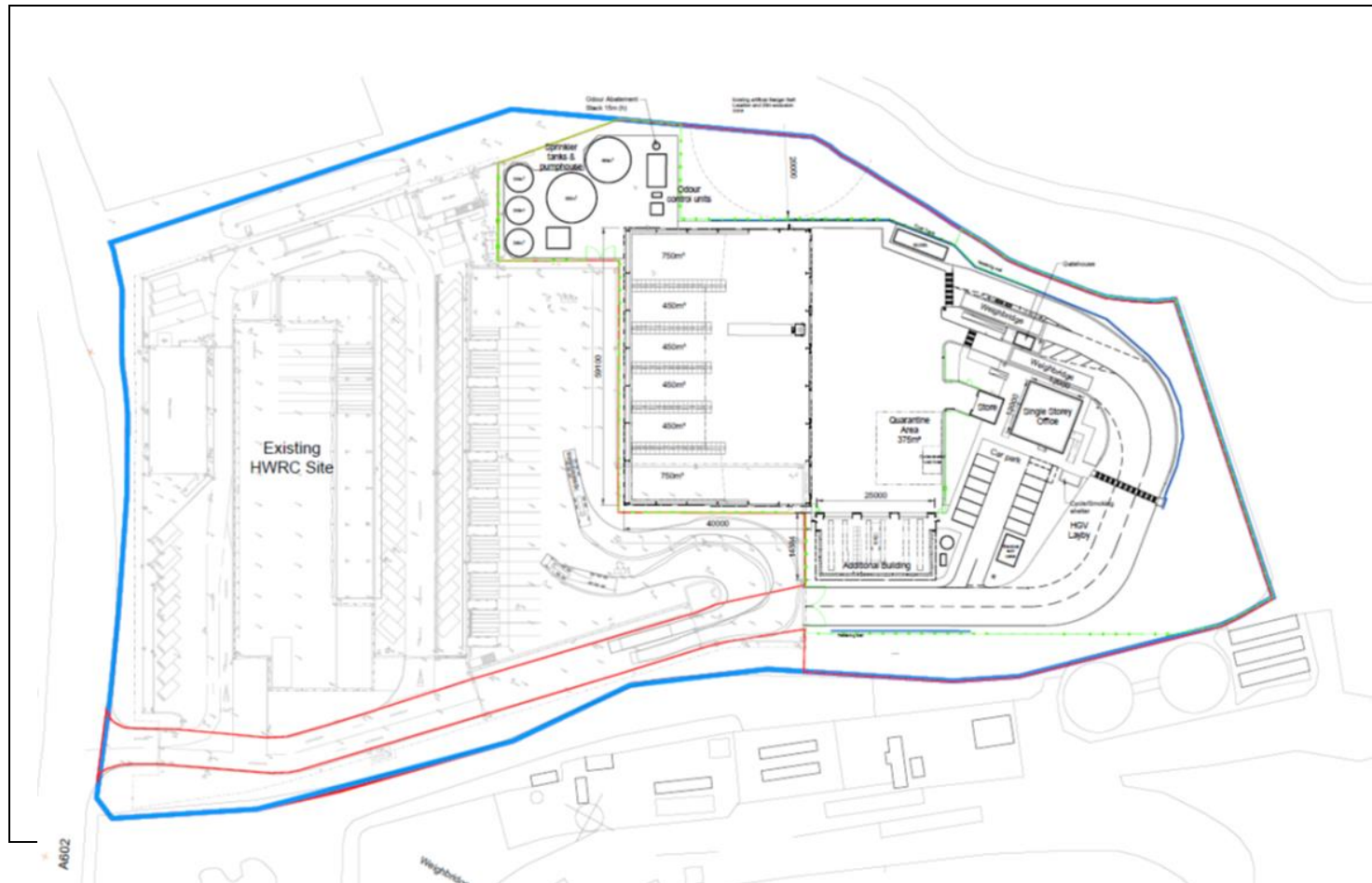
Figures

	<p>  ETS Site Boundary  1000 m from ETS Boundary  Dust_Sensitive_Receptors </p> <p>© 2021 RPS Group</p> <p>Notes</p> <p>1. This drawing has been prepared in accordance with the scope of RPS' appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.</p> <p>2. If received electronically it is the recipient's responsibility to print to correct scale. Only written dimensions should be used.</p>
	
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<p>Project: Eastern Transfer Station</p>	
<p>Job Ref: JAR11381</p>	
<p>File location:</p>	
<p>Date: 23/8/2021</p>	<p>Rev: 1</p>
<p>Drawn: WH</p>	<p>Checked:</p>



Figure 1: Site Location and Local Sensitive Receptors

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Project: Eastern Transfer Station

Job Ref: JAR11381

File location:

Dust Management Plan

	Date:	Rev: 0
	Drawn:	Checked:
	Figure 2: Site Layout	
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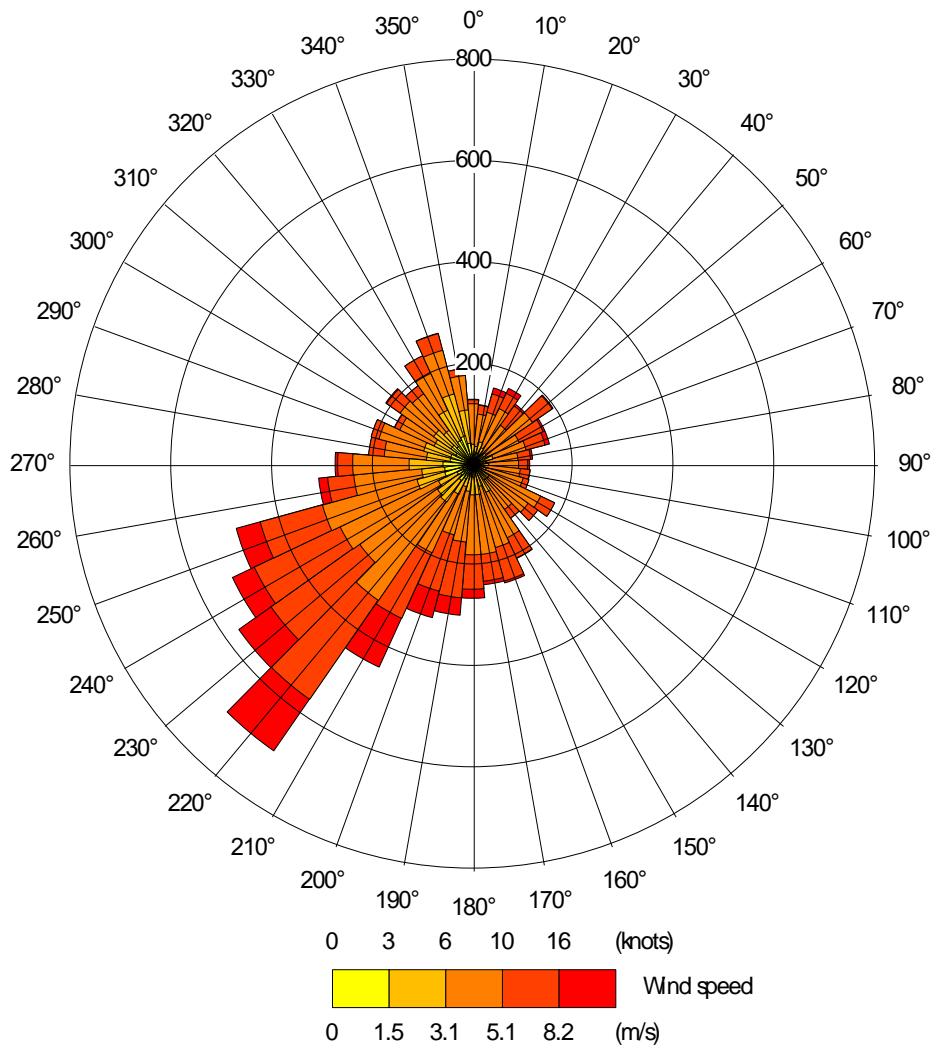


Figure 3: Wind Rose, Stansted 2020

Project Number	JAR11381	Project Title	Eastern Transfer Station		
Client:	Hertfordshire County Council	Rev :	0	Drawn By:	FP
		Date:	23/08/2021	Checked By:	WH
File location:					
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References

- 1 British Standard Institute (1983) BS 6069:Part 2:1983, ISO 4225-1980 Characterization of air quality
- 2 IAQM (May 2016) Guidance on the Assessment of Mineral Dust Impacts for Planning