Silica Developments Limited

Storage and Transfer Facility for Waste Glass
At

Gate 4, Shoreham Port, Brighton Terminal, Basin Road South, Shoreham, BN41 1WF

Environmental Management System

Dust Management Plan

Reference: EMS-OP-03

October 2024

DOCUMENT CONTROL SHEET

Version Reference	Date	Reason for Change	Issued by
1	25.10.2024	Application for Environmental Permit	ISL

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1 INTRODUCTION

This Dust and Emissions Management Plan (DEMP) has been prepared as part of the Environmental Management system for Silica Developments Limited (SDL).

Background

Since 2022 Silica Developments Limited has leased the land from Shoreham Port Authority (SPA).

Silica Developments currently use the large bay for storing waste glass, prior to export. This activity is carried out using a S2 Exemption registered with the Environment Agency and following the Regulatory Position Statement 292.[1]

This exemption allows operators to store waste glass (EWC191205). However, in November 2023, the Environment Agency issued guidance on the classification of waste glass generated from Material Recycling Facilities (MRF). Depending on the contents, some glass from MRFs could be coded as:

191212 – Mixed waste containing glass.

The acceptance of 191212 is permitted under the RPS292.

The use of the site for storing waste glass has been carried out since 2022. There have been no reported dust complaints.

Site Location

The procedures relate to the permitted activities at Gate 4, Shoreham Port, Brighton Terminal, Basin Road South, Shoreham, BN41 1WF. The site is centred on NGR TQ 76524 31301.

The site is in Shoreham Port, which is a busy industrial estate for loading / unloading at the dockside.

Scope

These Operational Procedures cover the storage and transfer of waste glass pending export.

The site is a bulk haulage facility for storing and transferring waste glass.

No treatment takes place. No other waste will be received.

Management System

The Management System covers all aspects of operations and aims to effectively manage the impacts of the business on the environment. The key documents include:

a) Documents: Procedures to set out how to undertake operations and checking for any issues.

[1] Storing and handling waste glass containing other wastes: RPS 292 - GOV.UK

b) Forms on which to record information and provide evidence of the system functioning properly.

2 OPERATIONS

Waste Deliveries to Site

The site will only handle waste glass. The following codes will be accepted:

150107	Glass packaging
170202	Glass
191205	Glass
191212	Mixed waste containing Glass
200102	Glass

The handling of glass has a low likelihood of generating dust. The RPS 292 does not identify dust as being a potential risk.

The company will only accept wastes which are allowed under the permit. The site is a specialist facility and therefore no non-permitted wastes will be delivered to the site. All deliveries are pre-booked. There can be no ad-hoc deliveries of waste to the site. This is due to the security controls provided by Shoreham Port.

For glass produced at Material Recycling Facilities (MRF), the following checks will be carried out.

Before accepting a new contract for the supply of waste glass, a representative of SDL will visit the source site and visually inspect the glass. Samples will be collected for analysis. The mixed glass is typically from large Material Recycling Facilities operated by established, reputable waste management companies (e.g. Biffa, Veolia).

SDL will request the previous 12 months testing data generated at the source site. MRF sites are required to carry out output sampling.

The testing will check the glass by weight. A sample is taken and weighed. It is then hand sorted to remove any incidental material (cardboard, metal, plastic and organic). The separated fractions are all weighed. The acceptable limit for SLD will be 95% glass by weight.

Once these checks have been used to classify the waste and confirm it is permitted, the producer will be registered with SDL for delivering waste glass.

During the first week of deliveries from a new source, each load is checked. A sample of glass is taken every 250 tonnes for weight testing.

SDL visually inspect the waste glass stockpile twice per week and maintain a weekly photographic record.

Glass produced at MRFs can be classified as 191205 Glass, or 191212 Waste Glass containing other non-hazardous waste. The producer (MRF operator) will be required classify the waste glass leaving their site.

SDL will carry out compliance checks to confirm the correct code has been used. With reference to the guidance[2], the decision should be made on a case by case basis.

As part of the classification, SDL will confirm if the source site is a Mixed Dry Recyclable Facility (MRF). This will help to confirm that the input material is non-hazardous waste. SDL will review the site's Waste Acceptance Procedures and check their procedures for removing non-compliant waste such as vapes and batteries.

The waste acceptance procedures at the MRF will be important to ensure that any mixed glass containing non-hazardous waste (EWC191212) is non hazardous. The MRF operators also work with Waste Collection Authorities to inform residents and businesses about the materials that can be placed in the collection bin. This will help reinforce the position that batteries and vapes should not be placed in the recycling bin.

With reference to the Environment Agency guidance, when the composition of the waste and its components is widely understood not to include hazardous substances, and visual inspections would easily identify materials likely to be hazardous, then the waste assessment may not need to include sampling and testing.

Prior to removal from the MRF, the waste producer will carry out periodic sampling to confirm the weight of glass, and other components. At this stage, the visual assessment will allow the operator to remove any non-compliant waste such as batteries and vapes.

The glass will typically be from a dry mixed recyclable input which is mixed with paper, plastics, and metal cans only. The input and output waste are consistent and as such no testing will be required.

As the waste is unloaded at the bulk storage facility, any incidental items of waste (plastic bags, cardboard) will be placed in a general waste bin.

For other glass, SDL will visit the source site and check the procedures generating the glass. For single source collected glass, no testing is required.

All waste delivery vehicles will use the weighbridge located at Gate 3. Once weighed, the driver will be provided directions to the bulk storage bay.

The loading shovel operator will be present at the storage bay and will direct the driver to unload into one of the bays, depending on the load.

Once unloaded, the driver will leave the site via the weighbridge.

The loading shovel operator will check the waste, removing any clear and obvious non-compliant waste such as plastic sacks. These will be placed in a quarantine container.

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[2] Glass from waste treatment facilities, Guidance LIT 72733, published 21 May 2024.

The loading shovel driver will push the waste into the storage bay, ensuring that all waste remains in the bay and below the 5m height marker

Overview of Waste Processing and Dust Controls

The site layout is shown on Drawing No. SDL-SBS-LAY-01. This will be a facility for bulk storage and transfer only.

The bulk storage facility has a 6m high concrete wall around three sides, with sub dividing block work forming internal bays. There is also a 2.4m high concrete block wall forming the front barrier, with just an entry point for vehicles to unload / load.

Bay 1 will be used for storing MRF Glass. This will be coded EWC 191205 Glass or 191212 mixed waste containing glass, depending on the classification.

Bay 2 will be used for storing MRF Glass or other glass.

Both bays will have separate sealed drainage. Any surface water within the storage bay will drain to a pipe that will drain into a sealed channel. The sealed channel will be inspected daily and if the water level is at 75% level, arrangements will be made to empty the system.

Table 1 –Wastes Typically Accepted at the Site

EWC Code	Description	Risk	Mitigation
150107	Glass packaging	Low risk of dust generation. There may be occasions during the summer or during a prolonged dry spell, when dust could be generated during unloading / loading operation. No treatment takes place	General good housekeeping practices. The presence of high 6m bay walls, will contain the glass and prevent the south westerly wind impacting the waste and transferring any dust down wind. If dust becomes a problem, the operator will review the waste storage procedures and if necessary implement dust suppression. Once emptied, a bay will be cleaned.
170202	Glass		
191205	Glass		
191212	Mixed waste containing Glass		
200102	Glass		

Waste Storage

Bay 1

Bay 1 will be used for storing MRF Glass. This is coded 191205 Glass, or EWC191212 Mixed Waste containing glass, depending on its composition. This waste has been derived from Material Recycling Facilities (MRF).

Whilst the MRF is used to separate recyclable wastes, the mixed glass can contain a small amount of other materials such as cardboard, plastic and metal. The composition will determine the EWC, and this will be carried out on a case by case basis.

No more than 6,000 tonnes of waste glass will be stored in Bay 1 at any one time.

Bay 2

Bay 1 could be used for storing MRF Glass from a different source. This is coded EWC191212 Mixed Waste containing glass. This waste has been derived from Material Recycling Facilities (MRF), and whilst the MRF is used to separate recyclable wastes, the mixed glass can contain a small amount of other materials such as cardboard, plastic and metal. This bay may also be used for storing other glass 191205, 200102, 150107.

Either Bay 1 or 2 can also be used for storing general glass. However, no mixing of glass will take place as the contents of each bay will be for a specific destination.

No more than 6,000 tonnes of waste glass will be stored in Bay 2 at any one time.

The total amount of glass that could be stored on site at any one time will be 12,000 tonnes.

There may be occasions when different waste glass streams are contracted for export. In such cases, concrete legio blocks will be used to subdivide the bays into small storage areas. The overall storage limit of 12,000 tonnes will apply.

The site will handle up to 100,000 tonnes of waste glass per annum.

Waste Treatment

No waste treatment will take place. This is a bulk storage facility for transferring waste glass to ships for export.

Mobile Plant and Equipment

The operation will use the following equipment:

- Loading Shovel
- Crane

The plant is managed by SPA. SPA provide the plant and operators for loading ships.

A programme of routine planned maintenance is provided for each item of plant and machinery, to prevent breakdown and faults.

All faults which require corrective action will be reported to the TCM to be implemented.

The plant and equipment will be subject to service agreements with the manufacturer and/or supplier. Where appropriate, these agreements will include a 24 hour call out facility.

Alternative plant and machinery is available on the Port for contingency measures.

An anti-idling policy will be in place to ensure that engines are switched off when not in use.

Plant and machinery are not permanently based at the permitted site. They are deployed to businesses on the port for planned movement of materials.

3 DUST AND PARTICULATE MANAGEMENT

Responsibility for Implementation of the DEMP

The Technically Competent Manager (TCM) has responsibility for ensuring these procedures are adhered to which includes communication with staff and contractors, and the provision of adequate training. The TCM is responsible for updating and re-issuing these procedures as necessary and ensuring all staff are trained in new procedures. The TCM will be the main point of contact for ensuring implementation of this plan. In their absence, the Site Supervisor will be responsible for implementation.

All staff will be trained in these procedures. The TCM is responsible for delivering training and maintaining records. Training is reviewed on an annual basis. The site office has a dedicated training room to deliver all training and tool box talks.

All staff will be trained to a standard which enables them to perform the responsibilities, and this will include understanding the DEMP (under Amenity Management).

A record of staff training will be kept for each staff member which includes inductions to new processes and procedures as needed. The following training matrix will be adopted to guide training needs.

It must be stated that staff are not permanently based at the permitted site. All SPA staff involved in the movement of waste glass will be trained to understand the requirements of the Environmental Permit.

For amenity management, the training will include:

- Identifying conditions that may give rise to dust emissions.
- Implementing dust suppression
- Reporting dust emissions to site management
- Sheeting vehicles
- Speed limits on site
- Addition controls for Met Office Red Alerts
- Handing complaints
- Reporting faults with any equipment that may increase risk of emissions.

All staff will receive induction training within 1 month of the permit being issued. Follow up training will take place annually, or sooner if DEMP has been updated.

For all visitors or contractors, a site safety briefing will be conducted in the main office. This will include H&S and an overview of amenity management. For contractors that may be employed to carry out repairs or maintenance, they must notify the site management of any activity that may cause dust emissions and ensure that mitigation measures are in place. Visitors and contractors can view the DEMP in the site office if required.

If there are any changes to the operation which affect the dust management at the site, the TCM will carry out revised training and update the Management Plan accordingly.

The DEMP will be reviewed on an annual basis or sooner if requested by the EA. It will also be updated if the operator changes the operation.

All documents supporting the EMS and DEMP will be kept in the main office.

Sources and Control of Fugitive Dust/Particulate Emissions

The following are potential sources of dust emissions:

- Vehicles entering and/or leaving the site with debris on their wheels
- Waste unloading
- Moving materials
- Storage
- Loading ships

3.1 It is also important to identify other potential sources of dust emissions in the locality. These are listed in Table 2.

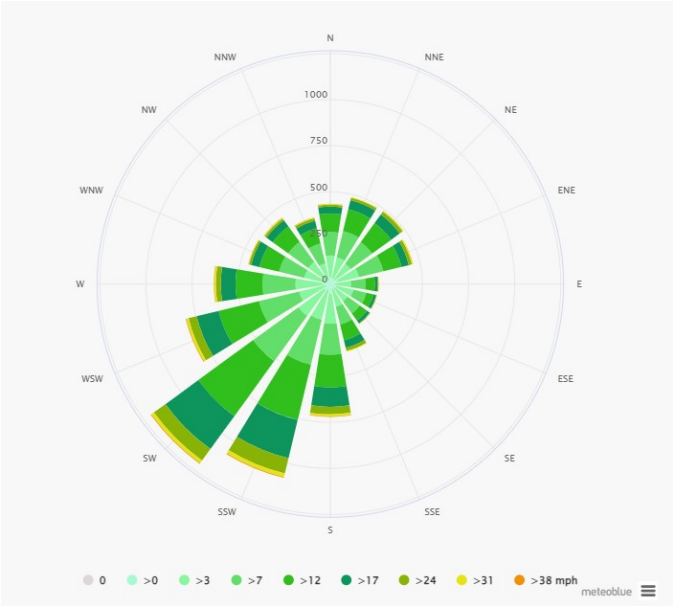
Table 2 - Sources of Dust and/or other Emissions

Company	Address	Type of Business	Distance from site boundary (m)
Tarmac	34 Basin Rd S, Southwick, Brighton BN41 1WF	Aggregate Processing – large open facility.	100m West
Cemex	Halls Wharf, Wellington Rd, Brighton and Hove, Brighton BN41 1DN	Concrete batching and aggregate processing. Large open facility	75m North
Day Aggregates	Basin Road N, Brighton BN41 1DN	Aggregate Processing – large open facility.	175m North East
Kendall Aggregates	25 Basin Rd S, Brighton and Hove, Brighton BN41 1UY	Aggregate processing	515m South East
General	Shoreham Port	All other activities associated with the port.	Adjoining site and opposite.

With reference to the wind rose for the site, the prevailing wind direction is from the south west and therefore areas to the north east of the site are down prevailing wind of the site.

Windrose data has been obtained for Shoreham by Sea.

Figure 1 - Wind Rose Data[3]



3.2 For the purposes of identifying the nearest receptors, a search area of 1km has been used.

3.3 Figure 2 shows the site and broad location of the main receptors within 1km. Table 3 provides a description of those receptors and the distance and direction from the site. The distance has been measured from the permit boundary, at the closest point. The receptors list and plan have been derived from the Environmental Risk Assessment and identify all receptors that may be sensitive to a risk. Not all listed will be sensitive to dust.

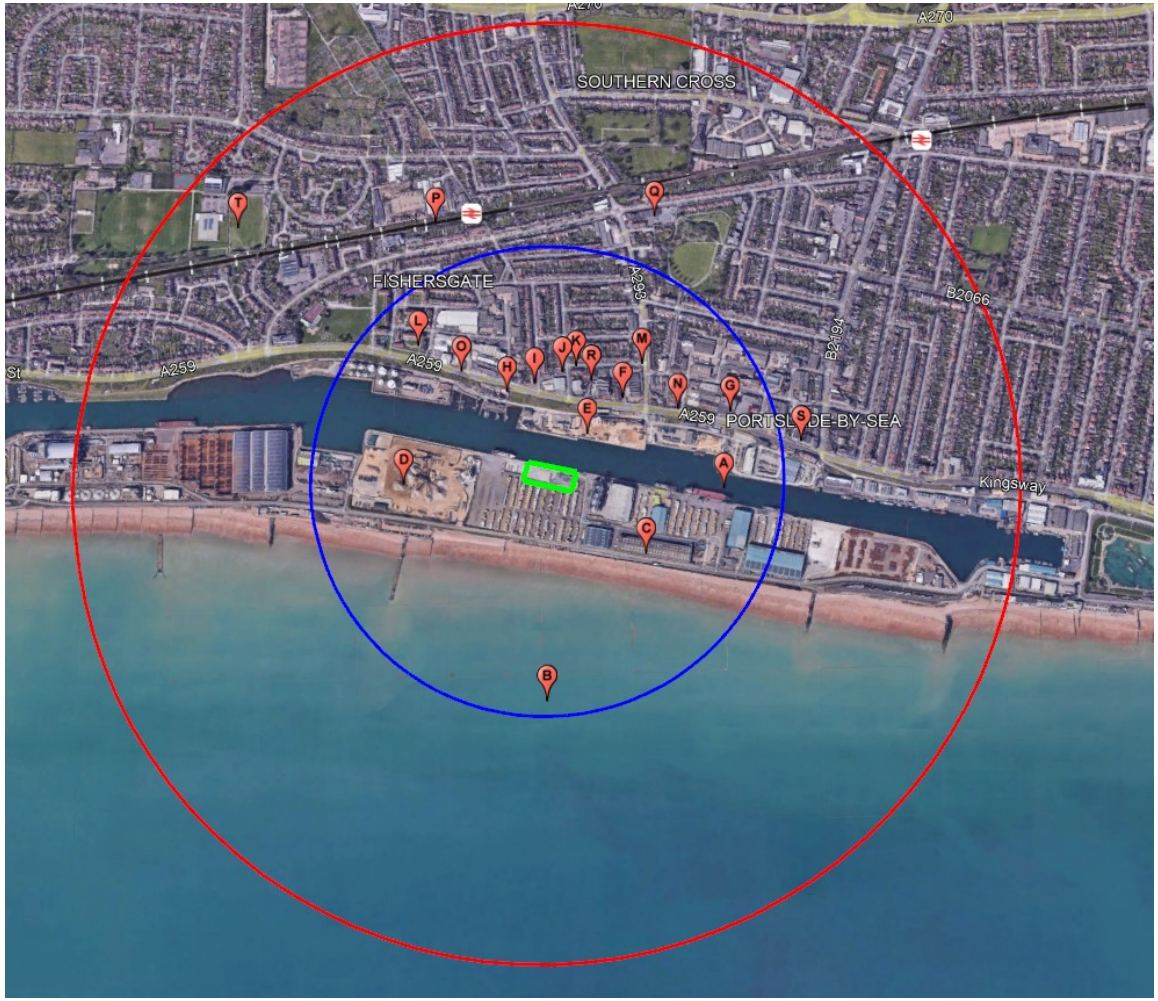
3.4 In terms of the sensitivity to dust the following has been adopted:

[3] Simulated historical climate & weather data for Shoreham-by-Sea - meteoblue

Type of Receptor	Sensitivity
Residential, schools, hospitals, nursing homes, Statutory Designations (SSSI, SPA, SAC)	High
Industrial premises, recreational grounds, Non-Statutory Designations	Medium
Roads, Industrial premises	Low

There may be other unique receptors that do not fall within any of the above categories. These have been considered separately depending on the nature of the business and use. People on footpaths are transient receptors.

Figure 2 - Site Setting and Receptors (The permitted site is shown with a green boundary). Blue shows 500m radius from centre point of site. The red line shows 1km radius from the centre of the site.



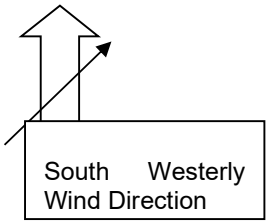


Table 3 – Receptors

Receptor	Legend	Type	Sensitivity to Dust	Distance and Direction from Permitted site
River Adur	A	Surface Water	Medium	Immediately North
English Channel	B	Surface Water	Medium	180 South
Shoreham Port	C	Industrial	Low	Immediately South, East and West
Aggregate Processing	D	Industrial	Low	100m West
Aggregate Processing	E	Industrial	Low	70m North
Industrial Estate	F	Industrial	Low	170m North East
Industrial Estate	G	Industrial	Low	270m North East
Fishersgate Terrace	H	Residential	High	150m North East
St Richards Road	I	Residential	High	165m North
Brambledean Road	J	Residential	High	205m North
St Peters Road	K	Residential	High	205m North
George Street	L	Residential	High	320m North East
Church Road	M	Residential	High	265m North West
Middle Street	N	Residential	High	255m North East
A259	O	Road	Low	140m North
Train line	P	Railway	Low	575m North
St Marys Primary School*	Q	Education	High	570m North East
St Peter's Primary School	R	Education	High	190m North
Clarendon Place	S	Residential	High	440m North East
Southwick Leisure Centre	T	Recreational	Medium	735m North West

Risk Assessment and Control Measures

The waste will be stored in a bulk storage facility, which benefits from a 6m high concrete rear and side walls. There will also be internal walls to separate different waste stockpiles.

Waste will be stored in the bay no higher than 5m. This will ensure that there is freeboard, and that no wind whip will occur across the stockpile.

The nearest sensitive receptors are located north east and north of the site. The houses will be protected by the 6m high concrete wall, which will reduce the likelihood of any dust being transferred from the source site. The storage bay also has a retaining front wall, which contains the waste.

The site has been designed to prevent dust emissions being created and leaving the site boundary. The following procedures will be implemented to prevent emissions to air from waste handling.

- Waste is delivered in sheeted or enclosed vehicles.
- Low likelihood of tracking due to nature of the waste.
- Site is concreted.
- Vehicles travel on road surfaces or concrete surfaces to access and leave Port.
- Storage of waste within concrete bay walls which are 6m in height on three sides. The waste will be stored with a 1m freeboard against the rear and side walls.
- Speed restriction of 5mph on site limit dust arising from waste vehicles and mobile plant.
- SPA will check the entire site for evidence of any debris and arrange cleaning as required.
- Use of bowser and trailer to dampen working yard. SPA apply this to the entire Port.
- Mobile plant will be cleaned.
- Drop heights will be reduced to mininise dust emissions.
- Stockpiles will be dampened.
- No treatment takes place.
- Bays to be cleaned when empty.

Dust Suppression

A formal dust suppression system is not necessary for this operation. There is a low likelihood of dust generation due to the nature of the waste and operation.

The stockpile will be monitored and if loading is due to take place during dry weather conditions, the waste can be dampened using a bowser prior to and during loading.

Control of Mud and Debris

The nature of the operations will not generate mud.

The waste glass will be in a solid state.

The site will be concreted, which provides an easier surface to keep clean.

Unloading will be overseen by site staff to prevent vehicles tracking through deposited waste.

Before exiting the site, all vehicles will be stopped and visually inspected by trained staff to reduce the risk of any debris being tracked off-site.

The deposit of material on the access road or public highway will be treated as an emergency and will be cleared immediately using either a brush and shovel or vacuum tanker/road sweeper. SPA will notify SDL in the event of such an occurrence to implement corrective action.

There have been no reported complaints associated with the existing operations. There have been no reported issues from SPA.

Routine Cleaning

The bays will be cleaned following a transfer period. That is, when a ship has been loaded and the bay cleared of waste. This is recorded by the operator in the site diary.

The cleaning schedule is provided in Table 4.

Table 4 – Cleaning Schedule

	Daily *	Weekly	Annually
Site Entrance	✓	✓	
Site Access	✓	✓	
Storage Bays – concreted	✓	✓	Full site Audit

*carried out by SPA as part of their overall function of maintaining the Port.

The TCM will follow up any complaints or incidents with a full inspection.

Visual Dust Monitoring

The site management and site operatives will make visual inspections of dust emissions around the entire site and perimeter. Additional monitoring may be carried out during times of dry/windy weather conditions or should SPA operatives observe significant levels of dust. The monitoring will be carried out at intervals while the site is receiving or transferring waste, should it be observed that dust is being emitted from the site, notes will be made describing the amount, direction and source of the dust.

The following monitoring locations are provided.

Figure 3 Monitoring Locations

Table 4 – Monitoring Locations.

Monitoring Location	Target Area
M1	To check if dust is being generated and detected outside the site boundary.
M2	
M3	
M4	

The results of monitoring exercises and any remedial action taken will be recorded. The name of the inspector will be stated in the site's diary / inspection form for each day of operation.

Operational Failure

This is unlikely to occur and if it did occur, it will not lead to dust generation. There is no waste treatment on site.

SPA provide the plant and machinery for transferring the waste. The plant is maintained and if one item breaks down, there are alternative supplies within the port.

Table 4 provides the risk assessment for dust and the remediation/control measures.

Table 4: Source-Pathway-Receptor Routes

Source	Pathway	Receptor	Type of impact	Control Measures
Unloading and transferring waste	Tracking dust on wheels and vehicles	Local Roads	Visual soiling, also consequent resuspension as airborne particulates	Nature of the waste will minimise risk associated with tracking dust / debris on to the road network. All vehicles delivery and collecting waste will be sheeted. Speed restrictions on site (5mph). There is over 1km of internal roads before entering public highway.
	Atmospheric dispersion	Nearby industrial premises (workers and pedestrians).	Visual soiling and airborne particulates	All waste deliveries in enclosed vehicles. The waste will be unloaded and stored in bulk transfer storage bays. Drop heights will be kept to a minimum. Waste to be stored with a 1m freeboard against the 6m high rear and side bay walls, to minimise windwhip.
	Atmospheric dispersion	Residential properties	Visual soiling and airborne particulates	The nearest residential receptors are approximately 150m north east of the site, separated by the River Adur and the industrial estate. There is a low risk associated with this potential impact.

Source	Pathway	Receptor	Type of impact	Control Measures
Debris	Falling off lorries	Local Roads	Visual soiling, and resuspension as airborne particulates	All vehicles delivering waste will be enclosed. Speed restrictions on site (5mph). There is over 1km of internal roads before public highway. This event is unlikely to occur.
Vehicle exhaust emissions	Atmospheric dispersion	All	Airborne particulates	Regulatory controls and best-practice measures to minimise source strength
Non road going machinery exhaust emissions	Atmospheric dispersion	Local Environment	Airborne particulates	Regulatory controls and best-practice measures to minimise source strength.

4 REPORTING AND COMPLAINTS

4.1 The Site Manager has the overall responsibility for reporting and dealing with complaints.

4.2 The administration staff will all be responsible for handling complaints and recording on the correct form. All complaints must be referred to the Site Manager.

4.3 In this context, a complaint may be received directly from a resident, customer, SPA representative, or from a Regulator.

4.4 It is likely that complaints will be directed to SPA. If SPA receives a complaint, a record will be passed to the TCM and summarised in a Site Diary.

4.5 The TCM will review the activities that may have given rise to the complaint. Other actions will include:

- Review of site diary and check for any unusual regional weather events occurring during the day on which the compliant was made.
- Review site diary and establish what site activities were taking place at the time the complaint even occurred.
- Identify whether there were any other activities in the area taking place that could have generated dust.
- If it is established that the emissions were attributable to activities being undertaken at the site, as necessary review the relevant operational procedures and implement improvements and provide additional training to site.

4.6 The TCM will aim to provide feedback to each complainant within 48 hours of receiving the complaint.

4.7 If the site receives several substantiated complaints, the operator will engage the services of an Air Quality specialist to review the site operations and update this DEMP accordingly. A substantiated complaint is one where the TCM has visited the complainant and confirmed that dust has left the site boundary and impacted their property (glass dust on cars, windows etc). The EA may also provide substantiated complaints.

Engagement with the Community

4.8 The operator has existing presence in this estate. The immediate neighbours will be contacted, and direct dial telephone details provided for the TCM and main office number. Email contact details will also be provided.

4.9 SPA carries out engagement with all users in the Port and will contact SDL directly should any complaint be received.