

# Dust and Emissions Management Plan

British Sugar York Site

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## Contents

1	Introduction.....	4
2	Operations at British Sugar York.....	7
3	Dust and Particulate Management.....	10
4	Particulate Matter Monitoring.....	15
5	Reporting and Complaints Response .....	16

## Tables

Table 1.1	Nearby Sensitive Receptors.....	5
Table 2.1	Mobile Plant and Equipment .....	8
Table 3.1	Source-Pathway-Receptor Routes .....	11
Table 3.2	Measures that will be used on site to control dust/particulates (PM <sub>10</sub> ) and other emissions	12

## Figures

Figure 1.1	Location and Type of Receptors Surrounding British Sugar Site.....	5
Figure 1.2	Wind Rose Linton upon Ouse 2019 .....	6

## Appendices

- Appendix A – Stockpile Areas
- Appendix B – Dust Complaint Form

# 1 Introduction

Arcadis Consulting Ltd (Arcadis) was commissioned by British Sugar Plc (British Sugar) to provide a Dust and Emissions Management Plan (DEMP) in relation to the remediation of former British Sugar York facility, Mill Lane, York, YO26 6PD (the 'Site').

Part of the site is currently subject to an EP (EPR/QP3593NF) which was in a state of Definitive Closure from October 2009 until EP variation consolidation in October 2015, when the period of aftercare monitoring and maintenance commenced. The EP (EPR/QP3593NF) previously permitted the activity of (D1) depositing aqueous solutions of soil and sludge in lagoons for precipitation and dewatering and other controlled wastes, with deposited soils originating from agricultural land supplying sugar beet to the site. Settled soils from the lagoons were principally sold commercially as topsoil. The EP variation (EPR/QP3593NF/V002, October 2015) removed the condition allowing deposit of waste and added R3, R5 and R13 recovery and storage activities to facilitate remediation and reclamation.

Planning permissions have been granted in relation to the proposed residential redevelopment of the Site, and as part of the planning application an air quality assessment was submitted which outlined the controls that would be put in place as part of the Construction Environmental Management Plan (CEMP) to ensure that during restoration of the site dust and construction related activities would be suitably controlled.

The purpose of this document is to build on the information presented in the CEMP to provide more detailed information on how the measures in the CEMP will be delivered. The document will present the details of the controls which will be implemented to minimise emissions and to describe the monitoring which is carried out to confirm the effectiveness of these controls.

This DEMP has been prepared based on the guidance presented in the relevant sections of the Environment Agency (EA) - Control and monitor emissions for your environmental permit. The activities with the potential to generate and/or release dust and particulate matter are identified within this document. The locations of potential receptors are identified in Table 1.1 and are shown on Figure 1.1.

An action plan is presented in Section 4 which will be implemented in the unlikely event that there is a significant emission of dust or particulate matter from the site. If a complaint regarding dust or particulate matter is received a Complaints Form is completed.

## 1.1 Sensitive Receptors

The Site on Mill Lane is surrounded by receptors in all directions. The receptors are located in close proximity to the boundary of the site and include residential, schools, businesses and ecological receptors that are sensitive to dust and particulate emissions.

These receptors are highlighted on Figure 1.1.

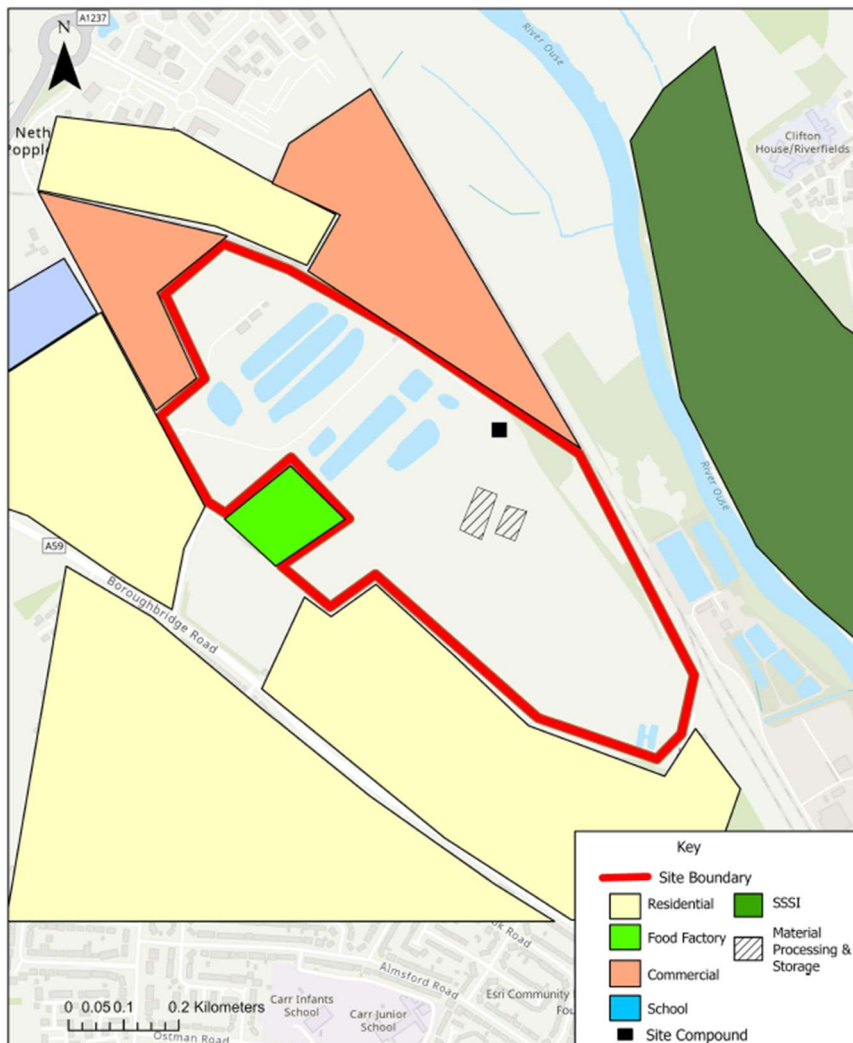


Figure 1.1 Location and Type of Receptors Surrounding British Sugar Site.

The site has residential receptors predominantly to the North and South. There are railway lines to the east and commercial units that have the potential to be sensitive to dust in close proximity to the north. There is a Site of Special Scientific Interest (SSSI) to the east across the River Ouse.

Table 1.1 provides the detail of the nearby sensitive receptors.

Table 1.1 Nearby Sensitive Receptors

Receptor	Type	Sensitivity*	Location
Millfield Lane	Residential	High	30m South West
Valeo Snackfoods Factory	Food Manufacture	High	<20m South West
Langholme Drive	Residential	High	<20m West
Ouse Acres	Residential	High	<20m South
Railway Line	Railway	Low	<30m East of Site

Receptor	Type	Sensitivity*	Location
York Business Park	Industrial	High**	Between 30m and 800m East and North East.
Seven Green	Residential	High	50m North
Manor Church of England Academy	School	High	200m North West
Amarna House Care Home - Avery Healthcare	Care Home	High	25m South
Boroughbridge Road Allotments	Allotments	Low	200m South
Clifton Ings And Raw	SSSI	Medium	>200m East

\*Sensitivity in Accordance with IAQM Guidance on the assessment of dust from demolition and construction Jan 2024 (version 2.2).

\*\*Most units would be medium sensitivity however some units such as car showrooms would be high so worse case sensitivity presented.

As presented in Table 1.1 dust sensitive receptors are located around the site in all directions.

In relation to other sources of dust in the area there are no significant sources of dust e.g. waste management processes etc.

A wind rose is for a nearby meteorological site (Linton upon Ouse) is presented in Figure 1.2.

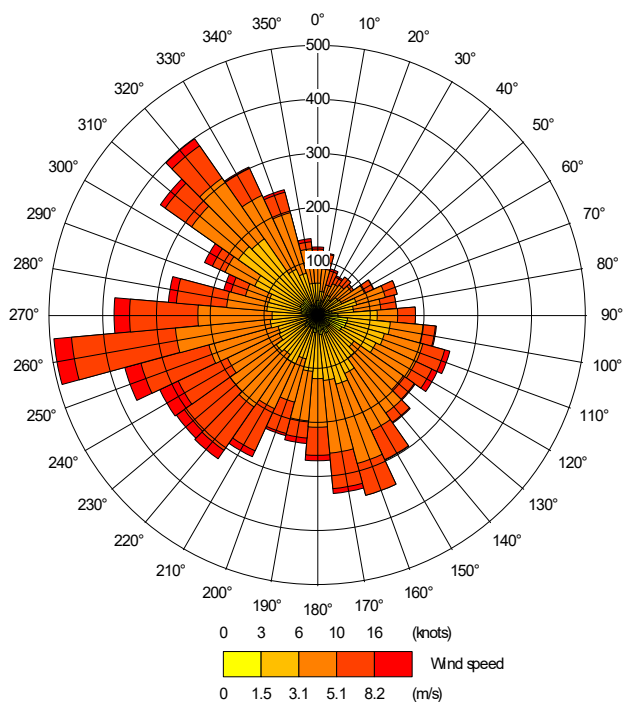


Figure 1.2 Wind Rose Linton upon Ouse 2019

As can be seen the predominant wind direction is from the West and North West.

## 2 Operations at British Sugar York

To allow the site to be developed the former British Sugar site needs to be remediated.

Due to the large size of the British Sugar site, with the exception of the stockpiling/remediation areas, the duration of works in close proximity to any single receptor is likely to be limited. When works occur away from the site boundary the magnitude of the construction dust levels that will be experienced at receptors will be considerably reduced.

The contractors site compound will be located in the northeast of the site near the existing weighbridge as shown on Figure 1.1. This will be utilised for a total of 18 months.

The following sections explain the main works that will be undertaken as part of the activities relating to this DEMP.

### 2.1 Initial clearance of any vegetation and/or topsoil

Enabling works required across the site, with vegetation clearance required within 25m of the Valeo Snackfoods Factory and the nearest residential properties on Langholme Drive and Low Poppleton Lane.

The demolition of structures is also to be undertaken within 25m of Langholme Drive and 150m of the Valeo Snackfoods Factory.

This phase of the works will involve vegetation being scraped, chopped and taken off site for disposal. Topsoil will be scraped and stockpiled for testing for potential reuse in the cut and fill process.

### 2.2 Excavation

The excavation work take place across the full site footprint. Over the course of the works, excavation related works will be undertaken within 50m of the nearest residential properties and within 25m of the Valeo Snackfoods Factory.

The design and execution of earthworks will be carried out to comply with relevant British Standards including BS6031:2009 "Code of Practice for Earthworks", to the effect that the integrity and function of adjacent property including but not limited to Network Rail property will not be adversely affected. The proposed earthworks will not require encroachment into Network Rail land.

### 2.3 Stockpiling

The proposed location of the phase one stockpiles are shown in Appendix A. However, additional areas for stockpiling may be required from time to time, the siting of which will take into consideration the proximity to adjacent receptors.

Stockpiles will be managed in a manner to reduce potential dust impacts, through the control of stockpile dimensions (height and surface area) and the angle of slope.

The height of the stockpile must not exceed 3m for made ground material or exceed 2m for topsoil type material.

The implementation of standard dust mitigation at the site compound area where material may be stored will be sufficient to control emissions to the extent that the risk of impacts would be low. Such measures would include general ‘good housekeeping’.

## 2.4 Remediation Work

Remediation work is assumed to be undertaken in a designated remediation treatment area in the centre of the site away from the site boundaries with residential areas. The site compound will be located in the northeast of the site near the existing weighbridge, within the Environmental Permit area, approximately 300m to the East of the Valeo Snackfoods Factory and 350m to the north of the residential properties on Langholme Drive. Material will be treated by either windrow or biopile, depending on the level of treatment required. The facilities to undertake both methods will be available from the start of the works.

## 2.5 Construction of Earth Bund

The earth bund will be constructed adjacent to the site boundary with the Valeo Snackfoods Factory. Works will therefore be undertaken within 25m of this receptor, and within 50m of residential receptors on Langholme Drive and Low Poppleton Lane and Millfield Lane.

## 2.6 Management of the Public Highway

Throughout the construction period the Principal Contractor will take reasonable steps to ensure that the deposit of mud and dirt on the highway is kept to a minimum. Wheel washing facilities will be provided by the Principal Contractor on the site at all times through each phase of the development. A pressure washer, with manual brushing facilities will be provided on site. It will be utilised as frequently as deemed necessary by the condition of the road adjacent to the operational site accesses, as determined by the Principal Contractor as part of the daily visual dust inspection regime. Consultation with the local authority’s highways department will be undertaken as necessary. Prior to the start of works on site, an inspection of the existing highway on Millfield Lane between the site access and the A1237 roundabout, and on Boroughbridge Road between the site access and the A1237 roundabout shall be undertaken by the Principal Contractor.

## 2.7 Mobile Plant and Equipment

Table 2.1 provides an overview of the mobile plant and equipment likely to be used during the works.

Table 2.1 Mobile Plant and Equipment

Item	Function
Excavators	Excavation and movement of material.
Backhoe Loaders	Excavation and digger trenches.
Dozers	Earthworks movement of material and levelling ground.
Articulated dump trucks	Movement of material around the site and off site.
Generators	Isolated temporary use generators shall be used for surface water management. The remediation treatment area shall use generators for gas extraction and water management.



## Dust and Emissions Management Plan

	It is assumed that the site compound will be powered by mains electricity.
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## 3 Dust and Particulate Management

### 3.1 Responsible for Implementation of the DEMP

British Sugar will appoint a Principal Contractor who will be required to demonstrate industry best practise towards site appearance, community liaison, protection of environment, safety and security and value of the workforce.

The principal contractor will appoint a site manager who will be responsible for the DEMP. Once the principal contractor has appointed a site manager this DEMP will be updated with their details. The DEMP will be reviewed yearly or more frequently if the need arises, such as a process being changed and/or alterations are made that may affect the risk of dust. In the event that an issue is identified, or a complaint is received regarding the construction activities at the site regarding dust, the DEMP will be reviewed. Any reviews or updates made will also be checked by the sites Environmental Consultant and British Sugar's Technical Competence Holder.

The site will maintain the highest possible standards of construction throughout the works.

Contact details for the site will be visible and community engagement will be undertaken to keep neighbours informed. The Construction Skills Certification Scheme (CSCS) will be adhered to, ensuring all operatives working on site are competent to fulfil their role.

The principal contractor will undertake regular toolbox talks to staff to raise the importance of the controls within the DEMP.

### 3.2 Sources and Control of Fugitive Dust/Particulate Emissions

#### Sources

The remediation activities at the site that have the potential to produce dust and particulates as listed below:

- Vehicles entering and/or leaving the site with mud on wheels and tracking dust on to or off the site.
- Vehicles and plant moving around the site generating dust.
- Excavators/360s carrying out earthworks, loading and unloading of material.
- Stockpiles during earthworks
- Loading waste materials back on to vehicles.
- Particulate emissions from the exhaust of vehicles/plant/machinery on site.
- Generators, plant and other non-road going mobile machinery.

Table 3.1 and Table 3.2 present the source pathway routes and the measures to control dust and emissions from the site.

Dust and Emissions Management Plan

Table 3.1 Source-Pathway-Receptor Routes

Source	Pathway	Receptor	Type of Impact	Where relationship can be interrupted
Mud	Tracking dust on wheels and vehicles then mud dropping off when dry	Local Highways	Visual Soiling and resuspension as airborne particulates	Vehicles will be jet washed if found to be dirty, muddy or dusty to remove mud, litter or dust from the tyres or under carriage. The jet wash is situated in the external yard and runs off the mains water supply. After cleaning the vehicles are inspected thoroughly both underneath the vehicle and the tyres. A road sweeper will be utilised to sweep the site and keep it clear of mud, dust and litter.
Debris	Falling off lorries during deliveries and removal of materials	Local Highways and receptors	Visual Soiling and resuspension as airborne particulates	Lorries are covered with netting before leaving site. The site is regularly swept using the road sweeper to keep the site surface clear of mud, dust and litter. Litter picking will be carried out when necessary.
Stockpiling of Material	Material drying and becoming airborne	Local Receptors	Visual Soiling and resuspension as airborne particulates	Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable. Use Hessian, mulches or trackifier adhesives where it is not possible to re-vegetate or cover with topsoil, as soon as practicable
Dust	Material being released to the atmosphere when dry due to excavation.	Local Receptors	Visual Soiling and resuspension as airborne particulates	Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
Particulate Emissions	Generators and plant using the site	Local Receptors	Airborne particulates	Plant and equipment will be maintained in accordance with manufacturers requirements. Non-road mobile machinery (NRMM) is controlled through European Directives. Where generators are required, these can be located away from receptors to increase dispersion of any emissions.

Table 3.2 Measures that will be used on site to control dust/particulates (PM<sub>10</sub>) and other emissions.

Abatement Measure	Description/Effect	Overall consideration and Implementation	Trigger for Implementation
<b>Preventative Measures</b>			
Site / process layout in relation to receptors	Locating particulate emitting activities at a greater distance and downwind from receptors may reduce receptor exposure.	Where activities can be undertaken away from receptors such as location of stockpiles given the size of the site this should be undertaken.	Will be undertaken prior to the works being started.
Site speed limit, 'no idling' policy and minimisation of vehicle movements on site.	<p>Reducing vehicle movements and idling should reduce emissions from vehicles.</p> <p>Enforcement of a speed limit may reduce re-suspension of particulates by vehicle wheels.</p>	Ensure all vehicles switch off engines when stationary - no idling vehicles.	Best Practice Measure and will be used through the entirety of the works.
Sheeting of vehicles	Prevents the escape of debris, dust and particulates from vehicles as they travel.	Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.	Best Practice Measure and will be used through the entirety of the works.
Stockpiles	<p>There will be two main stockpile areas at the site as presented in Appendix A. From these planned stockpile locations, the nearest sensitive receptors are the residential properties on Langholme Drive, which are over 100m of the stockpile locations. The Valeo Snackfoods Factory is located about 190m to the west of the nearest stockpile zone.</p> <p>In addition to the planned stockpile areas there is the potential for other areas of the site to be used as temporary stockpile areas. It is assumed that the locating of such stockpiles will take into account the proximity of nearby sensitive receptors.</p>	<p>The main stockpile areas have been chosen as they are in the middle of the site and well away from receptors.</p> <p>Temporary stockpiles will only be located away from site boundary, dampened down and removed as soon as practical.</p> <p>Materials retrieved during works close to sensitive areas of the site</p>	Main stockpile locations chosen to reduce any potential impact, temporary locations will be controlled as and when necessary, through the entirety of the works.

Dust and Emissions Management Plan

		boundary will be moved to designated stockpile areas away from the site boundary as soon as possible.	
Water Suppression	<p>Water Suppression will be available through the construction works, this will include;</p> <p>Regular dampening down of stockpiles with onsite water bowsers.</p> <p>Mist curtains shall be utilised at the remediation treatment area where there will be mixing with reagents and binders.</p>	Used particularly during prolonged dry spells or extreme wind events, as these conditions result in higher potential risk of release of dust from the site.	Best Practice Measure and will be used through the entirety of the works as and when necessary.
Material Storage	Potential for material to be needed during the works that could become airborne.	The storing of other potentially dusty materials should be done so away from site boundaries and/or potentially sensitive receptors. Materials, such as construction sand, or any other aggregate on site, should be stored in bunded areas and not allowed to dry out.	Best Practice Measure and will be used through the entirety of the works.
Monitoring	<p>Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked.</p> <p>This should include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100 m of site boundary, with cleaning to be provided if necessary.</p>	Implementation necessary to ensure measures are effective.	Ensures compliance with the DEMP and that the dust mitigation measures are effective.
<b>Remedial Measures</b>			
Off Site Controls	Inevitably there will be material that will leave the site that can't be captured.	Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require	Best Practice Measure and will be used through the entirety of the works.

Dust and Emissions Management Plan

		the sweeper being continuously in use.	
Site Management and complaints	Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken. Record any exceptional incidents that cause dust and/or air emissions, either on- or off-site, and the action taken to resolve the situation in the logbook. Make the complaints log available to the local authority when asked.	This will be a requirement of the principal contractor when appointed.	Ensures any complaints are recorded, investigated and remedial action taken when required.

### 3.3 Visual Dust Monitoring

A daily inspection of the site boundary in the vicinity of the works that are being undertaken at the time including haulage routes on and off site will be made, by the Principal Contractor. The inspections will check for abnormal levels of dust deposition and identify whether there is any visible transfer of dusty material beyond the site boundary. If abnormal levels are found, the Principal Contractor will investigate the cause and immediate remedial action will be taken where necessary. A site log will be maintained that records the details of all visual inspections undertaken at the site. These records will include a description of the any dust events, when and where it was found, the meteorological conditions at the time (with reference to the data being collected), whether or not evidence suggested that it was as a result of the works being undertaken at the site, and the corrective actions taken. The log should also record inspections when no dust deposition/events were identified. A record of all visual monitoring will be undertaken for each day when construction activities are being undertaken. The logs will include the following information:

- Date and time;
- Summary of meteorological conditions;
- Whether or not evidence dust deposition, if found; – If so, where and to what extent;
- A summary of the operational activities undertaken that day; and
- A description of the remedial actions taken. This information on visual inspections should be included within the site logbook, including inspections that do not identify abnormal dust conditions.

Additional visual monitoring inspections may be carried out during times of severe weather conditions or should operatives observe significant levels of dust. The monitoring will be carried out at intervals while the site is operational, should it be observed that dust is being emitted from the site a Checklist (Appendix B) will be completed and notes will made as to, the amount, direction and source of the dust. In the event of dust being visible off-site steps will be taken to suppress the dust, reduce operations or cease operations depending on the source of the dust. Additional dust monitoring will be carried out if necessary.

### 3.4 Contamination

During the excavation works, all excavated soil should be examined for visible or olfactory evidence of contamination. In the event that significant unexpected contamination is identified, for example, strong odours, visible free phase hydrocarbons or potential asbestos containing materials (ACM), then work is to be stopped and British Sugar is to be informed immediately in order to agree any further assessment and/or further stockpile or excavation management procedures considered appropriate. Any suspected contaminated material should be segregated to prevent the spread of contaminants.

All excavated materials shall be subject to geochemical testing from stockpiles following excavation and segregation according to material type.

## 4 Particulate Matter Monitoring

Additional dust monitoring equipment would be installed if the visual inspections identified abnormal levels of dust deposition. In addition, automatic monitoring may be required if complaints were received regarding activities on the site that required further investigation. This requirement will be reviewed and where necessary the DEMP will be updated.

## 5 Reporting and Complaints Response

### 5.1 Engagement with Community

During the works the Principal Contractor's site manager will be available on a weekly basis, to meet and discuss with stakeholders at nearby sensitive receptors any activities planned at the site for that week. The purpose of which will allow open discussion on the activities planned at that time, the risk associated with them and will also provide stakeholders with the means to raise concerns on the timing of activities and/or the control measures to be applied.

### 5.2 Management Responsibilities

A complaints procedure will also be put into practice, which will include the following procedure:

- The Principal Contractor will record the complaint details, including the time and the location that the dust episode was experienced at and the time of the complaint. Additional descriptive information should also be logged on the nature of the dust as described by the complainant.
- The Principal Contractor will investigate the activities ongoing at the time of the complaint and in the event of a complaint relating to an ongoing event apply mitigation as appropriate to minimise the generation of the emission at source.
- If unacceptable dust episodes are identified as being likely to reoccur under particular weather conditions or at particular locations, then consideration will be given to the restriction of remediation works or alternative methods of working, specifically to mitigate dust emissions and associated offsite impacts.
- The results and outcome of the investigation will be reported back to the complainant. A record of all substantiated and unsubstantiated complaints will be recorded and retained on site. The information recorded will include:
  - Date and time of the complaint.
  - Location of where the subject of the complaint occurred.
  - On-site activities undertaken at the time of the subject of the complaint.
  - Meteorological conditions at the time of the subject of the complaint.
  - Whether or not the complaint is substantiated.
  - If so, the remedial action taken.

A summary of all complaints, substantiation and resulting actions will be recorded in the site logbook.

Should complaints be received regarding odour these will be investigated in the same way as if they were dust complaints following the process above.

The complaints form in Appendix B shall be used in the event of a complaint.

In addition, as part of British Sugars overarching 14001 Environmental Management System requires all environmental complaints are logged, investigated and notified to senior management on the British Sugar Board.



## **5.3 Summary**

This DEMP has been prepared to outline the preventative control measures that will be utilised during the works at the British Sugar site. The document will be reviewed at least once a year or more frequently where there are either complaints or where there are unforeseen changes in working practices which may result in a greater risk of dust, or emissions being generated that need additional controls.

# Appendix A – Stockpile Areas



## Appendix B– Dust Complaint Form

Complaint Form	
Name of Complainant if Given	
Address or location of complaint	
Contact Details	
Tel	
Email	
Date	
Complaint Reference Number	
Complaint Details	
Investigation Details	
Investigation by	
Position	
Date and time investigation carried out	
Weather conditions	
Investigation Findings	
Feedback given to EA and/or LA	
Date Feedback given	
Feedback given to public and date.	
Review and improve	
Improvements Needed to prevent reoccurrence	
Proposed date for completion of improvements	
Actual Date for completion	
Does the DEMP need to be updated	
If so, date was updated.	
Closure	
Site Manager Review date	
Site manager signature to confirm no further action required	

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