

# **Environmental Permitting Regulations 2010**

## **DUST MANAGEMENT PLAN**

Prepared on Behalf of **Associated British Ports**

Site Name: **Roath Dock Cardiff**

**Environmental Permit Number:** TBC

Prepared By:

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Issued June 2015

Version: 1.1

## DOCUMENT CONTROL SHEET

**Client:** Associated British Ports

**Project:** Environmental Compliance Biomass & RDF Export Facility

**Job No:** ABP/Cardiff/ 001

**Title** Dust Management Plan

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To be reviewed	Annually or as necessary

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## 1. BACKGROUND

### 1.1 Scope

**1.1.1** This Dust Management Plan is intended to demonstrate appropriate measures to prevent or minimise the release of dust from the site such that they do not cause pollution or give rise to nuisance.

**1.1.2** The biomass & RDF export facility is in proximity to surrounding activities within Roath Dock Cardiff. Therefore, this Management Plan has been produced to address any potential dust issues arising from ABP's activities.

**1.1.3** Reference has been made to the following documents:

- *Environment Agency Technical Guidance Note H1-Annex A Fugitive emissions v2.2 (December 2011)*
- *How to comply with your environmental permit. Version 6(June 2013) Environment Agency*
- *Monitoring of particulate matter in ambient air around waste facilities Technical Guidance Document (Monitoring) M17 Environment Agency (April 2014)*
- *Mineral Industry Research Organisation, (February 2011). Good Practice Guide: Control and Measurement of nuisance dust and PM10 from Extractive Industries.*

### 1.2 Reasons for Dust Management

**1.2.1** The bespoke permit will impose the following condition:

***3.1 Emissions of substances not controlled by emission limits***

*3.1.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this rule if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.*

**1.2.2** Thereby this Dust Management Plan seeks to control fugitive emissions, which include dust generation, from site activities to prevent pollution, nuisance and annoyance that may be caused beyond the site boundary. In order to carry this out the sources of dust, the pathway and what receptors might be affected by it have been examined.

**1.2.3** To achieve these objectives, this Dust Management Plan identifies the following:

- Potential dust sources;
- Release points and impacts;
- Controls in place to manage the generation of dust and prevent its release;
- A dust monitoring plan to assess effectiveness of these controls;

## 2. SOURCES, RELEASE POINTS AND IMPACTS DUST

### 2.1 Dust Sources

**2.1.1** The Site Environmental Management System ensures site conditions are monitored to assure on-going compliance with health, safety and environmental legislation. The management system is underpinned by a Risk Assessment and this has identified the following operations as having potential to give rise to dust emissions:

1. Delivery of waste material
2. Depositing of waste material
3. Processing of waste material
4. Storage of waste material
5. Loading of waste materials
6. Transport of dusty material

**2.1.2** Mitigation measures are dealt with in Table 1 below

**Table 1: Potential Dust Sources & Mitigation Measures**

Source	Assessment Characteristics	Embedded Mitigation
Delivery	Delivery of processed wood chip	Minimum particle size specification to suppliers i.e. loads refused if too dusty  Sheeting of delivery vehicles  Delivery using Roll on & Roll off vehicles
Storage	Dry chips from delivery can be prone to wind blow	Minimum particle size specification to suppliers
Loading	Loading of chips in open jawed equipment and dropping from height	Use of appropriate equipment to load.  Grab lowered into ship hold.
Track Out	Carriage of dust on vehicle wheels	Site surface and access road tarmaced and concrete.  Surface cleaned and swept regularly.

## 2.2 Dust Pathways

**2.2.1** Dust should it arise could be transmitted from source to target via the atmosphere. The significance of this pathway i.e. level of dispersal/dilution is dependent on atmospheric conditions, wind speed and direction.

## 2.3 Impacts and Receptors

**2.3.1** Dust may have a number of effects on sensitive receptors including:

- General annoyance;
- Increased levels of stress;
- Loss of amenity (e.g. forcing someone out of their garden);
- Sensitisation to perceived health effects; and
- Concern regarding a drop in property values

**2.3.2** Dust monitoring points have been identified and are detailed on the site plan in ([Appendix DMP D](#)). The prevailing wind is from the southwest (SW) i.e. blowing to the north-east (NE). Receptors in the immediate vicinity of the site are primarily of an industrial/commercial nature. The site is situated within an industrial area alongside other port related activities that present the risk of similar impacts.

**2.3.3** The nearest residential properties is over half a kilometre distance from the biomass & RDF export facility in the opposite direction to the prevailing wind.

**2.3.4** The receptors are listed in Table 2 below:

**Table 2: Receptor Locations & Distance from Site Activities**

Ref	Receptor Type	Address	Approximate distance from Centre of the Facility (m)
R1	Permitted Area	ABP	N/A
R2	Adjacent Operation	ABP Operated Transit Shed	480
R3	Adjacent Operation	Edge of Port Estate Adjacent to EMR (Export Scrap Facility)	277
R4	Residential Development	Adventures Quay	560

### **3. DUST CONTROL**

#### **3.1 Dust Control - General**

- 3.1.1** All appropriate measures are taken to prevent dust emissions from the woodchip export facility. It is primarily controlled at source by good operational practice, including physical and management control measures. As identified in Table 1, the potential dust sources occur in relation to the following activities:

#### **3.2 Delivery**

- 3.2.1** Processed wood chips are delivered to the dockside in enclosed vehicles. These vehicles deposit their load onto the stockpile. Suppression equipment will be on hand to reduce dust potential. Delivery is expected to occur on a daily basis, during campaigns.

#### **3.3 Storage**

- 3.3.1** Delivered wood chip is stored in stockpiles pending collection by ship. The stockpiles will be built up and will not remain onsite for longer than 3 months. ,

#### **3.4 Loading**

- 3.4.1** Wood chip is loaded using a crane into the hold of a ship.

#### **3.5 Track Out**

- 3.5.1** Wood chip may be prone to 'track-out' by delivering vehicles and other wheeled plant and vehicles entering or passing the site.

#### **3.6 Dust Suppression System**

- 3.6.1** A mobile dust suppression system is deployed as needed. The site manager and other trained operatives will operate the dust suppression system if and when dust arises.

The procedure for deploying the dust suppression system is as follows:

##### Proactive

When preparing to accept deliveries, moving or loading materials activate the dust suppression equipment.

##### Reactive

If dust emissions arise from the operation activate the dust suppression system.

Once dust levels reduce record the incident on a Dust Assessment Form in (Appendix DMP B), the file for which is located within the site office.

Report incident to the site compliance manager for further investigation.

### **3.7 Technically Competent Person**

**3.7.1** The site will have a technical competent manager (TCM) who will be onsite for the specified time period and will supervise compliance with all requirements (4MTSNH6).

**3.7.2** The TCM will be responsible for oversight of the following matters of compliance:

- Waste acceptance and control procedures
- Operational controls
- Maintenance
- Record-keeping
- Emergency action plans & ship loading.
- Reporting and follow up of any incidents, complaints or emergencies



## **4. MONITORING**

### **4.1 General**

**4.1.1** A thorough monitoring schedule is implemented to assess the following:

- Process controls;
- Dust releases;
- Transport through the atmosphere; and
- Impacts.

**4.1.2** In addition, the following are also included in the monitoring schedule:

- Complaint response;
- Site, pathway and community monitoring undertaken by official bodies; and
- Detailed record keeping and reporting.

### **4.2 Monitoring Dust Releases**

**4.2.1** Routine daily visual dust assessments are conducted at locations as shown in ([Appendix DMP D](#)). The procedure for dust assessment is detailed in ([Appendix DMP A](#)).

**4.2.2** The assessor will go to each of the identified monitoring locations and observe conditions and inspect surfaces for the presence of dust. Primarily the site compliance manager is responsible for conducting all dust assessments.

**4.2.3** If a dust assessment indicates that dust present has arisen from the site, an assessment of the material handling process will be carried out to trace any observed dust to the source so that appropriate corrective action can be taken. This will include activation of the dust suppression system.

**4.2.4** The findings of the assessments will be recorded in the Dust Assessment Form in ([Appendix DMP B](#)) along with prevailing weather conditions at the time of the survey e.g. high winds and any abnormal events that may be affecting site operation. This feedback loop will ensure that corrective and preventative measures are in place if such conditions arise in the future.

**4.2.5** In the event of on-site sources being identified, or as a result of any assessments made by Natural Resources Wales and/or Cardiff City Council Environmental Health Officers, the site management will be informed and the appropriate corrective and preventative measures taken.

## **5. COMPLAINTS**

- 5.1.1** In order that the veracity of any dust complaints can be substantiated it is imperative that the site is immediately informed either by the complainant themselves or by Natural Resources Wales or Cardiff City Council. The site telephone number is displayed on the site notice and complainants are encouraged to immediately contact the site and/or Natural Resources Wales in the event of any off-site dust that might be attributable to site operations being detected.
- On receipt of a dust complaint, the responsible person will visit the location of the reported event to determine dust presence/absence, dust characteristics and intensity. The time of the complaint will be correlated with on-site activities – the Site Diary will be checked for ‘abnormal’ site operations/conditions at the time of the complaint.
- 5.1.2** The details will be recorded on the Complaint Log Form (Appendix DMP C).
- 5.1.3** The duration of the dust release to which a substantiated complaint relates will be recorded in the Site Diary and Complaint Log Form (Appendix DMP C).
- 5.1.4** Site management will be advised and details of the dust complaint recorded on the Log Forms (Appendix DMP C) in addition to complaint validation results and any corrective and preventative actions taken in response to the complaint.
- 5.1.5** All complaint forms will be kept until the surrender of the permit. All records will be available for inspection by a Natural Resources Wales representative.

## **6. CONTINGENCY PLAN**

- 6.1** Due to the nature of waste and operations and the dust control measures in place, it is considered unlikely that the operation will present any significant environmental problems with regard to dust.
- 6.2** However, this section provides short and long-term measures to be implemented in the event of a dust release as identified in the monitoring programme being found to be out of control.
- 6.3** In the event of a dust complaint being substantiated, the responsible person will conduct a visual dust survey as detailed in Section 4 as soon as is practicable.
- 6.4** In the event of on-site sources being identified, or as a result of any assessments made by the National Resources Wales and/or Cardiff City Council Environmental Health Officers, the site management will be informed and the appropriate corrective and preventative measures taken.
- In the short term these measures include:
- Suspension of material loading or reception; and
  - Damping down of stack and deployment of suppression measures. See [Appendix DMP E](#).
- 6.5** In the event of continued substantiated dust complaints or continued excess dust being detected beyond the site boundary, long-term contingency measures will be employed to assess what action is required to remediate the problem. This may include the exclusion of certain sources of material or installation of appropriate control measures.

## **7. DUST MANAGEMENT PLAN REVIEW**

**7.1.1** This plan will be reviewed on a regular (annual or as frequently as required) basis as part of the operation of the Site Environmental Management System. This will include:

- Review of any complaints received and remedial action taken
- Review of reported incidents of dust release to establish effectiveness of mitigation measures
- Recommendation on additional measures to be implemented as appropriate

**7.1.2** In the event of any substantive changes being made, the relevant authorities e.g. EHO, NRW will be advised.

**7.1.3** In the event of the site operation being modified that may impact on dust generation potential, this plan will also be reviewed and appropriate measures taken. Additionally, in the event of any change in operations the NRW will be provided with a revised copy of this Dust Management Plan.

## **Appendix DMP A: Dust Assessment Procedure**

Routine assessments can be used to build up a picture of the impact dust that might emanate from the site could have on the surrounding environment over time. You can develop 'worst case' scenarios by doing assessments during adverse weather conditions or during particularly dusty parts of an operation. Ideally, you should use the same methodology to follow up complaints.

Where you test will depend on:

- whether you are responding to a complaint;
- whether you are checking your state of compliance at sensitive receptors;
- whether you are trying to establish the source of dust;
- wind direction.

The assessment will involve someone walking along a route checking at the points identified in (Appendix DMP B).

Also keep a note of any activities beyond the site boundary that could be the source of the dust, contribute to the dust, or be a confounding factor.

## Appendix DMP B: Dust Assessment Form

Dust Assessment form										
Start Time of Check		AM		PM	Finish Time		AM		PM	
Duration (of check)										
Location of check if not on-site										
Weather conditions	dry		rain		fog		snow		other	
Temperature	hot		very warm		warm		mild		cold	
Wind strength	none		light		steady		gusting		strong	
Wind direction FROM	North		NE		E		SE			
	S		SW		W		NW			
<i>Intensity</i>	<i>0 No dust present</i>	<i>1 Intermittent particles</i>	<i>2 Faint layer</i>	<i>3 Distinct layer</i>	<i>4 Thick layer</i>					
Dust Detection	Point 1	Point 2	Point 3	Point 4	Point 5					
Intensity (using above scale)										
Was dust release constant (C) or intermittent (I) in this period										
What far was it travelling?										
Is the source evident?										
If yes - name it										
Any other comments or observations										

## **Appendix DMP C: Dust Complaint Record Form**

Site dust complaint form		
Site:	Operator:	
Complaint Ref.:	Date:	Page    of
Name and address of complainant:		
Tel no. of complainant:		
Time and date of complaint:		
Date, time and duration of offending dust:		
Location of dust, if not at above address:		
Weather conditions (i.e., dry, rain, fog, snow):		
Wind strength and direction (light, steady, strong, gusting):		
Complainant's description of dust (colour, origin):		
Intensity of dust (light, moderate, strong, persistent):		
Has complainant any other comments about the dust?		
<b>For completion by site manager</b>		
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:		
On-site activities at time the dust occurred (e.g., stock-pile movement):		
Operating condition at time dust occurred (e.g., normal, abnormal, maintenance/special):		
Remedial action taken		
Corrective action planned		
Corrective action completed		
Form completed by	Signed	Date

ORIGINATOR:

AUTHORISED BY:

DATE:

DATE:

## Appendix DMP D: Monitoring Point Locations





## Appendix DMP E: Mobile Dust Suppression Specification

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The APPS Portable Independent Rotary Atomiser (PIRA) can be used both indoor and outdoor in conjunction with Airborne 10 for use to combat odour and dust. This unit has been widely proven to be a effective, low carbon footprint unit in dealing with various dust and odour issues. Airborne 10, when is used in conjunction with the PIRA is non-selective and will deal with both dust and gas odours molecules.

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