

DUST MANAGEMENT PLAN

Asphalt Plant, (Celsa Manufacturing UK Ltd),
Tremorfa Works, Seawall Rd, Cardiff, CF24 5TH

Environmental Permit: (CELSA) EPR/TP3639BH

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Contents

| | | |
|------|---|---|
| 1.0 | Introduction | 3 |
| 1.1 | Aims..... | 3 |
| 2.0 | Roles & Responsibilities | 3 |
| 3.0 | Site Location..... | 3 |
| 3.1 | Receptors | 5 |
| 4.0 | Site Activities..... | 5 |
| 4.1 | Screening & Crushing..... | 5 |
| 5.0 | Sources of dust emissions | 5 |
| 5.1 | Point Source | 5 |
| 5.1 | Fugitive..... | 5 |
| | • Vehicle movements in/out of the site | 5 |
| | • Processing of material (including crushing & screening activities)..... | 5 |
| | • Wind blowing across stockpiled materials..... | 5 |
| | • Adverse weather conditions | 5 |
| 6.0 | Pathways | 6 |
| 7.0 | Control Measures..... | 6 |
| 7.1 | Point Source Emissions | 6 |
| 7.2 | Transportation / Vehicle Movements..... | 6 |
| 7.3 | Storage | 6 |
| 7.3 | Handling & Processing | 6 |
| 7.4 | Adverse Weather / Plant Failure..... | 7 |
| 7.5 | General..... | 7 |
| 8.0 | Incident / Complaints Response | 7 |
| 8.1 | Record | 7 |
| 8.2 | Notify..... | 7 |
| 8.3 | Investigate..... | 7 |
| 8.4 | Act | 7 |
| 9.0 | Monitoring | 8 |
| 9.1 | Visual..... | 8 |
| 9.2 | Stack Emissions | 8 |
| 10.0 | Records | 8 |
| 11.0 | Reference Documents:..... | 8 |

1.0 Introduction

The Dust Management Plan relates to the activities undertaken by Harsco at the Asphalt Plant located within the Celsa Manufacturing Steelmaking installation under Environmental Permit reference: EPR/TP3639BH. The facility is located at Tremorfa Works, Seawall Rd, Cardiff, CF24 5TH.

It has been produced in accordance with the Environment Agency's Guidance '*Control and Monitor emissions for your environmental permit*' (published 1st February 2016) and TGN M17 - Monitoring of particulate matter in ambient air around waste facilities (Version 2 July 2013). It identifies potential sources, pathways and receptors of dust emissions, and details the required control measures to minimise any adverse environmental impact.

1.1 Aims

The aims of the Dust Management Plan are to:

- Identify activities with the potential for dust generation
- Develop and implement an effective dust management strategy
- Minimise the likelihood of fugitive dust emissions from site and reduce potential environmental impact
- Ensure compliance with the environmental permit

2.0 Roles & Responsibilities

Overall responsibility for the implementation of the Dust Management Plan lies with the Site Operations Manager. Site employees shall be trained in accordance with the company procedure EM-P-0020.

3.0 Site Location

The site is in a predominantly industrial area situated within the Celsa Steelworks off Rover Way, Cardiff.

Figure 1) shows the location of the site the principal receptors and prevailing wind direction

Figure 1 – Location of receptors surrounding the Site (500 metres) with overlay of predominant wind direction

Wind data for Cardiff from <https://www.meteoblue.com/> / Google Earth Imaging with the permission of Google



3.1 Receptors

Principle receptors are illustrated in Figure 1 above and detailed further in Table 1) below. The nearest 'residential' properties are the located at Willow Avenue to the North and the Travellers Camp to the North north-east of the site. The Severn Estuary is located to the South-east of the site; this has protected status and dust and particulates have the potential to impact upon the ecology in this area.

Table 1) Sensitive receptors

| Receptor | Distance | Direction |
|---|-----------------|------------------|
| Wales Coast Path | 216m | South-east |
| Severn Estuary (Ramsar, SSSI, SAoC, SPA status) | 249m | South-east |
| Willow High School | 530m | North north-west |
| Willow Avenue (residential) | 580m | North |
| Travellers Camp | 617m | North north-east |

4.0 Site Activities

The primary activity undertaken on site involves the use of recovered (slag) aggregate which has been crushed and screened to produce a range of recycled asphalt products.

The asphalt plant has the capacity to produce 250 tonnes per hour of asphalt materials. Pre-screened slag aggregate is fed into the asphalt plant with the addition of bitumen, returned asphalt, cellulose, fibres and filler in varying proportions to produce different specifications of asphalt.

Materials are dried using a rotary drier prior to being fed into internal storage hoppers within the plant. Process steam and particulates generated from the drying process pass through a dust extraction system and are then discharged via a chimney stack.

4.1 Screening & Crushing

Prior to incorporation into the Asphalt Batching Process slag is screened and crushed to the desired size fraction. Without adequate control measures in place these activities have the potential to create fugitive dust emissions.

5.0 Sources of dust emissions

The following activities have the potential to generate dust / particulate matter:

5.1 Point Source

- Emissions from the stack during the asphalt batching process

5.1 Fugitive

- Vehicle movements in/out of the site
- Lift off from access/haul roads
- Loading and handling of materials
- Processing of material (including crushing & screening activities)
- Wind blowing across stockpiled materials
- Adverse weather conditions

6.0 Pathways

The primary pathway for dust and particulate matter is via wind-blown transportation. The prevailing wind direction is illustrated in Figure 1 above.

In periods of adverse weather (strong winds) the Site Manager may decide to limit or stop specific activities with the potential to generate dust, especially if the wind is blowing in the direction of sensitive receptors.

7.0 Control Measures

Best available techniques shall be used to prevent, or where that is not practicable, reduce emissions from the activities. To minimise potential generation of dust from the site, the following preventative or reactive control measures shall be implemented:

7.1 Point Source Emissions

The Asphalt Plant is fitted with an arrestment system to minimise the release of dust / particulate matter to the atmosphere. The filtration system must be maintained in accordance with the Preventative Maintenance Schedule and critical spares such as bag filters should be retained on site.

7.2 Transportation / Vehicle Movements

- Hard surfaced internal haul roads and the site access road shall be swept with a road sweeper as necessary
- Mud and debris on access and haul roads shall be monitored daily by the site manager and cleaned as necessary
- A mobile water bowser is to be used to suppress dust from site roadways in periods of dry weather / heavy traffic.
- Movement of mobile plant and site traffic shall be restricted to defined haul routes which are sufficiently maintained
- A site speed limit of ??mph on haul roads and ??mph in working areas will be enforced for all vehicles to minimise the potential entrainment of dust into the atmosphere

7.3 Storage

- All stockpiles shall be kept to minimum. Operator training includes the requirement to pay attention when moving material in order to prevent unnecessary dust emissions.
- Stockpile tops are flattened, rather than a pyramid shape to reduce the effect of wind erosion across the stockpiles.
- Water suppression systems are to be used to control the emission of dust from stockpiles

7.3 Handling & Processing

- Arrestment Plant (baghouse filtration system) installed and maintained to minimise point source emissions from stack
- Asphalt Plant encased in metal cladding to prevent fugitive emissions
- Covered / enclosed conveyor systems (including crushing & screening equipment)
- Drop height of material transfer points and disturbance of stockpiles shall be minimised
- Water Suppression systems for dampening down
- Minimise double-handling of materials

7.4 Adverse Weather / Plant Failure

- Activity may be ceased during high winds particularly when the prevailing wind direction is towards potentially sensitive receptors near the site.
- The plant can be stopped almost immediately in the event of equipment failure or operational upset, so there is a low risk of prolonged excessive emissions.

7.5 General

- Regular maintenance service and inspections in accordance with company procedure: HM-P-0014.
- Pre-start checks shall be carried out for mobile and fixed plant as per company procedure HM-P-0027, to identify any defects that could affect the environment
- Good housekeeping practices to ensure the site is clear of dust, mud, litter and debris
- Visual monitoring for emissions of particulate matter shall be undertaken by the authorised site personnel.
- All relevant site personnel including contractors shall be trained in working practices and mitigation measures to minimise the generation and release of particulate matter.

8.0 Incident / Complaints Response

8.1 Record

All incidents and complaints must be recorded on the Harsco Incident Notification System (INS).

8.2 Notify

In the event of a permit breach, or if any activities on site cause an accident or incident which may or already has, significantly affected the environment Celsa's Environmental Management Team must be notified who will inform Natural Resources Wales (NRW) as appropriate.

The Harsco site EHS Manager must be notified immediately of **all** incidents/complaints.

8.3 Investigate

All dust related incidents and complaints, whether observed by site personnel, the customer (Celsa), the Regulator (NRW), or the public must be investigated immediately by the Site Manager in accordance with Company Procedure HM-P-0017.

8.4 Act

The following actions must be taken:

- Establish the cause of the emissions
- Control emissions – where necessary cease activities
- Deploy bowser / sweeper as necessary on affected areas
- Ensure suppression units are functioning correctly (report faults and schedule repairs as required)
- Review operations and effectiveness of control measures
- Provide timely feedback to the customer (Celsa), Regulator (NRW) and complainants
- Inform and update all operators during pre-shift briefings.
- Record all corrective and preventative actions on the Action Capture System (ACS)

9.0 Monitoring

9.1 Visual

Visual inspections for emissions must be undertaken daily by trained personnel with any observations recorded and retained onsite.

Where emissions or issues have been identified the Site Manager must be notified and Section 8 of this plan should be actioned accordingly.

The Site Manager must use the Meteorological Office (www.met-office.gov.uk) weather forecast or other forecast to predict weather conditions such as prolonged dry spells which may give rise to particulate matter emissions and implement appropriate precautionary and or management measures.

9.2 Stack Emissions

The plant is fitted with a Continuous Monitoring System which should be calibrated and maintained in accordance with the Planned Preventative Maintenance Schedule.

Periodic Stack Emissions Testing must be completed in accordance with the conditions specified in Schedule 3 of the Environmental Permit. The emission limit is **?? mg/m³**. The emissions point is referenced as **??** on the site plan which is included in Schedule 7 of the environmental permit.

10.0 Records

All incidents / complaints must be recorded on the Harsco Incident Notification System and all actions logged on the Action Capture System (ACS).

The plant operator shall keep records of inspections, tests and monitoring including visual inspections. The records should be:

- kept on site
- kept for at least 3 years
- made available for the regulator to examine

11.0 Reference Documents:

Environmental Permit (CELSA) EPR/TP3639BH
HM-P-0017 – Incident Reporting and Investigation
HM-P-0014 – Routine Maintenance, Servicing and Inspection
EM-P-0020 – Training, Awareness and Competence
HM-P-0027 – Equipment Pre-Start Checks