



Materials Reprocessing Facility, Westonzoyland

Dust Management Plan

11th February 2019



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Document Control

Version	Date	Author / Checked by	Change Description
v1.0	02/05/2018	OL/LL	Document created/checked
v1.1	08/05/2018	OL/	Minor amendments.
v2.0	11/02/2019	RB/OL	Addition of other sources of dust within 1km radius & additional info on source-pathway-receptors.

Contact Details:

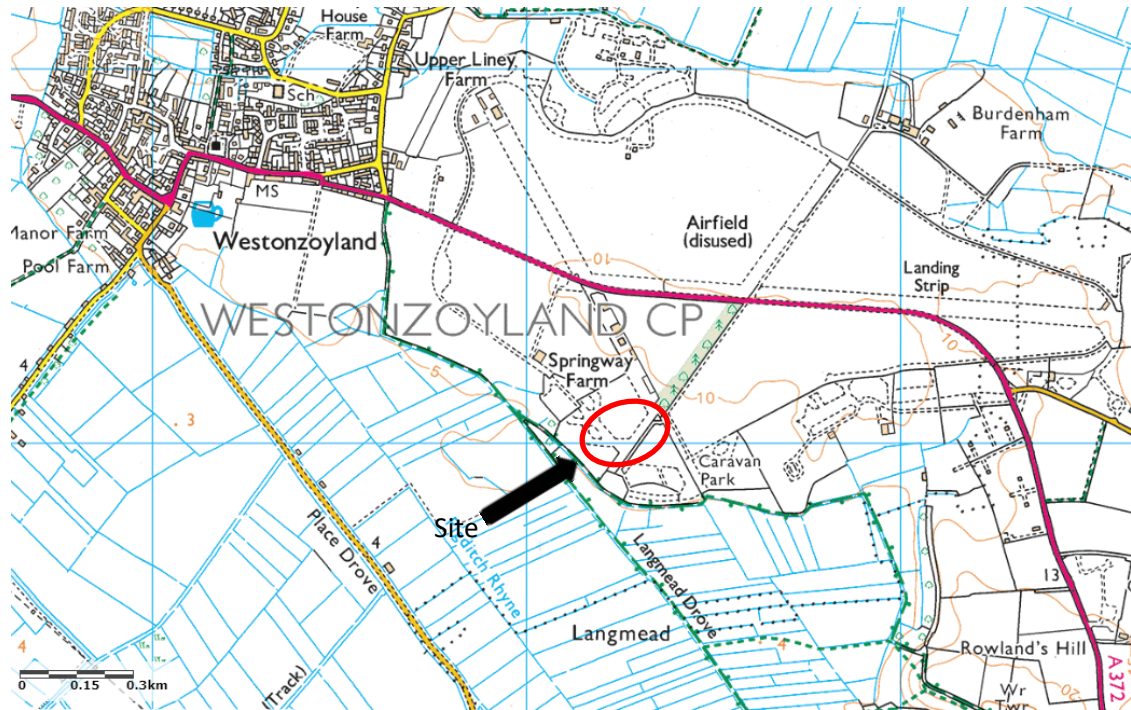
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1 Introduction

- 1.1 Towens of Weston Ltd (Towens) propose to operate a Materials Reprocessing Facility (MRF) at their site on Springway Business Park near Westonzoyland. The MRF will handle, process and store aggregates/hardcore, road planings, wood, green waste and soils.
- 1.2 The Site is located to the south east of Westonzoyland on the southern part of an old airfield and measures approximately 1.3ha in area.



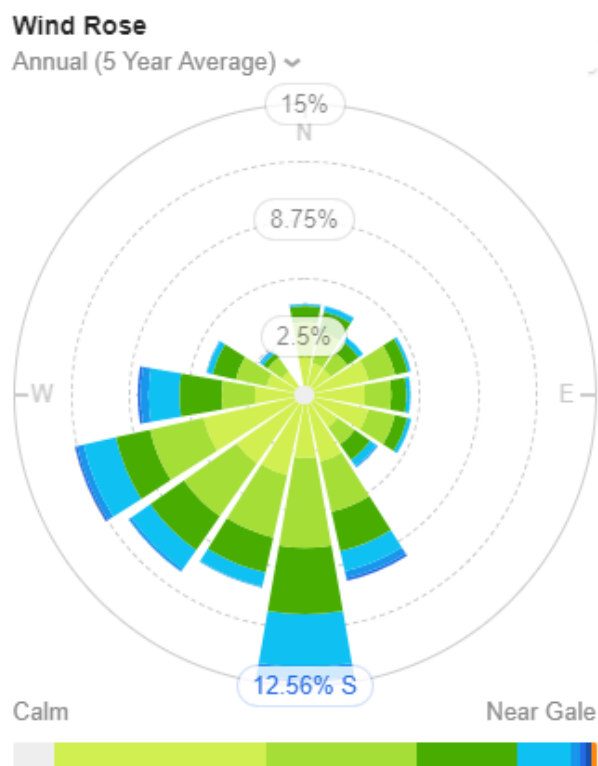
2 Sensitive Receptors

2.1 The key sensitive receptors are mainly ecological in nature which have been identified through correspondence with Natural England and Somerset County Council, consisting of:

- A small caravan park 100m to the southeast;
- SSSI (Langmead and Weston Level) 50m to the south;
- Surrounding rhynes; and
- RAMSAR site (Somerset Levels and Moors), the closest point of which is 1,800m to the northeast.

2.2 There is an industrial estate within 100m and whilst a receptor occupants are not considered specifically in the definition of “sensitive”, although it is noted that if dust were to be allowed to escape the site boundaries in visible quantities they may be impacted.

2.3 Details of the prevailing winds for the area are shown below.



The wind rose shows the proportion of time the wind blows from the indicated direction.

Based on 5 years of weather monitoring at Westonzoyland (reproduced from www.willyweather.co.uk)

2.4 The prevailing wind direction indicates that winds are predominantly from the south-west and south. Hence, in the unlikely event of significant dust emissions at the Site those receptors most likely to be impacted are those immediately north-east and north. The SSSI and rhynes to the south, west and southeast of the Site are at considerably lower risk from dust due to the low proportion of wind blowing in those directions which even which it does blow towards these receptors, it is of low strength and so particulates are unlikely to be carried a great distance (<50m).

3 Operations

Site Layout & Operations

Site Layout

- 3.1 Site Plan ref SCR.WZ.2017 shows the layout of the site.
- 3.2 The Site comprises impermeable hardstanding. A bunded processing area is located in the middle of the western part of the site, with a topsoil storage building on the southwestern boundary. Storage bays, some of which are covered, line the western and southeastern boundaries of the site. A 3m tall perimeter wall surrounds the site with the exception of the northern boundaries (between the site and adjoining field) where the wall will be 2.4m in height but shall also be lined with hedgerows.
- 3.3 The Site Entrance is located at the northern corner of the eastern part of the site with two emergency access points at the northeast and northwest boundaries.

Waste Operations

- 3.4 Incoming materials are deposited into their appropriate incoming bays according to their type. Material types are then processed in campaigns – processing includes:
- Crushing and screening of hardcore and road planings;
 - Screening of soils;
 - Shredding of green waste; and
 - Chipping of wood.
- 3.5 All these activities are performed within the processing area. Once processed, the materials are then placed into their appropriate outgoing bays to await collection.
- 3.6 All materials delivered to the site and removed from the site are in covered loads.
- 3.7 Material will not be accepted onto site under the following circumstances:
- If there is insufficient storage capacity within the waste transfer building;
 - If there are extreme weather conditions, such as site flooding; and
 - Abnormal Site conditions preventing normal working.

4 Dust Management

Responsibility for Implementation of the DMP

Management

- 4.1 The Managing Director has ultimate responsibility for all legislative requirements. Direct responsibility for implementing the DMP is held by the Technically Competent Management who will also be responsible for interim audits of the Management System in response to changes to the Site's operation, company changes, incident/accidents, complaints, and use of new plant or techniques
- 4.2 Towens will audit Site performance against the Management System, including dust and particulate management on an annual basis. The DMP will be reviewed on an annual basis, or if there are any procedural changes, changes in equipment, variations in the permit, or after any accident or breach of the permit.

Operational Staff

- 4.3 All Site staff receive a Site Induction when they commence on Site. The member of management carrying out the induction will take each inductee through the Company's list of Site Rules and Manager's Rules. All Site staff involved in the operations will receive training appropriate to their role. Additional training requirements will be reviewed annually, or if there are any procedural changes or changes in plant.

Training

- 4.4 Management will ensure that the Technical Competency is maintained in accordance with industry requirements. The Site staff will be suitably trained in their roles and responsibilities with on-site training by the technically competent management, to ensure that they conduct their duties in compliance with the Management System.
- 4.5 Management will periodically review the Company's environmental policy and objectives.

Visual Dust Monitoring

- 4.6 It is the duty of all site staff to remain constantly vigilant to dust releases and raise awareness of this issue should it arise. Visual dust inspections will be completed at least twice daily:
- On arrival at the site and before sorting and / or agitation of the waste occurs; and
 - After the designated lunch break, before afternoon sorting and / or agitation of the waste occurs.

- 4.7 The site staff responsible for this monitoring and record the results. The inspection focusses on the following areas:
- Monitoring for conditions likely to increase the risk of dust release;
 - Visual assessment of any dust release; and
 - Monitoring of any visible surface soiling.
- 4.8 The results of these inspections are recorded in the Site Diary. This will include both the prevailing conditions at the time of the observation (weather and nature of activity), the observation of any dust and location at which observations were made.
- 4.9 Should visible off site dust be released to the surrounding environment as a result of a particular activity, control measures would then be applied until the dust levels return to normal and the activity will be reviewed in order to prevent re-occurrence.
- 4.10 Additional, constant monitoring of all loads and on-going inspection of the facility activities by staff during normal operations. The results including any incidents of visible off-site dust emissions, will be recorded on a daily sheet similar to that below and events will be reported to the Environment Agency, if requested.

Daily Visual Dust Checks	
Date and time-	
Name of staff member	
Wind direction at time of inspection	
Wind Strength expected from weather forecast	
Any non routine operations on site	
Any non routine activities likely to produce dust in immediate vicinity -	
Inspection (visible dust release beyond the boundary)	Yes / No Remarks:

Sources of Fugitive Dust/Particulate Emissions

4.11 Sources of potential dust emission from site

- Vehicles tracking dust on to or off the site;
- Vehicles and plant moving around the site kicking up dust;
- Road vehicles tipping materials;
- Excavators/360s sorting materials;
- Plant sorting materials – (crusher/screener/shredder);
- Materials stored in bays;
- Loading waste materials back on to vehicles.

4.12 Sources of dust from off-site, 1 km radius from site.

Table 1. Sources of dust within 1km radius of site.

Source	Activity	Emissions type	Distance from site
Industrial Estate	Waste transfer station; Engineering; Vehicle movements	Dust and particulates	5 metres
Agriculture	Ploughing; wind-blown soil	Dust	All around the site
B2B Pallets	Wood shredding, chipping, chopping	Dust and particulates	10 metres
Burnham Coal Supplies	Wind-blown from stockpiles; loading and unloading; Vehicle movements	Dust and particulates	392 metres
Durston Compost	Shredding of green waste; turning of windrows; loading / unloading; Vehicle movements	Dust and particulates	673 metres
Granfields Motor Track	Motorbike track with bare soil: Wind-blown soil; Vehicle movements	Dust	766 meters
A373 road	Vehicle movement kicking up dust form road	Dust	338 metres
Westonzoyland airfield	Vehicle movement kicking up dust from airfield	Dust	507 metres
Allotments	Wind-blown soil	Dust	754 metres

Pathway and Control of Fugitive Dust / Particulate Emissions

- 4.13 The pathway for the dust to sensitive receptors is windblown, although as noted above the sensitive receptors lie out of the prevailing wind direction.
- 4.14 The control of dust and particulate emissions from the site will be the overall responsibility of the Site Manager. The sources of possible dust emission and the measures used to control and mitigate dust arising are not limited to any particular circumstances and any of the control measures available will be used where appropriate and effective to address any potential source of dust. Any activities causing visible off site emissions from the facility will be suspended until the appropriate dust suppression systems have brought the situation under control. Such measures will include:
- The operation of a pole mounted water spray dust suppression system, covering the processing area. and/or damping the operational area;
 - A DC50 mobile dust cannon is to be kept on-site for use on areas outside of the processing area. Full specification can be found in Appendix A.
 - Use of a roadsweeper on site to remove surface dust;
 - Containment of materials;
 - Control of transportation and speed limits;
 - General good housekeeping on site; and
 - Modification and/or cessation of operations in extreme conditions.
- 4.15 The implementation of the appropriate dust suppression system will be monitored to ensure its effectiveness.
- 4.16 A high-pressure hose is available on site which drivers are instructed to use if their wheels are likely to track mud onto the road, although impermeable hard surfacing across all tracked areas reduces the likelihood of this significantly.
- 4.17 The whole site is screened from wind by the high perimeter wall, reducing the chance of dust being blown up across the site and retaining any that might be. Furthermore, the material storage bay walls, which screen the materials on 3 sides, will further buffer winds and prevent dust arising.

4.18 The topsoil storage building is further protected from wind, sheltered on three sides with the open side facing northeast where little wind blows from. The topsoil building, as well as wood and green waste bays, are also rooved, aiding the retention and reducing the likelihood of dust.

Table 2. Breaking the link between Source – Pathway - Receptor

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Crushing aggregate	Atmospheric dispersion	Adjacent farmland, including Langmead and Weston SSSI; Neighbouring industrial estate; Main A372 road; Pedestrians enjoying the countryside	Visual soiling; Respiratory system irritant; Nuisance; Smothering of flora and fauna	<p>Water suppression attached to crusher to prevent dust becoming airborne;</p> <p>Processing kept to designated 'Processing area' of site. Regular housekeeping of this area to clean surface dust and therefore remove dust at source, thereby preventing possibility of becoming wind-blown.</p> <p>Dust suppression system covering processing area, to knock down airborne dust and prevent it from leaving site.</p> <p>Site is screened by a high perimeter wall preventing dispersion by way of a physical barrier.</p>
Chipping wood	Atmospheric dispersion	Adjacent farmland, including Langmead and Weston SSSI; Neighbouring industrial estate; Main A372 road; Pedestrians enjoying the countryside.	Visual soiling; Respiratory system irritant; Nuisance; Smothering of flora and fauna	<p>Dust suppression system covering processing area, to knock down airborne dust and prevent it from leaving site.</p> <p>Processing kept to designated 'Processing area' of site. Regular housekeeping of this area to clean surface dust and therefore remove dust at source, thereby preventing possibility of becoming wind-blown.</p> <p>Site is screened by a high perimeter wall preventing dispersion by way of a physical barrier.</p>

Mud	Tracking dust on wheels and vehicles	Main A372 road users	Visual soiling; Respiratory system irritant; Nuisance; Smothering of flora and fauna	<p>Regular housekeeping and sweeping of surface mean there is little dust for the vehicles to track.</p> <p>High pressure hose available on-site to clean vehicle and wheels if necessary, thereby removing dust from vehicles so no dust to track.</p> <p>Site vehicle speed limit is 5mph.</p>
Tipping, loading, storage of waste in the open	Atmospheric dispersion	Adjacent farmland, including Langmead and Weston SSSI; Neighbouring industrial estate; Main A372 road; Pedestrians enjoying the countryside	Visual soiling; Respiratory system irritant; Nuisance; Smothering of flora and fauna	<p>Soil to be tipped and kept inside of a building. Building acts as physical barrier and prevents dust from leaving.</p> <p>Wood and green waste tipped in covered bays, limiting areas that dust can exit and become airborne.</p> <p>Aggregates will be dampened down in dry weather, preventing dust from leaving stockpile.</p> <p>Mobile dust cannon DC50 kept on site for areas that static dust suppression can't reach.</p> <p>Site is screened by a high perimeter wall preventing dispersion by way of a physical barrier</p>
Tipping, loading, storage of waste inside buildings	Atmospheric dispersion	Adjacent farmland, including Langmead and Weston SSSI; Neighbouring industrial estate; Main A372 road; Pedestrians enjoying the countryside	Visual soiling; Respiratory system irritant; Nuisance; Smothering of flora and fauna	<p>Doors of building to be kept shut whilst unloading / loading takes place, thereby preventing dust from becoming airborne.</p> <p>Mobile dust cannon DC50 kept on site for areas that static dust suppression can't reach.</p> <p>Site is screened by a high perimeter wall preventing dispersion by way of a physical barrier.</p>



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- 4.19 In the event that the dust suppression system breaks down, hosepipes will be used instead to damp down the waste and yard areas. If this is not effective, then no further waste will be accepted onto site until dust mitigation is working again.
- 4.20 Should visible off-site dust be released to the surrounding environment as a result of a particular activity, control measures detailed above would then be applied until the dust levels return to normal and the activity will be reviewed in order to prevent re-occurrence.
- 4.21 The likelihood of dust leaving the site outside of operational hours is considered to be negligible as the potential sources of dust are primarily related to operational issues.
- 4.22 The Site will be shut down if conditions prevent normal working methods leading to an unacceptable risk such as risk of pollution from dust emission. Such conditions include critical failure of the dust management measures, extreme weather conditions; or emergency situations such as outbreak of fire.

5 Complaints

- 5.1 Any complaints received at the site will be immediately investigated by the Site Manager and, where appropriate, remedial action taken. The complaint will be reported to the Directors within 24 hours of its receipt. Details will be recorded using the Towens Non-Conformance procedure, which forms part of the Towens Environment Management System and details will also be recorded in the site diary.

NON-CONFORMANCE REPORT (NCR)			
NCR NUMBER:		DATE:	
Please circle relevant system	9001 (quality)	14001 (Environment)	19001 (Health & Safety)
DESCRIPTION OF NON-CONFORMANCE:			
IDENTIFIED BY (NAME):			
REASON FOR NON-CONFORMANCE:			
CORRECTIVE ACTIONS REQUIRED:			
CORRECTIVE ACTIONS:			
Action:	Implemented By:	Date:	
PROCEDURE MANUAL AMENDED (If applicable):			
NAME:	POSITION:	DATE:	
NAME	POSITION:	DATE:	

6 Appendix A

DC50 dust cannon



dust cannons

The DC50 creates a fine mist of water droplets which are then directed forwards by a high flow fan, the water projects up to 50 meters dependent upon local wind conditions.

The DC50 is a self contained unit available as a static unit or trailer mounted system with a added advantage of having a 350 degree rotational range for increased coverage.



application

- demolition
- construction
- coal handling & power generation
- ground remediation
- mining & quarrying
- bulk materials ports & shipping
- recycling & scrap
- steel mill slag handling
- waste transfer
- wood processing

special applications

- watering (golf courses and horticulture/ agriculture)
- chemical spraying (horticulture/agriculture, mosquito areas etc.)

basic model includes

A rear mounted axial high flow fan, high efficiency spray nozzles, central column support to enable 350 degree horizontal rotation, control panel and filter unit.

optional extras

Trailer mount (can be used for flexible application).

DC50 technical specification:

Range (m)	50 meters (still conditions)
Sprayed area (m ²)	7,860
Droplet size (µm)	50-150
Nozzles (pcs)	36
Fan (kW)	6.5
Pump (kW)	5.5
Filter (µm)	200
Minimum input water pressure (bar)	4
Water consumption (l/h)	up to 8,000
Horizontal turning radius (°)	0-350
Vertical elevation radius (°)	0-70
Power supply	3x400 VAC, 50 Hz, 14.5 kVA
Pressure water connection	DN25

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