

**ENVIRONMENTAL MANAGEMENT SYSTEM**

**DUST & EMISSION MANAGEMENT PLAN  
WATFORD**

<b>HSQE</b> Department	<b>HSQE</b> Department	<b>Company</b> Director
<b>AUTHOR</b>	<b>REVIEWER</b>	<b>APPROVER</b>

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**VERSION HISTORY**

<b>VERSION</b>	<b>STATUS</b>	<b>DATE</b>	<b>REVISION DESCRIPTION</b>
V.1	First Issue	08/03/2022	Prepared for planning
V.2	Second Issue	04/03/2024	Reviewed and updated for permit variation application
V.3	Third Issue	05.01.2026	Reviewed and updated for permit variation application
V.4	Fourth Issue	10/03/26	Reveiwed and updated for permit variation application

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## **1. Introduction**

The site comprises an irregular-shaped site covering circa 1.45ha in a mixed industrial/residential area circa 3km to the North of Watford town centre. The site is bounded by residential apartment buildings to the north-Northwest Avenue to the South, a supermarket to the West and a railway line with residential development beyond to the East. The site operates as a waste transfer station under the EA standard rules permit, the vast majority of this is commercial and industrial wastes (skip and other), with some minor elements of C&D waste recycling.

The current waste licence permit held at the Watford Depot, is under the name of PB Donoghue (Construction) Watford Ltd. This was transferred from Kerville Properties Ltd. PB Donoghue Group (PB Donoghue) has been in control of the Watford Depot since 2007. PB Donoghue continued to operate as the transfer station and serve the construction industry in supply of skip hire, ground works and civil engineering.

For ease, the company will be known as PB Donoghue for the remainder of this report rather than its full title as in the Permit and on Companies House register.

Mixed C n D waste material is deposited and processed in the main tipping hall (shed) in the south section of the site, which contains two picking stations with a single processing line (MRF), separating out a range of materials for onward recycling. Design specification of the tipping hall is 2240m<sup>2</sup>. Inert material is deposited and processed within a separate building within the middle of site. The design specification of the inert building is 1140m<sup>2</sup>. In addition, there are other buildings on site. A workshop to the north of the site (design specification 190m<sup>2</sup>) and offices to the west, design specification - porta-cabins. The proposed inert processing shed, is fully enclosed on three sides and the open aperture will have plastic hanging curtains. The proposed workshop building will not house any waste activities and is designed solely for day-to-day maintenance of the P.B. Donoghue own fleet vehicles and also any minor repairs and maintenance to on-site kit.

Watford depot falls under Watford Borough Council within Hertfordshire. The depot was originally railway sidings and became waste management site around 2000 / 2001. Residential areas to the east were developed in the late 70's, early 80's. J Sainsbury's store to the west was built in the 90's, along with residential homes.

The only AQMA in the borough are for NO<sub>2</sub>, the closest of which is circa 500m to the SW of the site.

The purpose of this report is to show that as a company we have developed in its operation over the years, along with the local area around the site and PB Donoghue are continually striving to maintain and improve our operation within our environmental management license / permit, with full consideration to the local community and neighbours.

This Dust and Emission Management Plan ('DEMP') forms part of PB Donoghue's environmental documentation and is controlled within the company quality management system. An electronic version will be held on PB Donoghue's server, and a printed copy will be held on site at Watford for all relevant personnel to access.

Key personnel will be made aware of the DEMP. These will include site TCM, Weighbridge Operator, HSQE department and operational staff, such as, plant operators.

This format follows the EA DEMP v10.

Site permit number: EPR/LB3604XG

The sites hours of operation are:

Monday – Friday 07.00 to 17.30

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Saturday 07.00 to 13.30

The site is closed Sundays and Bank Holidays

# DUST AND EMISSION MANAGEMENT PLAN WATFORD PLAN

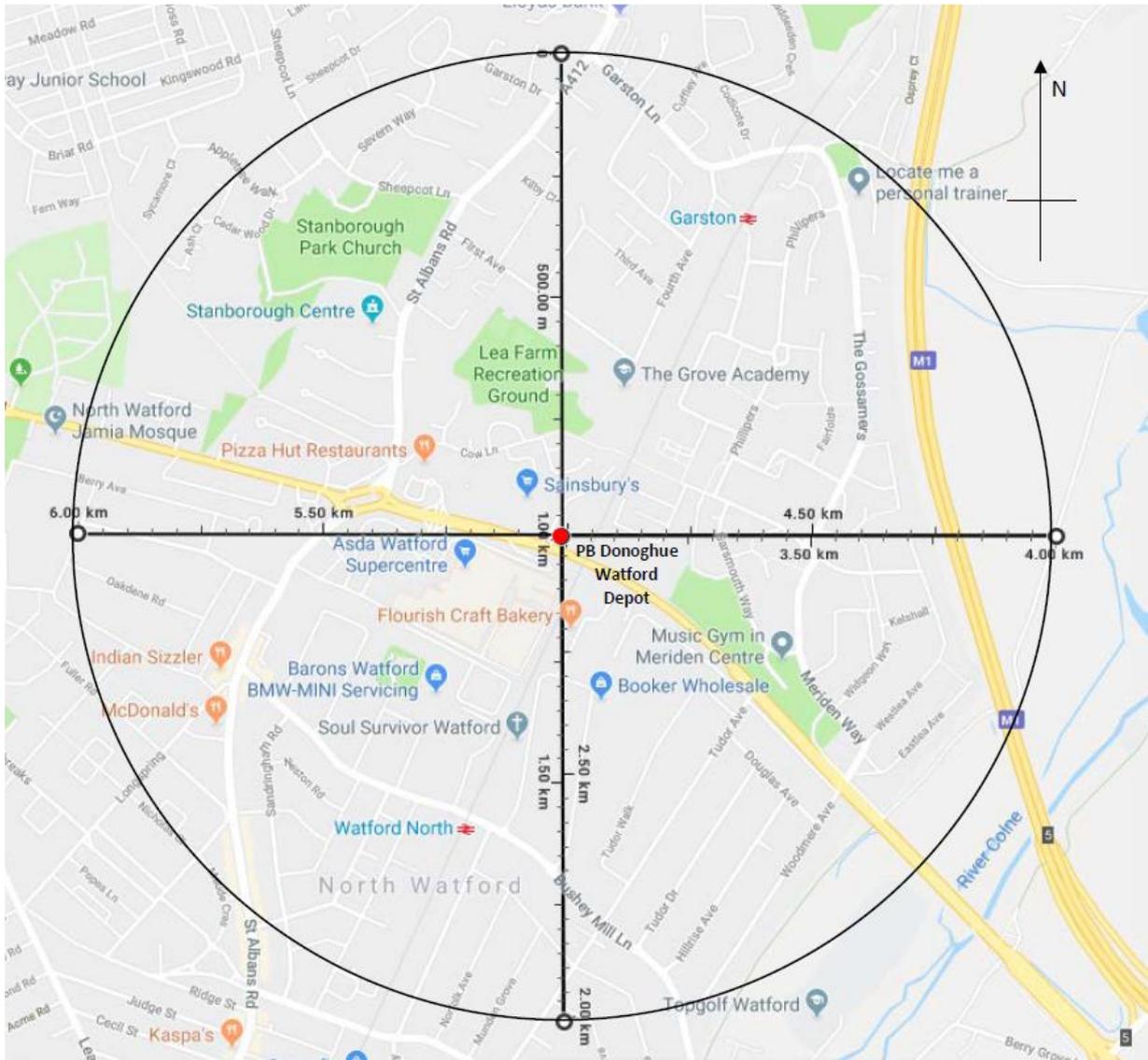
## 1.1 Sensitive Receptors

PB Donoghue Watford Depot is located along Colne Way off the A41 WD25. The area is built up of predominately large Hypermarkets and car parks. There is residential housing and local businesses located to the back of the Depot which are listed in the sensitive locations area.

The map shows a 1km circumference from Watford depot. The maps are split further into four quarters, which show nearby receptors. The following table 1.1, breaks down and name the main receptors within 1km circumference.

**Figure 1**

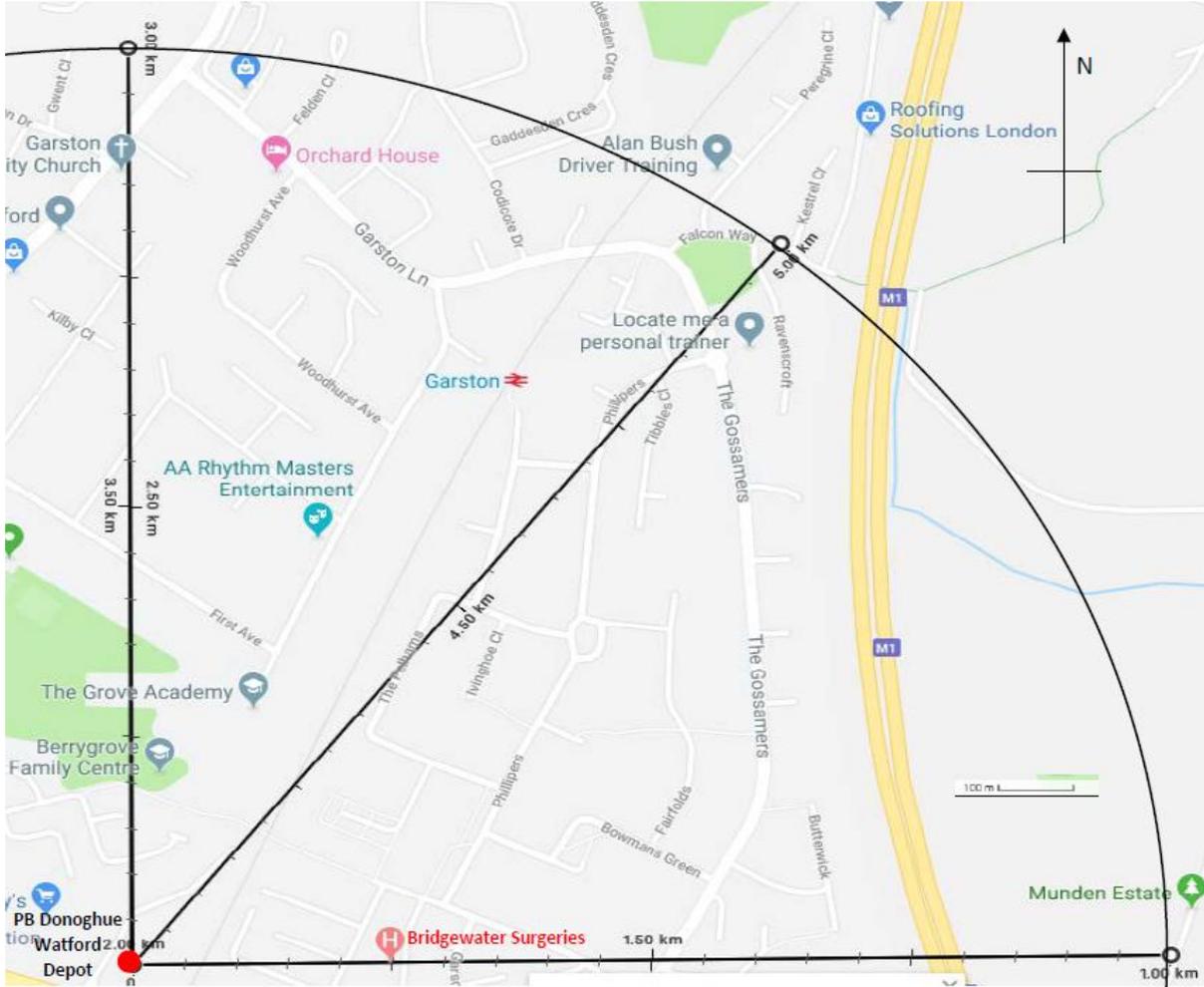
**360 Map**



Note: The nearest hospital is Watford General Hospital – approximately 3.3 miles away. The nearest school is The Grove Academy, Fourth Avenue, 0.4 miles to the north of Watford depot.

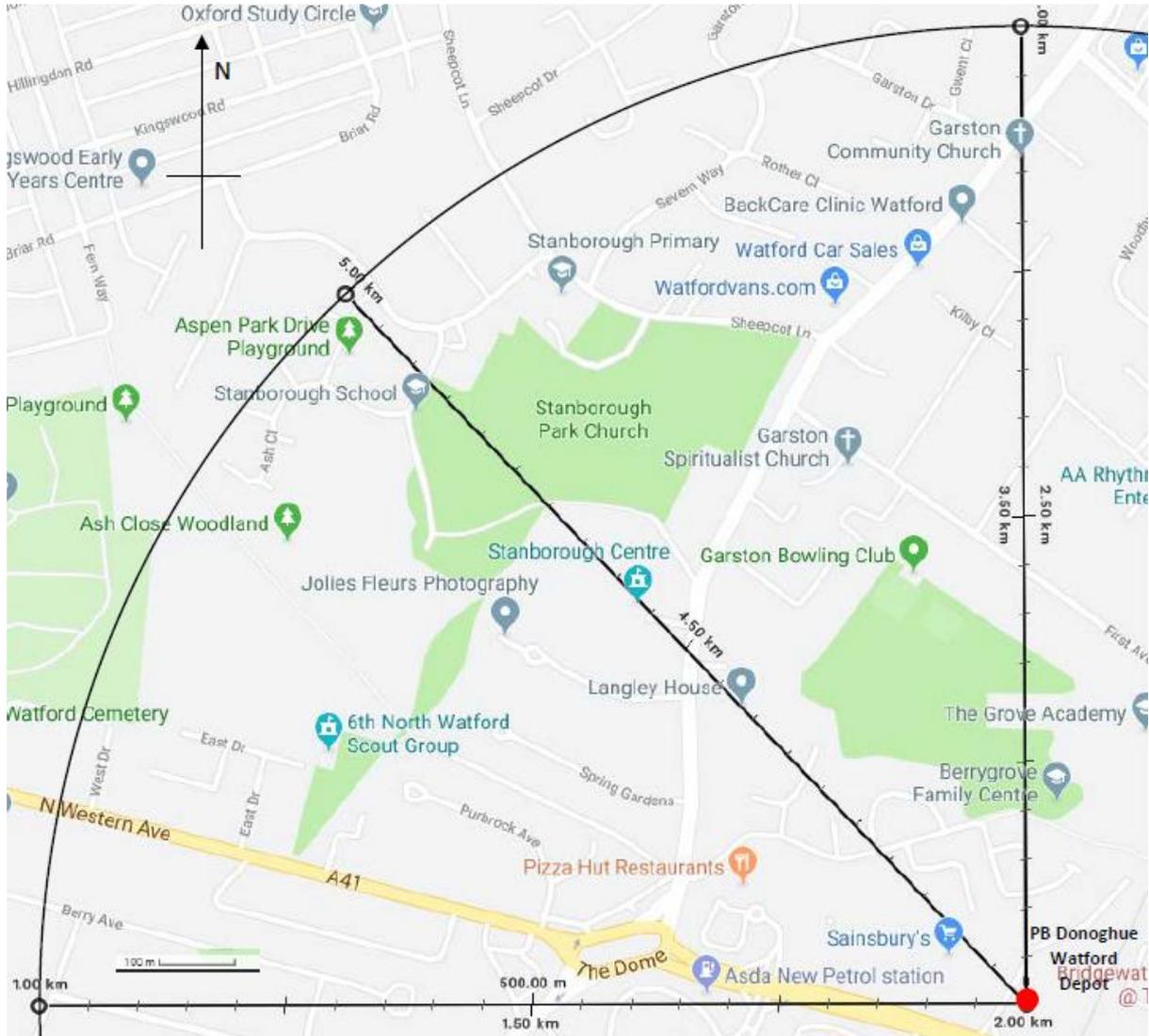
# DUST AND EMISSION MANAGEMENT PLAN WATFORD PLAN

## North to East Quarter



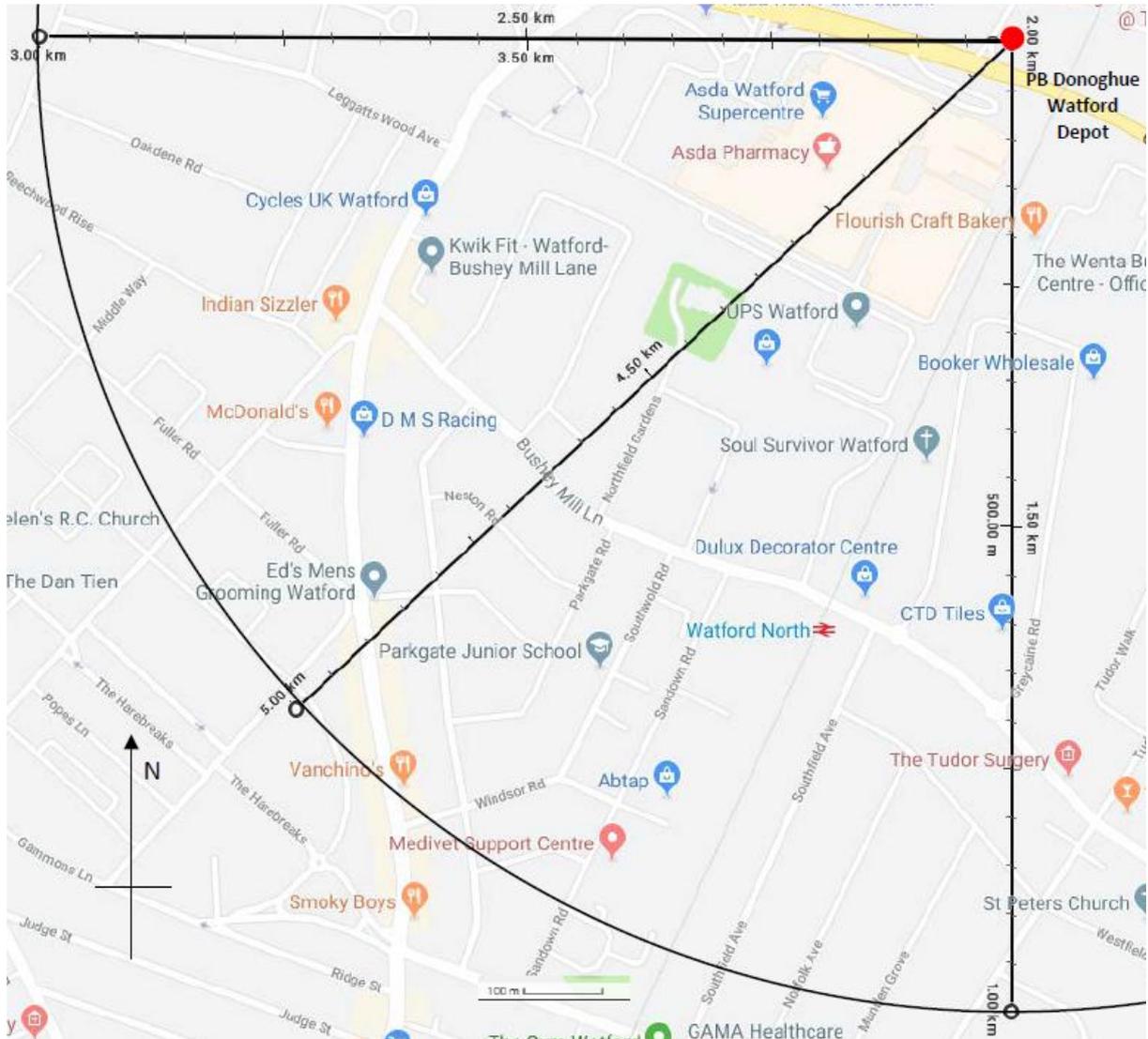
# DUST AND EMISSION MANAGEMENT PLAN WATFORD PLAN

## North to West Quarter



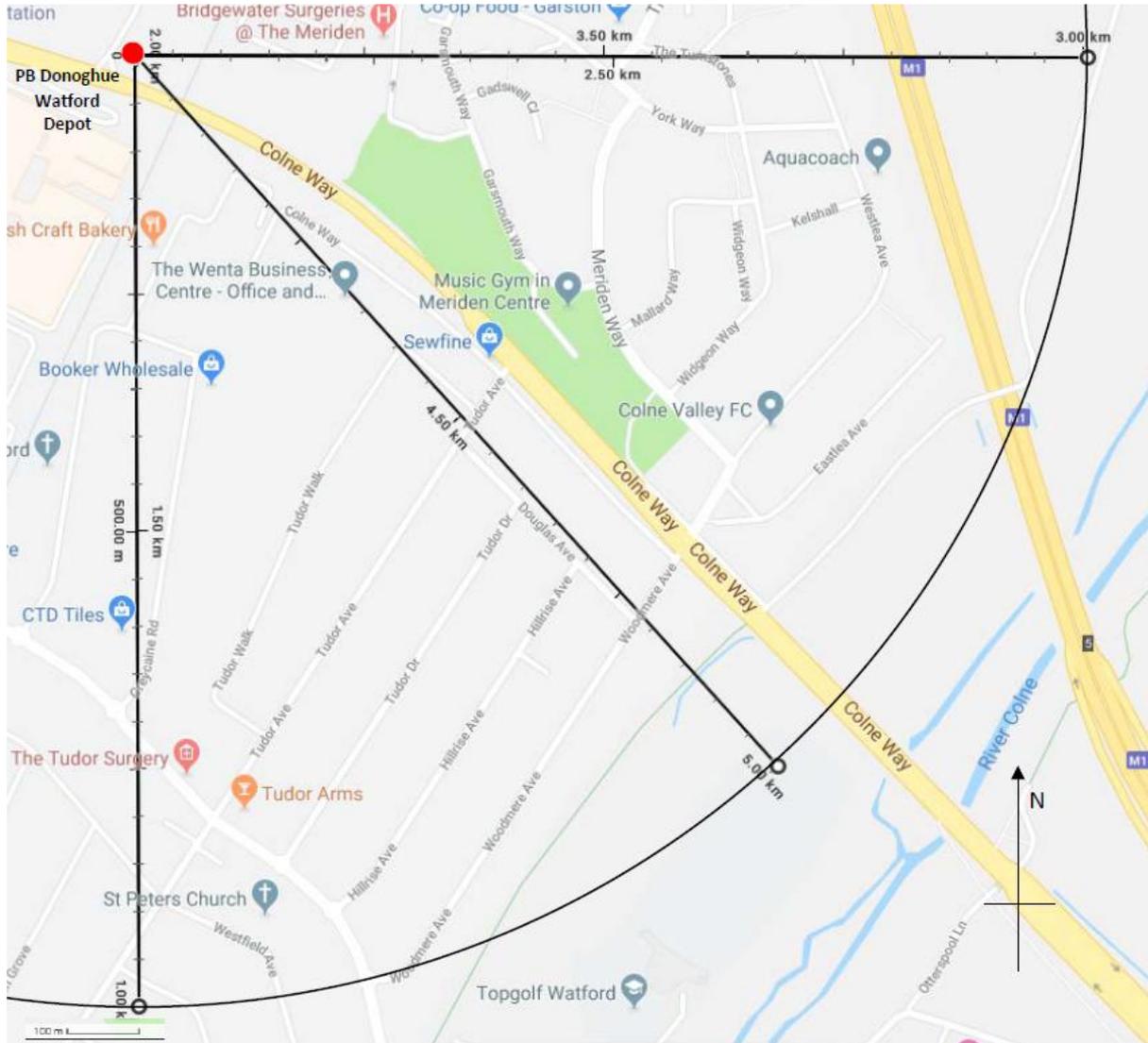
# DUST AND EMISSION MANAGEMENT PLAN WATFORD PLAN

## South to West Quarter



# DUST AND EMISSION MANAGEMENT PLAN WATFORD PLAN

## South to East Quarter



DUST AND EMISSION MANAGEMENT PLAN  
WATFORD PLAN

Figure 2

Wind Rose relating to Watford Area



**DUST AND EMISSION MANAGEMENT PLAN  
WATFORD PLAN**

**Table 1.1 - Sensitive Receptors Table**

Location / Name	Distance (Km / m)	Direction	Location / Name	Distance (Km / m)	Direction
<b>Businesses &amp; Companies</b>					
J Sainsburys Supermarket	50m	NE	Railway Line	10m	E
The Grove Academy	200m	SSE	Bridge Water Surgeries	150m	SE
Berry Grove Family Centre	150m	N	Sally Beauty	965m	N
Orchard House	887m	N	AA Rhythm Masters	509m	NNE
Acw Personal Cars	210m	EEN	Stained-Glass Restoration	555m	N
Garston Train Station	720m	NE	Berrygrove Family Centre	90-190m	N
Appearance Male Image	945m	N			
Meriden Shops including Co-op, fish bar, post office, café and pub				490m	W
Bridgewater Surgeries	200m	E	Arriva Bus Company	305m	E
Topgolf Watford	1km	SE	Evolving Landscapes & Construction	690m	SE
<b>Colne Way Industrial Estate</b> including A&A Self-Storage, CTD Tiles, PLH Medical, Neatsmith Head Office, Dulux Centre, Dolphina Gymnastics Centre, M.K. Ginder & Sons, Décor Tiles & Floors, GAP Plant & Tools Hire, Trailparts, Herts Traffic Mgt, Soul Survivor Watford, Morjarias Toys & Gifts, Longforte, Procure Group, Shani Ltd, Booker Wholesale, Watford Gracie Jiu Jitsu, LVC Cleaning, Flourish Craft bakery, Highend Accessories, Wenta Business centre, Urban Rock, Furniture Fusion, Anarchy Ltd, Kurz Leonhard (UK), Haz Afro Cosmetics, HMD Group, Watling Street Beer, Herts Traffic Management, Southern Windows-Factory				124-700m	S
Tudor Surgery	775m	S	Fujian White Crane Kung Fu	970m	SSE
Stanborough Centre	570m	NW	Asda Watford Supercentre	200m	SW
Reach Printing Services (Watford)	170m	SW	Watford BMW	430m	SW
Watford North Main Railway	660m	SSW	Wholesale Trading Supplies	705m	SSW
Colouricious Holidays	686m	SSW	Macks Toiletries	748m	SSW
Novelties Direct	748m	SSW	Pacific Steel	780m	SSW

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Location / Name	Distance (Km / m)	Direction	Location / Name	Distance (Km / m)	Direction
<b>Businesses &amp; Companies</b>					
Windsor Gym	880m	SSW	Medivet Support Centre	950m	SSW
<b>St Albans Road Shops/businesses</b> including Pizza GoGo, North Watford Supermarket, Gill Catering Halal Meat, Watford Café, Twilight Zone Engineering, Franco Peri Peri, GTV, Tudorken Pharmacy, Vape Shop Watford, Ed's Mens Grooming Watford, Salvation Army (Watford), Timmy's Auto-aid, DMS Racing, ML Autos, Vauxhall Watford, McDonald's Watford Hertfordshire Arms				800m - 1km	SSW
<b>St Albans Road Shops/businesses</b> including Viking Fish & Chips, Indian Sizzler, William Hill, Amber Cars, Dome Bar, Wok Express, Five Star Nails, Papa John's Pizza, Infinity Motorcycles, Cycles UK Watford, Kwik Fit, Amber Cars, North Watford Launderette, Impulse Trading				650m - 800m	SW

Location / Name	Distance (Km / m)	Direction	Location / Name	Distance (Km / m)	Direction
<b>Public Area &amp; Public Places</b>					
Lea Farm Recreation Ground	300m	NNW	Meriden Centre	350m	SE
Meriden Centre	520m	SE	Grass Area by Colne Way (J5)	960m	SE
St Peters Church	945m	S	Tudor Arms - Pub	820m	S
Garston Bowling Club	460m	NNW	Garston Spiritualist Church	580m	NNW
Peace Garden	595m	NW	7 <sup>th</sup> Day Adventist Church	610m	MW
Stanborough Park Church	700m	NW	East Drive Recreation Ground	720m	WWN
6 <sup>th</sup> North Watford Scout Group	765m	WWN	The Lemarie Centre	515m	W
North Watford Library	530m	W	Southwold Road Playground	740m	SSW
Light of the Word Gospel	665m	SW			

Location / Name	Distance (Km / m)	Direction	Location / Name	Distance (Km / m)	Direction
<b>Schools</b>					
The Grove Academy	60-200m	N	Stanborough School	850m	NW
Parkgate Infants and Nursery School	420m	SW	Little Raccoons Day Nursery	937m	SW
Parkgate Junior School	810m	SSW			

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Location / Name	Distance (Km / m)	Direction	Location / Name	Distance (Km / m)	Direction
<b>Local Roads in North East Quarter</b>					
Garston Lane	800m	NE QTR	Codicote Drive	975m	NE QTR
Bovingdon Crescent	990m	NE QTR	Felden Close	900m	NE QTR
Gaddesden Crescent	940m	NE QTR	Cuffley Avenue	850m	NE QTR
Bramfield	878m	NE QTR	Peregrine Close	962m	NE QTR
Falcon Way	920m	NE QTR	Ravenscroft	945m	NE QTR
St Albans Road	903m	NE QTR	Fourth Avenue	780m	NE QTR
Woodhurst Avenue	680m	NE QTR	Telford Close	670m	NE QTR
Kestral Close	1km	NE QTR	Ospray Close	1km	NE QTR
Amwell Close	840m	NE QTR	Tibbles Close	740m	NE QTR
Phillipers	500m	NE QTR	Whitwell Road	500m	NE QTR
Ivinghoe Close	430m	NE QTR	The Pelhams	334m	NE QTR
Aldbury Close	254m	NE QTR	Fairfolds	505m	NE QTR
Bowmans	359m	NE QTR	Butterwick	580m	NE QTR
York Way	170m	NE QTR	Garsmouth Way	300m	NE QTR
The Turnstone	510m	NE QTR	The Gossamers	500m	NE QTR

Location / Name	Distance (Km / m)	Direction	Location / Name	Distance (Km / m)	Direction
<b>Local Roads in South East Quarter</b>					
Harvest End	60m	SE QTR	The Meadows	80m	SE QTR
Garsmouth Way	300m	SE QTR	The Gossamers	500m	SE QTR
Westlea Avenue	680m	SE QTR	The Turnstone	510m	SE QTR
Meriden Way	470m	SE QTR	Widgeon Way	610m	SE QTR
Mallard Way	555m	SE QTR	Kelshall	660m	SE QTR
Colne Way A41	75m	SE QTR	Eastlea Avenue	825m	SE QTR
M1 Motorway	760m	SE QTR	Tudor Avenue	499m	SE QTR
Tudor Walk	411m	SE QTR	Tudor Drive	611m	SE QTR
Knutsford Avenue	840m	SE QTR	Bushey Mill Lane	1km	SE QTR
Hibbert Avenue	1km	SE QTR	Westfield Avenue	915m	SE QTR
Douglas Avenue	530m	SE QTR	Hillrise Avenue	334m	SE QTR
Woodmere Avenue	766m	SE QTR	Greycaine Road	325m	SE QTR
Garnett Close	166m	SE QTR			

Location / Name	Distance (Km / m)	Direction	Location / Name	Distance (Km / m)	Direction
<b>Local Roads in North West Quarter</b>					
St Albans Road	400m	NW QTR	Cezanne Road	100m	NW QTR
First Avenue	400m	NW QTR	Second Avenue	485m	NW QTR
Ley Farm Close	174m	NW QTR	Heron'slea	205m	NW QTR
Cow Lane	198m	NW QTR	Edward Amey Close	330m	NW QTR
Biddenham Turn	560m	NW QTR	Kilby Close	683m	NW QTR
Garston Drive	880m	NW QTR	Gwent Close	907m	NW QTR
Wheatley Drive	964m	NW QTR	Garston Crescent	986m	NW QTR
The Pippins	870m	NW QTR	Rother Close	835m	NW QTR
Medway Close	915m	NW QTR	Severn Way	827m	NW QTR
Sheepcot Lane	715m	NW QTR	Avon Close	820m	NW QTR

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Location / Name	Distance (Km / m)	Direction	Location / Name	Distance (Km / m)	Direction
<b>Local Roads in North West Quarter</b>					
Rochester Drive	740m	NW QTR	Appletree Walk	905m	NW QTR
Ellwood Gardens	911m	NW QTR	Cedar Wood Drive	877m	NW QTR
Aspen Park Drive	960m	NW QTR	Ash Close	955m	NW QTR
Hazel Grove	980m	NW QTR	Holland Gardens	475m	NW QTR
Spring Gardens	420m	NW QTR	Purbrock Avenue	505m	NW QTR
Pomeroy Crescent	630m	NW QTR	Berry Avenue	734m	NW QTR
Ash Tree Road	732m	NW QTR	Cherry Tree Road	976m	NW QTR
East Drive	829m	NW QTR	West Drive	987m	NW QTR
Taylor Close	718m	NW QTR			

Location / Name	Distance (Km / m)	Direction	Location / Name	Distance (Km / m)	Direction
<b>Local Roads in South West Quarter</b>					
Colne Way	200m	SW QTR	Ash Tree Road	740m	SW QTR
St Albans Road	470m	SW QTR	Berry Avenue	643m	SW QTR
Leggatts Wood Ave	620m	SW QTR	Hazel Tree Road	706m	SW QTR
Oakdene Road	785m	SW QTR	Odhams Trading Estate	330m	SW QTR
Bushey Mill Crescent	510m	SW QTR	Bushey Mill Lane	680m	SW QTR
Northfield Gardens	524m	SW QTR	Greycaine Road	310m	SW QTR
Southfield Avenue	645m	SW QTR	Westfield Avenue	753m	SW QTR
Norfolk Avenue	766m	SW QTR	Munden Grove	836m	SW QTR
Sandown Road	650m	SW QTR	Southwold Road	665m	SW QTR
Windsor Road	920m	SW QTR	Neston Road	750m	SW QTR
Parkgate Road	680m	SW QTR	Sandringham Road	700m	SW QTR
Buckingham Road	820m	SW QTR	St George's Road	935m	SW QTR
Fuller Road	925m	SW QTR	Longspring	772m	SW QTR
Nicholas Close	994m	SW QTR	Middle Way	944m	SW QTR
Beechwood Rise	810m	SW QTR			

Direct receptors are considered the most sensitive due to either their direct proximity to Watford depot or their sensitivity to react to dust or particulates.

The prevailing wind direction is predominately from the southwest / west which denotes the direct receptors that sit to the south / west and potential north of Watford depot may not be classed as direct receptors at all times.

Note: There are no rivers, streams, estuaries, lakes or canals within 1km of Watford depot that could be polluted. The nearest water course is the river Colne, southwest, of Watford depot, approximately 1.1km

**DUST AND EMISSION MANAGEMENT PLAN  
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**Table 1.2 Other sources of dust and/or other emissions**

Name/Company	Address / Location	Type of business	Distance (Km / m)	Direction
J Sainsbury's Supermarket	Cow Lane (off Colne Way)	Large Supermarket & Lorry Parking	50m	W
ASDA	A41 Colne Way	Hypermarket	200m	SE
Reach Printing Services	Colne Way	Industrial Printing Services	200m	SE
A41 Major Trunk Road	A41 Colne Way	Major Trunk Road	130m	S
M1 Motorway	Motorway	Motorway	750m	E / SE

**DUST AND EMISSION MANAGEMENT PLAN  
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## 2. Operations at Watford Depot

### 2.1 Waste Deliveries to Watford Depot

Waste material is delivered to site by road in Heavy Good Vehicles (HGVs). PB Donoghue has a variety of different vehicles: Skip Lorries; Roll On / Roll Off (ROROs); Tippers; Grabs; Articulated and two Cage Lorries. Watford depot primarily receive waste material from PBD vehicles, although, on occasions external vehicles unload when authorised.

Skip Lorries carry several different sized skips that range between 3yrds – 16yrds. Larger skips can be open or enclosed skips.

ROROs carry two different size containers / bins – 20yrds and 40yrds.

Tippers, Grabs and Articulated vehicles are generally used to carry bulk material. Generally, skips and containers will be used for mixed waste material; tippers and grabs will generally carry aggregates, muck, concrete, fines, brick, etc.

Vehicles when travelling on public highway and coming on or leaving site will always be covered (sheeted) to ensure material is safe within the container or body; this will reduce dust and control material within the vehicle. This is a requirement of external vehicles leaving Watford depot. All drivers have received information and instructions regarding the security of their loads.

All vehicles are weighed in when coming on to site and where required weighed off site. Records are kept on site via the company software system, Weighsoft. The software system holds all information regarding the delivery and collection, also any special instructions in relation to the job; such as type of material, dusty loads, etc.

Waste material that is received that will produce fugitive dust when unloaded, will be controlled within the compound. This will include dust suppression cannons and mist curtain.

All waste is held within buildings however the term “bays or compounds” will also be used throughout this report.

Table 2.1 on page 23, shows the different waste streams for Watford depot.

#### Supporting photos

	
<p>HGV entering Watford depot and stopping on weighbridge with load sheeted to control potential fugitive dust from loaded vehicles</p>	<p>HGV exiting Watford depot with load sheeted to control potential fugitive dust from loaded vehicles</p>

**DUST AND EMISSION MANAGEMENT PLAN  
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Photo denotes dust cannon in operation in front of main mixed waste shed to control fugitive dust when skip lorries unload within structure

## 2.2 Overview of Waste Processing, Dust and other Emission Controls

Site layout plans, figure 2.1, are shown below which identifies locations of material compounds.

The Watford depot waste process and operation are outlined within the site's Environmental Management System (EMS and also known as Working Plan) which is a live document. This has also been provided to the EA.

Waste material is brought into Watford depot, weighed in, and is unloaded within the material respective compounds. Mixed waste is unloaded within the main shed as per site's Environmental Permit and goes through the separation process. The Depot Manager, supported by weighbridge controller and 360 plant operators, will control HGV drivers where they unload the waste. HGV lorries are a constant flow of lorries returning from a collection to unload their waste. The Depot controls the number of skip lorries unloading at any one given time. Only two vehicles are authorised to unload at a time. The HGV driver will speak with the 360-plant operator, weighbridge controller or depot manager if they have any concerns regarding where to unload.

Heavy plant machinery is used to move material within the main shed and across the yard area. Individual material is then transferred out to their respective recyclers, e.g. metal, wood, plasterboard etc

As per site layout, figure 2.1, material is held in its respective compounds before being transferred out. Compounds are built with both steel frame and railway sleepers or concrete 'A' frame walls. Heights of compounds differ across the site and range between 5m to 7m. The heights of the walls do not indicate the maximum height of the material; however, material is stored up to 4 metres, as per FPP guidance. No material in stockpile compounds will be more than 0.5M over the level of the top of the bays to avoid wind whipping of the material.

**DUST AND EMISSION MANAGEMENT PLAN  
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As stated, mixed waste is held and processed within the main waste shed. Muck, soil and wood is held in the yard within compounds. Control of waste material is as per environment permit. See figure 2.1 for site layout.

Watford depot site surface is constructed of impermeable concrete surface, this denotes that dust can be created from the surface; however, during dry weather surface is constantly kept wet either from water hose, sweeper or sprinkler system.

- Suppressant systems are used throughout Watford depot. Figure 2.1 shows the locations of the suppressant systems, that include eyelets over main shed; dust cannon over main waste; rain guns along entry and exit to site; and within MRF station along conveyor.
- It is proposed to use similar water based suppressant systems in the new Inert processing shed (e.g.misting and direct damping with water cannon)
- Water dust cannon is used in the area in the front of the main waste shed. There is a portable dust cannon / fan, that is located where required to the operation.

Where required to reduce fugitive dust particulates, certain loading activities are controlled by operatives using pressure washers to soak over the area of the loading. In addition, the drop height of the waste being loaded is controlled by the plant driver. The drop height is the height between the waste leaving the bucket or grapple and landing in the container it is being loaded in to. The drop height naturally reduces as the load fills up; however, the plant driver will always ensure their bucket or grapple is as close as possible to the container or vehicle body to ensure minimal drop.

The operation of sprinkler and suppressant systems are controlled by Depot Manager, weighbridge controller and plant operators on specific machines. As with all plant, company defect reporting process in place. Defects are reported to Workshop at Cricklewood. IRTS sub-contractors will be contacted regarding any defects or general maintenance on suppression systems.

The main site water suppression system is fed by 1 large water tank, that houses approximately 2000ltrs, that is filled via mains water. The water tank is constantly filled, as there is a ballcock system within, which operates when water has emptied. Figure 2.1 indicates the location of the water tank and the systems that they feed. The Dehaco dust cannon that is the suppression system for the main waste shed is fed from its own water tank that is fed from mains water. On the rare occasions that water tanks can empty; this is monitored by the Depot Manager, and it can take 20 minutes to 2 hours to refill.

Water cannons are part of the preventative planned maintenance system and serviced and maintained internally by Workshop department and/or by external company.

Other methods used to control and prevent dust and particulates are explained in section 3.2; however, specific infrastructures in place are high walls; netting and tarpaulin sheeting around the main waste shed and peripheral fencing.

The following photos show the site processes and infrastructures at Watford site to control and reduce particulate emissions and dust.

**Front Entrance**



**DUST AND EMISSION MANAGEMENT PLAN  
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Front entrance to PBD is via service road. Road acts as a tyre dry and cleaning process before exiting on to A41

Photo shows entrance to PBD is soaked with water to control dust levels

**Front Entrance**



All vehicles are sheeted at all times when entering site from public roads and sheeted when leaving site to exit on to public roads

**Weighbridge Area**



Rain guns positioned along the fencing next to weighbridge that produce droplets to dampen ground surface. There are three rain guns along the fence, which disperses water droplets to dampen the surface as per the figure 2.1. Photo demonstrates sprinkler in operation

**Yard Area and Main Shed**



Photo depicts netting next to the main shed that

Peripheral fencing on the east side has netting

**DUST AND EMISSION MANAGEMENT PLAN  
WATFORD PLAN**

is designed to capture dust and control dust being released from the southwest/west. Photo shows that netting is replaced when soiled (in progress)

attached to control dust exiting the site

**Yard Area and Main Shed**



Photo depicts dust cannon in operation, spraying water mist over the main waste pile



Photo shows rain gun at top of main tipping hall (shed)



Photo depicts spray mist from under the overhang of the main tipping hall (shed)



Photo shows 70 plate sweeper



Photo depicts pressure washer using



Photo shows hose pipe used as a sprinkler to damp

**DUST AND EMISSION MANAGEMENT PLAN  
WATFORD PLAN**

spray mist to control loading

waste material within main tipping hall (shed)

**DUST AND EMISSION MANAGEMENT PLAN  
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**Yard Area and Main Shed**

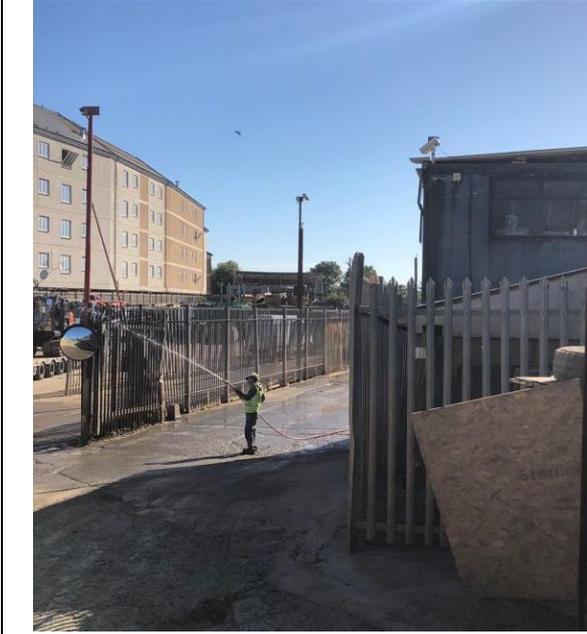
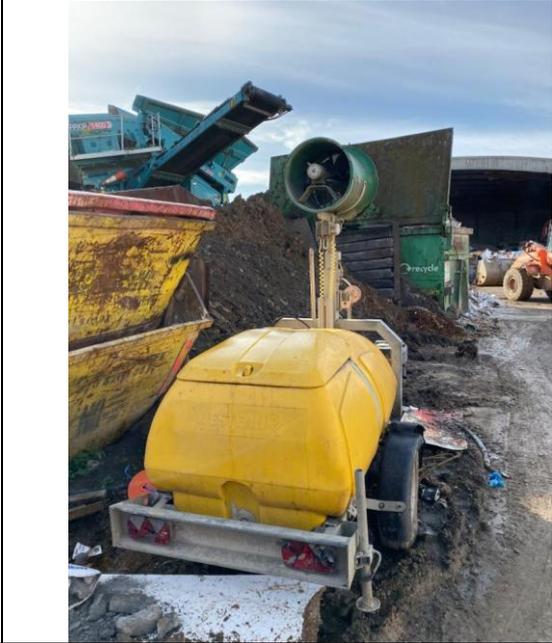


Photo depicts yard operative will use water hose to dampen surface during warmer weather



Mobile dust suppression fan is used to control potential fugitive dust when required

**Trommel System and Picking Line**



Photo shows sprinkler system that sprays mist over the waste material, to reduce dust within the separation process



Photo shows dust sheeting at rear of trommel system. The trommel is within the main tipping hall (shed), however, this sheeting helps contain the dust within the trommel area

**DUST AND EMISSION MANAGEMENT PLAN  
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**Rear off main waste shed**



Photos show large earth bank behind main tipping hall (shed). Direction of rear of shed is on a southwest alignment, which means the bank acts as an abatement measure to disrupt wind flow

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**2.3 Mobile Plant & Equipment**

<b>Description</b>	<b>Make</b>	<b>Model</b>	<b>Emission Rating</b>
360 Excavator	JCB		Tier 4/Stage IV
360 Excavator	JCB		Tier 4/Stage IV
Trommel	Kiverco		Tier 4/Stage IIIB
Shredder	Lindner Polaris	2800	Tier 4/Stage IV
Terex Crusher	Terex		Tier 4/Stage IV
Dust Cannon	Dehaco		Tier 4/Stage IV
Screener Warrior	Power Screen		Tier 3/Stage IIIB
360 Excavator	Doosan		Tier 4/Stage IV
Mini 360 Excavator	Doosan		Tier 4/Stage IV
Shovel	Doosan	350	Tier 4/Stage IV
360 Excavator	CAT 311		Tier 3/Stage IIIB

The majority of PB Donoghue plant is owned. In the event of a break down or scheduled maintenance, plant will be hired-in (if required) for the required duration.

Pre-use checks and defect sheets are completed daily and recorded. This is held by our in-house workshop department. Maintenance schedules are completed as per manufacturers guidelines.

Replacement is based on latest models, pricing and deals from current market.

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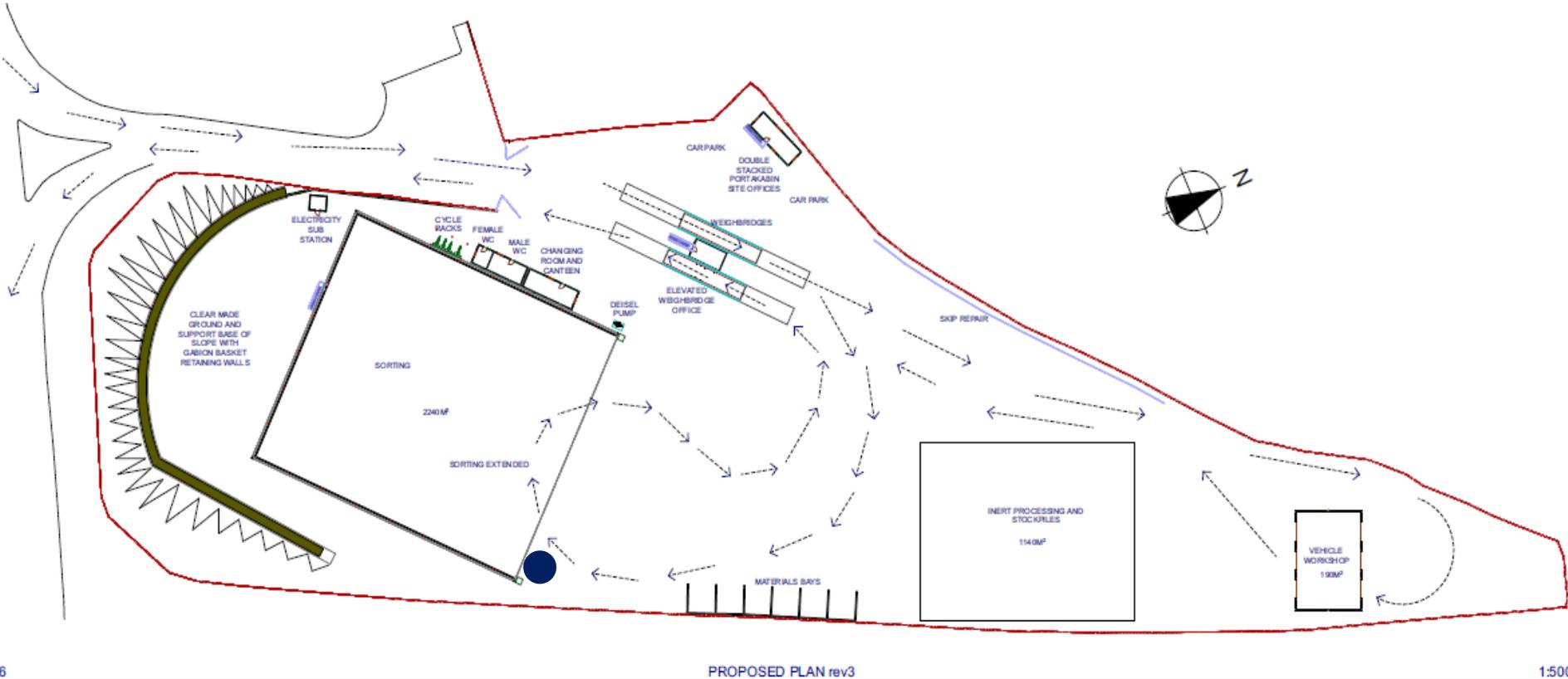
**Table 2.1 Typical waste types brought to Watford Site**

European Waste Code (EWC)	Product Description	Tonnes/week based upon 200,000	Destination within facility					Process
			Screening	Shredding	Main	Storage	Storage	
			Area	Area	Building	Bay 1	Bay 2	
17 09 04	Mixed Construction & Demolition Waste	1038	Yes		Yes			Separation via trommel & picking station
17 02 01	Wood	5.9		Yes				Transferred out to wood recyclers
17 08 02	Plasterboard	15				Yes		Transferred out to gypsum recyclers
17 05 04	Soil & Stones	2011				Yes		Transferred out to inert landfill
17 01 01	Concrete	92				Yes		Transferred out for crushing
17 04 07	Mixed Metals	0.13				Yes		Transferred out to metal recyclers
20 02 01	Biodegradable	4				Yes		Transferred out to recyclers
17 01 07	Mixed Concrete / Brick / Ceramics	23				Yes		Transferred out to be reused
20 01 01	Cardboard / Paper	0.03				Yes		Transferred out to recyclers
<b>Total</b>		<b>3189.06</b>						

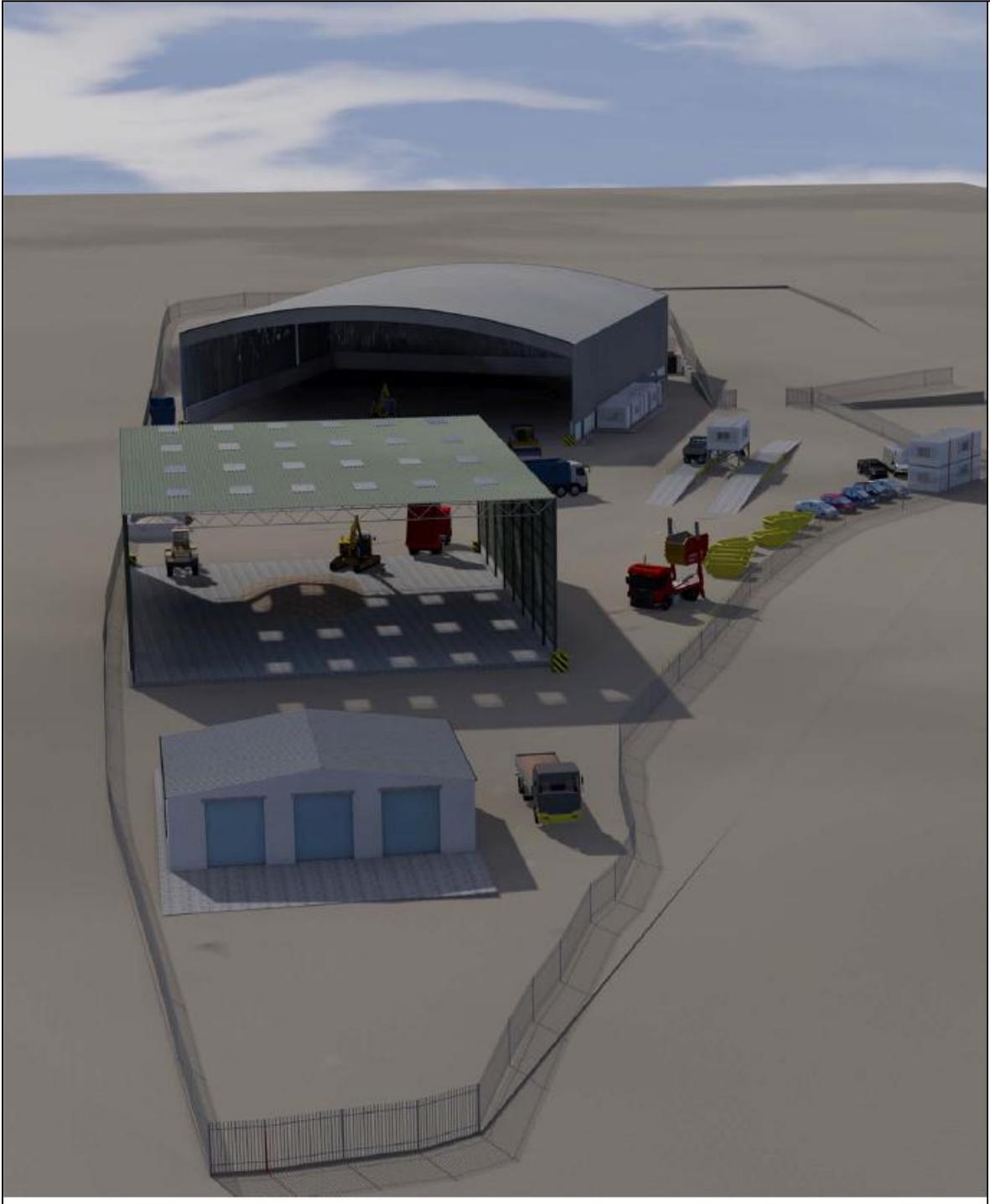
**Note: From the mixed C & D waste, other wastes will be separated and transferred to their storage bay. These include the EWC codes indicated above; however, we do not allow the receipt of plasterboard within our mixed C & D waste.**

# DUST AND EMISSION MANAGEMENT PLAN WATFORD PLAN

**Figure 2.1: Site Layout Plan and Location of Dust Suppression System**



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## **Site Layout Plan and Location of Dust Suppression System**

### **Breakdown of site plan**

The site layout plan denotes the locations of buildings, waste material, activities and suppression systems. Note: photos in section 2.2 (page 16) support the following details.

#### Buildings, waste materials and abatement measures

The plan (figure 2.1) shows all buildings on site including office buildings and waste buildings.

The main tipping hall is a metal steel frame with corrugated sheeting on three sides and a roof, with concrete lower walls. The roof is low convex shape in design, with a maximum peak at 14.m. The building design abatement measure is supported with dust cannon covering the shed front, rain gun and mist curtain at the front.

Rain guns are positioned along the weighbridge area to ensure the weighbridge area is dampened down during dry and dusty weather. This is identified in figure 2.1.

Rain guns produce droplets that disperse in the air that will primarily dampen the ground surface; however, will also control dust in the air.

Sprinkler heads (eyelets) are designed to create a mist effect, e.g. a mist curtain. These are smaller water particles that hang in the air longer, soaking the fugitive dust in the air as the mist falls to the ground.

As indicated previously, wind direction is predominately from southwest. To the south and southwest of the tipping hall, there is a large bank of earth that will disrupt wind air flow from the south/southwest. This will act as the main abatement measure, to reduce dust from the front of the tipping hall.

In addition to the large bank behind the tipping hall, the tipping hall has been designed and positioned so that front (tipping face) is opened in the direction of northeast. This means that activities completed within the tipping hall and in front, is naturally protected from the general wind direction from the southwest.

Where the wind direction may change and come from the west or northwest, additional netting has been installed on the north corner of the tipping hall, to disrupt wind air flow, blowing across the tipping face.

There is high peripheral netting on the northwest side of the site that acts as the first abatement measure for wind flow exiting the site. This means that the pathway is disrupted before the receptors.

Stockpiles and waste material are controlled within their own areas by their own abatement measures and tonnage is controlled within the company environmental permit.

Within the tipping hall, the trommel and conveyor line lead to the picking stations. At the point the waste material enters the picking station, there is a water sprinkler that soaks the waste and a conveyor to reduce dust entering the picking station. This controls potential dust dispersing from waste travelling and vibrating on the line.

The inert shed, by design, is fully enclosed with walls on three sides and plastic see through curtaining on the open aperture. Whilst its design has been primarily to secure noise abatement, it will also serve to help contain dust emissions. Like the main processing shed it will utilise fixed sprinkler heads (eyelets) The aperture of the shed will comprise sectioned plastic curtains ensuring that wind puterbation is also kept to a minimum. Damping of feed stoickpiles and of the processing lines will occur also.

As per permit variation EPR/CP3293LZ/V009, duly made on 12/01/2010 and notice issued 12/04/2010, conditions were deleted, 'Waste shall only be stored within the confines of the building.'

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From table 1.1. specified waste management operations, limits on specified waste management operations.

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### **3. Dust and Particulate (PM<sub>10</sub>) Management**

#### **3.1 Responsibility for Implementation of the DMP**

PB Donoghue Watford Depot Manager is responsible for company DEMP. The Depot Manager is Watford Depot Technical Competent Manager (TCM) and is supported by Company Health and Safety, Quality, Environment (HSQE) Department (Deputy to TCM). The HSQE department consists of Group HSQE Manager (CMIOSH) and H&S Adviser .

The TCM and company managers have been working within the waste industry for number of years. The DEMP will be reviewed on a regular basis (generally annually) by the TCM or Group HSQE manager or for any other reason if requires, e.g. following a significant incident or under advice from the EA. The review will consider any further training and communication.

Requirements of the DEMP will be communicated to relevant staff, e.g. Depot Manager, yard personnel, where appropriate.

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

PB Donoghue operates a waste transfer site, which means that we deal with waste material. Waste material comes on to site, is unloaded, separated where applicable, and is then transferred out.

Below is an overview list which details which areas or processes have the potential to create dust and particulates and in addition, potential mud and debris. Table 3.1 indicates the source-pathway-receptor model and table 3.2 indicates the control measures in place to disrupt the route from pathway to receptor. This has also been explained in previous sections.

##### Overview list of operations

- HGVs leaving the site with mud on wheels with the potential to track mud on roads.
- Vehicles and plant manoeuvring around site elevating dust from dry ground surface.
- Waste material being tipped within their respective compounds, inert shed or tipping hall that has the potential to give off dust.
- Use of plant machines; shovels, excavators and sorting or controlling waste.
- Static plant sorting / waste treatment machines – trommel screeners, topsoil screener, Polaris shredder.
- Picking Stations – sorted waste dropping from conveyors or by hand into the waste compounds below.
- Conveyor belts in motion.
- Material stored in compounds that could be exposed to windy weather potentially causing dust and particulates.
- Site surfaces – ground surface maintained and kept clear.
- Loading waste materials into back of vehicles.
- Particulate emissions from the exhaust of vehicles/plant/machinery on site.
- Generators, plant and other non-road going mobile machinery.

Table 3.1 shows the source-pathway-receptors for the Watford depot and the interruption process to break the pathway to receptor.

Table 3.2 details the interruption process and control methods in place to ensure that release of dust / particulates (PM<sub>10</sub>) into the air or from contact with ground surface is minimised or reduced to the lowest level reasonably practicable.

It is unlikely that control methods will fail; however, if suppressant systems or water hoses fail, then these will be fixed on site as soon as practically possible and where required, competent persons will be contacted, e.g. IRTS sub-contractors.

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**Table 3.1: Source-Pathway-Receptor Routes**

Source	Pathway	Receptor	Type of Impact	Where relationships can be interrupted
Mud – site surfaces	Tracking dust / mud on wheels and vehicles, then mud dropping from wheel / vehicles	Colne Way (A41)	Visual soiling and potential airborne particulates when dry mud is disturbed	Long service road ensures residual mud drops off before vehicle reaches public highway. If required jet washes are available to clean vehicle wheels. Company owned and on site road sweeper on site every day, which cleans the site, service road and A41
Debris	Material falling from body of HGV; mud, debris	Colne Way (A41)	Visual soiling. If mud, potential airborne particulates when dry	Long service road ensures residual mud drops off before vehicle reaches public highway. Road sweeper on site every day, which cleans the site, service road and A41 and is subject to regular and ongoing maintenance. Frequency will be need dependent but usually around four times a day.
HGVs and Plant manoeuvring kicking up dust from dry surfaces, including maintaining surfaces cleanliness	Atmospheric dispersion	Potentially all direct receptors regarding airborne particulates (dependent on wind direction)	Airborne particulates and visual soiling	Dust suppressant systems in place. Ground surfaces are kept wet during dry months. Loading shovel maintains ground surface cleanliness, e.g. scraping excess mud or debris from surface Road sweeper (mechanical) and sweeping brush cleans throughout. The Rod sweeper is subject to a regular and planned maintenance schedule. Frequency of sweeps is weather and condition dependant but no less than four times daily (if required could be hourly) During loading, load is sprayed with water to reduce dust being exposed to the atmosphere and settling on surface. Drop height is controlled when loading and unloading material
Loading of waste in open areas	Atmospheric dispersion	Potentially all direct receptors regarding airborne particulates (dependent on wind direction)	Airborne particulates and visual soiling	Dust suppressant systems in place. During loading, load is sprayed with water to reduce dust being exposed to the atmosphere. Drop height is controlled when loading material. Road sweeper and sweeping brush cleans throughout .
Unloading / loading of waste inside buildings	Escape from buildings and subsequent atmospheric	Potentially all direct receptors regarding airborne particulates (dependent on wind	Airborne particulates and visual soiling	Main waste shed has dust cannon suppressant system in place inside of building and rain gun and mist curtain at front of tipping hall. Drop height is controlled when loading and unloading

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	dispersion	direction)		material. Walls and buildings on site act as natural wind breakers.
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Source	Pathway	Receptor	Type of Impact	Where relationships can be interrupted
Screening	Atmospheric dispersion	Potentially all direct receptors regarding airborne particulates (dependent on wind direction)	Airborne particulates and visual soiling	Screening and separation are completed within main tipping hall. Main tipping hall has dust cannon suppressant system in place inside of building and rain gun and mist curtain at front of shed. Excess mud / debris on vehicles – Long service road ensures residual mud drops off before vehicle reaches public highway General housekeeping sees dust removal from the MRF lines at the end of day at shut down.
Topsoil screening	Atmospheric dispersion	Potentially all direct receptors regarding airborne particulates (dependent on wind direction)	Airborne particulates and visual soiling	Dust suppression from main tipping hall helps protects in the direction of topsoil mound. Mobile dust suppression positioned by topsoil mound. Power Screen only operations on clear / dry days but not when windy.
Vehicle exhaust emissions	Atmospheric dispersion	Potentially all direct receptors regarding airborne particulates (dependent on wind direction)	Airborne particulates	HGVs are Euro 5 / Euro 6 engines. Regular service maintenance schedule. PBD has company emission and idling policy, which is communicated to all drivers - e.g. if vehicle requires to idle for more than 2 minutes, then they switch the engine off Controlled speeding on site and local roads. Plant equipment switched off when not in use - e.g. end off shift and during breaks.
Non road going machinery – Plant exhaust emissions / dust from generator, static plant,	Atmospheric dispersion	Potentially all direct receptors regarding airborne particulates (dependent on wind direction)	Airborne particulates	Regular service maintenance schedule. Plant equipment switched off when not in use. Refer to table 2.3 - NRMM data.

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vehicles, etc				
Picking Stations – waste being dropped below from picking line	Atmospheric dispersion	Potentially all direct receptors regarding airborne particulates (dependent on wind direction)	Airborne particulates	Picking stations drop zones are within main waste shed building. Main shed has abatement measures, dust cannon, rain gun and mist curtain.

Source	Pathway	Receptor	Type of Impact	Where relationships can be interrupted
Conveyor belts – all plant – potential dust	Atmospheric dispersion	Potentially all direct receptors regarding airborne particulates (dependent on wind direction)	Airborne particulates	Picking lines are within the main waste shed with trommel and picking sheds. Main shed has abatement measures, dust cannon, rain gun and mist curtain.
Material stored in waste compounds – windy weather causing dust	Atmospheric dispersion	Potentially all direct receptors regarding airborne particulates (dependent on wind direction)	Airborne particulates	Waste material is stored outside as per EA permit requirements. Height of material is kept within EA permit and below peripheral fencing.
Loading waste material in back of vehicles	Atmospheric dispersion	Potentially all direct receptors regarding airborne particulates (dependent on wind direction)	Airborne particulates	During loading activities, material is watered down by water hose or pressure washer. Loading of certain material is completed with use of grab, which denotes waste can placed within vehicle and not dropped in lorry body. Drop height is controlled when loading.

**Table 3.2: Measures used on site to control Dust/Particulates (PM<sub>10</sub>)**

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
<b>Preventative Measures</b>			
Enclosure within a	Main tipping hall is enclosed on three sides and front canopy. Mixed waste	These control measures have been in place at the Watford yard for several years.	Introduced to control any fugitive dust.

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<b>Abatement Measure</b>	<b>Description / Effect</b>	<b>Overall consideration and implementation</b>	<b>Trigger for implementation</b>
building	material is located within tipping hall for separation. Inert processing to take place in bespoke and enclosed building with water based suppressions systems		
Negative pressure extraction	This would not be suitable for current buildings on sites. Cost and disruption to service are excessive. Related controls measures are in place and working well.	This would not be suitable for current buildings on sites. Cost and disruption to service are excessive. Related controls measures are in place and working well.	Related controls measures are in place and working well.

<b>Abatement Measure</b>	<b>Description / Effect</b>	<b>Overall consideration and implementation</b>	<b>Trigger for implementation</b>
Dust Extraction Systems	This would not be suitable for current buildings on sites. Cost and disruption to service are excessive. Related controls measures are in place and working well.	This would not be suitable for current buildings on sites. Cost and disruption to service are excessive. Related controls measures are in place and working well.	Related controls measures are in place and working well.
Site / process layout in relation to receptors	There are several buildings on the site. The tipping hall is in the south part the site, which contains a single processing line (MRF), separating out a range of materials for onward recycling. The tipping hall has a steel frame, open fronted construction with a footprint of circa 2240m <sup>2</sup> and pointing northeast. Inert shed has a footprint of 1140m <sup>2</sup> .	There are future plans to move away from the current layout; however, the main tipping hall will stay in current position and point towards the northeast.	Current site has been reviewed and inspected numerous times by the Environment Agency (EA).
Site speed limit, 'no	Minimal vehicle movements throughout the day. Operating hours 7am-6pm	All control measures are in place during the day-to-day operations.	All control measures are in place during the day-to-day operations.

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<b>Abatement Measure</b>	<b>Description / Effect</b>	<b>Overall consideration and implementation</b>	<b>Trigger for implementation</b>
idling' policy and minimisation of vehicle movements on site	Monday to Friday 7am-1pm Saturday. No vehicle movements on Sundays or Bank Holidays. Driver handbooks include information on idling and safer driving, telematics also fitted to vehicles to reduce idling and contributes to lower emissions. PBD procurement policy is to only purchase clean burn road vehicles and non-road mobile machinery. All plant working at Watford site are identified under NRMM standard. Speed limit on site is 5mph		
<b>Abatement Measure</b>	<b>Description / Effect</b>	<b>Overall consideration and implementation</b>	<b>Trigger for implementation</b>
Minimising drop heights for waste. Use of enclosed chutes for waste drops/end of conveyor transfers and covered skips / storage vessels.	All loading is carried out in a controlled manor and dust suppression is used during all loading operations via pressure hose.  Including the use of a large multifunctional dust cannon with 360 reach.	These controls are detailed in site risk assessments and constantly monitored by site supervisors and HSQE personnel.	All control measures are in place during the day-to-day operations.
Good housekeeping	Daily check sheet completed by site operative. HSQE personnel complete daily walks, when on site, to ensure compliance and good control is	These controls are detailed in site risk assessments and constantly monitored by depot manager and HSQE personnel	All control measures are in place during the day-to day operations.

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<b>Abatement Measure</b>	<b>Description / Effect</b>	<b>Overall consideration and implementation</b>	<b>Trigger for implementation</b>
	present throughout. Depot manager completes daily walks. Site is visited daily by road sweeper. Weekly cleaning and maintenance in place.		
Sheeting of vehicles	All vehicles and trailers are sheeted and covered before leaving site. This is briefed to all drivers during induction and written within their driver handbooks.	Identified in management systems and driver handbook.	All control measures are in place during the day to-day operations.
Ceasing operation during high winds and/or prevailing wind direction	Weather conditions are constantly monitored throughout the day and shredding, crushing and loading will cease if conditions are not suitable.	Procedures in place and working. Suggestion to install a windsock to assist site operatives to identify wind direction.	All control measures are in place during the day-to-day operations.
Pressure Washer	Pressure washer available for drivers to use to clean their vehicles; however, access to pressure washer is not at direct exit to site	Specific wheel wash is unrealistic to install in current layout; however, will be under consideration during upgrade	All control measures are in place during the day-to-day operations.
Easy to clean concrete impermeable surfaces	The Watford site has a full concrete impermeable surface. Sweeper operates daily all waste water goes to mains sewer via an interceptor where heavy particles (dust) will be captured.	Currently in place and on going	All control measures are in place during the day-to-day operations
Minimisation of waste storage heights and volumes on site	Height and volume of waste storage is controlled as per our EA permit. Waste is monitored throughout the day.	Height and volume of waste storage is controlled as per our permit. Waste is monitored throughout the day.	All control measures are in place during the day-to-day operations.

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<b>Abatement Measure</b>	<b>Description / Effect</b>	<b>Overall consideration and implementation</b>	<b>Trigger for implementation</b>
Reduction in operations (waste throughput, vehicle size, operational hours)	Daily vehicle movements in place throughout the day. Operating hours 7am-5pm Monday to Friday 7am-1pm Saturday. No vehicle movements on Sundays or Bank Holidays.	Currently in place and on going	All control measures are in place during the day-to-day operations.

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Remedial Measures			
Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Netting / micro netting around equipment	Netting and sheeting in place around perimeter and equipment. Weekly cleaning and maintenance in place	Currently in place and ongoing	All control measures are in place during the day-to-day operations.
On-site sweeping	Road sweeping vehicle dampens down dust and particulates whilst brushing and collecting dust and particulates from the road surface, particularly at the kerbside along adjacent road to the Watford Yard and within Watford Yard itself. The sweeper is a 70 plate HGV. This operation happens 2-4 times a day.	Currently in place and ongoing	All control measures are in place during the day-to-day operations.
Site perimeter netting / micro netting	Netting is in place around site perimeter and on the north corner of the main waste shed. Cleaning and maintenance in place	Currently in place and ongoing	All control measures are in place during the day-to-day operations.
Water suppression with hoses & water jets	Large multipurpose water cannon, along with pressure washers across the site	Currently in place and ongoing	All control measures are in place during the day-to-day operations.

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<b>Abatement Measure</b>	<b>Description / Effect</b>	<b>Overall consideration and implementation</b>	<b>Trigger for implementation</b>
Water suppression with mist sprays	Mist curtain in place on overhang of main waste shed	Currently in place and ongoing. Further considerations going forward regarding Watford upgrade (if this takes place)	All control measures are in place during the day-to-day operations.
Water suppression with bowser	Bowser and pressure washers are present at strategic locations across the Watford Site	Currently in place and ongoing	Related control measures are in place during the day-to-day operations.
Dust and particulate monitor with trigger alarm	The permit issued to PB Donoghue at the Watford Site has no requirement for dust or PM10 monitoring	Trial may take place in the future, however, at present no requirement	All control measures are in place during the day-to-day operations.
Shaker grids	Rumble strip is not currently in place at the Watford Depot, however there is a long-service road to the main road. Weekly cleaning and maintenance in place	To be discussed going forward	All control measures are in place during the day-to-day operations.
Water Cannons	Water Cannons in places across the site All controlled by remoted control. Main cannon located at wood area has 360 rotation ability	Currently in place and ongoing	All control measures are in place during the day-to-day operations.
Screening of buildings / reducing large apertures using plastic strips	Individual waste bays are within the main waste shed to reduce any fugitive dust escaping	Currently in place and ongoing. Discussion going forward regarding use of plastic strips	All control measures are in place during the day-to-day operations.

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Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Application of CMA / chemical suppressant	Waste piles are not in place for lengthy durations and is constantly rotating. The use of CMA chemical suppressant would not be suitable	Waste piles are not in place for lengthy durations and is constantly rotating. The use of CMA chemical suppressant would not be suitable.	Related control measures are in place during the day-to-day operations.
Heavy Water	Dust cannons can be set to release at different pressures. In dry weather heavy water would be used in small areas across the site	Currently in place and ongoing	All control measures are in place during the day-to-day operations.
Foam Suppression	Research into the foam suppression system showed it would not be suitable for the current facilities we have on site	Research into the foam suppression system showed it would not be suitable for the current facilities we have.	Related control measures are in place during the day-to-day operations.
Design of the site	Position of shed is pointing north / northeast. Behind the shed, large bank is present the disrupts air flow	Design of the site is not going to change which means abatement measure will stay the same	Controls in place

3.3: Measures to control dust emissions potentially asbestos containing construction wastes

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
<b>Preventative Measures</b>			
Unloading and loading of 17 06 05 material to	Excavated soils and spoils from utility roadworks will be delivered in small volumes to site under consignment. As a mirror hazardous code, it will be	Implementation will be in line with both site EMS and general management but also specific method statements and RAMS for the management/control and sampling of	Standardized practice for this material and its risk profile in line with CAR.

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<b>Abatement Measure</b>	<b>Description / Effect</b>	<b>Overall consideration and implementation</b>	<b>Trigger for implementation</b>
<p>reduce risk of free fibre inhalation by staff operatives.</p>	<p>treated “as if” it were hazardous until testing demonstrated the presence, absence or proportion of asbestos.</p> <p>Waste deliveries of 17 06 05 will be directed to the stockpile area which is cordoned off to all but trained site workers wearing required PPE.</p> <p>Wastes will be sheet covered and drop highs will be minimised to ensure minimum disturbance and, if required damping used via portable water cannons, Site operatives will be kept at safe distance when unloading and only trained and PPE kitted operatives allowed near stockpile and only if required.</p> <p>Loading procedures of the material post testing will be dependant on results of the stockpiled batch sampling and testing and whether asbestos is found to be present, absent or specific proportion/concentration of free fibres.</p>	<p>the 17 06 05 material.</p>	
<p>Stockpile management</p>	<p>17 06 05 wastes from utility excavations will be brought to site in small individual loads from specific digs. They will be stockpiled until a point of circa 20 tonnes is reached prior to that stockpile then being closed subject to lab results</p>	<p>Implementation will be in line with both site EMS and general management but also specific method statements and RAMS for the management/control and sampling of the 17 06 05 material.</p>	<p>Standardized practice for this material and its risk profile in line with CAR.</p>

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<b>Abatement Measure</b>	<b>Description / Effect</b>	<b>Overall consideration and implementation</b>	<b>Trigger for implementation</b>
	<p>and delineation on required onward processing/disposal.</p> <p>Material will have its own, cordoned off (Haz waste cordon) bay. This will only be accessible to specific, trained staff with appropriate PPE.</p> <p>The material will be damped if required to ensure non friability and risk of free fibre inhalation from dust.</p>		

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## **Other considerations**

### **Water usage/ availability:**

Water supply is predominately via Thames Water main supply. There is the main water tank for suppression that holds approximately 2000litres, that constantly refills, when used. Dehaco dust cannon holds its own water tank for suppression and gets refilled when emptied.

There is a hydrant located directly outside the main gates that will be utilised in an emergency by the emergency services. The site has a back-up genset should a power outage occur and pump based static plant can continue to operate.

### **In the event of a drought:**

If a drought warning were to be issued officially from the government or the local authorities, PB Donoghue would complete a dynamic risk and adapt control measures dependent on the severity of the drought warning. In addition, processes that create fugitive dust would be reduced or stopped, until further assessment is completed. PB Donoghue would also contact the Environmental Agency (EA).

## **3.3 Enclosure of Waste Processing & Storage Areas**

Mixed waste material is unloaded within the main waste shed and will be processed within the separation process. Waste is loaded into feeder and travels through the trommel and on to the conveyor system. Larger pieces will continue to travel into the picking station to be sorted and separated into the waste compounds below. Both picking stations are completely enclosed cabins and located within the main tipping hall.

Smaller particles (around 30mm) drop below the trommel into a holding area. This area is also enclosed and within the main tipping hall.

Waste material that is separated falls below into holding bays. When bays are full, the material is removed to their main holding areas, e.g. wood is removed outside.

Holding compounds outside the main waste shed are separated with concrete barriers and are to hold material until ready to be transferred out. The waste material held outside of the main shed is waste that does not produce fugitive dust when stable.

Screening of topsoil takes place within its own compound. Area has high level walls; screened muck material is stored within a 4m to 5m high designated area and is transferred out regularly. Screening only takes place when muck is dry and potential fugitive dust is controlled by mobile dust fan and if windy, no screening takes place.

## **3.4 Visual Dust Monitoring**

Visual dust monitoring takes place daily by the Depot Manager. Depot Manager will visually monitor the yard operation and ensure suppressant systems and sprinkler systems are in operation to control dust particles. In addition, water hoses will be used to water ground surface during drier days.

Daily checklist is completed at the end of the day by Watford Operative, under supervision of Depot Manager, to confirm that dust levels within the picking stations are at an acceptable level.

Depot Manager will ensure that waste compounds with material that could release dust due to windy and/or dry weather, will be covered with their sheeting system, e.g. topsoil. This will ensure that the potential to release dust out of hours will be reduced or eliminated.

Daily site log is completed by Depot Manager that will record daily conditions. Copy of checklist provided in Appendix B.

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#### **4. Particulate Matter Monitoring**

The environmental permit issued to PB Donoghue at the Watford Site has no requirement for dust or PM10 monitoring. The statutory requirement is that managers, supervisors and staff shall undertake visual inspection during operations. If dust emissions become evident, then immediate action will be taken to stop the waste activities giving rise to the emissions and to suppress the aerial emissions. Any instances of this will be recorded in the site diary by site TCM.

As a responsible operator, PB Donoghue is aware that the already domestically congested road networks and surrounding industry's does give rise to PM10 pollution and we seek to not add to these existing emissions.

##### **4.1 Monitoring Location**

There is no requirement under the company environmental permit for the monitoring of dust and PM10. Routine dust monitoring will be carried out twice a day more if necessary (for instance on a windy day or particularly dry day). At the end of every working day the site is tidied and dust and particulate are swept up using the sites own road sweeper. Visual monitoring is constantly carried out on site by the Site Manager, Gary Strange, and all staff have been trained with regards to dust generation, monitoring and suppression. Site management will make visual inspections of dust emissions around the entire site and perimeter throughout the day. See Appendix B Checklist. Additional monitoring 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

##### **4.2 Operation of the PM<sub>10</sub> and Dust Monitoring Equipment**

There is no requirement under the company environmental permit for the monitoring of dust and PM10.

##### **4.3 Quality Assurance/Quality Control and Record Keeping**

The information collected from the visual/odour monitoring exercises, will be treated as proprietary owned.

##### **4.4 Equipment and Data Management**

There is no requirement under the company environmental permit for the monitoring of dust and PM10.

##### **4.5 Reporting of Data**

As there is no requirement under the company environmental permit for the monitoring of dust and PM10, the information collected from the monitoring exercise will be treated as proprietary owned. If deemed appropriate, PB Donoghue may share the results with people or organisations highlighted by the company as stakeholders.

##### **4.6 Additional Detailed Monthly Reporting**

There is no additional detailed monthly reporting required.

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## **5. Actions when alarm is triggered.**

The alarm is not the sole indicator of a dust event at the Watford site; the continuous visual monitoring of potential dust sources and activities safeguard all contribute a very important part in managing dust and particulates.

## **6. Reporting and Complaints Response**

### **6.1 Engagement with the Community**

Representatives of PB Donoghue will endeavour to attend local residents' meetings and continue to strive to maintain good relations with neighbours. PB Donoghue will engage with representatives with a constructive attitude and respond swiftly to any complaints or concerns.

### **6.2 Reporting of Complaints**

PB Donoghue is accredited to ISO9001:2015 and have quality procedures in place for recording complaints. Should a dust complaint be received a Complaints Form will be completed see Appendix A, these will be kept for inspection on request by the EA. Details of information to be completed are dates, nature of complaint, weather conditions at the time of the complaint, investigation details, action taken and a signature (as a minimum). Any unavoidable events such as plant/equipment malfunctions will be recorded in the site diary, this will ensure that if complaints are received retrospectively from either the Council/EA or directly, any circumstances which led to that complaint as a result of elements outside of the operator's control would be able to be attributed to the cause of the complaint. If the source cannot be ascertained with 100% confidence, the site manager or TCP will either suspend or reduce the likely dust/particulate generating activities, i.e. waste processing. If the complaint is considered valid, an investigation into the complaint will take place immediately by site management to ensure the problem can be rectified as soon as possible. The operator would then contact the complainant to advise on the issue and how this has been rectified. If the source is within the site's control, the site manager or TCP will take appropriate action in terms of dust/particulate abatement. Complaints of dust and particulate will be dealt with by the Management. Details will be taken from the complainant and logged on a Complaint Form. Investigations will be made into the complaint to verify the issue. If the complaint is verified then the activity giving rise to the dust will cease until such time as the it can be carried out with causing a dust nuisance. The complainant will be informed of the findings and of the actions taken to rectify the issue. A record will be made in the Site Diary and the Complaint Form kept in the Site Office. This will generally be completed within two working days or less of the initial complaint.

A complaints form will be used to log complaints, feed-back will be given either in person to the complainant or over the phone. Complaints will be reviewed to ensure that the cause of the problem does not occur again. Any complaints received in relation to dust will be recorded on the form shown in Appendix A by the person in receipt of the complaint. Complaints will be handled by the Site management or TCP. The following details will be completed on the form.

- a) The name, address and telephone number of the caller will be requested (however the complainant will have the option to remain anonymous).
- b) Each complaint will be given a reference number.
- c) The caller will be asked to give details of
  - the nature of the complaint;
  - the time
  - how long it lasted
  - how often it occurs
  - See form below for more details The person completing the form will then, if possible, make a note of the weather conditions at the time of the problem (rain snow fog etc.), strength and direction of the wind and the activity on site at the time the dust was detected.

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d) The reason for the complaint will be investigated and a note of the findings added to the report. e) The caller will then be contacted with an explanation of the source of the complaint if identified and the action taken to prevent a recurrence of the problem in future.

f) If the caller is unhappy about the outcome or unwilling to identify themselves the caller will be referred to the appropriate department of the EA or Local Council.

g) Following any complaint the complaints procedure will be reviewed to see if any changes are required or if new procedures need to be put in place.

### **6.3 Management Responsibilities**

Site TCM is responsible to record and investigate complaints in relation to this document.

In addition, HSQE Department, when notified, will record the complaint under company QMS and company business improvement report form will be completed to record the investigation.

### **6.4 Summary**

The DEMP has been compiled to highlight all the control measures currently being implemented by PB Donoghue at the Watford Depot. It will be reviewed on an annual basis, if a significant change occurs, a change in operation or as directed by the EA.

The objective of the DEMP is to identify processes in relation to dust and emissions and identify control measures in place to reduce or mitigate from potential fugitive dust and emissions. Under the QMS, PB Donoghue will endeavour to always look for further improvements to and remain in compliance of the Environmental Permit.

## **Appendix A: Dust Complaint Form**

**P B Donoghue's Construction (Watford) Ltd**

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Name: (If Given)	
Address: (if Given)	
Contact Details: (for feedback)	
Date:	
Complaint Reference Number:	
Complaint Details:	
<b>Investigation Details</b>	
Carried out by:	
Position:	
Date and time of:	
Weather notes:	
Wind notes:	
Feedback to regulators	
Date of feedback:	
Feedback to complainant:	
Date of feedback:	
<b>Review and Improve</b>	
Improvements required:	
Date for completion (proposed):	
Date of Completion (actual):	
Account for Difference:	
Does DEMP need updating?:	
If yes Date DEMP was updated:	
<b>Closure</b>	
Site Manager Review date:	
Site Manager Signature to confirm no further action required:	

## Appendix B: Checklist

**DUST AND EMISSION MANAGEMENT PLAN  
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<b>DATE:</b>	<b>Mon</b>	<b>Tues</b>	<b>Weds</b>	<b>Thurs</b>	<b>Fri</b>	<b>Sat</b>
<b>Checked by (initials):</b>						
<b>Are dust discharges from stockpiles controlled?</b>						
<b>Are dust discharges from site surfaces controlled?</b>						
<b>Is any visible dust observed at the site downwind boundary?</b>						
<b>Are the sprinklers on regularly?</b>						
<b>Are the sprinklers on when waste is being sipped loaded pushed up?</b>						
<b>Is plant driver being mindful of dust when moving the waste?</b>						
<b>Drivers keeping to the 5kmhr and no idling rule?</b>						
<b>Is visible dust being produced anywhere an not being supressed?</b>						
<b>Is visible dust leaving the site boundary?</b>						
<b>Can you ID the source of this dust?</b>						
<b>Required preventative actions for this dust?</b>						
<b>Report issues to TCP</b>  <b>Additional Comments here:</b>						