Dust and Emissions Management Plan

Radlett SRFI Area 2

January 2024

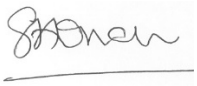
Waterman Infrastructure & Environment Limited
Pickfords Wharf, Clink Street, London, SE1 9DG
www.watermangroup.com

Client Name:	SEGRO Radlett Ltd
Document Reference:	WIE18710-100-R-30-3-2-DEMP
Project Number:	WIE18710
Asite Reference:	RAD-WAT-A2EX-XX-RP-I-0033
Revision	P03
Status	S3

Quality Assurance – Approval Status

This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

Issue	Date	Prepared by	Checked by	Approved by
30-3-2	January 2024	Sarah Owen Senior Associate	Freddie Alcock Technical Director	Sarah Owen Senior Associate



Comments

Disclaimer

This report has been prepared by Waterman Infrastructure & Environment Limited, with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporation of our General Terms and Condition of Business and taking account of the resources devoted to us by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at its own risk.

Contents

1. Introduction 1
- 1.1 The Brief 1
- 1.2 Context 1
- 1.3 Report Structure and Scope 2
- 1.4 Limitations and Constraints 3

2. Site Setting and Sensitive Receptors 4
- 2.1 Overview of Site 4
- 2.2 Surrounds and Sensitive Receptors 4
- 2.3 Other Emitters of Dust in Local Area 6
- 2.4 Sources of Potential Dust and Emissions from the Site 6

3. Operations 8
- 3.1 Waste 8
- 3.2 Overview of Waste Processing, Dust, and other Emission Controls 8
- 3.3 Mobile Plant and Equipment 9

4. Dust and Particulate Management 10
- 4.1 Responsibility for implementation of this plan 10
- 4.2 Sources and Control of Fugitive Dust & Other Emissions 10
- 4.3 Dust Suppression Equipment 11
- 4.4 Water Availability 29
- 4.5 Visual Dust Monitoring 29

5. Particulate Matter Monitoring 30
- 5.1 Monitoring Location(s) 30
- 5.2 Operation of the PM Monitoring Equipment 30
- 5.3 Quality Assurance/Quality Control and Record Keeping 31
- 5.4 Reporting of Data 31
- 5.5 Actions Following Breach of Boundary Early Warning or Action Levels 31

6. Reporting and Complaints Response 32
- 6.1 Complaints Procedure 32

Figures

Figure 1: Luton Airport Windrose 6

Figure 2: Area 2 Fixed Particulate Monitoring Points 30

Tables

Table 1: Proposed site derived waste types meeting specification for use in the works 8
Table 2: Mobile plant used for recovery activity 9
Table 3: Dust Risk Assessment 12
Table 4: “Table 3.2” – Abatement measures 20
Table 5: Receptors within 500m of Area 2 33

Appendices

A. Receptors Table

B. Complaints Procedure

1. Introduction

1.1 The Brief

Waterman Infrastructure & Environment Limited ("Waterman") has been appointed to prepare an application for an Environmental Permit (EP). The EP application is to authorise the permanent deposit of waste on land as a recovery activity. The waste recovery activity is for site-derived waste to be used in the construction of landscape bunds associated with the construction of the Radlett Strategic Rail Freight Interchange (SRFI), located at North Orbital Road, Upper Colne Valley, Hertfordshire, AL2 2ET – specifically the two landscape bunds on Area 2.

SEGRO Radlett Ltd is the master developer – the party responsible for bringing the scheme to fruition. It has appointed VolkerFitzpatrick Limited (VFL) to undertake the earthworks including bund construction and other enabling activities. VFL is therefore the EP applicant and will be the EP operator.

This report constitutes a Dust & Emissions Management Plan (DEMP), which is required to support the waste recovery EP application.

1.2 Context

Through the Radlett SRFI scheme SEGRO Radlett Ltd proposes to develop an intermodal terminal, with rail and road distribution units. The SRFI is located to the south of St. Albans, adjacent to the M25 and Midland Main line (MML) railway. The terminal will be serviced by a new dual track rail chord connected to the MML.

The SRFI comprises a 419-hectare (ha) development area that is sub-divided into eight plots referred to as Areas 1 to 8. The areas have the following proposed uses:

- Areas 1 (146 ha) and 2 (26 ha) – the SRFI Development Area. Area 1 will comprise an intermodal terminal and a rail and road served distribution facility consisting of several large warehouses. The rail chord connecting Area 1 to the MML will run through Area 2. Area 2 will also feature two landscape bunds (LS1 and LS2) that will help to screen the SRFI from public view and provide acoustic screening; and
- Area 3 to 8 (247 ha) – will be developed with additional works and landscaping to provide publicly accessible open land and a community forest.

The Areas are shown on plan "Different Development Phases (Areas 1 – 8) of the SRFI" (D-ESSD1A - drawings are to be found in the separate "ESSD drawings and information bundle").

To enable construction of the SRFI, earthworks are required to prepare the SRFI Development Area as summarised below:

Area 1

Earthworks material will be excavated from the northern half of Area 1 where the levels need to be lowered to enable access from the public highway to the north, to install surface water flow attenuation features and to create suitable development platform levels. The cut will be used to raise levels across the southern half of Area 1, to construct landscape bunds around the perimeter of Area 1 and to construct the landscape bunds on Area 2.

Area 2

Excavation is required in Area 2 to construct the new rail chord linking the MML and the SRFI – the rail chord needs to pass under the MML. Some of the excavation will be into historic landfill, with the waste arising to be processed by mobile treatment EP to generate useable earthworks material (i.e. meeting the specification for the works) with the unusable waste despatched for recovery or disposal elsewhere. The waste recovered from processing the historic landfilled waste as well as restoration soils and capping

material from Area 2 and excavation arisings cut from Area 1 will be used to construct the landscape bunds on Area 2.

The cut and fill locations across Areas 1 and 2 are shown on plan “Earthworks Analysis Cut and Fill Volumes” (D-ESSD4A).

Regulatory Control of Earthworks

Pre-application liaison has been undertaken with both local (Hertfordshire and North London) and national (Permitting Support Centre) EA teams, seeking to establish the waste / non-waste status of various excavation arisings and the appropriate mechanisms to regulate the use of the arisings as earthworks materials. Aspects of this liaison are not concluded at the time of writing.

The southern part of Area 1 has been subject to mineral extraction and restoration. The land is recorded in Landmark data as “EA historic landfill polygon” and “LA recorded landfill site”. If the restoration material can be demonstrated to comprise overburden and interburden from the mineral extraction activity, excavation arising generated from that area will be excluded from the scope of waste. In that case, the reuse of such material will be managed under the Definition of Waste Development Industry Code of Practice (DoWCoP) in order to maintain an auditable record of the materials use within the earthworks. If the non-waste status of such material cannot be demonstrated / agreed, the arisings would be managed as waste. The local EA team has been provided with evidence to support non-landfill history of the southern part of Area 1 and the information has been passed forward to the EA team responsible for maintaining the historic landfill dataset with a request that the record is removed.

Natural soils and Made Ground will arise from excavation into the northern part of Area 1 – i.e. from land outside the historic mineral workings. Whilst natural soils excavated and able to be used in construction on the same site are excluded from the scope of waste, their use in earthworks on this scheme would be managed under the DoWCoP, as would the use of Made Ground.

The arisings from excavation into the historic landfill in Area 2 will be waste. The arisings will be treated under mobile treatment EP and the useful products of treatment will retain their waste label until their permanent deposit into earthworks, regulated by waste recovery EP. For the avoidance of doubt, the treatment will not be regulated by the site-based waste recovery EP.

Due to the unsettled status of the material to be cut from the mineral restoration area in Area 1, the waste recovery EP will include both bunds on Area 2. The permitted area boundary is limited to the areas occupied by landscape bunds LS1 and LS2 and is shown on plan “Area 2 Bunds Waste Recovery Area Boundary”) (D-ESSD1C). The boundary for Area 2 is shown on plan “Site Location Plan” (D-ESSD1B).

1.3 Report Structure and Scope

The waste recovery activity has the potential for dust and particulate emissions to be generated. Management practices, equipment and infrastructure are in place ensure emissions of dust and particulates are minimised and contained as far as possible.

This DEMP explains the site setting and risks from dust and particulate emissions and how these will be controlled for the lifetime of the activity. The document follows EA guidance and has been structured using the EA template for a DEMP[1].

In accordance with the guidance, this DEMP has considered emissions of dust and particulates, including bioaerosols, mud (within Area 2 only) and litter.

Where EA templates have been used to structure the report, any sections that are not applicable to the activity have been included for completeness. With an explanation of why they are not relevant.

[1] https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit#dust-mud-and-litter and EA Example Dust Emission Management Plan version 10.

The purpose of the DEMP is to explain how the operator will prevent, contain, and supress any dust and airborne particulate emissions arising from the activity. Including from:

- handling of waste – during temporary stockpiling and in deposit; and
- vehicle emissions.

The DEMP will form part of the environmental management system (EMS) to be operated by the applicant for the lifetime of the EP. A copy of the DEMP and EMS will be kept in VFL site office.

Reference documents

Technical information prepared for the Radlett SRFI development area has been utilised where appropriate; including but not limited to that prepared for:

- the planning applications for the scheme;
- documents required to fulfil planning conditions (in particular the Construction Method Statement (CMS) submitted as details pursuant to Condition 14 of outline planning permission 5/09/0708);
- data and analysis from ground investigation;
- waste classification analysis; and
- specification for material suitable for reuse in the earthworks.

Plans and drawings referred to in this report are to be found in the “ESSD drawings bundle” submitted as part of the EP application. VFL procedures referred to are to be found in the “VolkerFitzpatrick bundle” submitted with the EP application.

1.4 Limitations and Constraints

Waterman has endeavoured to assess all information provided to them during this work but makes no guarantees or warranties as to the accuracy or completeness of this information.

The conclusions resulting from this study are not necessarily indicative of future conditions or operating practices at or adjacent to the Site.

2. Site Setting and Sensitive Receptors

2.1 Overview of Site

The permitted area is situated within Area 2 of the Radlett SRFI Scheme, at approximate address North Orbital Road, Upper Colne Valley, Hertfordshire, AL2 2ET, centred at approximate National Grid Reference TL 16114 03242. The waste recovery EP boundary is shown on D-ESSD1C. The Radlett SRFI development areas are shown on D-ESSD1A. The drawings are to be found in the "ESSD drawings and information bundle" submitted with the EP application.

The development to occur on Area 2 can be summarised as follows:

- Provision of enhanced wetland and terrestrial habitat for Great Crested Newt (GCN);
- Excavation to enable jack box tunnelling beneath the MML – to provide construction site access between Areas 1 and 2 and to accommodate the new rail chord;
- Excavation to enable new rail chord to connect MML with Area 1;
- Processing of excavated historically landfilled waste to reclaim usable earthworks material (regulated by separate mobile treatment EP);
- Topsoil strip;
- Construction of landscape bunds using suitable treated landfilled waste and other site derived excavation arisings (from Areas 1 and 2) and associated interim stockpiling (waste recovery activity); and
- Installation of temporary internal haul roads, vehicle turning areas and so on.

The majority of the activities set out above can emit dust and particulates. The DEMP is targeted at preventing and managing emissions from the waste recovery activity, however the techniques will be applied to all activities on Area 2 where relevant.

2.2 Surrounds and Sensitive Receptors

The various land-uses around Area 2 including receptors potentially sensitive to emissions from the activities on Area 2, are shown on D-ESSD2A. The local wildlife sites (LWS) in the vicinity of Area 2 are shown separately on D-ESSD2F. The land-uses and receptors immediately surrounding the boundaries of the wider construction site in each direction are:

North

To the immediate northeast is agricultural land and woodland, followed by the Napsbury Park residential area.

East

In the east lies agricultural land and woodland, with River Colne extending from east to southeast.

South

The southern boundary is formed by the M25. Further, lies woodland, the River Colne, a large residential property, grassland and the Ventura Park and Old Parkbury Lane commercial / industrial area (including .

West

Area 2 is flanked by the Midland Main line railway (MML) and Area 1 of the Radlett SRFI on its western side. Earthworks on Area 1 will occur concurrently with those on Area 2.

Protected Species within Area 2

Great Crested Newts (GCN) have been found to be present within, and in the vicinity of, Area 2. An area

of ponds and terrestrial habitat within Area 2 is to be fenced off before earthworks commence into which GCN trapped on Area 1 and 2 will be translocated. The area will be suitably protected for the duration of the earthworks and rail chord construction. Local Wildlife Sites

The following LWS have been identified near the permitted area:

- Arable Field SW of London Colney, immediately east of Area 2;
- Quarry at Former Radlett Aerodrome, located within Area 1; and
- Old Parkbury Fishing Lakes, 100m southeast of Area 2.

These LWS are shown on plan D-ESSD2F.

As discussed in section 3.1.2 of the Environmental Risk Assessment (ERA), risks from the permitted works to the LWS within Area 1 have not been considered within this report as the LWS will be entirely lost to facilitate the overarching development of Radlett SRFI. Risks to the Arable Field SW of London Colney are also discussed in the Ecology Method Statement appended to the ERA.

The remaining two LWS are assessed below.

2.2.1 Receptors within 500km

A full list of sensitive receptors identified within 500km of Area 2 has been developed and included at Appendix A. A receptor map (D-ESSD2A) is included in the "ESSD drawings and information bundle" submitted with the application.

In view of the prevailing wind direction (see section 2.2.4 below) and location approximately 250m away from the Area 2 boundary, the residential properties at Napsbury Park to the north east are particularly noted.

2.2.2 Local ambient air quality

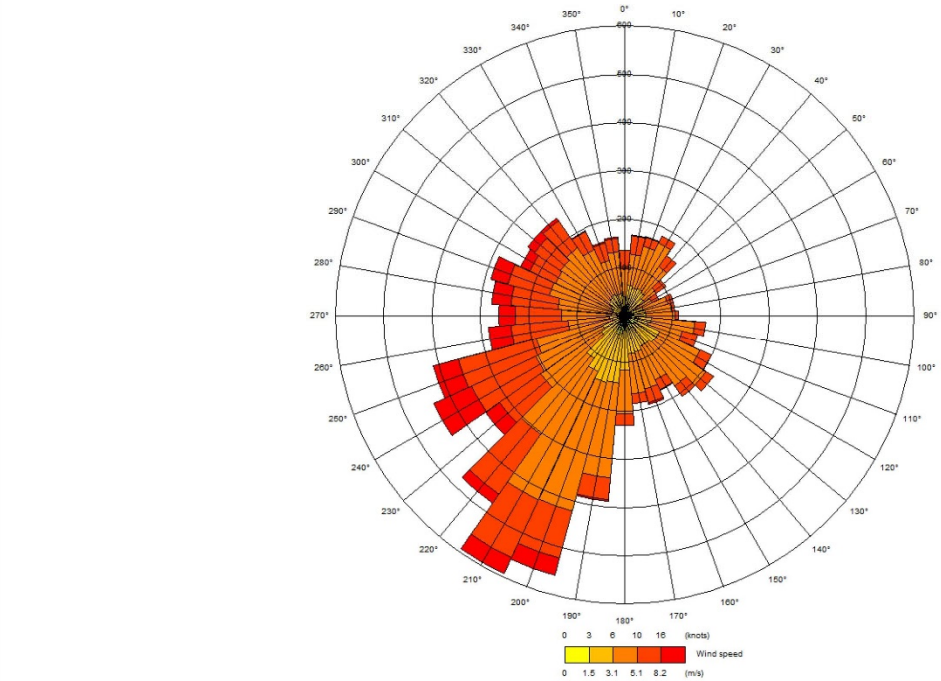
The Radlett SRFI Development Area is located in the administrative boundary of St. Albans City & District Council which has not declared an Air Quality Management Area for that location.

The air quality monitoring programme for Area 2 is discussed in section 5 below.

2.2.3 Prevailing wind direction

The windrose for Luton Airport is included on the plan D-ESSD2A and reproduced below – it shows prevailing winds from south-south-westerly direction.

Figure 1: Luton Airport Windrose



2.3 Other Emitters of Dust in Local Area

Other potential emitters of emissions of dust and particulates in the vicinity of the Area 2 including the permitted site during waste recovery activities include:[2]

Area 1 Radlett SRFI

Extensive earthworks will be carried out on Area 1 concurrently with the works on Area 2.

Area 1 will have temporary office and welfare complex.

Offices in Area 1 will run on mains power, with satellite offices including on Area 2 running on solar power and generators.

Roads

The M25 London Orbital Motorway is immediately south of the Radlett SRFI Development Area.

Railway

The MML runs north to south through the Radlett SRFI Development Area.

Farmland

Farmland to the east of Area 2 can emit dust during crop harvesting, or when the land is bare.

2.4 Sources of Potential Dust and Emissions from the Site

The DEMP considers emissions of dust and particulates, mud and litter.

Bioaerosols are not relevant for this site.

Emissions can arise from:

Use of vehicles and mobile plant

- mud – transferred to haul roads by vehicles (dump trucks and mobile plant) or being generated from

[2] MML not listed – the line is electrified

operating vehicles and mobile plant on unsurfaced ground. Mud can dry out and be released as dust;

- debris falling off uncovered dump trucks;
- dust kicked up from vehicles and mobile plant; and
- combustion emissions from exhausts.

Waste handling:

- mobile plant e.g. excavators handling waste;
- excavators loading waste onto dump truck vehicles;
- dump truck vehicles tipping waste; and
- road roller compacting material for deposit.

Waste storage:

- dust whipped from the surface of stockpiles.

Waste in permanent deposit:

- dust whipped prior to compaction in deposit locations; or
- prior to covering with temporary or final surface finish after compaction.

Litter could arise from general operations and the historic landfill waste. However, the historic landfill waste will be treated under a separate mobile treatment EP in part to remove littering items for storage and despatch offsite. Staff welfare facilities on Area 2 will have bins provided, and good housekeeping standards will be maintained to prevent the release of litter.

There are no combustion sources other than diesel powered engines on dump truck vehicles, mobile plant and generators operating on Area 2.

These sources of dust and emissions, potential pathway to receptors, methods to interrupt the pathway and abatement controls are set out in Tables 3 and 4 (EA template Tables 3.1 and 3.2).

3. Operations

3.1 Waste

The various site derived wastes to be used in construction of the landscape bunds are described in detail in the Waste Acceptance Procedures submitted with the EP application and summarised in the table below. The specifications the wastes must meet to be acceptable for use are also discussed in the Waste Acceptance Procedures.

Table 1: Proposed site derived waste types meeting specification for use in the works

EWC code	EWC description	Comment
17 05 04	Soil and stones other than those mentioned in 17 05 03	Natural soils and strata e.g. topsoil, sands and gravels, Chalk from Area 1
17 09 04	Mixed construction and demolition waste other than those mentioned in 17 09 01, 17 09 02 and 17 09 03	Made Ground – soils and deeper strata that have been disturbed replaced, with or without anthropogenic inclusions e.g. brick or tarmac fragments from Area 1 and Area 2
19 12 09	19 12 09 minerals (for example sand, stones)	Fraction recovered from historically landfilled waste by treatment process authorised by separate mobile treatment EP – Area 2
19 12 12	19 12 12 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	Fraction recovered from historically landfilled waste by treatment process authorised by separate mobile treatment EP – Area 2

The majority of the waste to be used will be 17 05 04 and 17 09 04. All waste types will have a propensity to release dust if not managed appropriately.

3.2 Overview of Waste Processing, Dust, and other Emission Controls

3.2.1 Screening and boundary treatments

Area 2 is screened by established trees on the boundary to north / east. The MML embankment runs along the western boundary. Localised palisade fencing is proposed to stop up existing public access points on the east and south boundaries. Existing fencing and temporary security mesh fencing will also be maintained / installed as required for security purposes.

3.2.2 Stockpiles

The intention is to minimise double handling and disturbance of waste as far as possible – therefore stockpiling of waste will only be undertaken when it cannot be placed directly into the earthworks. However, stockpiling of wastes may be necessary prior to use in waste recovery. Stockpiles will be located away from the northeastern boundary and the duration of stockpiling will be known at the outset for each stockpile. The stockpiles will be constructed in layers and lightly compacted as they build up, with the sides sealed with the back of the excavator bucket.

It may be necessary to stockpile treated historic landfill waste pending its use in bund construction due for reasons of programming – the cut to create the rail chord will occur before bund construction. These stockpiles may be in place for more than three months. Long-term stockpiles will be constructed to a maximum height of 5m (as described above), facilitating the use of dust suppression equipment such as Dustbuster1 (wetting agent in dust suppression water) and binders.

Daily site inspections undertaken by the Works Manager will include checks on dust controls / dust emissions from stockpiles.

3.2.3 Permanent deposit of waste

Bund construction will occur over three earthworks' seasons. During placement and compaction of waste dust will be released due to mobile plant activities (plant moving over the waste and handling the waste) and weather conditions (wind, rain). Dust will be minimised and managed by careful use of mobile plant (e.g. site speed limits, dampening of waste using mobile misting and / or water bowser, unhurried movements and minimising drop heights).

Between seasons, there will be unfinished bunds – expanses of placed waste. In order to minimise dust emissions from wind whipping, towards the end of the earthworks season the area will be treated with a binder. The waste will have been compacted as a necessary part of bund construction.

Daily site inspections will be undertaken by the Works Manager all year round and will include checks on dust controls / dust emissions from partially completed bunds.

3.3 Mobile Plant and Equipment

Diesel powered mobile plant and equipment (e.g. dump trucks road rollers, excavators) emit airborne emissions, relevant to the DEMP.

The following table lists the type, make and model and emission ratings for typical mobile plant and equipment used on site. A non-road mobile machinery (NRMM) register will be maintained for the duration of the permitted activity.

Table 2: Mobile plant used for recovery activity

Mobile Plant	Make	Model	Emissions standard
45T Excavator	Volvo	EC400e	V
30T Excavator	Hyundai	HX300L	V
22T Excavator	CAT	320-07	V
Dumptruck	Hydrema	912f	V
Dumptruck	Volvo	A25G	V
Dumptruck	Bell	B40E	V
Dumper	Wacker Neuson	DW90	V
Dozer	CAT	D6T	IV
Roller	CAT	CS66B	IV
Loading Shovel	Volvo	L90H	V
Water Tanker	Bell	B30E	IV
Towable Bowser	TBC	TBC	IIIB

Mobile plant on-site will be a combination of leased and owned.

Servicing and maintenance of mobile plant will be undertaken as per the manufacturer's recommendations.

All vehicles switch off their engines when stationary and are not left 'idling'.

Ultra-low sulphur diesel is used.

4. Dust and Particulate Management

4.1 Responsibility for implementation of this plan

4.1.1 Responsible persons and training

VFL is the competent operator for the activity. The management techniques applied are in accordance with VFL EMS, which is certified to ISO14001:2015 standard company wide.

VFL will implement the DEMP for the lifetime of the permitted activity. The manager responsible for the DEMP is the Project Manager, deputised by the Site Agent

Briefings to staff and the Site Environmental Daily Checklist are completed by the Works Manager.

All operational staff active on Area 2 will be briefed in the requirements of the EP, and the key management plans, including dust. Task method statements include dust minimisation and mitigation measures.

All are given induction training, and a weekly toolbox talk covers environmental refresher training as required. This is delivered by the General Foreman. Staff are also briefed on task method statements. Records of training are signed by staff and managers and kept in the site office. Records of training are also kept on a central register.

4.1.2 Review of document

The permitted activity is anticipated to occur for less than four years. Therefore, the DEMP would not need to be formally reviewed as is standard for a written management system associated with an EP.

However, staff will feed back on the effectiveness of measures proposed in the DEMP. The seasons and the circumstances around the activity will change, as the works on Area 2 progresses.

Procedures attached to the DEMP will be amended and updated as required.

The Environmental Advisor is qualified to do this.

The DEMP would be reviewed only if:

- evidence that measures proposed are not proving effective arises – for instance if three or more complaints are received due to dust arising for the same reason on separate occasions or the boundary dust monitoring indicates elevated emissions attributable to Area 2 activities;
- on excavation (or after treatment – historic landfill waste), there is a material change in the characteristics of the waste stockpiled and / or deposited; or
- there is a need to move stockpiling close to the north eastern boundary.

4.2 Sources and Control of Fugitive Dust & Other Emissions

As introduced in section 2.4, operations that will have the potential to produce dust and particulates from the activity include:

- mobile plant moving around the site kicking up dust;
- downwards facing exhausts kicking up dust;
- dump trucks tipping waste;
- excavators/ material handlers handling waste;
- loading stockpiled waste back on to dump trucks;
- combustion emissions from exhausts mobile plant and equipment and generators;
- wind whipping waste stored in stockpiles;

- wind whipping waste placed in permanent deposit locations, prior to compaction;
- wind whipping waste surfaces in permanent deposits, prior to completion of landscape planting;
- water runoff from stockpiles and waste after permanent deposit, leading to mud and drying out to generate dust; and
- wind whipping of dust on site surfaces (including around plant and equipment) – either directly deposited, or mud drying out and resuspending as dust.

These sources of potential dust and emissions, the likelihood of them occurring and control measures in place are set out in Tables 3 and 4 below (EA template Tables 3.1 and 3.2).

The following activities are not applicable for this permit[3]:

- plant sorting waste – e.g. trommel screeners, picking stations, conveyors; and
- plant treating waste – shredders, crushers etc.

4.3 Dust Suppression Equipment

Dust suppression equipment on site includes:

- Bell B30E water tanker fitted with dribble bar, spray valves, hose reel and water cannon;
- Fog cannon;
- Towable bowser; and
- Supplies of Dustbuster1 wetting agent and binder.

[3] Historic landfill waste to be treated under separate mobile treatment EP.

Table 3: Dust Risk Assessment

Dust						
Hazards	**Receptor**	**Pathway**	**Risk management techniques**	**Probability of exposure**	**Consequence**	**Overall risk**
Dust generated from mobile plant and equipment activities: mobile plant moving around the site kicking up dust; downwards facing exhausts kicking up dust; dump trucks tipping waste; excavators/ material handlers handling waste; loading stockpiled waste back on to dump trucks	Local human population (in particular residents of Napsbury Park) Road users MML railway Local ecology and arboriculture (protected species on Area 2) Local wildlife sites - Arable Field SW of London Colney and Old Parkbury Fishing Lakes	Airborne	**Reduction at source:** The waste does not contain fines or powders. It is dampened, if necessary, prior to mechanical handling and placement in stockpiles or at permanent deposit in bunds. Haul roads will not be surfaced but dampened down as required using a tractor and bowser. **Screening:** Area 2 will be screened to receptors by established trees on the boundary to the north and east. The western boundary is formed by embankment to MML. Localised palisade fencing is proposed to stop up existing public access points on the east and south boundaries. Existing fencing will also be maintained, and temporary security mesh fencing will be installed as required for security purposed. The M25 motorway separates Area 2 from the Old Parkbury Fishing Lakes LWS. **Methods of working:** Drop heights will be minimised	Low Control measures minimise the possibility of dust beyond the site boundary	Damage to health or nuisance (dust soiling of cars, windows)	Low

Dust						
Hazards	**Receptor**	**Pathway**	**Risk management techniques**	**Probability of exposure**	**Consequence**	**Overall risk**
			when loading waste from stockpiles etc. Dust suppression equipment is used, including a Bell B30E water tanker and fog cannon for misting to supress airborne dust and to dampen wastes and surfaces. **Management:** Site speed limits of 10mph on unsealed surfaces and 15mph on sealed surfaces aid in reducing kick up of dust. Vehicles on site will position their exhausts upwards to minimise risk of resuspending dust. A complaints handling procedure is in place. Baseline and real time monitoring will inform remedial actions, as necessary.			
Dust generated from wind whipping waste stored in stockpiles	Local human population (in particular residents of Napsbury Park) Road users MML railway Local ecology and arboriculture (protected species on	Airborne dispersion	**Reduction at source:** The waste does not contain fines or powders. The amount of excavated waste held in stockpiles pending placement will be minimised. **Screening:** Area 2 will be screened to receptors by established trees	Low Control measures minimise the possibility of dust beyond the site boundary	Damage to health or nuisance (dust soiling of cars, windows)	Low

Dust						
Hazards	**Receptor**	**Pathway**	**Risk management techniques**	**Probability of exposure**	**Consequence**	**Overall risk**
	Area 2) Local wildlife sites - Arable Field SW of London Colney and Old Parkbury Fishing Lakes		on the boundary to the north and east. The western boundary is formed by embankment to MML. Localised palisade fencing is proposed to stop up existing public access points on the east and south boundaries. Existing fencing will also be maintained, and temporary security mesh fencing will be installed as required for security purposed. The M25 motorway separates Area 2 from the Old Parkbury Fishing Lakes LWS. **Methods of working:** Stockpiles will be located as far as practicable from the north eastern boundary of Area 2. Dust suppression equipment is used, including a Bell B30E water tanker and fog cannon for misting to supress airborne dust and to dampen wastes. Stockpile surfaces are sealed by excavator tracks and buckets. Stockpiles anticipated to be in place for more than three months will be constructed to a maximum height of 5m. This will reduce wind whipping and enable dust suppression water			

Dust						
Hazards	**Receptor**	**Pathway**	**Risk management techniques**	**Probability of exposure**	**Consequence**	**Overall risk**
			including with wetting agents and binders if required to be applied. **Management:** A complaints handling procedure is in place. Baseline and real time monitoring will inform remedial actions, as necessary.			
Dust generated from wind whipping waste placed in permanent deposit locations, prior to compaction	Local human population (in particular residents of Napsbury Park) Road users MML railway Local ecology and arboriculture (protected species on Area 2) Local wildlife sites - Arable Field SW of London Colney and Old Parkbury Fishing Lakes	Airborne dispersion	**Reduction at source:** The waste does not contain fines or powders. Wastes will not be deposited for placement unless plant and staff are available to spread and compact the waste that day. **Screening:** Area 2 will be screened to receptors by established trees on the boundary to the north and east. The western boundary is formed by embankment to MML. Localised palisade fencing is proposed to stop up existing public access points on the east and south boundaries. Existing fencing will also be maintained, and temporary security mesh fencing will be installed as required for security purposed.	Low Control measures minimise the possibility of dust beyond the site boundary	Damage to health or nuisance (dust soiling of cars, windows)	Low

Dust						
Hazards	**Receptor**	**Pathway**	**Risk management techniques**	**Probability of exposure**	**Consequence**	**Overall risk**
			The M25 motorway separates Area 2 from the Old Parkbury Fishing Lakes LWS. **Methods of working:** Dust suppression equipment is used, including a Bell B30E water tanker and fog cannon for misting to supress airborne dust and to dampen wastes. Wastes will be compacted by the end of the working day. **Management:** A complaints handling procedure is in place. Baseline and real time monitoring will inform remedial actions, as necessary.			
Dust generated from wind whipping waste surfaces in permanent deposits, prior to completion of landscape planting	Local human population (in particular residents of Napsbury Park) Road users MML railway Local ecology and arboriculture (protected species on Area 2) Local wildlife sites - Arable Field SW of London Colney and	Airborne dispersion	**Reduction at source:** The waste does not contain fines or powders. The amount of exposed placed waste will be minimised. **Screening:** Area 2 will be screened to receptors by established trees on the boundary to the north and east. The western boundary is formed by embankment to MML. Localised palisade fencing is proposed to stop up existing	Low Control measures minimise the possibility of dust beyond the site boundary	Damage to health or nuisance (dust soiling of cars, windows)	Low

Dust						
Hazards	**Receptor**	**Pathway**	**Risk management techniques**	**Probability of exposure**	**Consequence**	**Overall risk**
	Old Parkbury Fishing Lakes		public access points on the east and south boundaries. Existing fencing will also be maintained, and temporary security mesh fencing will be installed as required for security purposed. The M25 motorway separates Area 2 from the Old Parkbury Fishing Lakes LWS. **Methods of working:** Dust suppression equipment is used, including a Bell B30E water tanker and fog cannon for misting to supress airborne dust and to dampen wastes. During the earthworks season, wastes will be sealed during compaction and will be dampened down when required. Between earthworks seasons surfaces will be sealed with binder and subject to daily inspection and further actions as required. **Management:** A complaints handling procedure is in place. Baseline and real time monitoring will inform remedial actions, as necessary.			

Dust						
Hazards	**Receptor**	**Pathway**	**Risk management techniques**	**Probability of exposure**	**Consequence**	**Overall risk**
Dust generated by wind whipping over site surfaces	Local human population (in particular residents of Napsbury Park) Road users MML railway Local ecology and arboriculture (protected species on Area 2) Local wildlife sites - Arable Field SW of London Colney and Old Parkbury Fishing Lakes	Airborne dispersion	**Reduction at source:** The actions set out above to limit and manage dust emissions from the various waste handling activities will serve to reduce the amount of waste depositing on haul roads and other surfaces. The quantities of water used in dust suppression activities will be closely monitored to prevent excess water being used, leading to muddy water running off on haul roads and other surfaces. **Screening:** Area 2 will be screened to receptors by established trees on the boundary to the north and east. The western boundary is formed by embankment to MML. Localised palisade fencing is proposed to stop up existing public access points on the east and south boundaries. Existing fencing will also be maintained, and temporary security mesh fencing will be installed as required for security purposed. The M25 motorway separates Area 2 from the Old Parkbury Fishing Lakes LWS.	Low Control measures minimise the possibility of dust beyond the site boundary	Damage to health or nuisance (dust soiling of cars, windows)	Low

Dust						
Hazards	**Receptor**	**Pathway**	**Risk management techniques**	**Probability of exposure**	**Consequence**	**Overall risk**
			Methods of working: Dust suppression equipment is used, including a Bell B30E water tanker and fog cannon for misting to supress airborne dust and to dampen wastes. A water bowser or the Bell 30E water tanker dribble bar will be used to dampen the haul roads in Area 2. **Management:** Exposed surfaces will be inspected daily and kept dampened if required. Haul roads will be maintained such that hollows are filled regularly to prevent dust accumulation, they will be dampened in dry weather, preventing release from surfaces. A complaints handling procedure is in place. Baseline and real time monitoring will inform remedial actions, as necessary.			

Dust						
Hazards	**Receptor**	**Pathway**	**Risk management techniques**	**Probability of exposure**	**Consequence**	**Overall risk**
Particulate emissions: combustion emissions from exhausts mobile plant and equipment and generators	Local human population (in particular residents of Napsbury Park) Road users MML railway Local ecology and arboriculture (protected species on Area 2) Local wildlife sites - Arable Field SW of London Colney and Old Parkbury Fishing Lakes	Airborne dispersion	Dump trucks and mobile plant meet at least minimum regulatory standards and in most cases higher standards for emissions Low sulphur diesel is used There are no generators on the permitted site Dump trucks and mobile plant are operated in the open There is a no idling policy to limit engine run time All on site mobile plant is subject to PPM as per the manufacturer's recommendations.	Low Control measures minimise the release of airborne particulates	Damage to health	Low

Table 4: "Table 3.2" – Abatement measures

"Abatement measure" and "description / effect" taken from guidance.

Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
Preventative Measures			
Enclosure within a building	Creating a solid barrier between the source of dust and particulates and receptors is likely to be the most effective method of control, provided that the building entrances and exits are well managed.	Not applicable. No building proposed given the nature of the project and the duration.	

Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
Negative pressure extraction	Within enclosed buildings, controlled extraction can be undertaken to ensure a constant negative pressure relative to the outside air. This system should prevent the emission of particulates from any openings in the building. Extracted air should be treated through a suitable filtration system prior to discharge to atmosphere. This method is more frequently applied for odour control.	Not applicable. As no building proposed given the nature of the project and the duration.	
Dust Extraction Systems	A large variety of abatement technologies exist for the removal of dust and particulates from a flowing gas and have typically been applied to combustion plants and other sites where controlled emissions of particulates occur. These include Electrostatic Precipitators (ESPs), wet scrubbers, baghouses (bag filters), viscous media (e.g. oil) filters and gravitational settling. Although not all of these may be appropriate for dust and particulate suppression at waste management sites, and they cannot be applied to controlling external fugitive emissions, they may be effective when coupled with local exhaust extraction, ventilation or negative pressure extraction systems from enclosed buildings to remove dust and particulates from the airstream.	Not applicable. As no building proposed given the nature of the project and the duration. Nor is there a gas stream to treat.	

Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
Site / process layout in relation to receptors	Locating particulate emitting activities at a greater distance and downwind from receptors may reduce receptor exposure, provided that emissions from the source are not dispersed over significant distances.	The most sensitive receptor identified is the residential area of Napsbury Park some 250m to the north east of Area 2. Stockpiles will be located away from the north eastern boundary.	This will be in place at all times whilst Area 2 is operational. There are no circumstances in which the measure will not be used.
Site speed limit, 'no idling' policy and minimisation of vehicle movements on site	Reducing vehicle movements and idling should reduce emissions from vehicles. Procurement policy to only purchase clean burn road vehicles and non-road going mobile machinery. Enforcement of a speed limit may reduce re-suspension of particulates by vehicle wheels.	The waste will be transported within the site in maximum 60 tonne loads to be as efficient as possible. There is a speed limit of 10mph on unsealed surfaces and 15mph on sealed surfaces for all mobile plant, and vehicles (covered in site induction training for relevant staff). A no idling policy is in place (covered in site induction training for relevant staff). VFL's supplier of mobile plant adheres to a maintenance strategy and ensures the fleet will meet Stage III B emissions standard at a minimum.	These measures will be in place at all times whilst Area 2 is operational. The no idling policy and adherence to site speed limit require positive action by operatives, with site management required to monitor compliance and reinforce via daily briefings and other training activities. Persistent non-compliance is a disciplinary matter.
Minimising drop heights for waste. Use of enclosed chutes for waste drops/end of conveyor transfers and covered skips / storage vessels.	Minimising the height at which waste is handled should reduce the distance over which debris, dust and particulates could be blown and dispersed by winds. Enclosing processes will further reduce dispersion.	Operators of mobile plant (dump truck / excavator) minimise drop heights and are aware of the advantages of this, in terms of accuracy of work, and minimising dust dispersion. (covered in site induction training for relevant staff).	These measures will be in place at all times whilst Area 2 is operational. These measures require positive action by operatives, with site management required to monitor compliance and reinforce via daily briefings and other training activities. Persistent non-compliance is a disciplinary matter.
Good house-keeping	Having a consistent, regular housekeeping regime that is supported by management, will ensure site is regularly checked and issues remedied to prevent and remove dust and particulate build up.	Site surface management – preventing muddy runoff by minimising water use in dust suppression on waste, use of road sweeper. Site Environmental Daily Inspection Dust suppression systems Maintenance	These measures will be in place at all times whilst Area 2 is operational. These measures require positive action by operatives, with site management required to monitor compliance and reinforce via daily briefings and other training activities. Persistent

Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
		(See section 4)	non-compliance is a disciplinary matter.
Sheeting of vehicles	Prevents the escape of debris, dust and particulates from vehicles as they travel.	Not required. Waste will be moved from Area 1 to Area 2 on dump trucks without using public highway. Dump trucks are not sheeted.	
Hosing of vehicles on exit	May remove some dirt, dust and particulates from the lower parts of vehicles although likely to be less effective than a more powerful wheel wash.	Not required. Waste will be moved from Area 1 to Area 2 on dump trucks without using public highway.	
Ceasing operation during high winds and/or prevailing wind direction	Mobilisation of dust and particulates is likely to be greater during periods of strong winds and hence ceasing operation at these times may reduce peak pollution events.	This would be implemented.	Loading would cease if strong winds were causing dust to blow to the Area 2 boundary. Compaction and stockpile management would continue (as both serve to reduce dust emissions). Boundary misting (e.g. using fog cannon) would be implemented to counteract the effect if possible.
Installed wheel wash	Provides a high pressure wash of vehicle wheels and lower parts (including under body) using a series of jet sprays. More effective if vehicles drive through the wheel wash slowly in order that there is sufficient time for dirt to be removed.	Not required for the same reasons as hosing.	
Easy to clean concrete impermeable surfaces	Creating an easy to clean impermeable surface, using materials such as concrete as opposed to unmade (rocky or muddy) ground within the site and on site haul roads. This should reduce the amount of dust and particulate generated at ground level by vehicles and site	The nature of the activity means that certain haul road routes may change over the construction programme (2023 – 2025) and so are temporary in nature. Haul roads will not be sealed, unless as existing, where additional routes are required crushed concrete will be used.	

Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
	activities.		
Minimisation of waste storage heights and volumes on site	Minimising the height at which waste is handled should reduce the distance over which debris, dust and particulates could be blown and dispersed by winds. Reducing storage volumes should reduce the surface area over which particulates can be mobilised.	Stockpiling of waste will be minimised as far as possible as double handling is inefficient. Treated historic landfill waste may require stockpiling for three months. It will be held in stockpiles constructed to a maximum height of 5m. When loading and unloading waste minimal drop heights will be applied.	These measures will be in place at all times whilst Area 2 is operational.
Reduction in operations (waste throughput, vehicle size, operational hours)	Reducing the amount of activity on site, including no tipping, shredding, chipping or screening of high risk loads during windy weather as well as associated traffic movements should result in reduced emissions and re-suspension of dust and particulates from a site.	The quantity of waste to be moved / recovered is fixed by the design of the bunds. The construction programme has been developed to achieve the construction taking into account weather conditions through the seasons and acceptable working hours. Large capacity dump trucks will be used for more efficient diesel usage. There will therefore be no reduction in waste throughput, vehicle size or hours of operation.	
Remedial Measures			
Netting / micro netting around equipment	Erecting netting around equipment that could give rise to large amounts of dust and particulates may be effective within the site boundary and prevent their dispersion off-site / their re-suspension within the site.	No treatment of waste. Waste will be handled by mobile plant over the permitted site. The use of netting around mobile plant is considered to be impractical and will not be implemented.	

Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
On-site sweeping	Sweeping could be effective in managing larger debris, dust and particulates but may also cause the mobilisation of smaller particles. Road sweeping vehicles damp down dust and particulates whilst brushing and collecting dust and particulates from the road surface, particularly at the kerbside. This may generate dust and particulate movement that may become a Health and Safety issue if the filters and spray bars on the sweepers are not maintained.	Any access or haul routes that are hardstanding will be washed by road sweeper. Haul routes constructed of crushed concrete will be dampened down by water bowser or Bell 30E water tanker dribble bar. Noting there are none in the permitted site itself.	As required across Area 2. These measures require positive action by operatives, with site management required to monitor compliance and reinforce via daily briefings and other training activities. Persistent non-compliance is a disciplinary matter.
Site perimeter netting / micro netting	Erecting netting around the site perimeter may capture released debris and dust and particulates prior to it being dispersed off-site.	Not applicable. Area 2 is too extensive to place netting around the perimeter.	
Water suppression with hoses & water jets	Damping down of site areas using hoses can reduce dust and particulate re-suspension and may assist in the cleaning of the site if combined with sweeping.	The operator uses a fog cannon and a heavy duty hose to mist or dampen down the waste. The hose is attached to Bell 30E water tanker. It is available at all times. It is operated manually by operatives to control the water usage and application.	Implemented when required at the direction of the Works Manager/Foreman/Technically Competent Manager. These measures require positive action by operatives, with site management required to monitor compliance and reinforce via daily briefings and other training activities. Persistent non-compliance is a disciplinary matter.
Water suppression with mist sprays	Installation of mist sprays around sites, at building entrances/exits and within buildings at point source emissions like conveyors, trommels etc. It can also assist in the damping down of dust and particulates,	A misting system would be considered for use around deposit areas if other methods were ineffective.	Implemented if other measures ineffective.

Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
	therefore, reducing emissions from site.		
Water suppression with bowser	Using bowsers is a quick method of damping down large areas of the site with large water jets. This method could also be used on easy-to-clean, impermeable concrete surfaces.	A water bowser with hoses and a spray bar is available. It can be used either when waste is being deposited, to supress dust in a specific direction. Or to dampen surfaces, stockpiles, or boundaries. It is available at all times. It is filled using the hydrant access.	Implemented when required at the direction of the Works Manager/Foreman/Technically Competent Manager. These measures require positive action by operatives, with site management required to monitor compliance and reinforce via daily briefings and other training activities. Persistent non-compliance is a disciplinary matter.
Dust and particulate monitor with trigger alarm	Installation of a dust and particulate monitor with specified alarm trigger level can alert site staff when short-term particulate concentrations are elevated in order that site practices can be reviewed or application of mitigation measures increased.	See Monitoring section 5	The alert will be investigated, and remedial action taken – dependant on the source of dust.
Shaker grids	Similar to cattle grids, these are installed at a site entrance and exit. The movement of vehicles over the grids shakes dust and particulates from the wheels, thus removing them before vehicles enter the site.	Not required. Waste will be moved from Area 1 to Area 2 on dump trucks without using public highway.	
Water Cannons	Water cannons provide a means for delivery of powerful water streams from a water truck. With variable nozzles, the spray pattern can be controlled and varied between jet and fog. Typical water flows are up to 5000 litres per minute. Water cannons are most often used for fire	The Bell 30E water tanker will be fitted with water cannon that can be used when dust suppression across large areas is required.	Implemented when required at the direction of the Works Manager/Foreman/Technically Competent Manager. These measures require positive action by operatives, with site management required to monitor compliance and reinforce via daily briefings and other training activities. Persistent

Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
	protection, mining operations, heavy machinery wash down, cleaning and dust and particulate abatement.		non-compliance is a disciplinary matter.
Screening of buildings / reducing large apertures using plastic strips	Installing plastic strips to cover entrances/exits to buildings may reduce emissions of dust and particulates dispersing through doorways.	Not applicable. As no building proposed given the nature of the project and the duration.	
Application of CMA / chemical suppressant	Diluted Calcium Magnesium Acetate (CMA) or other chemical based dust suppressant is regularly applied by spraying using a back-pack applicator for small areas or by road sweeper to cover larger areas. CMA acts as a suppressant with the aim of reducing dust and particulate re-suspension and hence ambient concentrations.	VFL favours the use of Dustbuster 1 wetting agent. Binder will be used on three month plus stockpiles and over winter on partially completed bunds.	
Heavy Water	Heavy water is used to improve the compaction and stability and reduce dust and particulates on unsealed roads or areas of land. Ideally it is blended into the road construction material as the road is constructed, but where this is not possible it can be sprayed onto the top of the road. Heavy water combines fast acting wetting agents with polymer binders, to allow penetration deep into the material and to 'agglomerate' the dust and particles together.	As above	
Foam Suppression	The aggregate and mining industries frequently use foam suppression for	As above	

Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
	the control of dust and particulate emissions, mixing the foam with broken material to increase efficiency. Foaming agents can be added to increase the efficiency of dust and particulate reduction. Foam suppression has seen increased attention in recent years and has previously been applied to waste transfer facilities where crushing of waste occurs. If using foam suppression to control dust and particulates from waste drops, the foam must be entrained within the waste material and as such must be injected prior to dropping the waste rather than at the bottom of the drop.		

The section of the EA template for a DEMP – “enclosure of waste processing and storage areas”, has not been included. As it relates to waste management activities enclosed within buildings which are not proposed given the nature and duration of the activity.

4.4 Water Availability

VFL has access to 2No. mains water hydrants. Located at the site compound in Area 1. VFL has appropriate keys and standpipes to use the hydrants. Access to the hydrants is available at all times.

Additional water for dust suppression may be available from lined pond(s) installed to collect stormwater runoff from land drains. This option is currently under consideration.

In the event of a drought or water shortage, it is anticipated mains water would still be available for use on site. Water is treated as a valuable resource and is not used unwisely or unnecessarily.

In extreme circumstances, methods that reduce water usage for dust suppression, such as heavy water (wetting agent) or foam suppression could be considered. Any major restrictions to mains water supply would be discussed with the water company and the EA.

4.5 Visual Dust Monitoring

A Site Environmental Daily Checklist is in operation. A copy of the checklist is provided in the VFL bundle submitted with the EP application. The daily inspection is conducted by the Works Manager or a Foreman.

The check includes:

- The appearance of Area 2 i.e. no visible dust raising is present;
  - an inspection of site boundaries i.e. there is no damage to the boundaries, including that could lead to the release of dust. If dust is noted to be accumulating at or on the boundary, additional housekeeping, wash and dampen down will be actioned;
  - stockpiles are checked to ensure they are orderly i.e. at the correct maximum heights and locations; and
  - all areas are checked for mud and dust – clean up and wash or dampen down (of surfaces where appropriate) will be actioned if necessary.

If visible dust with the potential to reach the Area 2 boundary is detected at any time, work is paused. Mitigation measures (e.g. dampening, covering) are implemented. Additional visual dust monitoring is conducted when work is resumed.

The Works Manager/Foreman signs the sheet to confirm:

- dust levels are compliant with the DEMP at the time of inspection;
- dust and emission controls are being utilised and / or maintained;
- suitable equipment only is observed on Area 2; and
- actions required are entered on the form.

Out of hours

Normal operating hours for the wider construction site are:

- Monday to Friday 06:30 – 20:30
- Saturday 07:30 – 13:00

Out of hours, there is no routine provision for visual dust monitoring.

5. Particulate Matter Monitoring

One fixed particulate matter monitor is proposed to be located north-east of Area 2.

5.1 Monitoring Location(s)

The location of the fixed particulate monitor is shown in Figure 2. Trials are currently being undertaken on two types of particulate matter monitor. Wind speed and direction will either be monitored at the same location, or a separate weather monitor will be located at Area 2. The particulate matter monitor will be at least 2m above surrounding ground level and will not be shielded by buildings, other structures or trees.

Figure 2: Area 2 Fixed Particulate Monitoring Points

Fixed Particulate Monitoring Point

Source: Image supplied by VFL

5.2 Operation of the PM Monitoring Equipment

The equipment supplier will be responsible for the management and operation of the system, whilst VFL has access to the data and receives mobile phone texts and emails ("alerts") should action levels be breached.

A boundary action level of 190 µg/m^3 (1-hour mean) PM_{10} is proposed, with an early warning level of 170 µg/m^3 (1-hour mean) PM_{10} proposed.

The data will be reviewed weekly in order to establish if dust control measures are effective. Should the data indicate rising or increased levels over background have occurred, a review of construction and dust control activities being undertaken at each time will be conducted to see if dust management can be improved.

5.3 Quality Assurance/Quality Control and Record Keeping

VFL will make and keep records of the make, model and serial number of each monitor.

VFL Technically Competent Manager will undertake the weekly data review as above and keep records of the findings.

The equipment supplier will be responsible for the servicing of the system, in line with the manufacturers recommendations. Filter and flow checks will also be carried out in line with the manufacturer's recommendations, however, this will either be undertaken as part of the service agreement with the equipment supplier, or a member of the VFL site team will be trained to undertake this task.

The equipment will be calibrated by the supplier in line with its recommendations. The supplier will provide details of when, how and by whom the equipment was calibrated. The supplier will ensure their staff have relevant training and qualifications.

VFL will visually inspect the equipment from ground level no less frequently than once a week, records of each visual inspection will be made. VFL will report any concerns arising from the visual inspections to the equipment supplier within 24 hours. The equipment supplier will check the equipment thoroughly as part of its maintenance and calibration works. If defects are confirmed, they will be rectified within 14 days.

5.4 Reporting of Data

Quarterly monitoring reports will be prepared for SEGRO Radlett Ltd. The reports will include summary of the continuous monitoring for the period, review of near exceedances and exceedances of boundary action level and the findings of investigations into the exceedance. Comparison with the daily (24-hour) mean concentration value of 50 $\mu g/m^3$ (PM_{10}) (Air Quality objective) will be made.

Should the waste recovery EP require it, monitoring data will be submitted to the EA.

5.5 Actions Following Breach of Boundary Early Warning or Action Levels

The Site Agent and Works Manager will receive automated alerts should the early warning level or action level be breached. Should either level be breached during working hours, the Site Agent and Works Manager or their deputy on receipt of the alert will investigate. For example, the wind direction will be considered alongside the specific monitor that has alerted in order to narrow down the part of Area 2 from which the emissions are most likely to have arisen. Visual inspection will be undertaken or instructed. Dust generating activities may be paused and / or additional dust suppression measures taken. Real time data from the monitors will be observed and adjustments made until PM_{10} concentrations return below the action level. Records will be made. Should the alert be received out of hours, it will be investigated the next working day.

If the breach of the action level was or may have been attributable permitted activities, and if required by the waste recovery EP, the EA will be notified.

The sections of the EA template for a DEMP – "equipment and data management" and "additional detailed monthly reporting" have not been included. As the information sought by the template has been addressed in other parts of section 5.

6. Reporting and Complaints Response

6.1 Complaints Procedure

SEGRO Radlett Ltd will manage stakeholder engagement including the receipt of complaints. Full details of the procedures to be applied will be provided to the EA prior to permitted works commencing. It is anticipated that the project website and signage at the entrances to the Radlett SRFI Development Area will provide telephone and email contact details for use during and outside working hours. SEGRO Radlett Ltd and VFL will develop the necessary procedures to ensure that complaints are investigated and responded to in a timely manner.

The procedure will address:

- engagement with the community
- report of complaints; and
- management responsibilities.

The procedure will be appended to this document (Appendix B)

APPENDICES

A. Receptors Table

Receptors within 500m of Area 2

Receptor type	North and north-east	East and south-east	South and south-west	West and north-west
Human				
Residential properties	Rosmary Drive, Tamarix Crescent, Beningfield Drive, Goldring Way, Pegrum Drive and other properties extending beyond 500m	Beningfield Drive other properties extending beyond 500m	-	-
Commercial premises (hotels, offices, retail)	Orange Blossom (Wedding Planner),	-	Ventura Park (business park), Express Logistics, Pangaea Laboratories, The Flooring Hub, JMT Indisplay, DHL	-
Industrial premises	-	-	-	-
Public places (squares, parks, places of interest, sports and recreation)	Napsbury Park, Napsbury Pavilion (registered park and garden)	Public footpaths	Public footpaths	-
Community and health centres	-	-	-	-
Places of worship	-	-	-	-
Vulnerable populations				
Hospitals	-	-	-	-
Schools	-	-	-	-
Care homes	-	-	-	-
Other (childcare, convalescent, other medical facilities)	-	-	-	-
Infrastructure and utility				
Transport infrastructure: Roads; Main and arterial Local / residential routes	Various local roads	London Orbital Motorway (M25),	London Orbital Motorway (M25), Midland Mainline, various local roads	Midland Mainline

Receptor type	North and north-east	East and south-east	South and south-west	West and north-west
Railways				
Electricity; Cabling Pylons Substations	-	-	-	-
Gas; Above ground networks Gas holders	-	-	-	-
Generators, turbines	-	-	Parkbury Power	-
Sensitive built environment (solar panels, air conditioning systems, car parking areas)	-	-	Ventura Park (business park), Pangaea Laboratories, parking off Old Parkbury Lane	-
Water supply for human consumption	-	-	-	-
Ecology and arboriculture				
Bodies of water	Unnamed streams to north east	Unnamed stream on boundary; River Colne	Ponds / lakes to south of M25	Ponds in Area 1 (to be lost to the development)
Habitats (including trees to be retained)	Deciduous woodland	Deciduous woodland	Deciduous woodland	-
Local Wildlife Sites (LWS)	-	Including Arable Field SW of London Colney and Old Parkbury Fishing Lakes	Old Parkbury Fishing Lakes	Quarry at Former Radlett Aerodrome LWS (to be lost to the development)

B. Complaints Procedure

To be confirmed and provided to the EA prior to permitted activities commencing.

We are Waterman, where every project matters

We deliver progressive, sustainability-driven environmental and engineering consultancy services across every sector. We think differently, and we're harnessing our collective expertise to deliver greener, healthier and well-connected communities, networks and built environments.

Based in strategic locations throughout the UK and Ireland, our team of specialists is at the forefront of tackling the climate emergency and forging a path to a Net Zero built environment.

UK & Ireland Office Locations