

TWO WORK	Appendix 5 – Dust Management Plan	Reference	DMP-WLC-001
		Revision	A-00
		Creation Date	27-09-22
		Review Date	See Review Sheet



On Behalf Of

Two Work Ltd

Site Address

Wolves Lane Centre

Wolves Lane

London

Post Code

NN22 5JD

Initial Creation Date

27-09-22

Created By



Unit 48 and 49, First Floor, East Wing, Ransom Hall, Ransom Wood Business Park, Southwell Rd W, Rainworth, Mansfield NG21 0HJ

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Accepted By	Name	Signature	Date of Acceptance
Project Manager	Chris Andrews		
Site Manager			
Safety Consultant	Simon Pratt		27-09-22

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Revision and Review Record

This document is to be reviewed:

- At least once a week by the Site Manager to confirm the document still represents the works ongoing
- At least once a month by the Project Manager / Safety Consultant to confirm the document still represents the status of the site, surrounding area and intents for future works
- Where the Client, Principal Designer or other party identifies a change to the project, pre-construction information or other relevant document which requires to be included in this document.

Where a review shows that the document requires a revision, this shall be notified to the relevant document controller, the changes made, and a record made here. Revised documents must be distributed to all relevant parties for their information.

Revision	Review Date	Reason and Details	Signature (Project / Site Manager)	Signature (Safety Consultant)
Rev 01				
Rev 02				
Rev 03				
Rev 04				
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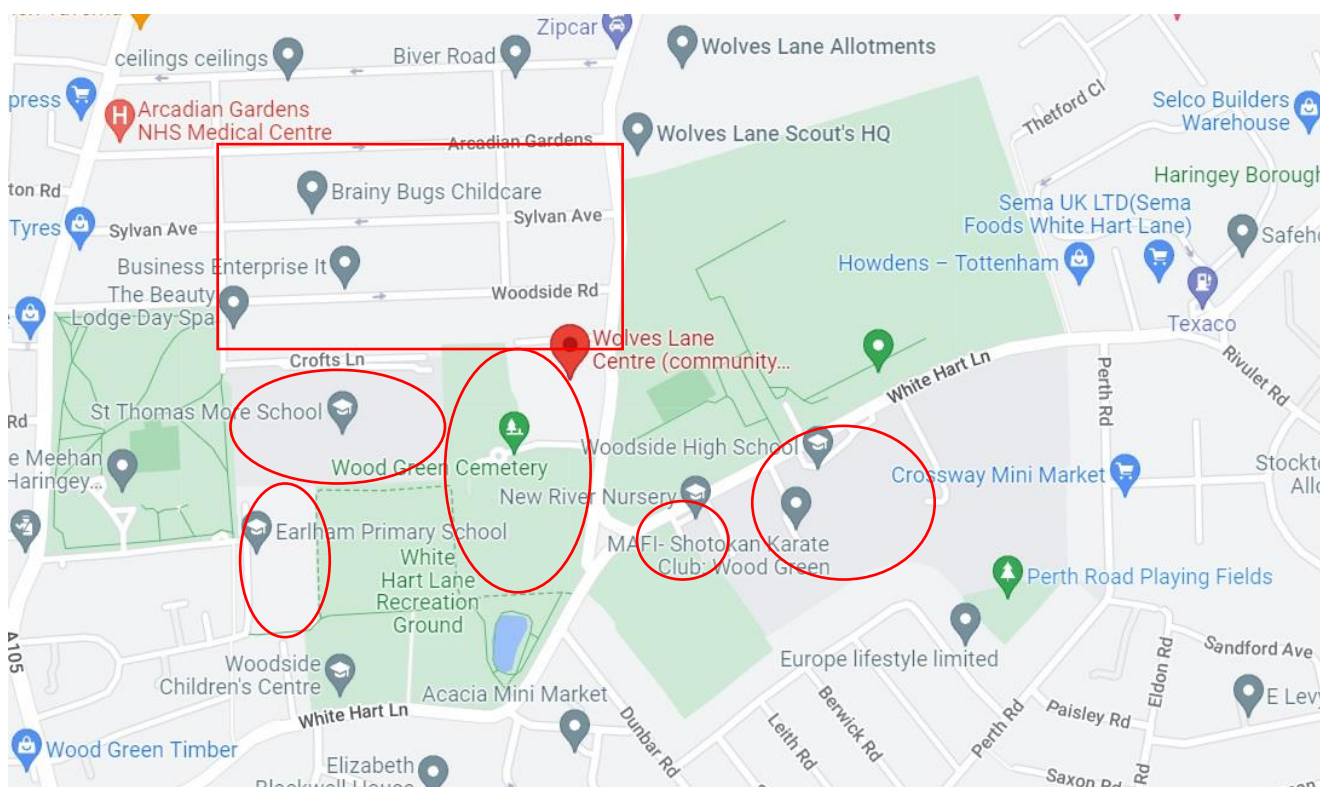
Section 1	Introduction
	It is an offence under the Environmental Protection Act 1990 (EPA) to cause nuisance to the inhabitants of the neighbourhood by generating dust. In cases where the Environment and Public Protection Service have received complaints, or has reason to believe that dust may be generated and nuisance is likely to occur, an investigation will be undertaken by Officers in accordance with the Council's policy on the investigation and assessment of dust nuisance complaints. On completion of these investigations, if nuisance is considered to be occurring due to activities on site, an Abatement Notice is likely to be served upon the contractor. To this end, this plan has been completed to identify the site requirements to mitigate dust creation on site and to deal with fugitive dusts created by the works ongoing. All contractors on site shall be required to adhere to this plan when working on site and shall be expected to factor these controls into their Risk Assessment and Method Statement (RA/MS) Packs prior to commencing works on site. This document has been prepared as part of the company Environmental Management System (EMS) and has been compiled as a result of the site's activities being located in a high risk area and has been written for and including 10 micron particulate pollution (PM10).

Section 2	Site Location, Undertakings and Expected Dust Risks
	The project consists of the demolition of existing temporary structures at the Wolves Lane Centre, a community greenhouse / garden project to allow for the construction of replacement, permanent buildings. Currently the section of the site to be redeveloped consists of three "portacabin" type temporary buildings in various states of disrepair, a blockwork annex to existing, retained greenhouses, and several timber sheds and walkways sited around areas of currently unused plant beds. An additional blockwork garage / storage building may also be added into the project at a later date. The area has significant overgrowth in some locations which may need to be removed to facilitate access and storage. The new development consists of three new structures comprising of a mix of office facilities, training / meeting rooms, and the associated welfare facilities required. These will be of sustainable timber construction predominantly with pad stone foundations. Internal works shall be of timber and board or metal and board construction. There is the potential for the installation of composting toilets but this has yet to be confirmed as several aspects of the design are in negotiation. The current scope of works consists of • Site mobilisation including temporary offices and welfare. • Making safe of the existing gas and electrical systems within the buildings • Site clearance of accumulated waste materials to facilitate access to the site • Removal of the temporary buildings (demolition with machines) • Removal of the blockwork annex building (Machine demolition with some hand demolition where the annex contacts the retained greenhouses) • Removal of supports for polytunnels (Machine demolition) • Soft strip of the working area to provide a safe working environment (Machine works) • Construction of stone pad foundations • Construction of building timber frame (Potentially to be replaced with "Nebraska style straw" construction.

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- Construction of external timber cladding and glazing (Again, potential for change)
- Construction of Roof system (material to be determined)
- Construction of internal partition walls
- First and second fix electrical works
- First and second fix mechanical works
- Joinery works including doors, Skirting, kitchens, etc.
- Finishing of internal walls (tape and joint)
- Decoration
- Ground works (Scope to be determined)
- Demobilisation of site and handover

The projected timeline from start of works is 26 weeks. Works shall be completed by Two Work employed operatives and selected external contractors.



Based on the above works, the following risks have been identified.

2.1	Demolition	Destructive operations generate significant quantities of dusts and noise with a high potential to affect surrounding properties. Dust suppression systems are to be used with all powered demolition equipment and water sprays used for all other demolition tasks where dusts may be generated.
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2.2	Ground Works	Earth moving, use of dry materials and use of heavy plant has the potential to generate dusts, especially in dry conditions. Regular damping down of ground is to be used and all plant is to be washed before leaving the site to prevent dust being tracked onto the road and turning to dust later.
2.3	Cutting Materials	Manual and powered cutting of materials, especially timbers, blocks and concrete generate large amounts of dusts. Where possible, materials shall be brought to site pre-cut for the works. Powered cutting tools on site shall be fitted with powered extraction / dust suppression systems. Cutting should be performed in an agreed location away from site boundaries.
2.4	Construction Operations	Shaping of materials, drying of materials, and similar can generate dusts internal to the building though these can become fugitive in strong winds before the building is fully enclosed. Regular removal of dusts and dry materials from inside the site is to be performed.
2.5	Waste Management	Material piles, open skips and materials piles can lead to fugitive dusts especially in dry, windy conditions. Burning of waste on site is also a high risk for dusts and ash. Skips and waste piles are to be covered where possible and damped down as necessary to minimise dust escapes. Burning of waste on site is strictly prohibited.
2.6	Idling Vehicles	Plant idling on site generates soot and fumes which have the potential to have an affect on the local surroundings. Plant shall be turned off when not in use.
2.7	Residential Properties	The surrounding properties are considered a high-risk receptor for dusts due to the high risk of complaints from the neighbours. All works shall be performed in such a way to minimise dust emissions. Regular monitoring of the site is to be performed by the management team to identify potential dust fouling before it becomes significant.

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Section 3 Sensitive Receptors and Dust Risk Assessment (DRA)

The company has carried out a review of potentially sensitive receptors using the hierarchy of hospitals, schools, childcare facilities, elderly housing, convalescent facilities, food manufacture, major infrastructure along with protected sites such as SSSIs and residential properties.

A list of the identified potentially sensitive receptors close to the site has been performed within a 500m radius which reflects the maximum potential distance PM10 could reasonably expected to be dispersed in extreme weather conditions from the site without controls measures being utilised.

The review identified several other sources of aerial emissions (dust and particulates at PM10) which have been considered such as other major construction projects in and around the local area and the presence of local roadways

The review of sensitive receptors several human receptors in the forms of residential premises, local business and schools and various ecological sensitive receptors in the form of local park spaces.

Within 50m, it has been determined that the overall risk rating is “Low” despite the presence of residential properties and commercial enterprises active and who could be exposed to PM10 and NOx over the duration of an 8-hour working shift. This is due to the low volume of works planned as per the Mayor of London guidance document.

Between 51 – 500m, the overall risk rating is set at “low” as while there are some high sensitivity receptor (schools) these are all at least 250m from the site.

Sensitive Receptors 0 – 50m from site

ID	Name	Address / Location	Type	Rating
1	Wood Green Cemetery	Wolves Ln, London N22 5DQ	Commercial / Religious	Medium
2				
3				
4				

Sensitive Receptors 51 – 500m from site

ID	Name	Address / Location	Type	Rating
1	Primary School	Earlham Primary School, Earlham Grove, London N22 5HJ	School	High
2	Secondary School	- Riverside School & Woodside School, Wood Green Inclusive Learning Campus, White Hart Lane, London N22 5QJ - St Thomas Moore School, Glendale Ave, London N22 5HN	School	High

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3	Nursery School	New River Nursery, White Hart Lane Learning Centre, White Hart Lane, London N22 5QR	School	High
4	Open Space	- White Hart Lane Recreation Ground, 59 White Hart Ln, London N22 5SJ - New River Sport Centre, White Hart Ln, London N22 5QW - Wolves Lane Allotments, Wolves Ln, London N22 5JD	Open Space	Low
5	Church	St Cuthberts Church, 85 Wolves Ln, London N22 5JD	Religious Building	Medium

Section 4

Prevailing Conditions

The wind rose identified the general prevailing wind conditions expected on the site and has been taken from the nearest weather station.

The primary wind direction (16.99% of days) is west south west, with approximately 20% of other days also being in a similar direction. This would be expected to take dusts and fumes over the cemetery areas predominantly.

Demolition is expected to be completed during autumn limiting the amount of dusts expected to be generated by initial demolition and site clear. However, due to the sensitive nature of the site, care will be taken to minimise emissions especially when services are being held

Wind Rose

Annual (5 Year Average)

99% WSW

Calm Strong

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Section 5 Roles and Responsibilities

5.1 Project Director

The Project Director is responsible for the over-arching control of the site with regards to emissions. Their duties are:

- To ensure this document is being complied with at all times during the project lifespan
- To ensure that the site manager is completing their duties on site including management of works, monitoring of emissions and completion of reports
- To ensure that all sub-contractors selected for works packages have been reviewed with regards to their emissions controls
- To ensure that all sub-contractor tendering for works are provided a copy of this document and have tendered accordingly.
- To respond to any and all complaints received by the site manager with regards to emissions from site.

5.2 Site Manager

The Site Manager, or his designated deputy, is responsible for the day-to-day management of emissions on site. Their duties are

- To ensure this document is being complied with at all times during the project lifespan
- To ensure that the Logistics / gate personnel are completing their duties on site as detailed below
- To ensure that sub-contractors are following the site requirements for emissions control including those set by this document and by their own RA/MS pack
- To ensure relevant monitoring is being completed as per the agreed schedule and that results are being reported to the relevant persons / organisations and that action items are dealt with in a timely manner
- To ensure that any and all complaints received are forwarded to the Project Director, along with any required evidence and information, to allow the complaint to be dealt with in a timely manner.

5.3 Logistics / Gate Personnel

Logistics / Gate personnel shall be responsible for

- Ensuring that plant and vehicles are parked in the correct locations in a timely manner
- That plant / vehicles are not permitted to “idle” with the engine’s running
- To inform delivery and plant operatives of the need to shut down plant which is not in use.
- To inform the management if they observe anything they consider to be detrimental to the emissions from site.

5.4 Visiting H&S Advisor

The safety advisor shall be responsible for

- Ensuring that this document is being adhered to during the life of the project
- That the above personnel are fulfilling their assigned duties
- That relevant documents and reports are being completed, distributed and actioned where required.
- That this document is updated as the project evolves.

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5.5 Sub-Contractors

All sub-contractors on site (in the person of the designated site manager / supervisor and the individual operatives present) are expected to:

- Ensure that works have been properly reviewed with regards to emissions control and that the best currently available methods have been used to reduce emissions where practicable
- That operations involving emissions of dusts, particulates, fume, etc. have been properly risk assessed and controls put in place.
- To ensure that control measures have been briefed to all personnel under their control and are being followed
- To report to the Principal Contractor's site manager should anything happen which causes emissions controls to fall below the required standard.
- To provide requested information

Section 6 Air Quality Statement

Through this document, the company intends to limit both the generation of, and emissions to atmosphere, of dusts, fumes and pollutants from all phases of construction and from plant in use on site as far as is reasonably practicable given current best practices, site limits and the experience of the contractors chosen to perform the tasks necessary for completion of the project.

During the demolition and construction phase there will be a number of activities undertaken, which have the potential to generate and/or re-suspend particulate matter, including particulate matter with an aerodynamic diameter of less than 10µm (PM10), also referred to as dust. Such activities include Site clearance and preparation, storage of materials, earthworks, laying of hard surfaces and landscaping.

Dust comprises particles typically in the size range 10-75µm in aerodynamic diameter and is created through the action of crushing and abrasive forces on materials. Due to its relatively large size, dust is usually only resident in the air for a short period of time after initial release and falls out of suspension fairly quickly. Dust is therefore unlikely to cause long-term or wide-spread changes to the air quality of the area; however, its deposition on property and cars can cause soiling and discoloration resulting in nuisance complaints from surrounding properties.

Small particles of dust are small enough to be drawn into the lungs of people during breathing, which may have adverse reactions to sensitive members of the public. As a result of the potential impacts on health objectives for PM10 have been defined in the Air Quality Strategy and Regulations. There is also the potential for Site traffic associated with the construction activities on the Site to have an effect on local pollution concentrations, in particular nitrogen dioxide (NO2) and PM10 levels.

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Section 7 Risk Assessment

Based on the area assessment, the following assessments of the various phases of works has been completed. Each local structure / area is assessed based on the sensitivity of the receptor and the amount of emissions (dust, noise, etc) expected at each phase of the project and a risk rating assigned based on the table below.

Sensitivity Rating	Example receptors
Low	Wasteland, Industrial Premises, Mines,
Medium	Parkland, Commercial Properties
High	Schools, Hospitals, Residential Properties, SSSI

Emission Rating	Example Emissions
Low	Minimal demolition, service excavations only
Medium	Internal strip out, Removal of external envelope only, single level excavation
High	Explosive / controlled demolition of whole structure, Multi-level excavations,

Sensitivity ↓	Emission →	High	Moderate	Small
High		Very High	High	Moderate
Moderate		High	Moderate	Low
Low		Moderate	Low	Negligible

Assessed Phase of Works		Demolition	
Potential Impact	Area Sensitivity	Emission Magnitude	Assessed Risk
Dust Soiling	High	Medium	Moderate
Human Impact	High	Medium	Moderate
Ecological Impact	Low	Medium	Low

Assessed Phase of Works		Ground Works	
Potential Impact	Area Sensitivity	Emission Magnitude	Assessed Risk
Dust Soiling	High	Medium	Moderate
Human Impact	High	Medium	Moderate
Ecological Impact	Low	Medium	Low

Potential Impact		Construction	
Receptor	Area Sensitivity	Emission Magnitude	Assessed Risk
Dust Soiling	High	Low	Moderate
Human Impact	High	Low	Moderate
Ecological Impact	Low	Low	Negligible

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Assessed Phase of Works		Withdrawal from site	
Receptor	Area Sensitivity	Emission Magnitude	Assessed Risk
Dust Soiling	High	Low	Moderate
Human Impact	High	Low	Moderate
Ecological Impact	Low	Low	Negligible

Section 8	Monitoring Arrangements
As the site has been classified as “Low Risk” under the guidance issued, the following monitoring has been assigned as per that guidance. Within the 50m inner zone, there are some High-risk receptors in the form of the Wood Green Cemetery and this shall be monitored Visually on a weekly basis by the site manager or his designated deputy and shall consist of walking the site boundary to monitor dust emissions and contamination in the area. A 100m radius shall be used for monitoring. The log will form part of the responses to any complaints or incidents that may occur at site. To support this manual monitoring the site manager will also maintain a log of prevailing weather conditions at least twice per day (start of shift and mid-shift) and the results included in the Daily Monitoring log form. The site shall have visual on-site monitoring performed twice daily (morning and afternoon) and a minimum of four times daily when activities with a high potential to produce dust and emissions and dust are being carried out, and during prolonged dry or windy conditions at the locations identified in and the results included in the Daily Monitoring log form A weekly off-site, 50m visual review at the sensitive receptors as identified above in by the site manager or his deputy will be undertaken to review dust deposition in the surrounding areas and the results recorded in the Daily Monitoring log form	

Section 9	Actions in the Event of Monitoring Identifying Dust Emissions
In the event of the visual monitoring identifying a level of aerial emission being generated with the potential to escape the site boundary, particularly with regard to the ecological sensitive receptors to the south and west of the site, the site foreman will inform the competent person of the occurrence. Dependent on whether the emission was significant or not will determine whether the Council needs to be notified. If the occurrence can be managed by the temporary cessation of the specified activity, then this will be the procedure to be followed at site. If the occurrence cannot be brought under control through the temporary cessation of the activity the complete operational activity will cease until the local conditions at site, such as metrological, change to enable normal operations to be carried out. The decision relative to determining the course of action to be taken will rest with the competent person.	

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Section 10 Complaints Procedure

When a complaint is received, it is to be handled as per the company complaints procedure. The Project Director be notified of the complaint and shall review the complaint and its validity.

The Site Emission Complaint Form shall be sent electronically upon request to the council.

The response time is 5 working days to all complaints unless otherwise requested by the operator.

The company notes that in the event of there being significant pollution it will advise the Council of the occurrence and any actions taken electronically.

Section 11 Minimising Plant Emissions

As part of the tendering process, this document among others, will be provided to the sub-contractors to ensure that they are aware of the requirement to minimise emissions from plant.

They shall be asked as part of the tender to confirm they are aware of the Ultra-Low Emission Vehicle Strategy (ULEVS) hierarchy for the use of on-road Ultra Low Emission Vehicles

- Electric
- Hybrid (Electric-Petrol)
- Petrol
- Hybrid (Electric-Diesel)
- Diesel (Euro VI)

Additionally, they should be tendering with regards to the requirement that all Non-road Mobile plant (NRMM) used on the site during the construction and demolition works must meet as a minimum the Stage IIIB emission criteria of Directive 97/68/EC and its subsequent amendments.

This will apply to both variable and constant speed engines for both NOx and PM.

All NRMM should be regularly serviced and service logs kept on site for inspection.

With regards to small tools and plant, these shall be selected to be battery or mains powered. Generators shall be used only where no other power source is practicable for the works.

NRMM where the power output is less than 37kW should be fitted with an after treatment device (DPF) stated on the approved list managed by the Energy Saving Trust; the ongoing conformity of plant retrofitted with suitable after treatment devices, to a defined performance standard, should be ensured through a programme of on-site checks.

Generators should be operated at 50% load and above, in order to be compliant with the present (Stage IV) emission standards for NOx, and PM. Consideration should be given to hybrid machines reducing fuel consumption by around 60% or emission free Hydrogen Fuelled generators that can offer very significant cost savings of up to 75% for loads up to 150 watts compared to conventional diesel generators (See the attached hydrogen fuel cell technologies document).