St Johns Wood Park

Dust Risk Assessment

September 2020

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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)

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Comments

Comments

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1. Introduction

1.1. An air quality assessment was submitted to accompany the planning application (2018/4763/P) for the redevelopment of land adjacent to 1 St Johns Wood Park, London, NW8 6QS (hereafter referred to as the 'Site') to provide nine residential dwellings, cycle storage, refuse storage and plant (hereafter referred to as the 'Proposed Development'). Following the submission the London Borough of Camden (LBC) made the following comment on the submitted air quality assessment (WIE15480-100-R-1-2-1. January 2019):

"It is not clear that both the emissions magnitude and sensitivity of the surrounding area has been considered according to the methodology stipulated in the SPG Control of Dust and Emissions 2014. Camden's CMP pro forma requires confirmation that the risk level has been identified, but the text above does not state the summary dust risk level. It's also crucial to calculate the risk of impacts with no mitigation measures applied, and it does not appear that this has been done.

Please could you provide an air quality (dust) risk assessment following the methodology from section 4 of the SPG above. You should end up with a table set out in the same format as the example below, which is taken from the SPG document.

TABLE 4.10 EXAMPLE OF A SUMMARY DUST RISK TABLE TO DEFINE SITE-SPECIFIC

Potential Impact	Risk			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	High Risk	High Risk	Low Risk	Medium Risk
Human Health	High Risk	Medium Risk	Low Risk	Medium Risk
Ecological	Negligible	Negligible	Negligible	Negligible

It is in the interest of all parties to ensure that the dust risk has been thoroughly assessed so that robust and proportionate mitigation measures are applied and complaints are minimised."

1.2. This report provides a Dust Risk Assessment for the Proposed Development following the methodology set out in section 4 of the Mayor of London SPG and identifies appropriate mitigation measures to be implemented at the Site.

2. Air Quality Guidance

Mayor of London: The Control of Dust and Emissions during Construction and Demolition Supplementary Planning Guidance, 2014

2.1. The Control of Dust and Emissions during Construction and Demolition SPG[1] seeks to reduce emissions of dust, PM_{10} and $PM_{2.5}$ from construction and demolition activities in London. It also aims to manage emissions of NO_x from construction and demolition plant by means of a new non-road mobile machinery Ultra-Low Emissions Zone (ULEZ). The SPG provides guidance on the implementation of London Plan Policy 7.14 'Improving Air Quality', as well as a range of policies that deal with environmental sustainability, health and quality of life.

Institute of Air Quality Management: Guidance on the Assessment of Dust from Demolition and Construction, 2014

2.2. The IAQM Construction Dust Guidance[2] provides guidance to consultants and Environmental Health Officers (EHOs) on how to assess air quality impacts from construction related activities. The guidance provides a risk based approach based on the potential dust emission magnitude of the site (small, medium or large) and the sensitivity of the area to dust impacts. The importance of professional judgement is noted throughout the guidance. The guidance recommends that once the risk class of the site has been identified, the appropriate level of mitigation measures are implemented to ensure that the construction activities have no significant impacts.

1 Mayor of London 2014 'The Control of Dust and Emissions During Construction and Demolition Supplementary Planning Guidance'
2 Institute of Air Quality Management, 2014, 'Guidance on the Assessment of dust from demolition and construction.

3. Baseline Conditions

Local Air Quality Monitoring

3.1. LBC currently undertakes air quality monitoring at four automatic monitors within the Borough. During consultation, LBC have considered the urban background automatic monitor at Bloomsbury, 4km to the south east of the Site, representative of concentrations at the Site. The monitoring results for NO_2 and PM_{10} at the Bloomsbury automatic monitor are presented in **Table 1** from 2015 to 2019.

Table 1: Measured Concentrations at the Bloomsbury Urban Background Monitor

Pollutant	Averaging Period	AQS Objective	2015	2016	2017	2018	2019
NO_2	Annual Mean (µg/m^3)	40µg/m^3	**48**	**42**	38	36	32
	1-Hour Mean (No. of Hours)	200µg/m^3 not to be exceeded more than 18 times a year	0	0	0	0	0
PM_{10}	Annual Mean (µg/m^3)	40µg/m^3	22	20	19	17	18
	24-Hour Mean (No. of Days)	50µg/m^3 not to be exceeded more than 35 times a year	6	9	6	1	9
$PM_{2.5}$	Annual Mean (µg/m3)	25µg/m^3	11	12	13	10	11

Note Data taken from the London Borough of Camden Air Quality Annual Status Report for 2019, July 2020

3.1. The data in **Table 1** shows the annual mean NO_2 AQS objective of 40µg/m^3 was exceeded in 2015 and 2016 but has been below the annual mean NO_2 AQS objective since 2017 and there has been a downward trend in concentrations between 2015 to 2019. The NO_2 1-hour mean objective and the PM_{10} and $PM_{2.5}$ objectives were met in all years.

Defra Air Quality Background Maps

3.2. In addition to the monitoring undertaken by LBC, background concentrations of NO_x, NO_2, PM_{10} and $PM_{2.5}$ are available from the Defra Air Quality Archive for 1x1km grid squares for assessment years between 2018 and 2030. **Table 2** presents the Defra background concentrations for the year 2019 for the grid square the Site is located within (526500, 184500).

Table 2: Defra Background Maps in 2019 for the Grid Square at the Location of the Site

Pollutant	Annual Mean Concentration (µg/m^3)	AQS Objective
NO_x	48.7	-
NO_2	30.3	40µg/m^3
PM_{10}	19.2	40µg/m^3
$PM_{2.5}$	12.3	25µg/m^3

Notes Data Source: http://uk-air.defra.gov.uk

3.3. The data in **Table 2** shows that all pollutants are below the respective AQS objectives. The Defra background map annual mean NO_2 concentration (of 30.3µg/m^3) is lower than the 2019 monitored concentration at the Bloomsbury automatic monitor (of 32µg/m^3). The Defra background map for annual mean PM_{10} (19.2µg/m^3) and $PM_{2.5}$ (12.3µg/m^3) concentrations are greater than the concentrations at the Bloomsbury automatic monitor (PM_{10}: 18µg/m^3; and $PM_{2.5}$: 11µg/m^3).

London Atmospheric Emissions Inventory

3.4. The London Atmospheric Emissions Inventory (LAEI) and associated pollution maps, produced by the GLA, provide detailed estimates of pollution levels London-wide for select years. The maps for the latest predicted year is 2020 and the pollutant concentrations at the Site (grid reference as 526500,184000) are shown below in **Table 3**.

Table 3: LAEI Maps in 2020 for the Grid Square at the Location of the Site

Pollutant	Annual Mean Concentration (µg/m^3)	AQS Objective
NO_x	59.6	
NO_2	35.6	40µg/m^3
PM_{10}	24.3	40µg/m^3
$PM_{2.5}$	15.0	25µg/m^3

Notes Data Source: https://data.london.gov.uk/dataset?q=laei

3.5. The data in **Table 3** shows that all pollutants are below the respective AQS objectives. The LAEI concentrations are greater than both the Defra background maps and the Bloomsbury automatic monitor.

4. Dust Risk Assessment

Assessment Methodology

4.1. The assessment of effects of dust emissions from the construction phase has been based on the Mayor's 'The Control of Dust and Emissions during Construction and Demolition SPG', which takes account of the guidance published by the IAQM.

4.2. The approach to the assessment includes:

- consideration of planned construction activities and their phasing; and
- a review of the sensitive uses in the area immediately surrounding the Site in relation to their distance from the Site.

4.3. The SPG identifies receptors sensitive to emissions and nuisance dust from construction activities are existing and proposed receptors within 350m of the boundary of the Site, and within 50m of construction routes. **Figure 1** shows the area surrounding the Site, where sensitive receptors could be affected, considering the SPG. The SPG presents a method for assessing the sensitivity of the area surrounding the Site rather than at individual receptor locations.

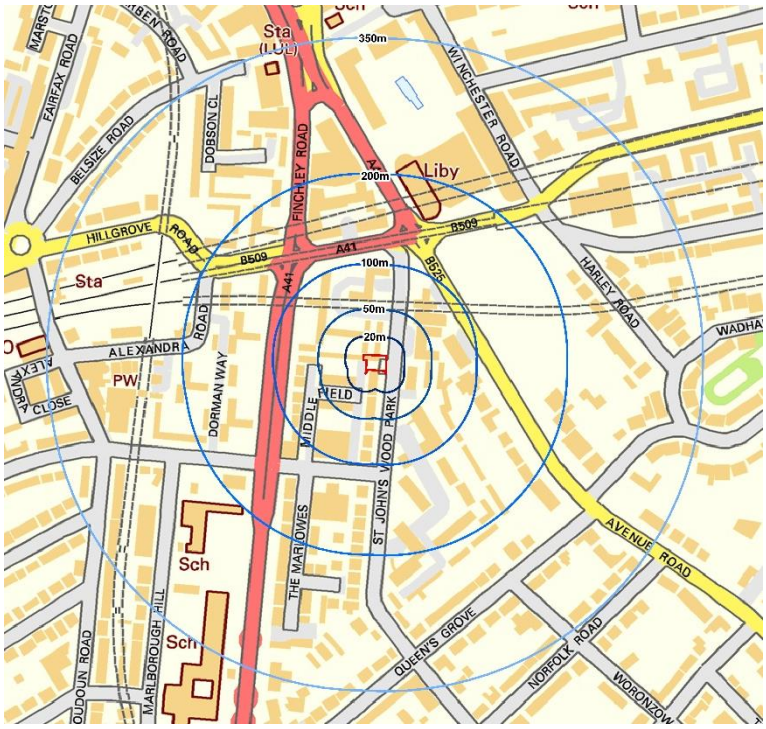

Figure 1: Construction Phase Assessment Bands

4.4. Following the Mayor's SPG, construction activities can be divided into the following four distinct activities:

- Demolition – any activity involved in the removal of an existing building;
- Earthworks – the excavation, haulage, tipping and stockpiling of material, but may also involve levelling the site and landscaping;
- Construction – any activity involved with the provision of a new structure; and
- Trackout – the movement of vehicles from unpaved ground on a site, where they can accumulate mud and dirt, onto the public road network where dust might be deposited.

4.5. The Mayor's SPG considers three separate dust effects, with the proximity of sensitive receptors being taken into consideration for:

- annoyance due to dust soiling;
- potential effects on human health due to significant increase in exposure to PM_{10}; and
- harm to ecological receptors.

4.6. To determine the risk of the construction phase, the following process, as set out in **Table 4**, has been undertaken.

Table 4: Summary of the Mayor's SPG for Undertaking a Construction Dust Assessment

Step		Description
1	Screen the Need for a Detailed Assessment	Simple distance-based criteria are used to determine the requirement for a detailed dust assessment. An assessment will normally be required where there are 'human receptors' within 50m of the boundary of the site and / or within 50m of the route(s) used by construction vehicles on public highway, up to 500m from the site entrance or 'ecological receptors' within 50m of the boundary of the site and/or within 50m of the route(s) used by construction vehicles on public highway, up to 500m from the site entrance.
2	Assess the Risk of Dust Impacts	The risk of dust arising in sufficient quantities to cause annoyance and/or health or ecological effects should be determined using four risk categories: negligible, low, medium and high based on the following factors: • the scale and nature of the works, which determines the risk of dust arising (i.e. the magnitude of potential dust emissions) classed as small, medium or large; and • the sensitivity of the area to dust effects, considered separately for ecological and human receptors (i.e. the potential for effects) defined as low, medium or high. Provide a map of nearest receptors.
2a	Define the potential Dust Emission Magnitude	Classify the magnitude of the likely risk as small, medium or large for the four activities.
2b	Define the Sensitivity of the Areas	Define the sensitivity of receptors as High, Medium or Low. Define sensitivity of people to Dust Soiling Effects and define the sensitivities of people to the health effects of PM_{10}.
2c	Define the Risk of Impacts	Combine the magnitude (as detailed in 2a) and the sensitivity (in 2b) to determine the risk of impacts with no mitigation applied. Summaries the risk of dusts impacts for the four activities in a table

4.7. Following the above air quality dust risk assessment, appropriate dust and pollution measures are provided to ensure the air quality impacts of construction are minimised and any mitigation measures employed are effective.

4.8. The potential impacts and effects of construction activities on local air quality were based on professional judgement and with reference to the criteria set out in the Mayor's SPG guidance. This includes an assessment of the risk of dust effects arising from the likely construction activities, based on the magnitude of potential dust emissions and the sensitivity of the area.

Determining Significance of Effects

4.9. The significance of the effects of construction vehicle exhaust emissions on air quality is based on professional judgement. Details of the assessor's experience and competence to undertake the dust assessment is provided in **Appendix A**.

4.10. Appropriate site-specific mitigation measures that would need to be implemented to minimise any adverse effect have also been considered.

4.11. **Table 5** provides examples of the potential dust emissions classes for each of the construction activities, as provided in the SPG on the assessment of construction dust. It should be noted that not all the criteria need to be met for a particular class.

Table 5: Criteria for the Potential Dust Emissions Class

Activity	Class	Example Criteria
Demolition	Large	Total Building volume >50,000m^3, potentially dusty construction material (e.g. concrete), on site crushing and screening, demolition activities >20m above ground level.
	Medium	Total Building volume 20,000-50,000m^3, potentially dusty construction material, demolition activities 10-20m above ground level.
	Small	Total Building volume <20,000m^3, construction material with low potential for dust release (e.g. metal cladding or timber), demolition activities <10m above ground, demolition during wetter months.
Earthworks	Large	Total site area >10,000m^2, potentially dusty soil type (e.g. clay which will be prone to suspension when dry due to small particle size), >10 heavy earth moving vehicles active at any one time, formation of stockpile enclosures >8m in height, total material moved >100,000 tonnes.
	Medium	Total site area 2,500m^2 - 10,000m^2, moderately dusty soil type (e.g. silt), 5-10 heavy earth moving vehicles active at any one time, formation of stockpile enclosures 4m-8m in height, total material moved 20,000 tonnes – 100,000 tonnes (where known).
	Small	Total site area <2,500m^2, soil type with large grain size (e.g. sand), <5 heavy earth moving vehicles active at any one time, formation of stockpile enclosures <4m in height, total material moved <10,000 tonnes, earthworks during wetter months.
Construction	Large	Total Building volume >100,000m^3, piling, on site concrete batching, sand blasting.
	Medium	Total building volume 25,000 m^3 - 100,000m^3, potentially dusty construction material (e.g. concrete), on site concrete batching.
	Small	Total building volume <25,000m^3, construction material with low potential for dust release (e.g. metal cladding or timber).
Trackout	Large	>50 HDV (>3.5t) outward movements in any one day, potentially dusty surface material (e.g. high clay/silt content), unpaved road length >100m.
	Medium	10-50 HDV (>3.5t) trips in any one day, moderately dusty surface material (e.g. high clay content), unpaved road length 50-100m (high clay content).
	Small	<10 HDV (>3.5t) trips in any one day, surface material low potential for dust release, unpaved road length <50m.

4.12. Once the potential dust emissions class has been defined, the significance of the likely dust impacts can be determined. The assessment of the risk of dust effects arising from each of the construction activities, as identified by the SPG, is based on the magnitude of potential dust emissions and the sensitivity of the area. Examples of the magnitude of potential dust emissions for each construction activity and factors defining the sensitivity of an area are provided in **Table 6**.

Table 6: Examples of Factors Defining Sensitivity of the Area

Type of Effect	Sensitivity of Receptor	Examples
Sensitivities of People to Dust Soiling Effects	High	Users can reasonably expect a enjoyment of a high level of amenity; or The appearance, aesthetics or value of their property would be diminished by soiling; and the people or property would reasonably be expected[1] to be present continuously, or at least regularly for extended periods, as part of the normal pattern of use of the land. Indicative examples include dwellings, museums and other culturally important collections, medium and long-term car parks[2] and car showrooms.
	Medium	Users would expect[1] to enjoy a reasonable level of amenity, but would not reasonably expect to enjoy the same level of amenity as in their home; or The appearance, aesthetics or value of their property could be diminished by soiling; or The people or property wouldn't reasonably be expected[1] to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land. Indicative examples include parks and places of work.
	Low	The enjoyment of amenity would not reasonably be expected[1]; or property would not reasonably be expected[1] to be diminished in appearance, aesthetics or value by soiling; or There is transient exposure, where the people or property would reasonably be expected to be present only for limited periods of time as part of the normal pattern of use of the land. Indicative examples include playing fields, farmland (unless commercially-sensitive horticultural), footpaths, short term car parks[2] and roads.
Sensitivities of People to Health Effects of PM_{10}	High	Locations where members of the public are exposed over a time period relevant to the air quality objective for PM_{10} (in the case of the 24-hour objectives, relevant location would be one where individuals may be exposed for eight hours or more in a day).[3] Indicative examples include residential properties. Hospitals, schools and residential care homes should also be considered as having equal sensitivity to residential areas for the purposes of this assessment.
	Medium	Locations where the people exposed are workers[4], and exposure is over a time period relevant to the air quality objective for PM_{10} (in the case of the 24-hour objectives, a relevant location would be one where individuals may be exposed for eight hours or more in a day). Indicative examples include office and shop workers, but will generally not include workers occupationally exposed to PM_{10}, as protection is covered by Health and Safety at Work legislation.
	Low	Locations where human exposure is transient.[5] Indicative examples include public footpaths, playing fields, parks and shopping streets.
Sensitivities of Receptors to Ecological Effects	High	Locations with an international or national designation and the designated features may be affected by dust soiling; or Locations where there is a community of a particularly dust sensitive species such as vascular species included in the Red Data List for Great Britain[6] Indicative examples include a Special Area of Conservation (SAC) designated for acid heathlands or a local site designated for lichens adjacent to the demolition of a large site containing concrete (alkali) buildings.

Type of Effect	Sensitivity of Receptor	Examples
	Medium	Locations where there is a particularly important plant species, where its dust sensitivity is uncertain or unknown; or Locations with a national designation where the features may be affected by dust deposition. Indicative example is a Site of Special Scientific Interest (SSSI) with dust sensitive features.
	Low	Locations with a local designation where the features may be affected by dust deposition. Indicative example is a local Nature Reserve with dust sensitive features.

1 People's expectations will vary depending on the existing dust deposition in the area.

2 Car parks can have a range of sensitivities depending on the duration and frequency that people would be expected to park their cars there, and the level of amenity they could reasonably expect whilst doing so. Car parks associated with work place or residential parking might have a high level of sensitivity compared to car parks used less frequently and for shorter durations, such as those associated with shopping. Cases should be examined on their own merits.

3 This follows Defra guidance as set out in LAQM.TG(16).

4 Notwithstanding the fact that the air quality objectives and limit values do not apply to people in the workplace, such people can be affected to exposure of PM_{10}. However, they are considered to be less sensitive than the general public as a whole because those most sensitive to the effects of air pollution, such as young children are not normally workers. For this reason workers have been included in the medium sensitivity category.

5 There are no standards that apply to short-term exposure, e.g. one or two hours, but there is still a risk of health impacts, albeit less certain.

6 Cheffing C. M. & Farrell L. (Editors) (2005), The Vascular Plant. Red Data List for Great Britain, Joint Nature Conservation Committee.

4.13. **Table 7**, **Table 8** and **Table 9** show how the sensitivity of the area may be determined for effects related to dust soiling (nuisance), human health and ecosystem respectively. When using these tables, it should be noted that distances are to the dust source and so a different area may be affected by the on-site works than by trackout (i.e. along the routes used to access the site). The IAQM guidance advises that the highest level of sensitivity from each table should be recorded.

Table 7: Sensitivity of the Area to Dust Soiling Effects on People and Property

Receptor Sensitivity	Number of Receptors	Distance from the Source (m)			
		<20	<50	<100	<350
High	>100	High	High	Medium	Low
	10-100	High	Medium	Low	Low
	1-10	Medium	Low	Low	Low
Medium	>1	Medium	Low	Low	Low
Low	>1	Low	Low	Low	Low

Table 8: Sensitivity of the Area to Human Health Impacts

Receptor Sensitivity	Annual Mean PM_{10} Concentration	Number of Receptors	Distance from the Source (m)				
			<20	<50	<100	<200	<350
High	>32µg/m^3	>100	High	High	High	Medium	Low
		10-100	High	High	Medium	Low	Low
		1-10	High	Medium	Low	Low	Low
	28-32µg/m^3	>100	High	High	Medium	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	High	Medium	Low	Low	Low
	24-28µg/m^3	>100	High	Medium	Low	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	Medium	Low	Low	Low	Low
	<24µg/m^3	>100	Medium	Low	Low	Low	Low
		10-100	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
Medium	-	>10	High	Medium	Low	Low	Low
	-	1-10	Medium	Low	Low	Low	Low
Low	-	>1	Low	Low	Low	Low	Low

Table 9: Sensitivity of the Area to Ecological Impacts

Receptor Sensitivity	Distance from the Source (m)	
	<20	<50
High	High	Medium
Medium	Medium	Low
Low	Low	Low

4.14. As previously mentioned, the assessment of the risk of dust effects from each of the construction activities, is based on the magnitude of potential dust emissions and the sensitivity of the area. Once these have been determined, the risk of the dust effects can be assessed.

4.15. The risk category matrix for each of the construction activity types, taken from the SPG, are presented in **Table 10** to **Table 13**.

Table 10: Risk Category from Demolition Activities

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Medium Risk
Medium	High Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

Table 11: Risk Category from Earthworks Activities

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

Table 12: Risk Category from Construction Activities

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

Table 13: Risk Category from Trackout Activities

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Low Risk	Negligible
Low	Low Risk	Low Risk	Negligible

4.16. The risk category determined for each of the construction activity types is used to define the appropriate, site specific, mitigation measures that should be applied. The IAQM guidance recommends that significance is only assigned to the effect after considering mitigation and assumes that all actions to avoid or reduce the environmental effects are an inherent part of the proposed development, and that in the case of construction mitigation (secured through planning conditions, legal requirements or required by regulations), this will ensure that potential significant adverse effects will not occur.

Construction Effects

Dust Emissions

Site Evaluation / Screen the Need

4.17. The nearest residential properties are located within 20m of the Site, located on Middlefield and St John's Wood Park. There are no ecological receptors within the vicinity of the Site and therefore ecological impacts have not been considered further. The Construction Phase Assessment Bands are presented in **Figure 1**. In accordance with **Table 5**, the assessment will proceed to detailed assessment.

Potential Dust Emission Magnitude

4.18. The risk of dust impacts from the demolition and construction phase has been considered based upon the magnitude of works as detailed in the SPG. This includes:

- Demolition - The estimate for the total volume of building to be demolished 27m^3. Based on this and considering the criteria in **Table 6**, the potential dust emissions during demolition activities would be of **small** magnitude.
- Earthworks - Given the area of the Site (370m^2), it is estimated that there would be less than five heavy earth moving vehicles active at any one time and the total material to be excavated is 3,000 tonnes. Based on this and considering the criteria in **Table 6**, the potential dust emissions during earthworks activities would be of **small** magnitude.
- Construction - It is estimated the total volume of building to be constructed would be less than 25,000m^3 and there will be no on-site concrete batching or sandblasting. Based on the criteria in **Table 6**, the potential dust emissions during construction activities would be of **small** magnitude.
- Trackout – Given the surrounding site location and the size of the Site it is estimated that the number of HDV trips leaving the Site would be less than 10 HDV outward movements in any one day. Based on this and considering the criteria in **Table 6**, the potential for dust emissions due to trackout activities would be of **small** magnitude.

Sensitivity of the Area

4.19. As detailed in the SPG the sensitivity of the area has taken account of the following factors:

- The specific sensitivities of receptors in the area;
- The proximity and number of those receptors;
- The local background PM_{10} concentration; and
- Site-specific factors, such as whether there are trees or other vegetation to reduce the risk of wind-blown dust.

Sensitivity of the Area to Dust and Soiling Effects on People and Property

4.20. As discussed above, the nearest residential properties are located within 20m of the Site, located on Middlefield and St John's Wood Park. Based on **Table 8**, given that there are 1-10 high sensitivity receptors within 20m, it is considered the area has a **medium** sensitivity to dust and soiling effects on people and property.

Sensitivity of the Area to Human Health Impacts

4.21. As shown in **Table 4**, the LAEI annual mean PM_{10} concentration in 2020 is 243 µg/m^3. This is below the annual mean AQS objective for PM_{10} of 40ug/m^3.

4.22. Based on **Table 9**, given that there are estimated to be 1-10 high sensitive receptors within 20m, it is considered the area could be of **medium** sensitivity to human health impacts.

Dust Risk Summary

4.23. Based on the dust emissions magnitude and taking account of the sensitivity of the area, the overall risk impacts have been identified and presented in **Table 14**. This is based on the matrices set out in **Tables 10** to **13**. The predicted impacts are prior to, and do not take account of, mitigation applied.

Table 14: Summary of Dust Risk

Potential Impact	Risk			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Low Risk	Low Risk	Low Risk	Negligible
Human Health	Low Risk	Low Risk	Low Risk	Negligible
Ecological	Negligible	Negligible	Negligible	Negligible

4.24. The Site is considered **low risk**, consequently, mitigation would be required to ensure that adverse impacts are minimised, reduced and, where possible, eliminated.

5. Construction Mitigation Measures and Residual Effects

Construction Dust

5.1. The Site is a low-risk site in relation to nuisance dust emissions (referred to earlier in this Report), and therefore a range of environmental management controls would be developed with reference to the SPG. The management controls would prevent the release of dust entering the atmosphere and / or being deposited on nearby receptors and would be included within a Construction Environmental Management Plan. The management controls would include:

Table 15: Relevant Mitigation Measures

Site Management
Display the name and contact details of person(s) accountable for air quality pollutant emissions and dust issues on the site boundary.
Display the head or regional office contact information.
Record and respond to all dust and air quality pollutant emissions complaints.
Make a complaints log available to the local authority when asked.
Carry out regular site inspections to monitor compliance with air quality and dust control procedures, record inspection results, and make an inspection log available to the local authority when asked.
Increase the frequency of site inspections by those accountable for dust and air quality pollutant emissions issues when activities with a high potential to produce dust and emissions and dust are being carried out, and during prolonged dry or windy conditions.
Record any exceptional incidents that cause dust and air quality pollutant emissions, either on or off the site, and the action taken to resolve the situation is recorded in the logbook.
Preparing and Maintaining the Site
Plan site layout: machinery and dust causing activities should be located away from receptors.
Erect solid screens or barriers around dust activities or the site boundary that are, at least, as high as any stockpiles on site.
Avoid site runoff of water or mud.
Operating Vehicle/Machinery and Sustainable Travel
Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone.
Ensure all non-road mobile machinery (NRMM) comply with the standards set within this guidance.
Ensure all vehicles switch off engines when stationary – no idling vehicles.
Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where possible.
Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing).
Operations
Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.
Ensure an adequate water supply on the site for effective dust/particulate matter mitigation (using recycled water where possible).
Use enclosed chutes, conveyors and covered skips.
Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
Waste Management
Reuse and recycle waste to reduce dust from waste materials

Avoid bonfires and burning of waste materials.
Demolition
Ensure water suppression is used during demolition operations.
Avoid explosive blasting, using appropriate manual or mechanical alternatives.
Bag and remove any biological debris or damp down such material before demolition.
Construction
Avoid scabbling (roughening of concrete surfaces) if possible
Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place
Trackout
Regularly use a water-assisted dust sweeper on the access and local roads, as necessary, to remove any material tracked out of the site.
Avoid dry sweeping of large areas.
Ensure vehicles entering and leaving sites are securely covered to prevent escape of materials during transport.

5.2. Such measures are routinely and successfully applied to construction projects throughout the UK and are proven to reduce significantly the potential for adverse nuisance dust effects associated with the various stages of construction work. Taking account of the mitigation measures, the likely residual effect of nuisance dust is **not significant**.

6. Summary and Conclusions

6.1. A Dust Risk Assessment has been carried out following the methodology from section 4 of the Mayors SPG and identifies a range of mitigation measures to be implemented at the Site. The implementation of appropriate site management practices to control dust emissions would significantly reduce the potential for adverse nuisance dust effects associated with the various stages of the works. It is considered that likely residual impacts and effects due to fugitive emissions would be **not significant**.

APPENDICES

Appendix A Assessor Experience

Name: Christopher Brownlie

Years of Experience: 13

Qualifications:

- BSc (Hons)
- MSc
- MIAQM (Member of the Institute of Air Quality Management)

Chris has over 13 years of experience in the assessment of air quality and odour for a variety of environmental impact assessment projects. Chris has knowledge and extensive experience of designing and undertaking ambient air quality monitoring programmes using real time equipment and passive diffusion tubes. This includes devising monitoring programs for dust deposition, typically to monitor levels of dust generated during construction activities in populated areas where there is the potential for nuisance to be caused.

Chris has been responsible for the technical delivery of a wide range of air quality projects for a variety of clients in both the public and private sector. These projects include consideration of emissions from both transportation and industrial sources, through both monitoring and modelling, and therefore he has an in depth understanding of the regulatory requirements for these sources and the published technical guidance for their assessment.

UK and Ireland Office Locations