

1-6 Crescent Mews
N22 7GG

Air Quality and Dust
Management Plan

August 2023



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DOCUMENT CONTROL SHEET		DISCLAIMER
Report Reference	CE1965/CM/AQDMP/202308-RT	The information contained within this Report is based on Drawings and Specifications provided by the Design Team along with information assumed by NRG Consulting for the purposes of compliance. Any budget costs or plant sizing contained within are based upon the best available information, are to be taken as an estimation and guideline only. NRG Consulting disclaims any responsibility to the Client and others in respect of any matters outside the intended scope of this report.
Issue Purpose	Planning Condition 14	
Report Prepared For:	X Construct Ltd	
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Approved By	Paul Canessa	
Date of Issue	9 th August 2023	

1. INTRODUCTION

NRG Consulting have been commissioned to undertake an Air Quality and Dust Management Plan (AQDMP) by X Construct Ltd for the redevelopment at 1-6 Crescent Mews, London, N22 7GG.

The description of development is:

“demolition of the existing buildings, retention of slab level, perimeter wall along the northern boundary of site, and wall adjacent to Dagmar Road gardens, and redevelopment of the site to provide two 3 storey blocks fronting Crescent Mews, a 1 storey block adjacent to Dagmar Road and a 4-storey building to the rear comprising 30 residential units (Use Class C3)

This report has been written to address Planning Condition 14 (ref: HGY/2019/1183) which states:

No works shall be carried out on the site until a detailed Air Quality and Dust Management Plan (AQDMP) detailing the management of demolition and construction dust, has been submitted and approved by the LPA (the plan shall be in accordance with the GLA SPG Dust and Emissions Control and shall also include a Dust Risk Assessment). The development shall be carried out in accordance with the approved plan.

Reason: To comply with Policy 7.14 of the London Plan and to safeguard the amenities of the area.

Construction activities have the potential to cause dust nuisance and health impacts if appropriate mitigation measures are not applied. The GLA has released Supplementary Planning Guidance on the Control of Dust and Emissions from Construction and Demolition (GLA, 2014). The SPG outlines a risk assessment approach for construction dust assessments and helps determine the mitigation measures that will need to be applied. This report describes the potential risk of dust impacts associated with construction activities required as part of the proposed development.

To ensure that this document remains relevant, adequate and effective as the works progress, this document will be reviewed and updated as necessary:

- Every 3 months (minimum).
- As instructed by the Project Manager.
- Following any changes to the scope of the works that have had an impact on environmental requirements.

Key Personnel

Contact Details for Main Contractor	
Name	Dan Fitzgerald
Position	Project Manager
Telephone Number	020 8106 5598
Email	Dan.Fitzgerald@xconstruct.co.uk

2. SITE ASSESSMENT AND DETAILS

2.1. Site Details

The site, illustrated below, is located at 1-6 Crescent Mews, N22 7GG. It is currently a commercial cul-de-sac to the rear of Crescent Road, some 450m to the northwest of Alexandra Palace railway station. The site is roughly triangular in shape and bound to the north by the railway line. To the south the site is bound by residential and small commercial units fronting Crescent Road and Palace Gates Road, and to the west by residential units fronting Dagmar Road.



Sensitive Receptors

Sensitivity receptors refer to locations where members of the public are expected to experience negative impacts due to changes in air quality or dust accumulation resulting from the proposed development. High sensitivity receptors typically encompass residential properties, schools, hospitals, and other similar facilities. Meanwhile, medium and low sensitivity receptors encompass workplaces and amenity areas, such as parks, respectively. The consideration of these receptors also depends on their proximity to the site.

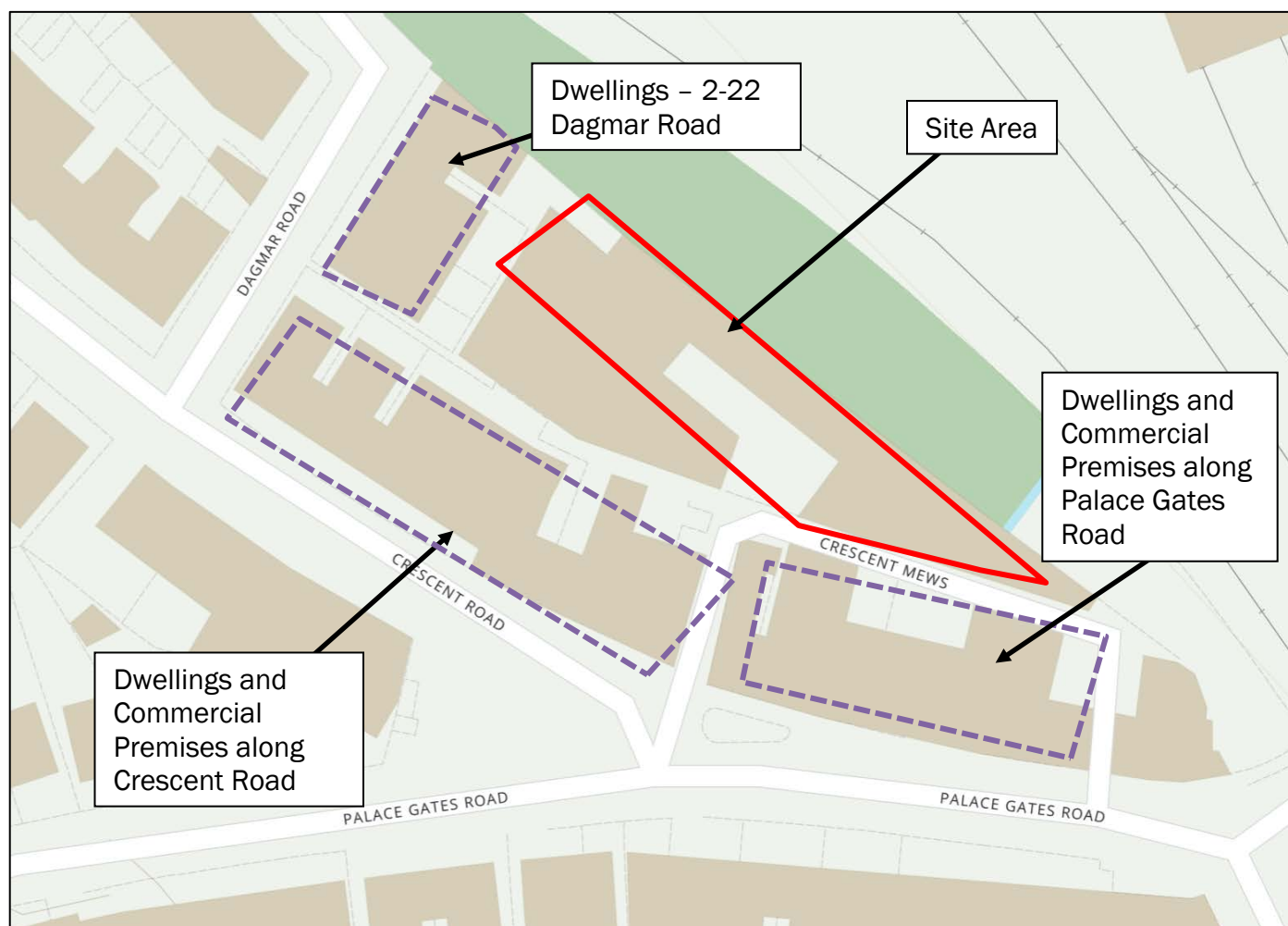
Off-Site Sensitive Receptors

The closest sensitive receptors immediately adjacent to the site are shown below. Particularly sensitive receptors are:

- Residential properties (Upper Floors) and Commercial properties (Class E) (Ground Floor) at Crescent Road
- Residential properties (Upper Floors) and Commercial properties (Class E) (Ground Floor) at Palace Gates Road
- 2-22 Dagmar Road

Sensitive Receptors Locations

Below shows the location and boundary of the proposed site, as well as the location of an adjacent sensitive receptors relative to the site location:



2.2. Construction Programme

Construction Stage	Start Date	End Date
Site set-up and Demolition	Oct-2023	Jan-2024
Basement Excavation and Piling	Jan-2024	Mar-2024
Sub-Structure	Mar-2024	Jun-2024
Superstructure	Jun-2024	Jan-2025
Cladding	Jan-2025	Mar-2025
Fit-out, Testing and Commissioning	Jan-2025	Mar-2025

Proposed Development Works Scope

Activity Stage	Scope of Works at each Stage of Construction
Demolition	Complete demolition of the existing vacant building (s)
	Site clearance
Earthworks	The total site area is approximately 2,300 m ²
	Maximum number of 2 earth moving vehicles on site at each time
	No bunds
	Works to take place in Spring
Construction	Construction duration is circa 18 months
	The estimated building volume is 20,000–50,000m ³
	Traditional build including Brick, Glass, Steel
	No on-site concrete batching
Trackout	Maximum of 2-3 vehicles visiting site during any one-day at height of development

Hours of Site Operation

Deliveries to site will be restricted between the hours of:

- 8:00am – 6:00pm Monday to Fridays;
- 8:00am – 1:00pm Saturdays;
- No activities on Sundays or bank holidays

Peak times shall be avoided wherever possible.

It is not anticipated that out of hours deliveries will be required but if this becomes unavoidable, details will be provided and times and dates agreed with the local authority in advance.

Roles and Responsibilities

The Site Manager, alongside the Project Manager will be responsible for dust management and control on the development.

Role	Responsibilities
Site Manager	Ensure that the mitigation & monitoring requirements are carried out during works on site
	Ensure that staff are aware of the requirements of the AQDMP including training sessions.
	Undertake and record dust inspections of the site as required by the AQDMP
	Ensure that site documentation (inc. method statements and risk assessments) include dust mitigation
	Act on complaints and dust alerts as detailed in the AQDMP
	Maintain up-to-date site log of air quality events and complaints
	Investigate the cause of air quality events and apply additional mitigation are required
	Act as the key point of contact for queries and complaints regarding air quality emissions from site.
Site Manager Details	TBC
All Site Personnel	Carry out the works in line with the AQDMP requirements
	Report observations of dust events or deviations from the DMP procedures
	Attend environmental management training

Community Liaison

X Construct will designate a responsible individual as the Site Community Liaison Officer, whose name and contact details will be prominently displayed at all site entrances. The Liaison Officer will maintain regular communication with site neighbours and relevant stakeholders, aiming to inform them about upcoming construction activities and foster positive relationships.

The responsibilities of the Community Liaison Officer will include:

- Recording and addressing inquiries or complaints from the local community.
- Communicating with the local community to provide information about the nature of the construction work.
- Sharing the construction program with the local community, highlighting any activities that may result in complaints, such as dusty operations.
- Updating the local community regarding any changes in the nature or schedule of the works, as necessary.
- Establishing and nurturing good relationships with local stakeholder groups.
- Neighbouring properties situated within a minimum distance of 25 meters from the site boundary will receive advance notice of the proposed construction program and regular updates on any changes. They will be specifically informed about activities that could potentially cause nuisances or generate complaints.

Complaints Procedure

If any complaints are received, they will be investigated by the Site Manager. The Site Manager will document the complaint, determine its cause, implement appropriate measures to promptly reduce emissions, and record the actions taken in the dust complaint form. Within 24 hours, the completed form will be sent via email to the LBH Environmental Management team at pollution@haringey.gov.uk.

As part of the communication programme, the Site Manager will inform stakeholders about the complaint procedure. The complaints procedure must meet the following requirements:

- Publication of contact details for all relevant individuals, including their telephone and email information.
- Establishment and maintenance of a complaints register, which logs all communications received from the general public or stakeholders, whether verbal or written.
- Categorisation of each communication by nature (e.g., complaint, enquiry, comment).
- Completion of necessary actions and ensuring that the complaints register is updated with records of all actions and outcomes.

These measures will ensure a systematic and comprehensive approach to handling complaints and maintaining effective communication with stakeholders throughout the project.

Training

1. Site Induction and Training:

- Comprehensive training will be provided to all site personnel during the site induction process. This training will cover key aspects such as dust management, emission control, and best practices.
- The training will highlight the potential impacts of construction activities on air quality and the importance of adhering to the AQDMP guidelines.
- Training records will be maintained, documenting the date, content, and attendees of each training session.

2. Regular Toolbox Talks:

- Toolbox talks will be conducted on a frequent basis to refresh and reinforce the knowledge and understanding of site personnel regarding dust management requirements.
- These talks will be tailored to address specific activities, potential risks, and control measures related to dust generation and emission reduction.
- Attendance records will be maintained to track participation in each toolbox talk session.

3. Method Statements and Risk Assessments:

- Method statements and risk assessments will be prepared for all activities that have the potential to impact air quality on the site.
- These documents will outline the sequence of works, identify potential sources of dust and emissions, and detail the control measures and risk mitigation strategies to be implemented.
- Site personnel will be briefed on the contents of the method statements and risk assessments relevant to their respective roles and responsibilities.

Incident Procedures

X Construct Ltd will maintain comprehensive records of regular monitoring activities conducted throughout the project. In addition, an environmental incident logbook will be used to record all environmental incidents that result in air pollution, along with the corresponding remedial actions taken. Complaints received will also be diligently recorded and investigated by the Site Manager.

The following actions will be undertaken when addressing complaints:

1. Recording Complaint Details:
 - Time, date, and contact details of the complainant will be documented.
 - The wind direction, strength, and weather conditions at the time of the complaint will be noted.
 - If the complaint has been referred by the local authority, this information will also be recorded.
2. Gathering Complaint Information:
 - The complainant will be asked to describe the dust emissions in detail, including whether they are constant or intermittent, the duration of occurrence, and any specific times of the day when the issue is more pronounced.
 - Any identifiable sources of the dust emissions will be noted.
3. Site Inspection and Dust Mitigation:
 - A prompt site inspection will be conducted by the Site Manager following receipt of the complaint.
 - All dust-producing activities will be observed and documented during the inspection.
 - The dust mitigation methods being employed will be noted.
4. Remedial Actions:
 - If the complaint is related to a recent activity, any dust-producing activities that were ongoing at that time will be documented.
 - Any feasible remedial actions will be implemented promptly, if possible.
5. Verification and Communication:
 - The area from which the complaint originated will be revisited to ascertain if the problem persists.
 - After completing the initial investigations, the complainant will be contacted to explain any issues identified and the corresponding remedial actions that were taken.
6. Reporting:
 - The Council will be notified by an email to the council's air quality department, or alternatively, the notification will be sent on the next working day if the complaint is received during a weekend or bank holiday.
 - The notification will include details of the complaint, the findings of the investigation, and the remedial measures that were undertaken.

3. DUST RISK ASSESSMENT – SITE CLASSIFICATION

The Dust Risk Assessment conducted for the project adheres to the guidelines outlined in the Mayor of London SPG 'The Control of Dust and Emissions during Construction and Demolition' (July 2014) and the Institute of Air Quality Management (IAQM) Guidance on the assessment of dust from demolition and construction (January 2014). This assessment aims to classify the risk of dust impacts originating from the site and determine appropriate mitigation measures for implementation.

The assessment considers the potential for dust soiling (nuisance) and PM10 (human health) impacts within a radius of 350 meters from the site boundary or within 50 meters of roads used by construction vehicles. Receptors that may be affected by dust generation and vehicle emissions resulting from the construction activities include, but are not limited to:

- Local residents in the immediate vicinity
- Construction workers
- Visual amenity
- External surfaces and materials (through surface soiling)

Based on site activities and the sensitivity of nearby receptors, worksites are categorized into one of three tiers according to the level of dust risk. The Dust Emission Magnitude (DEM) is determined based on the scale of the anticipated works. The site will be classified according to the definitions provided by the IAQM and the London SPG."

3.1. Demolition Phase

Demolition works cover the removal and tearing down of existing buildings on site. For this scheme, this comprises of the vacant two storey building with associated warehouses.

Descriptors	Result	Classification
Total volume of building to be demolished	<20,000m3	Small
Dust potential from material	Traditional & Light Industrial Materials	Medium
Demolition Height	10-15 m above ground	Medium
Overall Classification	Medium	

3.2. Earthworks Phase

This phase covers:

1. **Site Preparation:** This step involves the clearance of vegetation, stripping of topsoil, and pre-excavation preparation. Effective dust management strategies include dampening the site, erecting dust screens, and minimising vegetation clearance as much as is feasible.
2. **Excavation:** This process includes the removal of earth and rock to prepare the site for foundational structures and associated sub-structure works. Dust mitigation strategies for this phase involve dampening the site, applying dust suppression systems on excavation equipment, and sheeting excavated materials to mitigate wind-blown dust dispersion.
3. **Material Stockpiling:** Excavated materials may be temporarily amassed on-site before subsequent removal or reuse. Dust management strategies for stockpiles include compressing these materials, locating piles away from sensitive receptors, and applying moisture as needed.

4. **Ground Levelling and Compaction:** This process entails the adjustment and consolidation of the ground in preparation for construction. Mitigation strategies include the use of dust suppressants and dampening methods to minimise dust generation.

The scale of the potential dust emissions for the site from this phase will be determined using the following criteria:

Descriptors	Result	Classification
Total Site Area	>2,000 m ²	Small
Soil Type	Topsoil - SAND/GRAVEL/CLAY with brick, wood and concrete fragments	Medium
	3m+ - London Clay - Mottled with occasional gravels & carbonaceous deposits	
Stockpile Enclosure	6 metres in height, or total material moved, <10,000 tonnes (where known)	Small
Vehicle Movements	<2 heavy earth moving vehicles active at any one time	Medium
Work Times	3-4 months, during wetter periods of the year	Small
Overall Classification	Medium	

3.3. Construction Phase

The key issues when determining the potential scale of dust emissions during the construction phase include the size of the buildings, the method of construction, the construction materials to be used and the duration of the build.

The scale of the potential dust emissions for the site from this phase will be determined using the following criteria:

Descriptors	Result	Classification
Total Build Volume	Total building volume <25,000 m ³	Small
Material for Potential Dust Release	Masonry Construction – Concrete to be used on-site	Medium
Overall Classification	Medium	

3.4. Trackout Phase

Factors that will determine the risk of dust emissions from track out are vehicle size, vehicle speed, geology and duration.

Descriptors	Result	Classification
Vehicle Trips	10-50 HDV trips in one day	Medium
Site Surface	Medium potential for Dust Release	Medium
Unpaved Road Length	50m unpaved road length max.	Medium
Overall Classification	Medium	

4. DEFINING THE SENSITIVITY OF THE AREA

The sensitivity of the area is determined by several factors, as outlined in the GLA Tables provided in Appendix 1. These factors include:

- Specific sensitivities of receptors in the area.
- Proximity and number of receptors in the vicinity.
- Local background concentration of PM₁₀, which is a measure of particulate matter.
- Site-specific factors, such as the presence of natural shelters like trees, which can help reduce the risk of wind-blown dust.

4.1. Dust Soiling

Descriptors	Result
Density	10-100
Distance from Source	< 20 m
Receptor Sensitivity	High
Overall Risk Classification	High

Regarding site-specific factors, the area is characterised by the following:

- Users can reasonably expect a high level of amenity, including residential areas and outdoor sports facilities.
- The appearance, aesthetics, or value of properties would be negatively affected by soiling.
- People or property would be present continuously or regularly for extended periods as part of the normal land use pattern (primarily residential dwellings).

4.2. Human Health

Descriptors	Result
Density	10-100
Distance from Source	< 20 m
Receptor Sensitivity	High
PM ₁₀ Annual Average	Less than 24
Overall Risk Classification	Low

For the PM₁₀ annual classification, the relevant locations are those where individuals may be exposed for eight hours or more in a day, such as residential properties and schools.

The predicted baseline PM₁₀ annual mean concentration for the 1km grid square covering the site, based on DEFRA UK-AIR GIS Tool, is **16.97 µg/m³**.

This provides an indication of the annual mean concentrations at receptors near the development site. Referring to the matrix in Appendix 1, the surrounding area of the construction site is classified as having 'Low' sensitivity to human health effects.

4.3. Ecological Effects

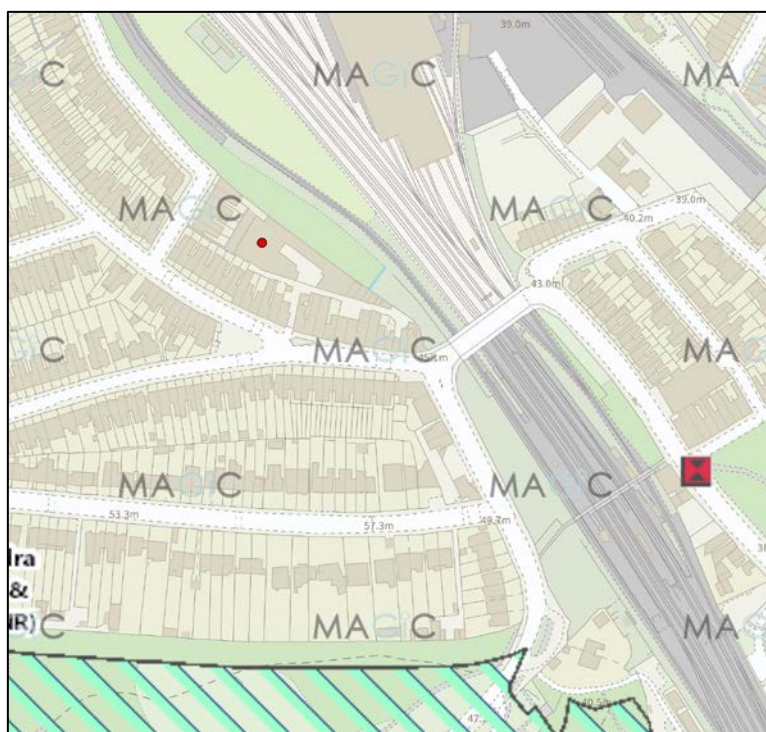
Overall Risk Classification	Low
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The guidance provided in the SPG has been adhered to in assessing the impacts of construction on ecological receptors. According to the guidance, receptors located within 350 meters of the site boundary should be taken into consideration. However, within this distance, there are no designations that meet the ecological criteria. This has been confirmed through examination of DEFRA's MAGIC database, which includes the following designations:

- Conservation Areas or RAMSAR sites
- National and Local Nature Reserves
- Areas of Outstanding Natural Beauty or
- Ramsar Sites
- Sites of Special Scientific Interest or Special Protection Areas

Since none of these ecological designations are present within 350 meters of the site boundary, the construction project does not directly impact any of these protected ecological areas.

The closest area of interest is Alexandra Palace & Park, a Local Nature Reserve, as shown below. However, it is too far for the proposed development to have any impact on.



4.4. Other Factors

The following additional factors have been considered when determining the sensitivity of the area.

- Any history of dust generating activities in the area.
- The likelihood of concurrent dust generating activities on nearby sites.
- The season during which the work will take place.
- Duration of the potential impact, as a receptor, may become more sensitive over time.
- Locations with a local designation where features may be affected by dust deposition i.e. Listed Buildings. The nearest Listed Building is shown on the Map on the right (Grade II Listed)

5. DUST MANAGEMENT AND AIR QUALITY

5.1. Air Quality and Dust Risk Assessment Result

The Air Quality and Dust Risk Assessment (AQDRA) outlined above and in Appendix 1, has determined the following.

Activity	Dust Emission Magnitude
Demolition	MEDIUM
Earthworks	MEDIUM
Construction	MEDIUM
Trackout	MEDIUM

Dust Soiling Sensitivity	Human Health Sensitivity	Ecological Sensitivity
Medium	Low	Low

Therefore, the following section outlines these combined sensitivities and magnitudes.

Potential Impact	Dust Risk			
	Demolition	Earthworks	Construction	Track-out
Dust Soiling	N/A	Medium Risk	Medium Risk	Medium Risk
Human Health	N/A	Low Risk	Low Risk	Low Risk
Ecological	N/A	Low Risk	Low Risk	Low Risk
<i>Table: Summary of Risk of Impacts Without Mitigation</i>				

The Site Manager will ensure that site personnel always follow best practice to control and limit emissions of gaseous and particulate pollutants into the atmosphere from construction activities, including from vehicles and plant.

These measures are seen in the Table above (The relevant dust-controlled measures for medium risk contained within Appendix 7 of the Mayors SPG), and they are divided according to key construction stages and site risk.

The measures be implemented on site in full and will result in the impact of dust emissions during construction of the development being negligible. Both desirable and highly recommended control measures as part of Appendix 7 of the Mayors SPG are highlighted below and will be adhered to by the site.

5.2. Dust and Emissions Control Measures

Phase of Works	Activities Generating Dust	Level of Risk
Demolition	<u>Demolition</u> Breaking of hardstanding surface at ground level. Stripping and demolishing of existing structures.	<u>Demolition</u> Medium Risk
	<u>Trackout</u> Removal of potentially dust material from site to the main road and away from local area.	<u>Trackout</u> Low Risk
Earthworks	<u>Earthworks</u> Excavation, haulage, tipping and stockpiling. Levelling the site and landscaping.	<u>Earthworks</u> Medium Risk
	<u>Trackout</u> Site traffic movement onto Crescent Road and Palace Gates Road, including all deliveries and earth movements / removal.	<u>Trackout</u> Medium Risk
Construction	<u>Construction</u> External cladding and rendering of the building.	<u>Construction</u> Medium Risk
	Stockpiling and storage of materials.	
	Concrete placing during the creation of the ground floor slab.	<u>Trackout</u> Medium Risk
	<u>Trackout</u> Site traffic movement onto Crescent Road and Palace Gates Road	
<i>Table: Dust and Emissions Generating Activities</i>		

5.3. General Activities

There are numerous activities on construction projects that if unmitigated can give rise to elevated levels of dust. This can be the movement and placing of granular materials and the excavation of foundations, poor stockpile management, site traffic movements, etc.

Dusty emissions escaping the work area may cause nuisance through, for example, surface soiling, loss of visibility due to deposition and effects on local people. Since it is difficult to suppress dust once it is airborne it is preferable, where possible, to prevent dust from being generated in the first place.

5.4. Mitigation Measures and Management Controls

The GLA SPG Dust and Emissions Control, and Institute of Air Quality Management (IAQM) guidance, will be adhered to throughout the construction works on-site. The measures adopted will be consistent with this Guidance and proportionate to the risk of dust nuisance in individual cases and will therefore, be more stringent where construction activities are closer to sensitive receptors.

Contractors will implement all necessary management and Best Practicable Means (BPM) to reduce levels of dust emissions from the Site both internally (*in situ*) and externally (off-site). Site specific control measures extend beyond those required for a negligible dusty site but will be implemented as a minimum in order to reduce the likelihood of dust nuisance from dusty operations from construction, earthworks, on-road and off-road emissions, and these will include the measures outlined on the following pages.

Mitigation Measures – Throughout Development		Implemented on site
Site Management		
1	A stakeholder communications plan, including community engagement, will be developed and implemented prior to work beginning on site.	✓
2	This AQDMP will be implemented and adhered to on-site	✓
3	The name and contact details of the individual responsible for air quality emissions and dust generated from site activities will be displayed on the site boundary with contact information.	✓
4	This display will also include the head office contact information.	✓
5	A site log will be maintained to record complaints and outcomes of the site inspections in the forms in Appendix 2, 3 & 4 will be issued to the council upon request	✓
6	Record and respond to all dust and air quality pollutant emissions complaints	✓
7	A complaints log will be created and will be made available to the LBH Environmental Team at pollution@haringey.gov.uk . when asked (Appendix 2)	✓
8	Carry out regular site inspections to monitor compliance with air quality and dust control procedures, record inspection results, and create an inspection log available to the local authority when asked	✓
9	Increase the frequency of site inspections when activities with a high potential to produce dust and emissions and dust are being carried out, or during prolonged dry or windy conditions.	✓
10	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 (Appendix 2)	✓
Preparing and Maintaining the Site		
11	The site layout will be planned so that NRMM plant and dust-causing activities are located away as remote as practically possible from the residential receptors around the development's area.	✓
12	Erect solid screens or barriers around dust generating activities, at least, as high as any stockpiles on site	✓
13	Keep site fencing, barriers and scaffolding clean using wet methods.	✓
14	Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period.	✓
15	Prevent site runoff of water or mud.	✓
16	Carry out regular dust soiling checks of buildings within 100m of site boundary and cleaning to be provided if necessary.	✓
17	Remove materials from site as soon as possible.	✓
18	Cover, seed, or fence stockpiles to prevent wind whipping.	✓
19	Agree dust monitoring (if required) with the Environmental Team at pollution@haringey.gov.uk .	✓
Operating Vehicle/Machinery and Sustainable Travel		
20	Ensure all non-road mobile machinery (NRMM) comply with the standards set within this guidance.	✓
21	Ensure all vehicles switch off engines when stationary – no idling vehicles	✓

Operations		
22	Ensure an adequate water supply on the site for effective dust/particulate matter mitigation (using recycled water where possible).	✓
Waste Management		
23	Prohibit bonfires and burning of waste materials.	✓
24	Reuse and recycle waste to reduce dust from waste materials	✓

Mitigation Measures – Specific to Demolition		Implement ed on site
15	A soft strip inside buildings shall be completed before demolition is undertaken.	✓
16	Hoarding shall be installed around the building's perimeter, with monarflex screening to minimize dust flux. Scaffolding and monarflex membrane shall be the full height of building to be demolished.	✓
17	Water suppression shall be used during demolition operations, both hand-held water spray hoses and fine mist spray machines. Handheld sprays shall be used as the water can be directed to where it is needed.	✓
18	No explosive blasting or mass demolition shall be undertaken.	✓
19	Any biological debris shall be bagged and removed or damped down before demolition	✓
23	Cutting, grinding or sawing equipment shall only be used where fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction.	✓
24	Crushing plant shall be located as remote as practically possible from the off-site residential receptors within 25m of the site boundaries.	✓
25	Scabbling (roughening of concrete surfaces) shall be avoided if possible	✓
26	Dry sweeping of large areas will be avoided	✓
27	An adequate water supply on the site for effective dust/particulate matter suppression/mitigation shall be ensured. Handheld sprays shall be used as the water can be directed to where it is needed.	✓
28	Enclosed chutes, conveyors and covered skips shall be used	✓
29	Drop heights from loading shovels, hoppers and other loading or handling equipment shall be minimized, and fine water sprays shall be used on such equipment wherever appropriate	✓
30	Equipment shall be readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods	✓
31	A change of shoes and clothes shall be required before going off-site to reduce transport of dust.	✓
32	Fuel (diesel) if required shall be stored safely in bunds on-site and shall be located at a location remote as possible from the nearest off-site sensitive receptors within 20m of the site boundaries.	✓

Mitigation Measures – Specific to Earthworks		Implemented on site
1	Only remove secure covers in small areas during work and not all at once.	✓

Mitigation Measures – Specific to Construction		Implemented on site
1	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.	✓
2	Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling.	✓
3	For smaller supplies of fine powder materials ensure bags are sealed after use.	✓

Mitigation Measures – Specific to Trackout		Implemented on site
1	Use a water-assisted dust sweeper on the access and local roads, as necessary, to remove any material tracked out of the site.	✓
2	Avoid dry sweeping of large areas.	✓
3	Ensure vehicles entering and leaving the site are securely covered to prevent escape of materials during transport.	✓
4	Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).	✓
5	Ensure that the hard surfaced road between the wheel wash facility and the site exit is maintained, wherever site size and layout permits.	✓
6	Access gates to be located at least 10m from receptors where possible.	✓
7	Apply dust suppressants to locations where a large volume of vehicles enter and exit the construction site	✓
8	Ensure all non-road mobile machinery (NRMM) comply with the standards set within this guidance.	✓
9	Ensure all vehicles switch off engines when stationary – no idling vehicles	✓
10	Record all inspections of haul routes and any subsequent action in a site logbook.	✓

Dust Control Measures

When addressing dust control, it is crucial to prevent the occurrence of statutory nuisance resulting from construction works or activities that generate dust. Therefore, it is essential to adopt a philosophy focused on preventing dust formation in the first place. Dealing with dust should follow the following approach:

1. Prevention:

- Emphasise measures to prevent dust formation, as outlined in best practice guidance such as the Mayor of London SPG 'The Control of Dust and Emissions during Construction and Demolition' (July 2014) and 'Best in Class' Guidance on Dust and Emissions from Construction (LLECP, March 2019).
- Implement techniques and practices to minimise dust generation, reducing the potential for airborne emissions and nuisance.

2. Suppression:

- Employ dust suppression techniques during dusty activities and throughout the primary construction phase.
- Utilise water-based suppression methods, such as using hoses and dampening down localized areas, as recommended by guidance from the Institute of Air Quality Management (IAQM) and the Control of Dust and Emissions during construction and demolition Supplementary Planning Guidance (2014).

3. Containment:

- Implement effective measures to prevent dust from leaving the construction site boundaries.
- Conduct regular inspections and implement procedures to promptly identify and address any instances of airborne dust escaping the site, in line with best practice guidance on monitoring in the vicinity of demolition and construction sites (IAQM, October 2018).

The Site Manager will ensure an adequate water supply is available on-site, considering the need for frost protection, as recommended by best practice guidance.

The site manager will employ effective management techniques to control emissions, including:

- Proper management, supervision, and training of process operations, as advised by best practice guidance on controlling particles, vapour, and noise pollution from construction sites (BRE, 2003).
- Appropriate use and efficient operation of equipment.
- Implementation of comprehensive preventative maintenance programs for all plant and equipment associated with emission control.

At the beginning of each construction phase, the site manager will compile a list of essential items necessary for effective emission control, as recommended by best practice guidance on dust and emissions from construction (LLECP, March 2019). Additionally, a proactive approach to preventative maintenance will be applied to all aspects of the construction works, including plant, vehicles, buildings, and equipment involved in emissions control, following the guidance on controlling particles, vapour, and noise pollution from construction sites (BRE, 2003).

6. SITE MONITORING

To minimise the formation of dust and harmful emissions from the site, the following dust monitoring activities will take place:

- Two real-time automatic PM₁₀ Monitors shall be installed to ensure dust emissions are kept to acceptable levels. This will take place using Airly PM monitors (or any other MCERTS approved monitor).
- Handheld Dust Monitoring will be conducted if high-dust generation works take part on-site away from the automatic monitors.
- Weekly Visual Inspections with the nearest sensitive off-site receptors located within 50-100m of the site (primarily Dagmar Road and Crescent Road) as indicated in the receptor locations figure.

The air quality dust risk assessment has identified a Medium to Low Risk of dust soiling impacts due to construction, demolition, earthworks, and trackout activities. Dust soiling impacts typically relate to the coarser fraction of dust (PM₁₀) and are associated with the loss of amenity and potential nuisance effects.

Regarding human health, the assessment has indicated a Low Risk of impacts from all on-site activities. However, with the implementation of the mitigation measures detailed in Section 6, the residual impacts are deemed 'not significant' for human health. Nevertheless, in accordance with the guidance provided by the Greater London Authority (GLA, 2014), it is recommended that all construction sites should be monitored for the generation of air pollution. The necessity of monitoring depends on existing air quality, air pollution risks from the development, and the practical and financial considerations of dust monitoring.

The monitoring strategy should be proportionate to the potential risk of impacts. For this site, it is appropriate to adopt monitoring requirements similar to those for Medium to High-Risk sites, taking into account PM₁₀ levels and dust soiling concerns.

Relevant sections of the GLA's guidance for the site include:

Medium Risk Site (Dust Soiling/Nuisance/PM₁₀):

- Determine the prevailing wind direction across the site using data from a nearby weather station or by setting up a weather station on-site.
- Conduct assessments of dust deposition and soiling rates following recommended procedures.
- Perform visual inspections of site activities, dust controls, and site conditions, recording the findings in a daily dust log.
- Establish a procedure to notify the local authority, enabling immediate and appropriate measures to rectify any issues. Alert mechanisms may include emails or texts.

Dust monitoring will be conducted near sensitive receptors to assess any potential impacts at these locations. Site-specific monitoring protocols and procedures are as follows:

- Consider the impact of air quality and dust on occupational exposure standards to minimise worker exposure and prevent breaches of air quality objectives beyond the site boundary, including through visual assessments.
- Maintain an accurate log of public complaints and document the measures taken to address them when necessary.
- Determine the prevailing wind direction across the site using data from a nearby weather station.
- Identify the locations that require monitoring.
- If deemed necessary, monitor dust deposition and soiling rates as indicators of nuisance effects.

Air Quality Monitoring and Locations

PM₁₀ emissions will be continuously monitored until the end of the superstructure phase using real-time automatic monitors.

These monitors will be installed according to the guidance provided by the Institute of Air Quality Management (IAQM). These will be positioned on the site boundaries (near sensitive receptors) at locations indicated by the red marks on the below figure. One of the monitoring locations will include an anemometer to monitor on-site wind conditions.

Formal reports will be issued on a monthly basis. Upon request, login details for accessing the real-time PM₁₀ monitoring data will be provided to Haringey Council. The council's pollution team will then have access to the monitoring data platform for ongoing assessment during both the demolition and construction phases.

It is important to note that real-time PM₁₀ monitoring locations may be subject to change due to mitigating circumstances, such as modifications to sensitive receptors or access issues. Any proposed changes to monitoring locations will be submitted to Haringey Council for written agreement prior to implementation.



Figure: Dust Monitoring Locations

Site Alert Levels

The IAQM guidance recommends a trigger alert level of $190 \mu\text{g}/\text{m}^3$ is set as an hourly mean for concentrations of PM_{10} close to demolition and construction sites. Internal amber PM_{10} alerts shall be set at $150 \mu\text{g}/\text{m}^3$ (hourly mean). Action in the event an alert occurs is as follows:

- Amber ($150 \mu\text{g}/\text{m}^3$) alert – site manager or other appropriate person to review activities to identify any potential dust or particulate sources and if cause of alert relates to a site activity, mitigation will be put in place immediately to reduce impacts
- Red ($190 \mu\text{g}/\text{m}^3$) alert – site manager or other appropriate person to review activities to identify any potential dust or particulate sources
 - a) if cause of alert relates to a site activity, mitigation will be put in place immediately to reduce impacts
 - b) if the mitigation is identified as insufficient then activities causing the elevated dust / particulate levels will cease

Should the site action level be exceeded; automatic alerts shall be sent via email and/or text message to nominated individuals. The alerts will include the following information:

- the location of the exceedance.
- the time of the exceedance; and,
- the recorded PM_{10} concentration.

Within 15 minutes of receiving an email alert, the Site Manager shall investigate the exceedance, undertaking a visual inspection of construction activities to ensure mitigation measures are being employed.

Any identified causes will be rectified. Actions shall be recorded and will detail reasons for the exceedance and any steps taken to prevent reoccurrence.

It is noted that trigger exceedances could occur due to unrelated activities e.g., Saharan dust episodes. Once mitigation measures are implemented, site activities will continue whilst being monitored to ensure that the mitigation has been effective. The Project Manager and Site Manager shall be notified of the exceedance as soon as practical, including details of any corrective and preventative actions undertaken.

6.1. Daily and Weekly Dust Monitoring Programme (Procedures and Protocols)

The Site Manager will conduct daily visual inspections of the site during stages of high dust emission generation. All relevant information and observations from these inspections will be recorded in the Daily Inspection checklist provided in Appendix 3. The Daily Dust logs will include the following details:

- Date, time, and location of the inspection (both on-site and off-site).
- Observations on site conditions, specifically regarding dust emissions.
- Remedial measures undertaken to ensure compliance with the Dust Management Plan (DMP) when necessary.

Additionally, a weekly inspection will be carried out, involving a perimeter walk around the site. This inspection will focus on observing dust emissions and dust soiling, particularly in upwind locations of on-site activities. Regular checks for dust soiling on surfaces such as street furniture, cars, and windowsills near the site boundary will be conducted, and cleaning will be provided if necessary. The results of the weekly inspection will be documented in the Weekly Inspection Checklist found in Appendix 4. Any specific notes regarding dust soiling or dust generating activities will be recorded using the provided record sheet in Appendix 4. The Daily and Weekly Inspection Checklists will be shared with the council upon request via email to pollution@haringey.gov.uk.

If significant dust is identified beyond the site boundary, a Dust Event Form available in Appendix 2 should be completed by the site operative who identified the issue. Immediate investigation and remedial action will be undertaken. The Site Manager will regularly review Dust Event Forms to ensure the implementation of necessary actions and identify areas where additional mitigation measures against dust emissions may be required. These forms will be shared with the council within 24 hours via email or the next working day in case of weekends or holidays.

Dust Event Forms can be completed based on information provided by nearby community members (complaints) or staff members who observe an incident or event.

In the event of complaints related to dust soiling, the Pro-Forma Complaint and PM₁₀ trigger alert Notification Form in Appendix 2 will be completed. It will be submitted to the council within 24 hours via email or the next working day during weekends or holidays. Persistent complaints may also trigger a period of dust soiling monitoring to investigate the issue further.

6.2. Site Logbook

A Site Logbook will be maintained, which will incorporate the information from the forms provided in Appendix 2, 3, and 4. This logbook will document the details and actions taken in response to incidents or episodes that cause dust, as well as the mitigation measures implemented. It will serve as a comprehensive record of all relevant information pertaining to dust management on the site.

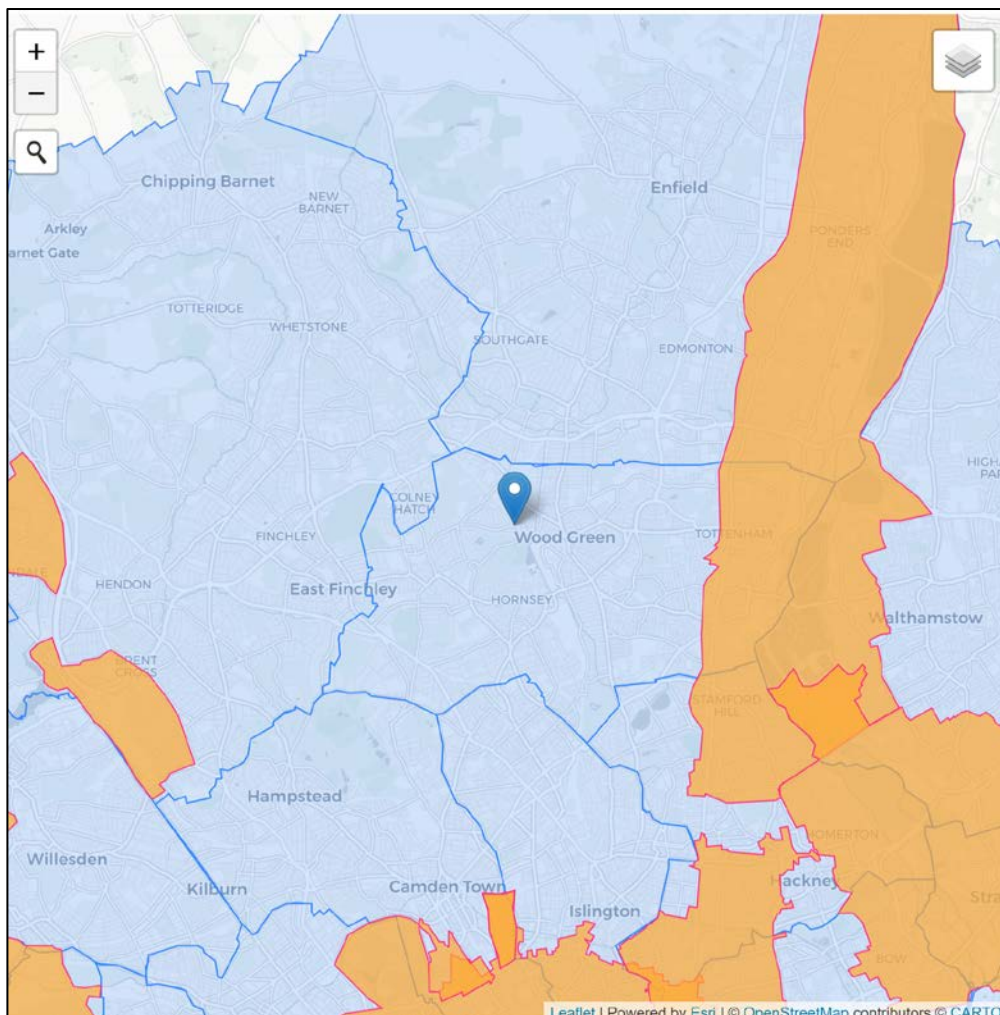
The site logbook will be made available to the Council upon request, and it will be shared with them via email. This logbook ensures transparency and provides a means for the Council to access and review the information related to incidents, dust-causing episodes, and the corresponding mitigation measures taken at the site.

7. NRMM

X Construct will ensure all on-road vehicles will comply with the requirements of the London Low Emission Zone.

The use of Ultra-Low Emission Vehicles (ULEV) (e.g. Euro VI (HGV), Electric, Hybrid (Electric-Petrol) will be prioritised and suppliers that can provide Euro VI vehicles, and preferably electric or hybrid vehicles will be prioritised.

Due to the location of the site, highlighted below, emissions from non-road mobile machinery (NRMM) with net power between 37kW and 560kW used on site will meet the Stage IIIB of the EU Directive 97/68/EC and its subsequent amendments as a minimum. This will apply to both variable and constant speed engines for both NO_x and PM. Stages IIIB and IV have not been defined for machines with constant speed engines, such as generators. This means that these machines will need to meet Stage V.



All eligible NRMM will meet the standards above unless it can be demonstrated that the machinery is not available or that a comprehensive retrofit to meet both PM and NO_x emission standards is not feasible.

The full exemption and retrofit procedure document for NRMM can be found here -

https://www.london.gov.uk/sites/default/files/nrmm_lev_exemption_and_retrofit_policy_-_covid-19_update_final_0.pdf

The details of all proposed NRMM to be used on the site for the construction phases of the development will be registered on the NRMM register (<https://nrmm.london/user/register>)

A NRMM compliance log will be issued to the Council on request via e-mail.

8. Appendices

The following Dust Risk Assessment in Appendix 1 has been carried out in accordance with the Institute of Air Quality Management (IAQM) Guidance on the assessment of dust from demolition and construction (January 2014).

Appendix 1: Air Quality and Dust Risk Assessments (AQDRA) - Dust Emission Magnitude, Human Health Impacts, Ecological Impacts, Risk of Impacts – Demolition, Risk of Impacts – Earthworks, Risk of Impacts – Construction, Risk of Impacts – Track out, Summary.

Appendix 2: Pro-Forma Complaint and PM10 trigger alert Notification Form

Appendix 3: Daily Inspection Checklist

Appendix 4: Weekly Inspection Checklist

List of best-practice reference documents used in the writing of this report are:

- The Control of Dust and Emissions during construction and demolition - Supplementary Planning Guidance (2014)
- Guidance on the assessment of dust from demolition and construction (IAQM, June 2007)
- Guidance on Monitoring in the Vicinity of Demolition and Construction Sites (IAQM, October 2018)
- 'Best in Class' Guidance on Dust and Emissions from Construction (LLECP, March 2019).
- DEFRA: Air Quality Strategy for England, Scotland, Wales and Northern Ireland – July 2007
- BRE: Controlling particles, vapour and noise pollution from construction sites, parts 1-5 – 2003

APPENDIX 1: Air Quality Dust Risk Assessment (AQDRA)

Dust Emission Magnitude

Dust and Soiling effects on people and property

Receptors and their sensitivity and respective distance from the proposed development are used on the table below to determine the area sensitivity. The area is considered of High Sensitivity.

Receptor Sensitivity	Number of Receptors	Distance from the Source (m)			
		Less than 20	Less than 50	Less than 100	Less than 350
High	More than 100	High	High	Medium	Low
	10-100	High	Medium	Low	Low
	1-10	Medium	Low	Low	Low
Medium	More than 1	Medium	Low	Low	Low
Low	More than 1	Low	Low	Low	Low
<i>Table A1– Sensitivity of the area to dust and soiling effects on people and property</i>					

*Adapted from Table 2 - IAQM Guidance on the assessment of dust from demolition and construction report January 2014

Human Health Impacts

Receptors and their sensitivity and respective distance from the proposed development are used on the table below to determine the are sensitivity. The area is considered of High Sensitivity.

Receptor Sensitivity	Annual Mean PM10 Concentration $\mu\text{g}/\text{m}^3$	Number of Receptors	Distance from the Source (m)				
			Less than 20m	Less than 50m	Less than 100m	Less than 200m	Less than 350m
High	More than 32	More than 100	High	High	High	Medium	Low
		10-100	High	High	Medium	Low	Low
		1-10	High	Medium	Low	Low	Low
	28-32	More than 100	High	High	Medium	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	High	Medium	Low	Low	Low
	24-28	More than 100	High	Medium	Low	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	Medium	Low	Low	Low	Low
	Less than 24	More than 100	Medium	Low	Low	Low	Low
		10-100	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
	Medium	More than 10	High	Medium	Low	Low	Low
		1-10	Medium	Low	Low	Low	Low
Low	-	1-10	Low	Low	Low	Low	Low

Table A2 – Sensitivity of the area to human health impacts

*Adapted from Table 3 - IAQM Guidance on the assessment of dust from demolition and construction report January 2014

Ecological Impacts

Receptors and their sensitivity and respective distance from the proposed development are used on the table below to determine the area sensitivity. The area is considered of Low sensitivity.

Receptor Sensitivity	Distance from Source (m)	
	Less than 20m	Less than 50m
High	High	Medium
Medium	Medium	Low
Low	Low	Low
<i>Table A3 – Sensitivity of the area to Ecological Impacts</i>		

**Adapted from Table 4 - IAQM Guidance on the assessment of dust from demolition and construction report January 2014*

Risk of Impacts

The dust emission magnitude determined above is combined with the sensitivity of the area to determine the risk of impacts with no mitigation applied. The Risk tables below will be used to calculate the Risk of Dust Impacts for each of the four phases, i.e., demolition, earthworks, construction and Track-out.

**Adapted from Table 6 - IAQM Guidance on the assessment of dust from demolition and construction report January 2014*

Demolition – No demolition.

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 A4.3 – Risk of Dust impacts – Earthworks

*Adapted from Table 7 - IAQM Guidance on the assessment of dust from demolition and construction report January 2014

The Earthworks phase Risk matrix for the Receptors/Sensitivity of Area/Dust Emission Magnitude is as follows:

Receptors	Area Sensitivity	Dust Emission Magnitude	Risk of Dust Impacts Earthworks
Dust Soiling	High	Medium	Medium Risk
Human Health	Low	Medium	Low Risk
Ecological	Low	Medium	Low Risk

Table A4.4 – Risk of Dust impacts on Receptors during Earthworks Phase

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 A4.5 – Risk of Dust impacts – Construction

*Adapted from Table 8 - IAQM Guidance on the assessment of dust from demolition and construction report January 2014

The Construction Phase Risk Matrix for the Receptors/Sensitivity of Area/Dust Magnitude is as follows:

Receptors	Area Sensitivity	Dust Emission Magnitude	Risk of Dust Impacts Construction
Dust Soiling	High	Medium	Medium Risk
Human Health	Low	Medium	Low Risk
Ecological	Low	Medium	Low Risk

Table A4.6– Risk of Dust impacts on Receptors during Construction Phase

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

Table A4.7 – Risk of Dust impacts – Track-out

*Adapted from Table 9 - IAQM Guidance on the assessment of dust from demolition and construction report January 2014

The Track-out Phase Risk Matrix for the Receptors/Sensitivity of Area/Dust Emission Magnitude is as follows:

Receptors	Area Sensitivity	Dust Emission Magnitude	Risk of Dust Impacts Track-out
Dust Soiling	High	Medium	Medium Risk
Human Health	Low	Medium	Low Risk
Ecological	Low	Medium	Low Risk

Table A4.8 – Risk of Dust impacts on Receptors during Track-out Phase

The results are summarised on the dust Risk Table below.

Potential Impact	Dust Risk			
	Demolition	Earthworks	Construction	Track-out
Dust Soiling	N/A	Medium risk	Medium Risk	Medium Risk
Human Health	N/A	Low Risk	Low Risk	Low Risk
Ecological	N/A	Low Risk	Low Risk	Low Risk

Table A5 – Summary Dust Risk Table with no mitigation measures applied, to Define Site-Specific Mitigation

APPENDIX 2: Pro-Forma Complaint and PM10 trigger alert Notification Form

Reference Number:		Date:		Time:	
Monitoring Location					
Level of dust emission					

Complaint Notification (Yes/No)					
Date:		Time:		Received by:	
Complainants Name:					
Telephone Number:					
Address:					
Weather Details:					
Description of complaint / incident:					
Investigative action taken:					

Details of best practice mitigation in place:			
Remedial action taken:			
Preventative measures implemented to prevent further complaints/incidents/exceedance:			
Is the complaint considered (please tick):	Justified	Unsubstantiated	Unfounded
Signed:			
Print name:			
Position:			
Date:			

APPENDIX 3: Daily Inspection Checklist

[illegible]

APPENDIX 4: Weekly Inspection Checklist

Week Commencing:								
Inspected Items	Frequency	Mon	Tue	Wed	Thu	Fri	Sat	Sun
<i>Person completing the checklist</i>	<i>Initials</i>							
Dust being controlled correctly by personnel	Daily							
Visual inspection of mud/debris on haul routes	Daily							
Visual inspection of dust soiling on local streets, cars and window sills	Daily							
Visual observation of dust generation from earthworks and construction	Daily							
Wind direction	Daily							
Wind speed	Daily							
Weather forecast	Daily							

