Kairus Ltd

Dust Management Plan

Channing Junior School

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1 Introduction

1.1 Introduction

A Dust Management Plan (DMP) has been prepared for Channing Junior School to cover activities and potential impacts from dust emissions during construction of the new school extension and associated works (Planning Reference Camden Council 2017/2451/PRE).

The DMP is required as part of the sites minimum requirements as set out within the Camden Minimum Requirements (CMR) document 242952 and Addendum to CMR 242952.

The Plan has been produced based on the Greater London Authority (GLA) Special Planning Guidance (SPG) on the control of dust and emissions during demolition and construction[1] and the guidance set out within CMR 242952. The report sets out mitigation measures that will be deployed at the Site to prevent significant dust effects at nearby receptors.

1 GLA (2014) The Control of Dust and Emissions during Construction and Demolition, Supplementary Planning Guidance

2 Site Description

2.1 The Existing Site

The Site is located to the south of Highgate Hill, within the grounds of Channing Junior School.

The location of the School is shown in red within Figure 2.1.

The School is bounded to the north-west by properties along Bisham Gardens (mainly residential), to the south-west by Highgate Cemetery, to the south-east by Waterlow Park and to the north-east by premises located along Highgate Hill, a mix of residential and commercial premises.

The nearest sensitive receptors to the Site have been identified as the parishioners of St Joseph's RC Church (located to the south-east), delegates and employees of the Ghana High Commission, located to the east on Highgate Hill, residents of 104-112 Highgate Hill, located to the north-east and residents along Bisham Gardens, to the north-west.

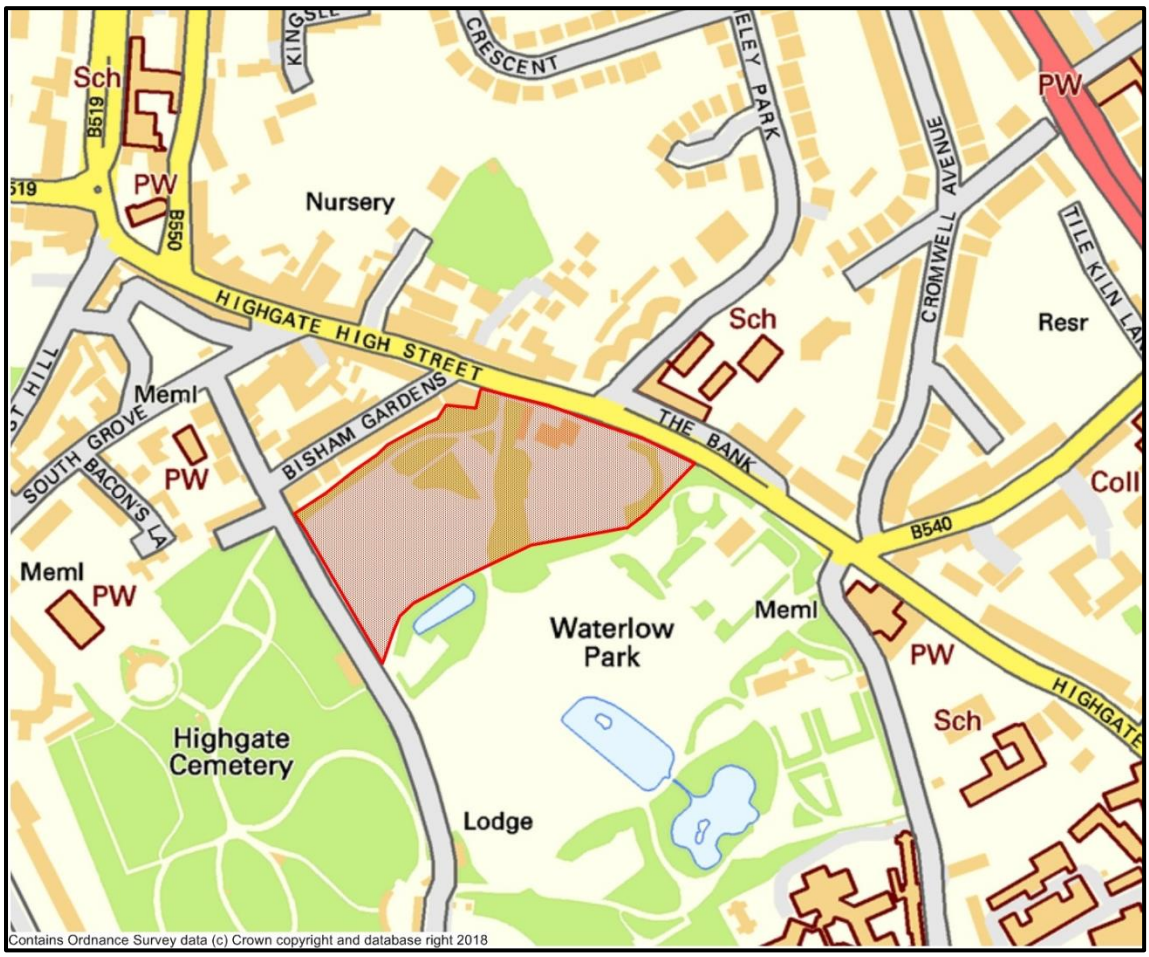


Figure 2.1: Location of Development Site

2.2 The Development

The construction activities being undertaken at the site relate to a southern rear extension to the main school building to provide a new hall at ground floor level, minor alterations to the eastern elevation at lower ground level of the existing building and the creation of a sports changing room facility at subterranean level adjacent to the existing tennis courts. The location of the rear extension building is shown in blue in Figure 2.2.

An area within the school grounds will be cordoned off during the construction period for use by contractors and will include the areas where construction activities will be carried out and an area for construction traffic to access the Site. This area is shown by the blue hatched area in Figure 2.3.

Figure 2.2: Layout of Development

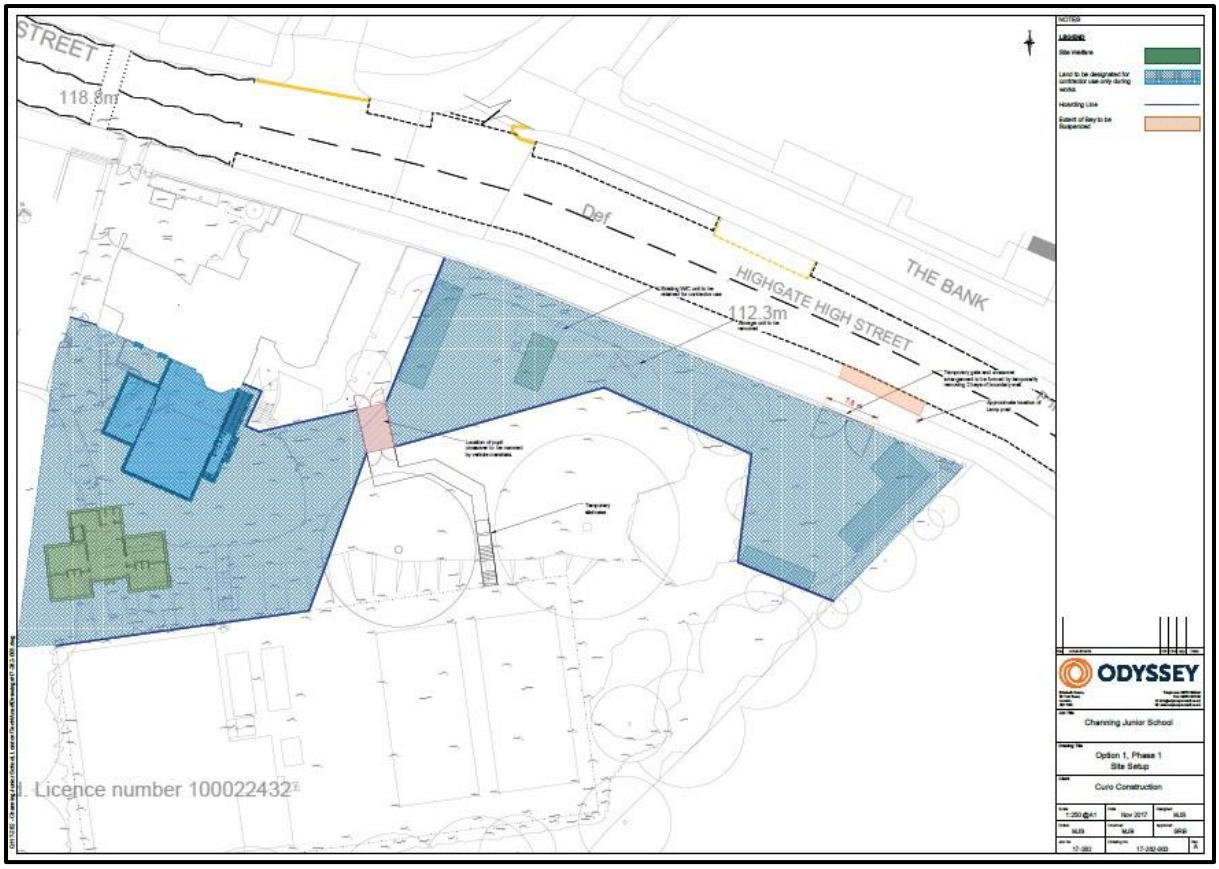


Figure 2.3: Contractor and Construction Area

3 Risk Assessment of Dust Impacts

3.1 Methodology

The main air quality impacts that may arise as a result of the construction activities are dust deposition resulting in the soiling of surfaces e.g. cars, window sills; visible dust plumes and elevated PM_{10} concentrations as a result of dust generating activities on the site. These dust emissions can give rise to annoyance at nearby receptors due to the soiling of surfaces by the dust.

Separation distance is also an important factor. Research indicates that particles greater than 30µm, will largely deposit within 100m of sources, while intermediate particles (10-30µm) can travel up to 200 – 300m[2]. Particles of greater than 30µm are responsible for the majority of dust annoyance. Consequently, significant dust annoyance is usually limited to within a few hundred meters of its source. Smaller particles (<10µm) are deposited slowly and can travel up to 1 km; however, the most significant impacts on short term concentrations of PM_{10} occur within a shorter distance from source. This is due to the rapid decrease in concentrations with distance from the source due to dispersion.

The assessment of potential impacts follows the guidance published by the GLA on the assessment of the impacts of construction on air quality. The GLA assessment methodology considers three separate dust effects and defines their significance according to the sensitivity of the surrounding area, as follows:

- Annoyance due to dust soiling;
- The risk of health effects due to significant increase in PM_{10}; and
- Harm to ecological receptors.

The assessment has been carried out in a number of steps following the IAQM guidance:

- Step 1, the need for a construction assessment was screened, based on the proximity of receptors;
- Step 2, the risk of dust impacts was assessed taking into account the level of activity and the proximity of sensitive receptors;
- Step 3, site specific mitigation integral to the development proposals was reviewed and supplemented where necessary; and
- Step 4, the significance of the dust effects, after applying the site-specific mitigation, was assessed.

Full details of the assessment methodology are provided in Technical Appendix A.

3.2 Dust Risk Assessment

3.2.1 Site and Surroundings

A summary of the proposed development is provided in Section 2 of this report.

As detailed in Section 2, the main land uses surrounding the Site are a mix of residential, commercial and education facilities. There are also places of worship and recreational space which would be sensitive to dust effects. All the above receptors are within 350 m of the Site boundary, therefore

2 Arup, The Environmental Effects of Dust at Surface Mineral Workings. (Report to the DETR)

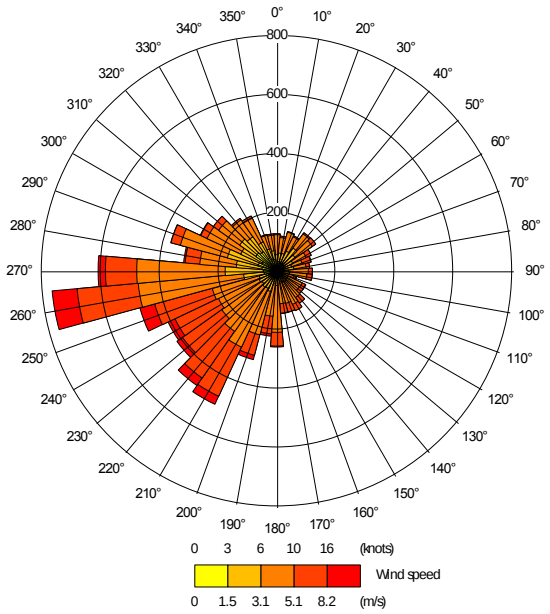
following the screening approach within the IAQM, the risk of effects on human receptors has been undertaken.

Dust emissions from construction activities are unlikely to result in significant impacts on ecologically sensitive receptors beyond 50 m from the site boundary. A review of data set out on Defra's Magic website[3] indicated that there are no sites designated as important for wildlife within 50 m of the Site therefore impacts on ecological receptors has not been considered within this assessment.

Details on background PM_{10} concentrations in the vicinity of the Site have been obtained from the DEFRA 2015 background maps available on the UK-Air website[4]. The maps estimate a background concentration of 16.2 µg/m^3 in the vicinity of the Site during 2018, less than 45% of the objective limit of 40 µg/m^3.

The precise behaviour of the dust, its residence time in the atmosphere, and the distance it may travel before being deposited would depend upon a number of factors. These include wind direction and strength, local topography and the presence of intervening structures (buildings, etc.) that may intercept dust before it reaches sensitive locations. Furthermore, dust would be naturally suppressed by rainfall. The construction area is surrounded by dense trees and shrubs to the west, south and east, which would act as screens preventing the dispersion of dust in these directions and therefore reducing the risk of significant impacts at receptors located beyond the trees, i.e. properties along Bisham Gardens, Waterflow Park, St Josephs R C Church, the Ghana High Commission and a number of properties along Highgate Hill.

A windrose from the Heathrow Airport Meteorological Station for 2017 is provided below in Figure 3.1, which shows that the prevailing wind is from the west/south-west. Receptors located to the north-east of any dust generating activities are therefore most at risk of experiencing impacts. Land-uses to the north-east include residential properties located along Highgate Hill along with Channing Senior School beyond.



3 http://magic.defra.gov.uk/

4 https://laqm.defra.gov.uk/review-and-assessment/tools/background-maps.html

Figure 3.1: Windrose from Heathrow Airport for 2017

3.2.2 Defining the Dust Emissions Magnitude

With reference to the SPG criteria detailed in Appendix A, the dust emission magnitude for site operations have been determined. These have been summarised in Table 3.1.

Table 3.1: Dust Emission Magnitudes

Activity	Criteria	Dust Emission Magnitude
Demolition	The volume of buildings to be demolished would be less than 20,000 m^3 and less than 10 m in height. The main materials involved would be concrete and brickwork, potentially dusty materials, however no on-site crushing or screening would be carried out. Demolition would also be carried out during the wetter winter months of 2018/2019	**Small**
Earthworks	Total site area involved in earthworks will be 642 m^2, with less than 20,000 tonnes of material being excavated and removed. The soil type at the Site is sand/gravel which has lower potential for dust generation and any storage of materials would be within earth bunds of less than 4 m in height. However, it is expected that there will be between 5-10 earth moving vehicles in operation on site during this time, although again earthwork activities would be carried out during the wetter months of winter 2018 to 2019.	**Small**
Construction	Total volume of buildings to be constructed is less than 25,000 m^3 and although there won't be any on-site concrete batching or sandblasting undertaken the main construction materials will be concrete and brick, potentially dusty materials.	**Small**
Trackout	There will be less than 10 outward movements from the Site per day and the surface type will be recycled slag, which is relatively dust free, although the extent of unpaved haul road will be more than 100 m.	**Small**

3.2.3 Sensitivity of Surrounding Area

Using the criteria set out in Tables A.2 and A.3, Appendix A, the risk categories for the activities have been determined and are set out in Table 3.2.

Dust Soiling

The properties adjacent to the Site on Highgate Hill include residential properties, which are considered to be of high sensitivity to dust soiling and commercial premises (places of work) which are considered to be of medium sensitivity to dust effects. These properties are within 20 m of the Site boundary. There are less than 10 residential units within 20 m of the Site boundary, but more than 1 commercial property. Based on the criteria set out in Table A2, the overall sensitivity of the surrounding area in relation to dust soiling effects is considered to be medium.

As detailed in Table 6.1 there will be less than 10 outward movements per day on the adjacent road during the construction period. These vehicles would travel to and from the Site along Highgate Hill. As a general guide, significant impacts from trackout may occur up to 500 m from large sites, 250 m from medium sites and 50 m from small sites, as measured from the site exit. There are residential receptors within 20 m of the roadside within 50 m of the Site exit, although the total number is less than 10 therefore the sensitivity of the area to dust soiling effects from trackout is also considered to be medium.

PM_{10} Effects

As previously discussed, annual mean PM_{10} concentrations in the vicinity of the Site are expected to be in the region of16 µg/m^3, so below 24 µg/m^3. Based on the proximity of sensitive receptors to the site boundary and the local concentrations of PM_{10} the sensitivity of the surrounding area is considered to be low with regards human health impacts (Table A.3, Appendix A).

Table 3.2: Sensitivity of Receptors		
Potential Impact		**Sensitivity at Site**
Dust Soiling (demolition)	Receptor Sensitivity	High
	Number of Receptors	<10 within 20m
	Sensitivity of the area	**Medium**
Dust Soiling (earthworks and construction)	Receptor Sensitivity	High
	Number of Receptors	<10 within 20m
	Sensitivity of the area	**Medium**
Dust Soiling (trackout)	Receptor Sensitivity	High
	Number of Receptors	<10 within 50 m of site exit
	Sensitivity of the area	**Medium**
Human Health (demolition)	Receptor Sensitivity	High
	Annual Mean PM_{10} Concentration	< 24 µg/m^3
	Number of Receptors	<10 within 20m
	Sensitivity of the area	**Low**
Human Health (earthworks and construction)	Receptor Sensitivity	High
	Annual Mean PM_{10} Concentration	< 24 µg/m^3
	Number of Receptors	<10 within 20m
	Sensitivity of the area	**Low**
Human Health (trackout)	Receptor Sensitivity	High
	Annual Mean PM_{10} Concentration	< 24 µg/m^3
	Number of Receptors	<10 within 50 m of site exit
	Sensitivity of the area	**Medium**

3.2.4 Defining the Risk of Impacts

The dust emission magnitude as set out in Table 3.1 is combined with the sensitivity of the area (Table 3.2) to determine the risk of both dust soiling and human health impacts, assuming no mitigation measures applied at site. The risk of impacts associated with each activity is provided in Table 3.3 below and has been used to identify site-specific mitigation measures, which have been included within the DMP as set out in Section 4.

Table 3.3: Summary of Effects Without Mitigation

Source	Dust Soiling	PM_{10} Effect
Demolition	Low	Low
Earthworks	Low	Low
Construction	Low	Low
Trackout	Low	Low

It should be noted that the above assessment has been based on information provided by the client. An Air Pollution Risk Assessment Score Sheet for Construction Activities has previously been completed that identified the site as a Medium Risk site for dust related impacts. A copy of this Risk Assessment was provided to LBC with the CMP Proforma V2.1.

4 Dust Management Plan

4.1 Mitigation Measures

The following section outlines the best practice measures that will be implemented at the Site during the construction period to minimise off-site effects. However, the DMP should be considered as a live document and will be reviewed and updated on a regular basis to ensure mitigation is kept relevant to site operations.

Communications

- The name and contact details of person(s) accountable for air quality and dust issues will be displayed on the site boundary.
- The head or regional office contact information will also be displayed
- The parishioners of St Joseph's RC Church, users of the Ghana High Commission and residents of 104-122 Highgate Hill will be consulted and informed of activities being carried out on site.
- A Construction Working Group will be set up to communicate with the local community and as a point of contact for any issues.

Site Management

- CURO will enroll the Site in the Considerate Contractors Scheme (CCS) and will ensure measures are put in place to follow the initiatives set out by the scheme.
- All dust and air quality complaints will be recorded within a complaints register, the cause(s) identified and appropriate measures taken take to reduce emissions in a timely manner. The measures taken will be recorded.
- The complaints register will be made available to the LBC when asked.
- Any exceptional incidents that cause dust and/or air emissions, either on or off site and the action taken to resolve the situation, will be recorded in the log book.

Monitoring

- Regular site inspections will be carried out to monitor compliance with this DMP and inspection results recorded. The inspection log will be made available to the LBC when asked.
- The frequency of site inspections by the person accountable for air quality and dust issues on site will be increased when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.
- Two real time dust monitors will be installed along the northern boundary of the Site, as shown in Figure 4.1. Details of the monitoring to be undertaken are provided in more detail in section 4.2.

Preparing and Maintaining the Site

- The layout of the Site will be planned to locate dust raising activities away from sensitive receptors, where possible.
- Solid hoarding/fencing will be erected along the Site boundary and between the construction phases and the school playing/activity areas.
- All fencing, barriers and scaffolding will be checked regularly for dust deposits and cleaned using wet methods where deposits are found.
- Site runoff of water, mud and any other liquid will be controlled on site via regular inspections and protecting mats;

- A dedicated store for diesel generator oil, fuel and other similar liquids will be maintained on site.
- Wind speed and direction will be assessed at the start of daily operations and the anticipated method/sequence of works adjusted if necessary.
- Storage bays will be fenced with solid barriers and all internal separating barriers will be at least ½ m higher than the external walls.
- All stored material will be kept damp to reduce the risk of dust emissions.
- Any materials not being reused will be removed from site as soon as is practicable.

Operations

- A wheel washing facility will be provided at the Site for use throughout the construction period.
- Hard standing areas will be maintained across the site and regularly cleaned.
- Water-assisted dust sweepers will be used to remove any mud or debris that gets deposited on the public highway.
- All vehicles transporting materials to and from the Site will be fully sheeted or will make use of enclosed containers to prevent dust emissions.
- All stock piles of topsoil and other dust generating materials will be kept below hoarding heights and damped down in dry windy conditions.
- All materials delivered and used at the Site will have minimum packaging possible.
- Where polystyrene and other lightweight materials are used these will be weighted down.
- All dust generating materials will be adequately contained, packaged or damped down to prevent wind whipping.
- Drop heights to lorries and from delivery trucks will be minimised and fine water sprays will be used where appropriate to prevent dust emissions.
- A waste management system will be implemented on site.
- All plant will be regularly serviced/maintained to ensure it is operating correctly.
- Plant operators will undergo a site induction which will cover the issue of over revving of plant. Operatives will also be advised to isolate plant/equipment during idle periods to reduce fumes.
- An adequate water supply will be available on site for effective dust/particulate matter suppression/mitigation where weather conditions require it, with damping down across the site being undertaken during long dry spells. Non-potable water will be used where possible and appropriate and measures will be put in place to protect water supplied from frost.
- Water suppression will be used at all times during demolition.
- All buildings requiring demolition will be soft striped inside, with windows and walls retained where possible to reduce dust dispersion.
- All demolition will be carried out using manual or mechanical activities, no explosive blasting will be used.
- All biological material will be bagged and removed or damped down during demolition.
- Cutting, grinding or sawing equipment will only be used if fitted or used in conjunction with dust suppression techniques such as local extraction or water sprays.
- All chutes, conveyors and skips will be enclosed.
- All waste will be disposed of frequently to ensure it does not create a dust hazard.

- No burning of any material will be permitted on site.
- Haulage roads will be made from recycled slag, which is relatively dust free. Haul roads will be inspected and where compromised, repaired as soon as practicable;
- There will be no dry sweeping across the Site.
- The scheme is already registered with the NRMM scheme therefore all on-site, non-road mobile machinery will comply with the standards set out within the GLA SPG i.e. all NRMM will meet Stage IIIA of EU Directive 97/68/EC.
- The use of diesel and petrol generators will be avoided where possible with electric and battery powered equipment used instead.
- A maximum speed limit of 10 mph will be imposed on hard-surfaced haul routes and areas of hard standing, with 5 mph applied to unsurfaced haul routes.

Reducing Emission from Transport

- All on-road vehicles will comply with the requirements of the London Low Emission Zone.
- All major deliveries will be managed by key members of the site team. Weekly Delivery Schedules will be agreed with the supply chain to ensure main routes do not become congested with idling vehicles. Any deliveries arriving outside their agreed delivery time will be sent away. No waiting on the public highway will be allowed.
- Delivery schedules will take account of peak traffic times and will ensure deliveries do not arrive at school start and end times.
- Traffic marshals will be stationed to control the movement of lorries in and around the site to ensure no idling.
- A delivery booking system will be put in place which will require a FORS ID number in order for a delivery to be booked onto site.
- Checks for FORS ID numbers will be carried out periodically.
- Random spot checks will be carried out on vehicles and drivers visiting the site which will include evidence of routing information, vehicle safety checks etc.
- construction vehicles will access the site along the B519 from the A1 Archway Road thus preventing them from using any narrow or minor roads in the area;
- All vehicle engines will be switched off when stationary.
- The Site Manager will, prior to commencement of works and at regular intervals during the construction phase, check for other local construction activity. Where appropriate, the Site Manager will liaise and co-ordinate vehicle movements to ensure no congestion or idling on the local roads.

4.2 Monitoring Survey

Two DM11 real-time optical particulate monitors measuring PM_{10} and $PM_{2.5}$ were located at the Site on 27th September 2018, prior to any construction works being carried out at the Site to allow baseline data to be collected prior to any influence from construction activities and traffic. The monitors are located along the northern boundary of the Site as shown in Figure 4.1.

The monitors and data will be accessed and monitored on a regular basis by Alex Lever and Chris Ellison of Curo Construction. The monitoring system will be set up with alerts which will advise of any unresponsive device (i.e. from power or signal failure) and any exceedence of the set exceedence levels. At this stage an exceedence level has not been set but this will be determined in the coming weeks.

The monitors will operate at the Site for the duration of the construction period and will provide real-time concentrations of PM_{10} and $PM_{2.5}$. When the data shows an exceedence of the alert level, the source of the exceedence will be identified and measures taken to reduce emissions from the source as soon as is practicable.

A record of the data recorded by both devices will be kept in an appropriate location and provided to the LBC when requested. Any exceedences of the alert levels will be recorded in an associated log book, along with the measures taken to reduce emissions which will also be made available to LBC upon request.

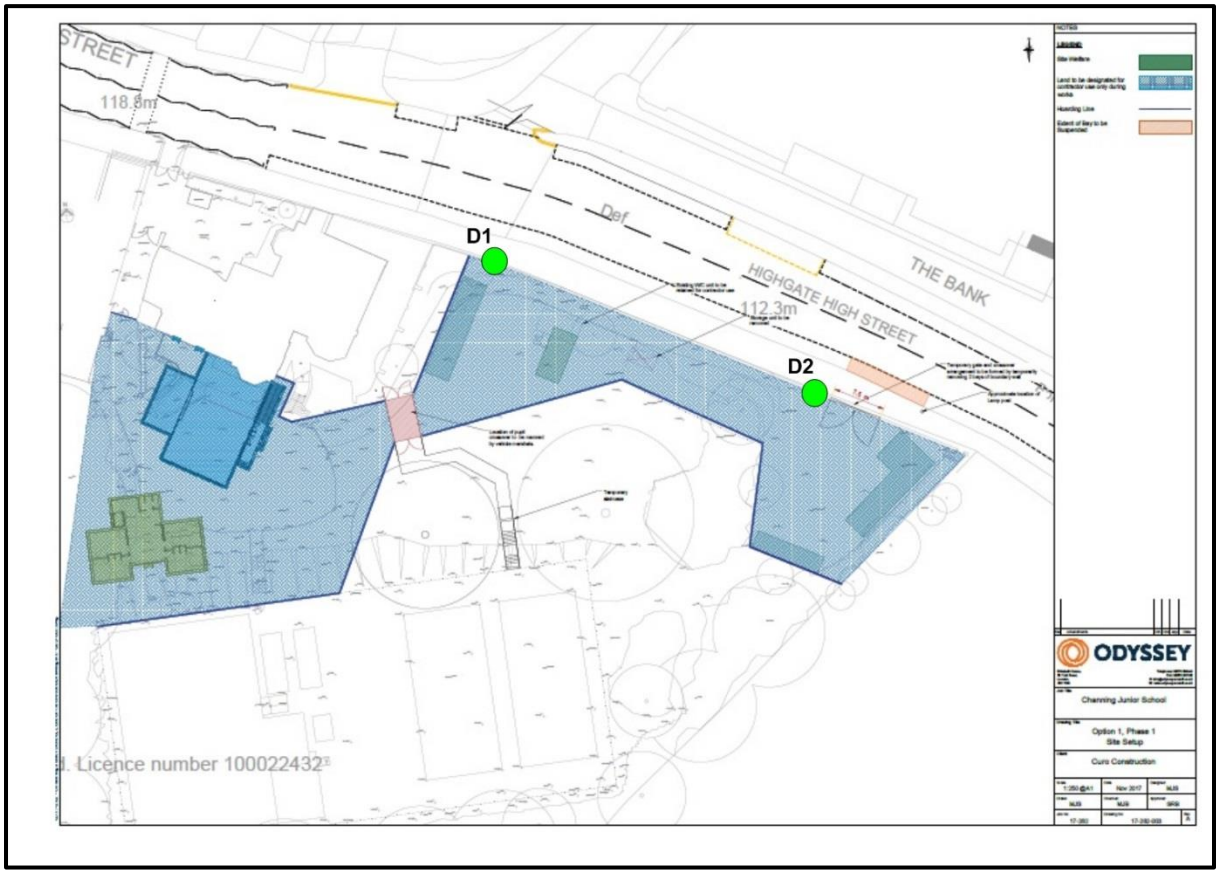


Figure 4.1: Location of DM11 Monitors

5 Conclusion

A Dust Management Plan has been prepared setting out mitigation measures that will be implemented during construction operations at the Channing Junior School.

The DMP should be seen as a working document and updated with additional measures should these be implemented or considered necessary.

Through the implementation of the measures proposed within this DMP, it is considered that dust impacts during operation will be effectively managed and mitigated to ensure off site impacts are negligible.

Appendix A – GLA SPG Demolition and Construction Risk Assessment Guidance

In order to assess the potential impacts, the activities on construction sites are divided into four categories. These are:

- demolition (removal of existing structures);
- earthworks (soil-stripping, ground-leveling, excavation and landscaping);
- construction (activities involved in the provision of a new structure); and
- trackout (the transport of dust and dirt from the construction site onto the public road network where it may be deposited and then re-suspended by vehicles using the network).

For each activity, the risk of dust annoyance, health and ecological impact is determined using three risk categories: low, medium and high risk. The risk category may be different for each of the four activities. The risk magnitude identified for each of the construction activities is then compared to the number of sensitive receptors in the near vicinity of the site in order to determine the risks posed by the construction activities to these receptors.

Step 1: Screen the Need for an Assessment

The first step is to screen the requirement for a more detailed assessment. An assessment is required where there is:

- a 'human receptor' within 350m of the boundary of the site or 50m of the route(s) used by construction vehicles on the public highway, up to 500m from the site entrance(s); and/or
- an 'ecological receptor' within 50m of the boundary of the site; or 50m of the route(s) used by the construction vehicles on the public highway, up to 500m from the site entrance(s).

Step 2A: Define the Potential Dust Emission Magnitude

This is based on the scale of the anticipated works and the proximity of nearby receptors. The risk is classified as small, medium or large for each of the four categories.

Demolition: The potential dust emission classes for demolition are:

- 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 20,000m^3 – 50,000m^3, potentially dusty construction material, demolition activities 10-20 m above ground level; and
- 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: This involves excavating material, haulage, tipping and stockpiling. The potential dust emission classes for earthworks are:

- 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 bunds >8 m in height, total material moved >100,000 tonnes;
- Medium: Total site area 2,500 m^2 – 10,000m^2, moderately dusty soil (e.g. silt), 5 – 10 heavy earth moving vehicles active at any one time, formation of bunds 4m – 8m in height, total material moved 20,000 tonnes- 100,000 tonnes; and

- 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 bunds <4 m in height, total material moved <20,000 tonnes, earthworks during wetter months.

Construction: The important issues here when determining the potential dust emission magnitude include the size of the building(s)/infrastructure, method of construction, construction materials, and duration of build. The categories are:

- Large: Total building volume >100,000m^3, on site concrete batching, sandblasting;
- Medium: Total building volume 25,000m^3 – 100,000m^3, potentially dusty construction material (e.g. concrete), on site concrete batching; and
- Small: Total building volume <25,000m^3, construction material with low potential for dust release (e.g. metal cladding or timber).

Trackout: The risk of impacts occurring during trackout is predominantly dependent on the number of vehicles accessing the Site on a daily basis. However, vehicle size and speed, the duration of activities and local geology are also factors which are used to determine the emission class of the Site as a result of trackout. The categories are:

- Large: >50 HDV (>3.5t) outward movements in any one day, potentially dusty surface material (e.g. high clay content), unpaved road length > 100m;
- Medium: 10-50 HDV (>3.5t) outward movements in any one day, moderately dusty surface material (e.g. high clay content, unpaved road length 50-100m; and
- Small: <10 HDV (>3.5t) outward movements in any one day, surface material with low potential for dust release, unpaved road length >50m.

Step 2B: Defining the Sensitivity of the Area

The sensitivity of the area is defined for dust soiling, human health (PM_{10}) and ecological receptors. The sensitivity of the area takes into account the following factors:

- the specific sensitivities of receptors in the area;
- the proximity and number of receptors;
- in the case of PM_{10}, the local background concentration; and
- site specific factors, such as whether there are natural shelters, such as trees, to reduce the risk of wind-blown dust.

Table A1.1 is used to define the sensitivity of different types of receptors to dust soiling, health effects and ecological effects.

Based on the sensitivities assigned to the different receptors surrounding the site and numbers of receptors within certain distances of the site, a sensitivity classification can be defined for each. Tables A1.2 to A1.4 indicate the criteria used to determine the sensitivity of the area to dust soiling, human health and ecological impacts.

Table A1.1: Examples of Factors Defining Sensitivity of an Area			
Sensitivity of Area	**Dust Soiling**	**Human Receptors**	**Ecological Receptors**
High	Users can reasonably expect enjoyment of a high level of amenity The appearance, aesthetics or value of their property would be diminished by soiling' The people or property would reasonably be expected to be present continuously, or at least regularly for extended periods, as part of the normal pattern of use of the land. E.g. dwellings, museums and other important collections, medium and long term car parks and car showrooms.	10 – 100 dwellings within 20 m of site. Local PM_{10} concentrations close to the objective (e.g. annual mean 36 -40 $\mu g/m^3$). E.g. residential properties, hospitals, schools and residential care homes.	Locations with an international or national designation and the designated features may be affected by dust soiling. Locations where there is a community of a particularly dust sensitive species such as vascular species included in the Red List for Great Britain. E.g. A Special Area of Conservation (SAC).
Medium	Users would expect to enjoy a reasonable level of amenity, but would not reasonably expect to enjoy the same level of amenity as in their home. The appearance, aesthetics or value of their property could be diminished by soiling The people or property wouldn't reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land. E.g. parks and places of work.	Less than 10 receptors within 20 m. Local PM_{10} concentrations below the objective (e.g. annual mean 30-36 $\mu g/m^3$). E.g. office and shop workers but will generally not include workers occupationally exposed to PM_{10} as protection is covered by the Health and Safety at Work legislation.	Locations where there is a particularly important plant species, where its dust sensitivity is uncertain or unknown. Locations with a national designation where the features may be affected by dust deposition E.g. A Site of Special Scientific Interest (SSSI) with dust sensitive features.
Low	The enjoyment of amenity would not reasonably be expected. Property would not reasonably be expected to be diminished in appearance, aesthetics or value by soiling. 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. E.g. playing fields, farmland unless commercially sensitive horticultural, footpaths, short lived car [parks and roads.	Locations where human exposure is transient. No receptors within 20 m. Local PM_{10} concentrations well below the objectives (less than 75%). E.g. public footpaths, playing fields, parks and shopping streets.	Locations with a local designation where the features may be affected by dust deposition. E.g. Local Nature Reserve with dust sensitive features.

Table A1.2: Sensitivity of the Area to Dust Soiling 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 A1.3: Sensitivity of the Area to Human Health Impacts							
Receptor Sensitivity	**Annual Mean PM_{10} Concentration**	**Number of Receptors**	**Distance from Source (m)**				
			<20	**<50**	**<100**	**<200**	**<350**
High	>32 µg/m^3	>100	High	High	High	Medium	Low
		10-100	High	High	Medium	Low	Low
		1-10	High	Medium	Low	Low	Low
	28-32 µg/m^3	>100	High	High	Medium	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	High	Medium	Low	Low	Low
	24-28 µg/m^3	>100	High	Medium	Low	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	Medium	Low	Low	Low	Low
	<24 µg/m^3	>100	Medium	Low	Low	Low	Low
		10-100	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
Medium	>32 µg/m^3	>10	High	Medium	Low	Low	Low
		1-10	Medium	Low	Low	Low	Low
	28-32 µg/m^3	>10	Medium	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
	24-28 µg/m^3	>10	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
	<24 µg/m^3	>10	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
Low	-	>1	Low	Low	Low	Low	Low

Table A1.4: 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

Define the Risk of Impacts

The final step is to combine the dust emission magnitude determined in step 2A with the sensitivity of the area determined in step 2B to determine the risk of impacts with no mitigation applied. Tables 4.5 to 4.7 indicate the method used to assign the level of risk for each construction activity. The identified level of risk is then used to determine measures for inclusion within a site-specific Construction Management Plan (CMP) aimed at reducing dust emissions and hence reducing the impact of the construction phase on nearby receptors. The mitigation measures are drawn from detailed mitigation set out within the IAQM guidance document.

Table A1.5: Risk of Dust Impacts from Demolition			
Sensitivity of Area	**Large**	**Medium**	**Small**
High	High Risk	Medium Risk	Medium Risk
Medium	High Risk	Medium Risk	Low Risk
Low	Medium Risk	Low Risk	Negligible

Table A1.6: Risk of Dust Impacts from Earthworks/ Construction			
Sensitivity of Area	**Large**	**Medium**	**Small**
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

Table A1.7: Risk of Dust Impacts from Trackout			
Sensitivity of Area	**Large**	**Medium**	**Small**
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Low Risk	Negligible
Low	Low Risk	Low Risk	Negligible