



Air Quality Monitoring Strategy: Bayham Street, Camden

September 2020



Experts in air quality
management & assessment



Document Control

Client	Camden Lifestyle (UK) Limited	Principal Contact	Daniel Webb (Meridian Project Management Ltd)
---------------	-------------------------------	--------------------------	---

Job Number	J4276
-------------------	-------

Report Prepared By:	Tomas Liska and Dr Denise Evans
----------------------------	---------------------------------

Document Status and Review Schedule

Report No.	Date	Status	Reviewed by
J4276A/1/F1	30 September 2020	Final	Guido Pellizzaro (Associate Director)

This report has been prepared by Air Quality Consultants Ltd on behalf of the Client, taking into account the agreed scope of works. Unless otherwise agreed, this document and all other Intellectual Property Rights remain the property of Air Quality Consultants Ltd.

In preparing this report, Air Quality Consultants Ltd has exercised all reasonable skill and care, taking into account the objectives and the agreed scope of works. Air Quality Consultants Ltd does not accept any liability in negligence for any matters arising outside of the agreed scope of works. The Company operates a Quality Management System, which is certified to ISO 9001:2015, and an Environmental Management System, certified to ISO 14001:2015.

When issued in electronic format, Air Quality Consultants Ltd does not accept any responsibility for any unauthorised changes made by others.

When printed by Air Quality Consultants Ltd, this report will be on Evolve Office, 100% Recycled paper.



Air Quality Consultants Ltd
23 Coldharbour Road, Bristol BS6 7JT Tel: 0117 974 1086
119 Marylebone Road, London NW1 5PU Tel: 020 3873 4780
aqc@aqconsultants.co.uk

Registered Office: 23 Coldharbour Road, Bristol BS6 7JT
 Companies House Registration No: 2814570

1 Introduction

- 1.1 This document sets out an air quality monitoring strategy to be applied during the demolition and construction works associated with the proposed mixed-use development at Bayham Street in Camden, London. It has been prepared by Air Quality Consultants Ltd (AQC) on behalf of Camden Lifestyle (UK) Limited in order to satisfy Condition 10 of the planning permission for the development (application reference: 2018/3647/P), which states:

“No development shall take place until full details of the air quality monitors have been submitted to and approved by the local planning authority in writing. Such details shall include the location, number and specification of the monitors, including evidence of the fact that they have been installed in line with guidance outlined in the GLA's Control of Dust and Emissions during Construction and Demolition Supplementary Planning Guidance and have been in place for 3 months prior to the proposed implementation date. The monitors shall be retained and maintained on site for the duration of the construction works in accordance with the details thus approved.”

- 1.2 In preparing this document, regard has been given to the guidance on monitoring strategies as set out in the Greater London Authority's *Supplementary Planning Guidance for the Control of Dust and Emissions During Construction and Demolition* (GLA, 2014), as well as the Institute of Air Quality Management's *Guidance on the Assessment of Dust from Demolition and Construction v1.1* (IAQM, 2016) and *Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites* (IAQM, 2018).

2 Monitoring Approach

- 2.1 The GLA Guidance (GLA, 2014) states that, for all demolition and construction sites in London, “it is essential to monitor for dust generation, including PM_{10} ”. Furthermore, it defines the approach to be adopted for monitoring particulate matter (as PM_{10}) for medium and high risk sites, and details the type of monitor to be used to provide high resolution measurements in short time periods (i.e. 15 minute and 1 hour intervals). More specifically, the guidance stipulates the requirement to:

“If measuring air quality along a line; Set up a line across the site according to the direction of the prevailing wind; and... operate a minimum of two automatic particulate monitors to measure PM_{10} levels at either end of the line - either inside or outside the site boundary...”

If monitoring air quality at sensitive receptors: Identify which location(s) need to be monitored and set up an automatic particulate monitor at each of these to measure representative PM_{10} levels.”

- 2.2 The guidance in the document cited above is founded on a risk-based approach, taking into account the size of the development and the proximity of sensitive receptors. Other issues that should be taken into account are the duration and phasing of the works and the prevailing baseline air quality conditions.
- 2.3 The proposed development lies within an Air Quality Management Area declared for exceedances of the 24-hour mean PM_{10} and annual mean nitrogen dioxide objectives. PM_{10} concentrations measured by the London Borough of Camden (the Local Planning Authority; LPA) at kerbside, roadside and background locations have been well below the relevant objectives for a number of years (London Borough of Camden, 2020), and concentrations in the vicinity of the site are therefore unlikely to exceed the air quality objectives.
- 2.4 There are residential properties surrounding the development site. These existing residential properties are all considered to be of high sensitivity to any increase in dust or PM_{10} concentrations.
- 2.5 The prevailing wind direction in the area is from the southwest (~ 40% of time) with the second most frequent wind direction from the east (~ 13% of time), as shown in the wind roses for 2018 and 2019 at London City Airport (Figure 1).
- 2.6 It is anticipated that the demolition and construction works will take place for a period of 21 months from 2nd April 2021. The planning condition states that PM_{10} monitoring should commence three months in advance of commencement of the works. It is therefore anticipated that monitoring will commence in December 2020 and continue until termination of the construction works. The proposed date of commencement of monitoring and commencement of site works will be confirmed with the LPA prior to commission.

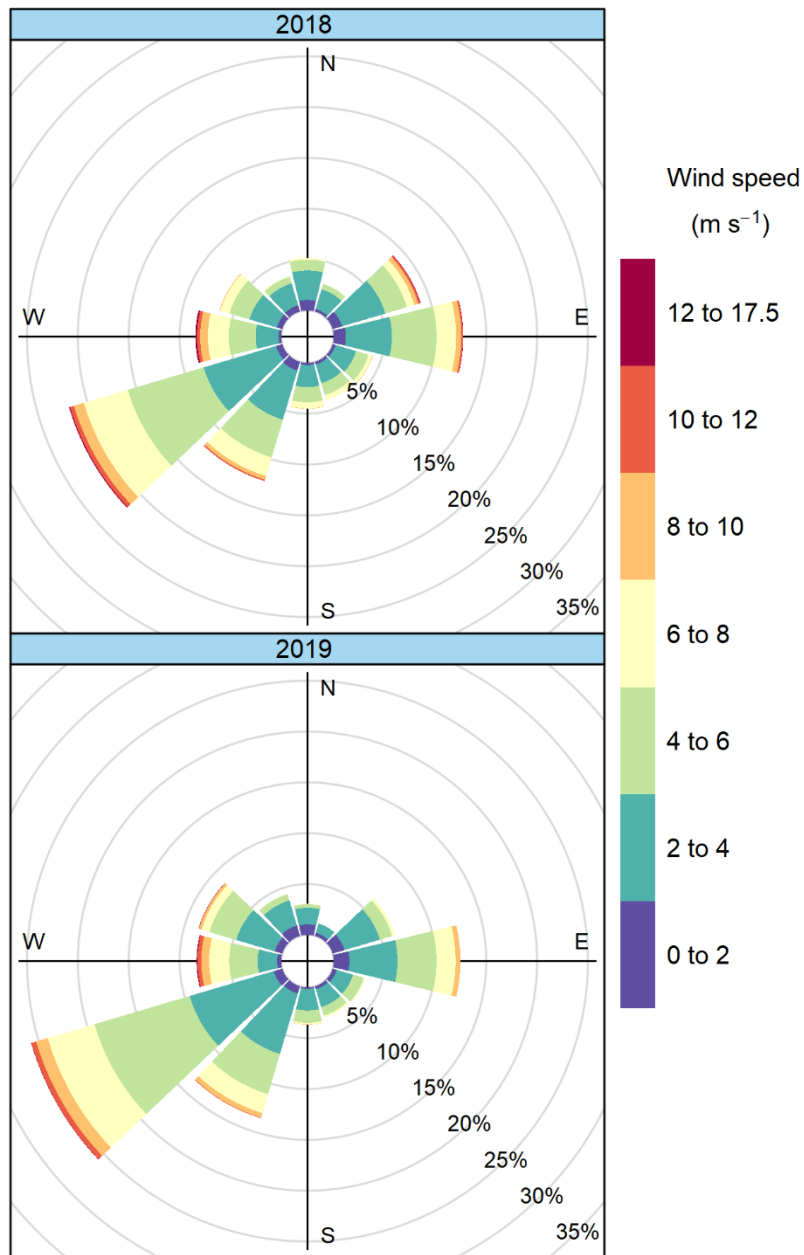
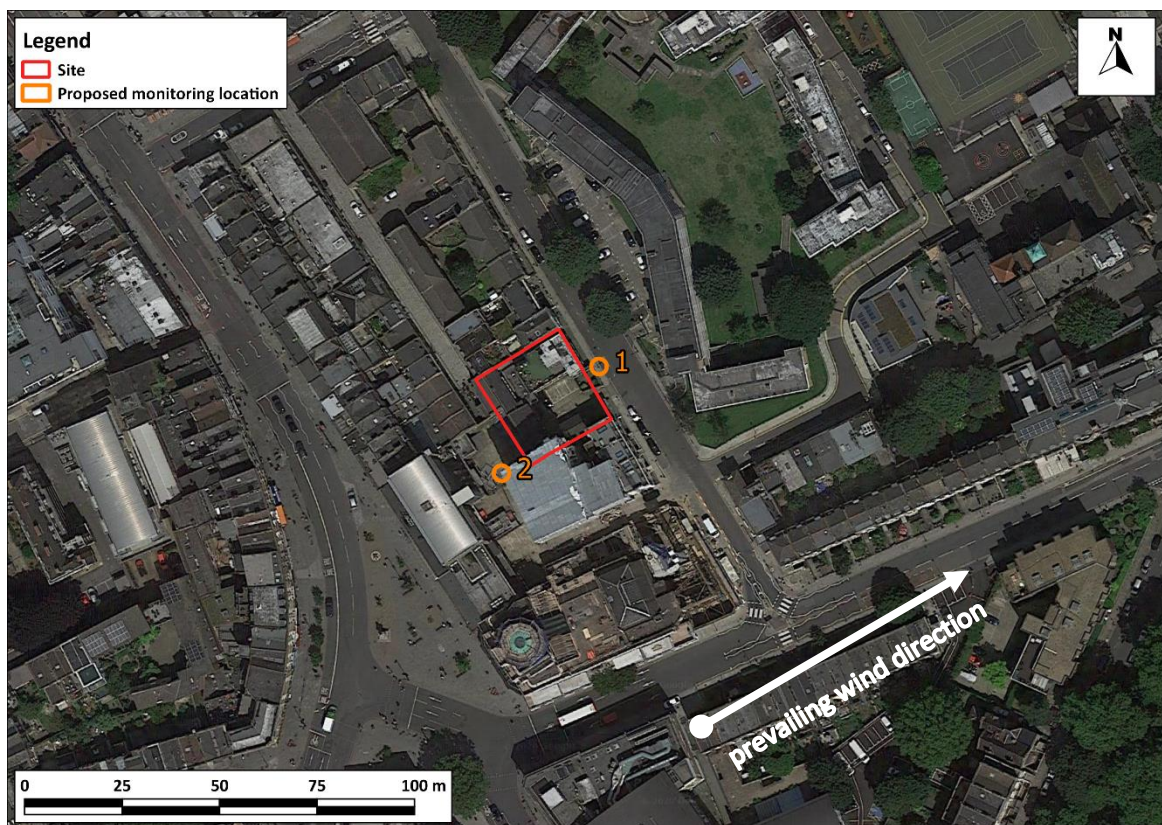


Figure 1: Wind Roses: London City Airport in 2018 (top) and 2019 (bottom)

3 Monitoring strategy

- 3.1 Continuous PM₁₀ monitoring will be undertaken at two locations using two Osiris particle monitors capable of measuring and logging PM₁₀ in real-time, and with the ability to download results from the units in real time using a GSM modem. A meteorological sensor will be installed, collocated with one of the monitors, in order to gather site-specific wind speed and direction data.
- 3.2 The proposed monitoring locations take account of the prevailing wind direction, and the location of sensitive receptors, and are shown in Figure 2. It is proposed that the lamp post (location 1 in Figure 2) is used as there are no other suitable locations on the north-eastern side of the proposed development.

Figure 2: Indicative Dust Monitoring Sites



Imagery ©2020 Google.

Site Action Levels and Reporting

- 3.1 At this stage it is anticipated that the Site Action Level (SAL) will be based on those recommended by IAQM (2018). For PM₁₀ measurements, a SAL of 190 µg/m³ as a 1-hour average will be used and its appropriateness will be confirmed following the three months baseline monitoring.
- 3.2 In the event that the SAL is exceeded, the Site Manager will be alerted immediately via an automated SMS and/or email alert system, and the following actions taken (further details of the procedure to be adopted following SAL exceedances are detailed in Appendix A1):
 - the event will immediately be recorded in a log book, along with the date and time and details of any actions taken on site to reduce emissions;
 - an additional assessment of the results will be commissioned to ascertain the potential cause of the exceedance;
 - construction activities taking place at the time the action level was exceeded will be reviewed;
 - if necessary, the mitigation measures that are in place will be reviewed and revised; and
 - the LPA will be informed of the exceedance by the Site Manager, as well as the actions taken to reduce emissions, within 48 hours.
- 3.3 The LPA will be informed of the outcome of the additional assessment, and advised of any revisions to working practices and mitigation.
- 3.4 Three-monthly monitoring summary reports will be prepared and submitted to the Local Planning Authority. These reports will summarise the following:
 - 24-hour average PM₁₀ concentrations;
 - date and time of any breach of the SAL, with the 1-hour mean concentrations recorded clearly stated;
 - wind direction at the time of any breaches of the SAL; and
 - details of the identified cause of elevated dust emissions and mitigation measures.
- 3.5 Should it be necessary to relocate either of the monitors during the construction programme, the LPA will be notified of any proposed changes in the location and operation of the monitors, and will be allowed to agree the new location(s) prior to relocation.

4 References

GLA. (2014). *The Control of Dust and Emissions from Construction and Demolition SPG*. Retrieved from <https://www.london.gov.uk/what-we-do/planning/implementing-london-plan/supplementary-planning-guidance/control-dust-and>

IAQM. (2016). Guidance on the Assessment of Dust from Demolition and Construction v1.1. Retrieved from <http://iaqm.co.uk/guidance/>

IAQM. (2018). Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites v1.1. Retrieved from www.iaqm.co.uk/guidance.html

London Borough of Camden. (2020). Air Quality Annual Status Report for 2019.

A1 Procedure for Site Action Level Exceedances

A1.1 Further to the information detailed in Paragraph 3.2, details of the procedure to be adopted following a dust event or a measured exceedance of the SAL are shown in Figure A1.1.

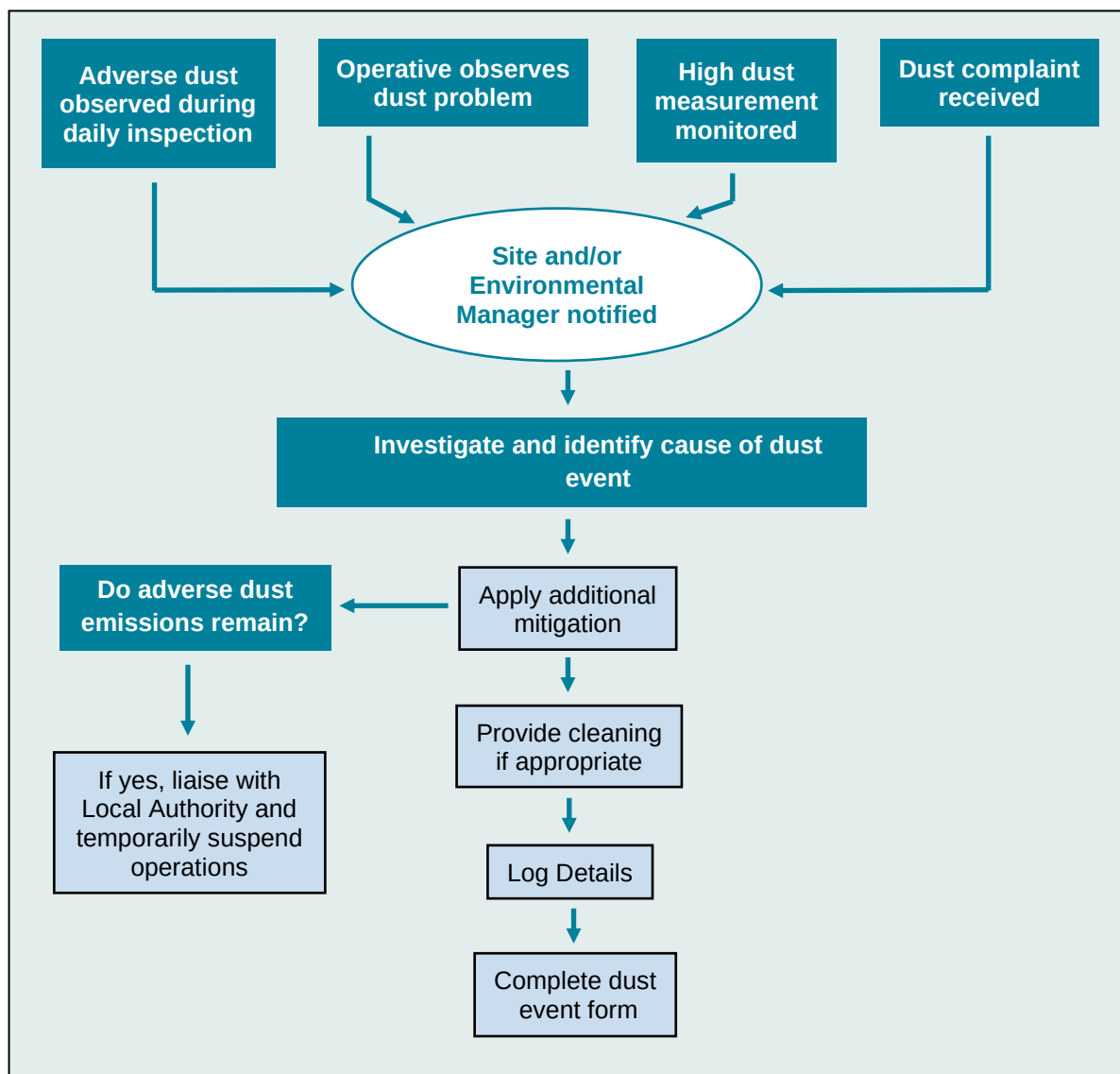


Figure A1.1: Dust Event Response Flowchart