

Laura Hazelton  
Senior Planning Officer  
Camden Council

**Ref:** LR02-20443-R0  
**Date:** 11 November 2020

Dear Ms Hazelton,

**RE: 20-23 GREVILLE STREET LONDON – DISCHARGE OF CONDITION 13**

Please find enclosed our pre-construction dust monitoring report CM01-20443-R3 dated 10<sup>th</sup> November to inform the discharge of Planning Condition 13 of consent 2018/0910/P.

The report provides pre-construction dust levels at the site in terms of PM10 particulate between July and October 2020 and also sets out the monitoring methodology that has been adopted (in terms of monitoring locations, adopted trigger and action levels and the protocols that will be followed in the event of any dust exceedances once construction works commence) in line with the approved Construction Dust Risk Assessment Air Quality Monitoring plan document (reference 28477-RP-SU-001 dated 3 June 2020) produced by Hilson Moran.

It is worth noting that the dust monitoring units have now been relocated so that the air inlets are now at least 0.5m in front of any building facades to minimise obstructions affecting the airflow as far as practicably possible.

It can be seen from the results documented in the Appendices to the report that baseline levels of PM10 throughout the monitoring period have been very low, with average PM10 concentrations ranging between 9-15 µg/m<sup>3</sup>. There have also been some brief isolated exceedances of the trigger and action level criteria at Location 1, which were likely caused by either local atmospheric conditions or vehicles along Greville Street. This demonstrates that the equipment is working correctly and any construction related exceedances will be addressed once works commence through the implementation of dust suppression measures as documented in the project CEMP.

Yours sincerely,



**Adam Bamford BSc MIOA DipIOA  
Principal Consultant**

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Architectural & Environmental Acousticians  
Noise & Vibration Engineers

# Pre-construction & Construction Dust Monitoring

20-23 Greville Street, London

# Pre-construction & Construction Dust Monitoring

**Project:** 20-23 GREVILLE STREET, LONDON

**Report reference:** CM01-20443

**Client:** RED CONSTRUCTION GROUP LTD  
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## Document control:

| REVISION | ISSUE DATE       | REPORT BY                                                           | CHECKED BY                                                | NOTES         |
|----------|------------------|---------------------------------------------------------------------|-----------------------------------------------------------|---------------|
| 3        | 10 November 2020 | Adam Bamford, BSc MIOA<br>DipIOA, Principal Acoustics<br>Consultant | Anthony Coraci, BSc DipIOA<br>AMIOA, Acoustics Consultant | Initial issue |
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## 1. INTRODUCTION

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- 1.1 Cass Allen Associates has been instructed by Red Construction Group Ltd to carry out pre-construction dust monitoring and then construction dust monitoring at the consented development at 20-23 Greville Street, London, in line with the project brief.
- 1.2 The monitoring commenced on 24<sup>th</sup> July 2020. For the first 12 weeks of monitoring, baseline dust levels are being monitored prior to construction activities commencing. Construction monitoring will then be carried out for a further 50 weeks throughout the construction phase of the project.
- 1.3 This report summarises:
- The monitoring methodology that has been adopted for works;
  - The results of the monitoring – these will be updated on a monthly basis and presented in the Appendices attached to this report.

## 2. ADOPTED MONITORING METHODOLOGY

### Locations

- 2.1 Two MCERTS [dust monitoring systems](#) are installed along the north-west and south-east site boundaries, as per the requirements of the project air quality monitoring plan prepared by Hilson Moran (report reference 28477-RP-SU-001 dated 3 June 2020). Camden Council expressed concerns regarding the siting of these monitoring units and this is discussed in further detail in our letter report LR01-20443 dated 6 October 2020, included within Appendix 3 of this report. The monitoring positions were relocated on 30<sup>th</sup> September and the current positions are shown in Figure 1 below.

**Figure 1 Construction Monitoring Locations**



- 2.2 Both monitoring locations can be summarised as follows:

- The dust monitoring units are fixed to temporary scaffolding at least 0.5m in front of the facade of the building at approximately first floor level (4m above local ground level) to minimise obstructions affecting the airflow in the vicinity of the sampler and to prevent any risk of it being tampered with at street level below.



- An anemometer has been installed on the dust monitoring unit at Location 1. This will collect local wind speed and direct data impacting the site and its surroundings. An anemometer will also be installed at Location 2 w/c 16<sup>th</sup> November 2020 once the permanent monitor for Location 1 is returned from the manufacturer.

2.3 The dust monitoring systems are configured to record particulate matter (PM10) levels over 15-minute intervals and they are connected to the building's electricity supply, which should ensure that data is continuously recorded so long as the electricity to the building is not turned off.

#### Limits

2.4 Table 1 below summarises the dust trigger and action levels that will be adopted for the project. These are taken from the Hilson Moran project air quality monitoring plan document which are based on the on the guidance given in the Mayor of London Supplementary Planning Guidance document "*The Control of Dust and Emissions During Construction and Demolition*<sup>1</sup>".

**Table 1      Dust Monitoring Limits during Construction Phase**

| Limits                                                                                              | Reference Periods                                                                                   |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| 150 $\mu\text{g m}^{-3}$ 15-minute mean for PM10 concentrations<br>(trigger level – both locations) | 0800-1800hrs on weekdays (Monday through Friday)<br>0800-1300hrs on Saturdays                       |
| 250 $\mu\text{g m}^{-3}$ 15-minute mean for PM10 concentrations<br>(action level – both locations)  | 150 $\mu\text{g m}^{-3}$ 15-minute mean for PM10 concentrations<br>(trigger level – both locations) |

2.5 In the event of exceedances of either the trigger level or the action level values given in Table 1 above for dust emissions relating to construction activities, the protocols given below should be followed.

#### Trigger Level Exceedance Protocol

- 2.6 In the event of any exceedances of the recommended trigger levels, the following actions should be taken:
- The Contractor should ascertain the cause of the exceedance by reference to the timing of the alert, site diaries and a knowledge of current site activity.
  - The Contractor should inform the acoustics consultant managing the monitoring of the cause of the exceedance so it can be documented for reporting purposes. Non-construction related exceedances would be disregarded.

<sup>1</sup> <https://www.london.gov.uk/file/18750/download?token=zV3ZKTpP>

- For construction related exceedances, the Contractor should ensure that the activity causing the alert is carried out in such a way as to minimise construction emissions as far as reasonably practicable (as per the mitigation and management measures documented within the project Construction and Environmental Management Plan (CEMP)).
  - If the works believed to be the cause of the alerts are still to be completed, it is recommended that notice be provided to nearby sensitive receptors with an explanation of the types of works being undertaken, and an indication of the likely remaining duration, in order to manage their expectations of the works.

2.7 Following receipt of any construction related trigger level exceedances, construction emissions will be kept under close review as activities continue, to minimise the risk of actionable exceedances occurring.

#### Action Level Exceedance Protocol

2.8 In the event of any exceedances of the recommended action level, the following actions should be taken:

- The works believed to be causing the action level exceedance should cease while alternative working solutions are investigated. If no source can be identified, the site manager will query as to whether or not the alert was triggered by accident.
  - The Contractor should ascertain the cause of the exceedance by reference to the timing of the alert, site diaries and a knowledge of current site activity.
  - The Contractor should inform the acoustics consultant managing the monitoring of the cause of the exceedance so it can be documented for reporting purposes. Non-construction related exceedances would be disregarded.
- If there is a risk of repeat action level exceedances from the site activity identified, the Contractor may convene a meeting with the Local Planning Authority. The purpose of the meeting would be to carefully review the working method / practices and machinery to determine if there are any reasonable alternative measures that could be implemented to reduce construction emissions further to minimise the risk of a re-occurrence.

2.9 Following receipt of any actionable exceedances, construction emissions would be kept under close review until all related site activity is completed.



### **3. MONITORING RESULTS**

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- 3.1 The results of the pre-construction monitoring and the construction monitoring to follow, along with discussion of any remedial measures taken are provided in the Appendices to this report. They will be updated on a monthly basis until further notice.

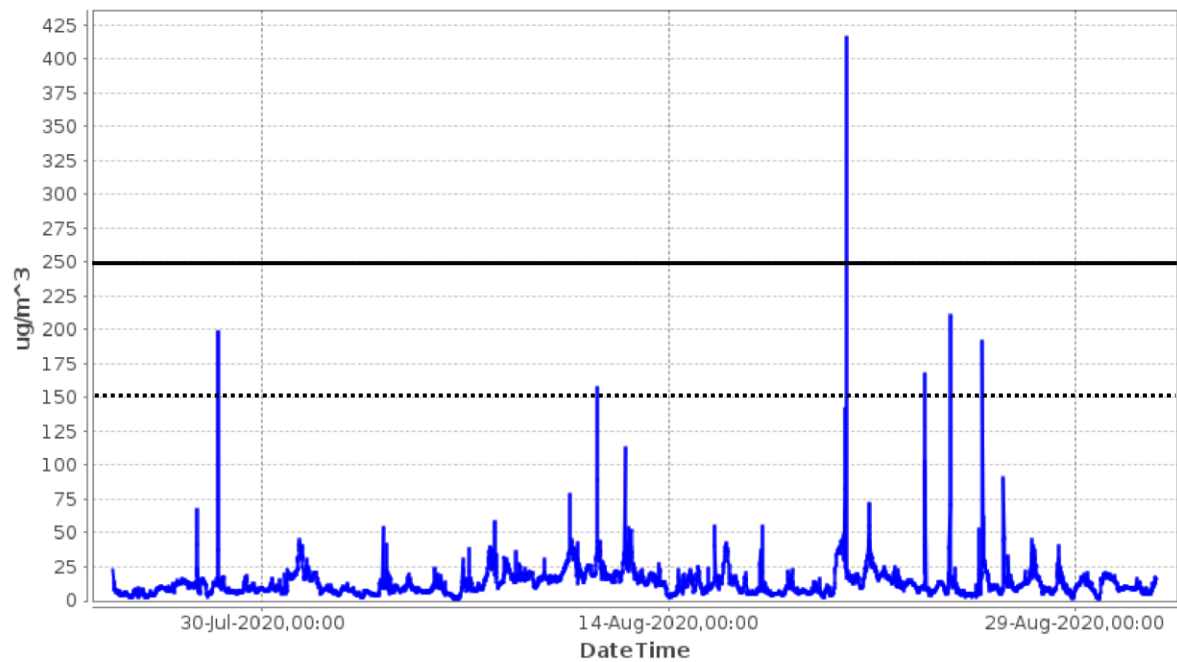
## **4. CONCLUSIONS**

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- 4.1 Pre-construction and construction dust monitoring (PM10) is being carried out at a consented development at 20-23 Greville Street in London on behalf of Red Construction Group Ltd.
- 4.2 Two dust monitoring units have been installed on the north-west and south-east corners of the existing building as per the project air quality monitoring plan.
- 4.3 The monitoring is being provided by Cass Allen and commenced on the 24<sup>th</sup> July 2020. The monitoring is anticipated to last for 62 weeks in total – the first 12 weeks monitored baseline dust levels prior to construction starting.
- 4.4 The monitoring results and discussion of any remedial measures taken will be included in Appendices and reported on a rolling monthly basis unless otherwise advised by the client.

## Appendix 1 Monitoring Results – July to August 2020

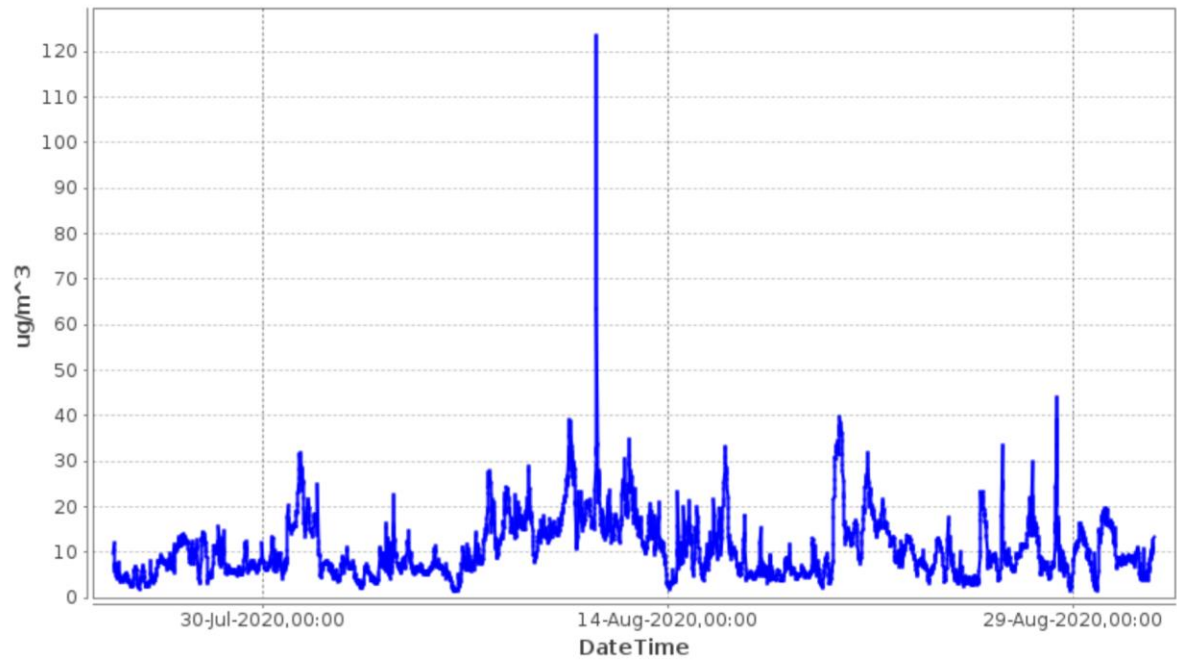
Location 1 – North-west corner of site



- ..... Dust trigger level, 150  $\mu\text{g}/\text{m}^3$  15-minute mean for PM10 concentrations
- Dust action level, 250  $\mu\text{g}/\text{m}^3$  15-minute mean for PM10 concentrations
- Dust level,  $\mu\text{g}/\text{m}^3$  15-minute mean for PM10 concentrations

Average PM10 level during monitoring period – 13  $\mu\text{g}/\text{m}^3$

Location 2 – South-east corner of site



..... Dust trigger level, 150  $\mu\text{g m}^{-3}$  15-minute mean for PM10 concentrations

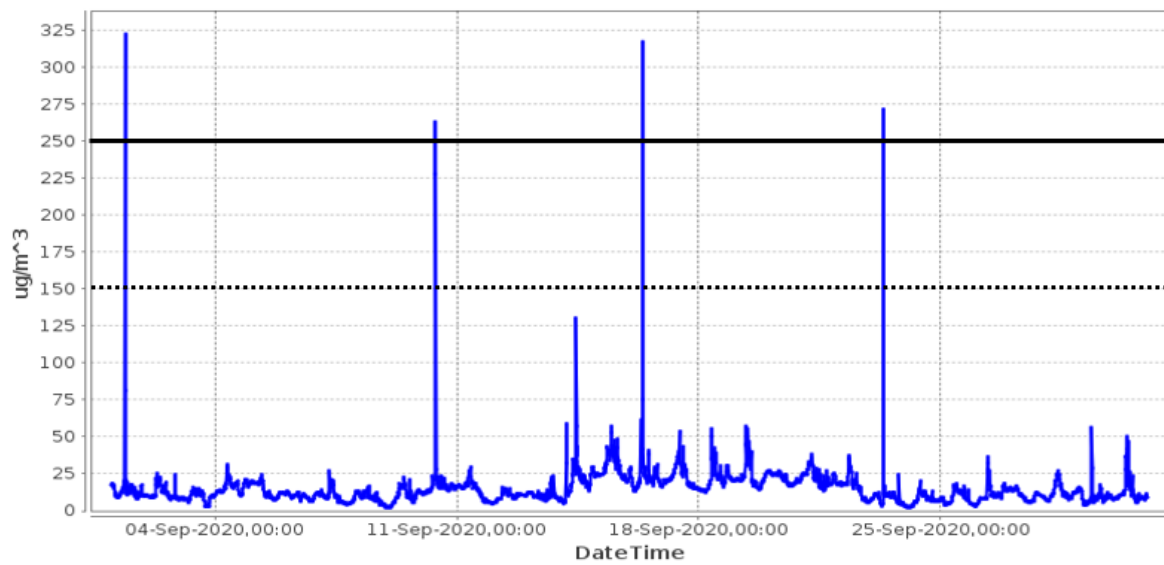
— Dust action level, 250  $\mu\text{g m}^{-3}$  15-minute mean for PM10 concentrations

— Dust level,  $\mu\text{g m}^{-3}$  15-minute mean for PM10 concentrations

Average PM10 level during monitoring period – 11  $\mu\text{g}/\text{m}^3$

## Appendix 2 Monitoring Results – September 2020

Location 1 – North-west corner of site



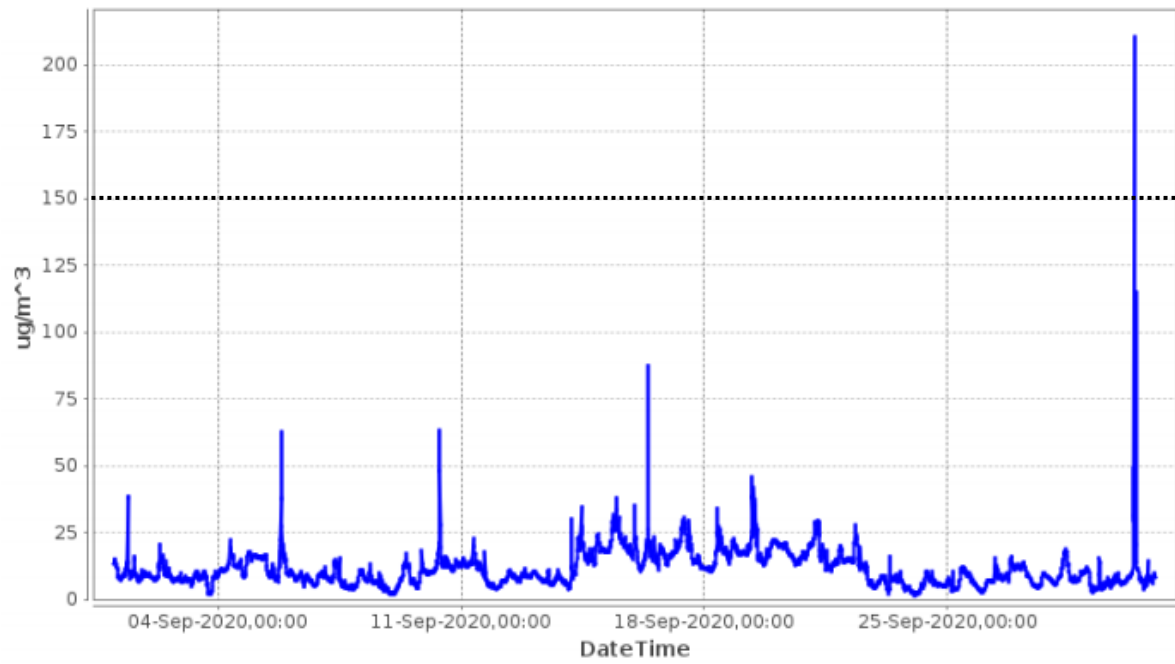
..... Dust trigger level, 150  $\mu\text{g m}^{-3}$  15-minute mean for PM10 concentrations

— Dust action level, 250  $\mu\text{g m}^{-3}$  15-minute mean for PM10 concentrations

— Dust level,  $\mu\text{g m}^{-3}$  15-minute mean for PM10 concentrations

Average PM10 level during monitoring period – 15  $\mu\text{g}/\text{m}^3$

Location 2 – South-east corner of site

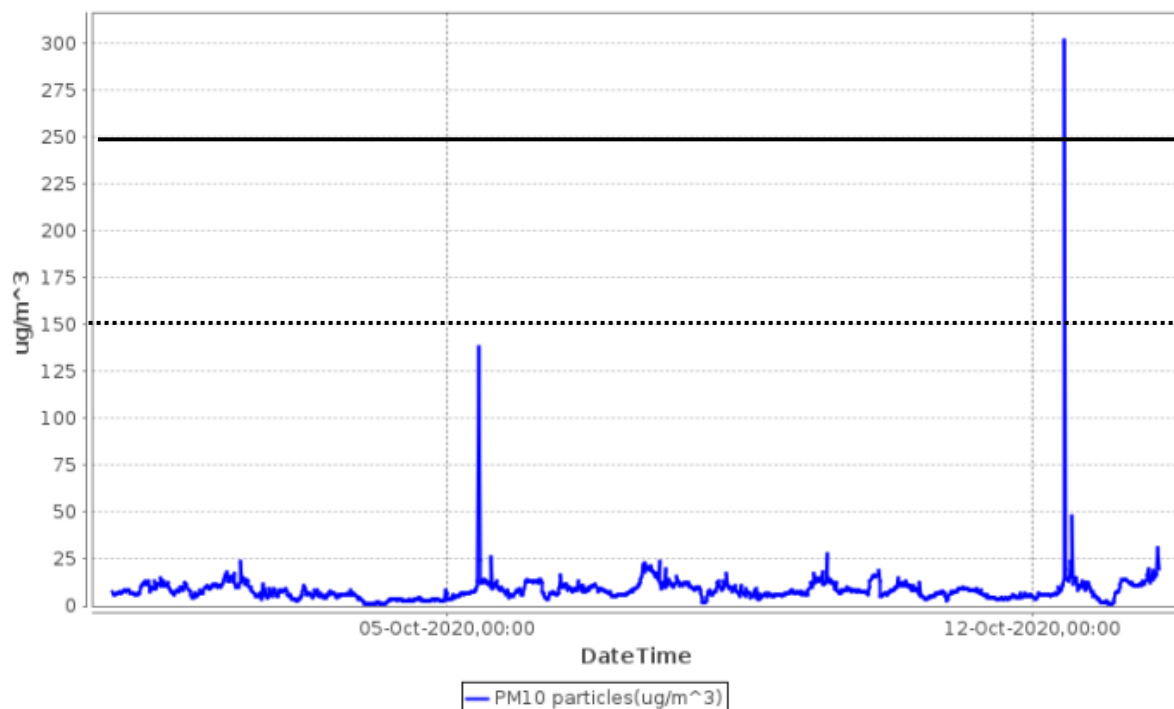


- ..... Dust trigger level, 150  $\mu\text{g m}^{-3}$  15-minute mean for PM10 concentrations
- Dust action level, 250  $\mu\text{g m}^{-3}$  15-minute mean for PM10 concentrations
- Dust level,  $\mu\text{g m}^{-3}$  15-minute mean for PM10 concentrations

Average PM10 level during monitoring period – 11  $\mu\text{g/m}^3$

## Appendix 3 Monitoring Results – October 2020

Location 1 – North-west corner of site



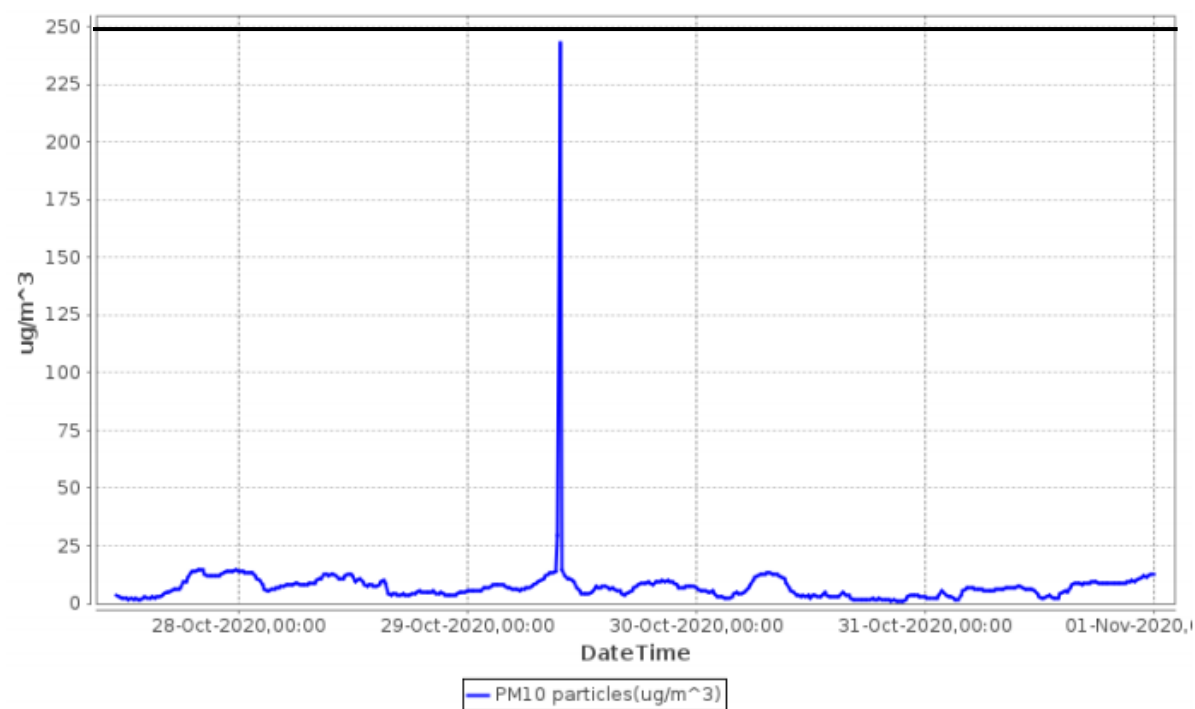
- ..... Dust trigger level, 150  $\mu\text{g m}^{-3}$  15-minute mean for PM10 concentrations
- Dust action level, 250  $\mu\text{g m}^{-3}$  15-minute mean for PM10 concentrations
- Dust level,  $\mu\text{g m}^{-3}$  15-minute mean for PM10 concentrations

Average PM10 level during monitoring period (1<sup>st</sup> October to 13<sup>th</sup> October) – 9  $\mu\text{g/m}^3$

Unfortunately, the monitor stopped working on 13<sup>th</sup> October unexpectedly and no data was recorded between midday on the 13<sup>th</sup> October until 11:15 hours on 27<sup>th</sup> October when a temporary replacement unit was installed whilst the permanent monitor is fixed by the equipment manufacturer.

It is understood that the replacement monitor will be shipped from the manufacturer w/c 9<sup>th</sup> November and therefore we anticipate that it will be back onsite w/c 16<sup>th</sup> November if not before.

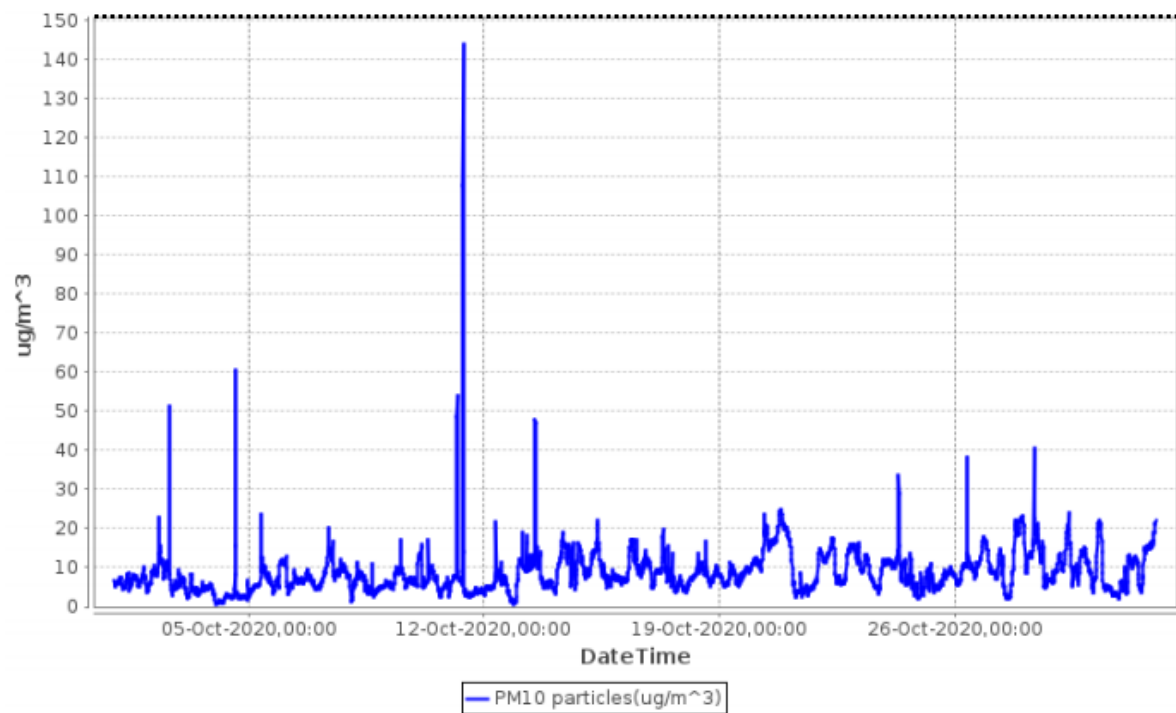




- ..... Dust trigger level, 150  $\mu\text{g}/\text{m}^3$  15-minute mean for PM10 concentrations
- Dust action level, 250  $\mu\text{g}/\text{m}^3$  15-minute mean for PM10 concentrations
- Dust level,  $\mu\text{g}/\text{m}^3$  15-minute mean for PM10 concentrations

Average PM10 level during monitoring period (27<sup>th</sup> October to 31<sup>st</sup> October) – 7  $\mu\text{g}/\text{m}^3$

Location 2 – South-east corner of site



- ..... Dust trigger level, 150  $\mu\text{g m}^{-3}$  15-minute mean for PM10 concentrations
- Dust action level, 250  $\mu\text{g m}^{-3}$  15-minute mean for PM10 concentrations
- PM10 particles( $\mu\text{g m}^{-3}$ )

Average PM10 level during monitoring period – 9  $\mu\text{g m}^{-3}$

## **Appendix 4** Letter RE Monitoring Locations Onsite

Laura Hazelton  
Senior Planning Officer  
Camden Council

**Ref:** LR01-20443  
**Date:** 6 October 2020

Dear Ms Hazelton,

**RE: 20-23 GREVILLE STREET LONDON – DISCHARGE OF CONDITION 13**

Cass Allen are instructed to carry out dust monitoring for the above development in relation to Planning Condition 13 of consent 2018/0910/P which states:

*Air quality monitoring should be implemented on site. 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 development in accordance with the details thus approved.*

*Reason: To safeguard the amenity of adjoining premises and the area generally in accordance with the requirements of policies A1 and CC4 of the London Borough of Camden Local Plan 2017..*

Two dust monitoring stations were installed onsite on 24<sup>th</sup> July 2020 at locations as identified in Figure 3 of the Hilson Moran Construction Dust Risk Assessment Air Quality Monitoring Plan document (see Addendum 1), in line with the guidance given in the Mayor of London Supplementary Planning Guidance document "The Control of Dust and Emissions During Construction and Demolition" document (hereafter MLSPG)

The MLSPG does not contain any specific guidance in it regarding the siting of the monitoring stations. However, the 2018 Institute of Air Quality Management document 'Guidance on Monitoring in the Vicinity of Demolition and Construction Sites' does provide further clarification in Section 4.26 (page 11) and Case Study 8 (page 26), both snippets below for reference.

**4.26** Care needs to be taken with regard to the microenvironment in positioning of samplers. For example, sampler inlets should be located in a clear, unobstructed position, and some metres away from any large structures (such as walls of buildings) that might interrupt airflow; immediately above should be open to the sky (free in an arc of at least 270°), with no overhanging trees or other structures. To measure airborne dust concentrations, the sampler head should ideally be located between 1.5 to 4m above ground level as suggested in the 2008 Ambient Air Quality Directive (2008/50/EC). Examples of good and poor siting of samplers is provided in **Section 9: Case Study**.

There are a few basic guidelines as to where the monitors should be installed which fall in line with the microscale siting criteria according to European Directive 2008/50/EC, these include:

- the flow around the inlet sampling probe shall be unrestricted (free in an arc of at least 270°);
- without any obstructions affecting the airflow in the vicinity of the sampler (normally some metres away from buildings, balconies, trees and other obstacles and at least 0.5 m from the nearest building in the case of sampling points representing air quality at the building line);
- in general, the inlet sampling point shall be between 1.5 m (the breathing zone) and 4 m above the ground; and
- The inlet probe shall not be positioned in the immediate vicinity of sources in order to avoid the direct intake of emissions unmixed with ambient air.

The following factors should also be taken into account:

- interfering sources (including site access gates, mist canons and water suppression);
- security;
- safe operator access; and
- availability of a permanent electrical power supply.

There are many interpretations of the advice given above; included is a gallery of the good, the bad and the ugly! The images used have been taken across a number of construction projects in London and are not representative of any one developer, contractor or supplier of monitoring equipment and services.

The full document can be viewed here:

[https://iaqm.co.uk/text/guidance/guidance\\_monitoring\\_dust\\_2018.pdf](https://iaqm.co.uk/text/guidance/guidance_monitoring_dust_2018.pdf)

Following submission of the data for the first month of baseline monitoring we received comments from Camden Council with regard to the monitor locations. Camden Council have expressed their concern that both locations are fixed to the walls and that Location 1 is also obstructed by an overhanging part of the building. Additional factors that we had to take into account (which the guidance clearly states should also be considered) were security, safe operator access and availability of a permanent electrical power supply. In this instance they were key considerations in the siting of the monitoring equipment given the current constraints affecting the site, which are discussed below:

#### Site constraints which influenced current monitoring locations

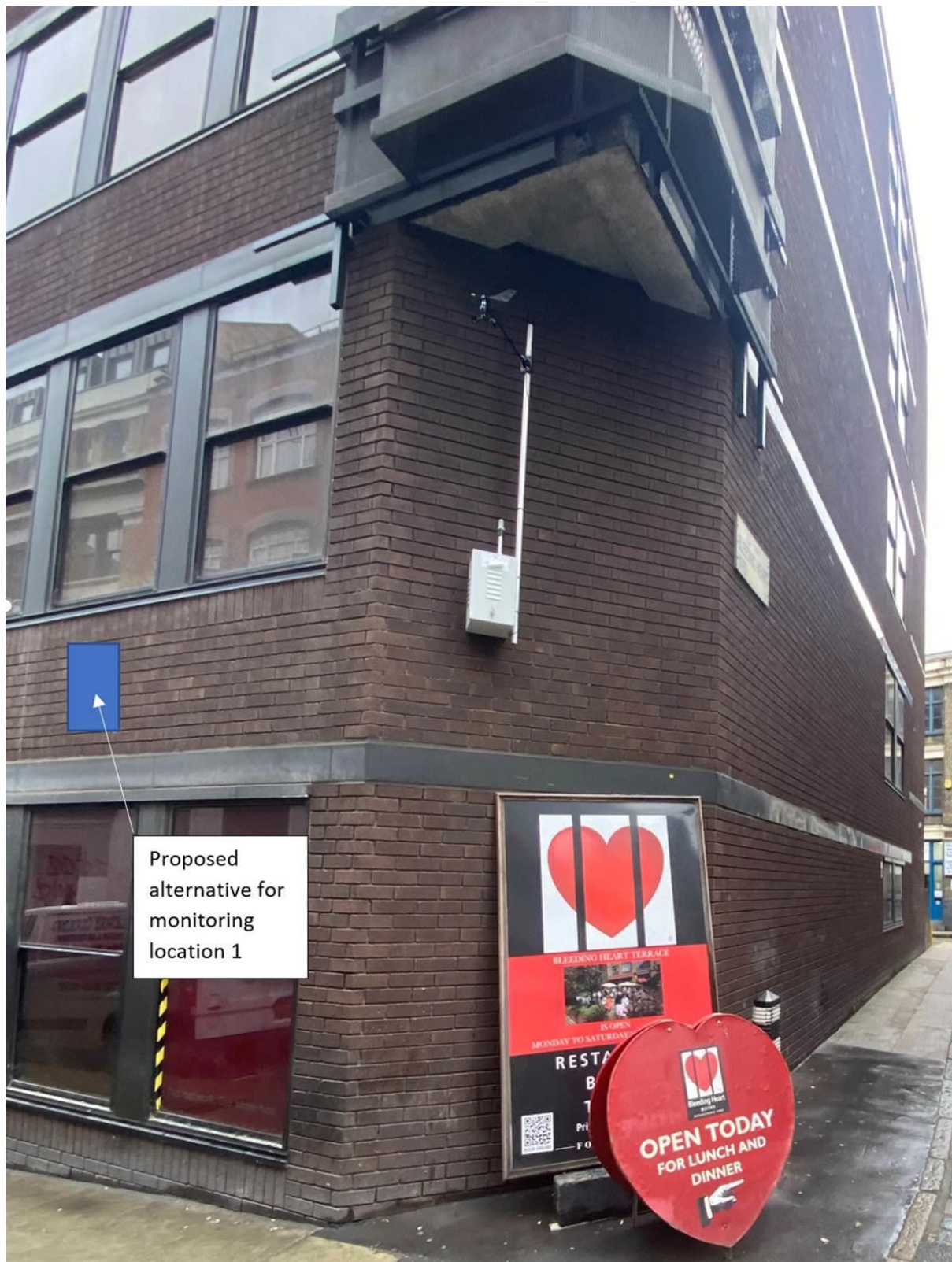
- No site hoarding installed around the site boundaries, which meant that units had to be installed on the façade of the existing building for power and security reasons. Similarly, there wasn't space to install the equipment within cages or use tripods to the lack of space and security concerns.
- Public footpath and the safety of its users – Refer to Addendum 2 Image 1&2

- Very close proximity of the Public Highway – Refer to Addendum 2 Image 1&2
- Access and outdoor seating area to the Bistro in Bleeding Heart Yard – refer to Addendum 3 Image 3
- Provision of permanent power and the safekeeping thereof to any other location as previously and currently installed
- The bistro at the rear of the premises is named as a sensitive receptor in the project air quality monitoring plan and therefore the current monitoring location was chosen as most representative of this location
- Siting the unit underneath the overhang at Location 1 was done for two reasons
  - The air inlet has direct line of sight to Greville Road at this location – if the unit had been sighted on the façade of the building adjacent to Bleeding Heart Yard it would have been partially screened from Greville Road.
  - Using the overhang meant that the equipment could be installed using the floor that is set back from the main pedestrian footway which minimised the risk to members of the public and operatives.

The following modifications have been made in order to more closely follow the IAQM guidance as requested by Camden Council:

Location 1 has been moved from its current location to the position shown in the snip below on 30<sup>th</sup> September 2020.





This alternative location will remove any potential influence of the building overhang on the air inlet. Furthermore, the monitoring unit has been mounted to 100mm x 100mm wooden spacers which in turn are fixed to the façade of the building. This increases the gap between the building façade and the air inlet as far as reasonably practicable to allow free air flow behind the air inlet in front of the building.

Location 2 was also moved on 30<sup>th</sup> September 2020 and the monitoring unit mounted on 100mm x 100mm wooden spacers to increase the air gap between the air inlet and the building façade as per at Location 1.

We trust that the revised locations/adjustments (see addendum 3) will be acceptable to Camden Council once they take into consideration the practical limitations of the site such as security, availability of power and operator safety as referred to above.

Finally, we maintain that the baseline monitoring data that has been collected to date is robust and fit for purpose and that there should be no need to 'reset' the 12 week baseline data collection for the adjustments and relocations noted above.

Baseline PM10 concentrations affecting the site are very low and where there have been isolated high concentrations recorded to date due to local atmospheric conditions, these have been picked up by the monitoring units in real time. This demonstrates that the units will be perfectly capable of reporting any exceedances of the adopted trigger levels due to construction activities once construction commences

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Adam Bamford'.

**Adam Bamford BSc MIOA DipIOA**  
**Principal Consultant**

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**Direct dial:** 01234 834773



## Addendum 1

Extract from the Hilson Moran Construction Dust Risk Assessment Air Quality Monitoring Plan



20-23 GREVILLE STREET LONDON EC1N 8SS  
Construction Dust Risk Assessment Air Quality Monitoring Plan



**Figure 3 – Proposed Real Time Monitoring Locations**



## Addendum 2

Position of equipment prior to relocation and in positions indicated in Addendum 1



Image 1 – Greville Street Elevation



Image 2 – Greville Street Elevation





Image 3 – Bleeding Heart Yard

### Addendum 3



Image 1 – Greville Street Elevation relocated monitoring position





Image 2 – Greville Street Elevation relocated monitoring position



Image 3 – Bleeding Heart Yard relocated monitoring position



## Architectural & Environmental Acousticians Noise & Vibration Engineers

This report has been prepared by Cass Allen Associates Ltd in accordance with the CDM regulations with all reasonable skill, care and diligence, and taking account of the resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid at the time of collection. This report is for the exclusive use of the client named above; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from Cass Allen Associates Ltd. Cass Allen Associates Ltd disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of work.



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