



Essential Living (Swiss Cottage) Limited

100 Avenue Road, London

**Air Quality Monitoring Quarterly Report – 1st June to 31st August
2018**

Project No. 442346-10

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RSK GENERAL NOTES

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This work has been undertaken in accordance with the quality management system of RSK Group Limited.

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1 INTRODUCTION

RSK Environment Ltd (RSK) was commissioned by Essential Living (Swiss Cottage) Limited to undertake air quality monitoring during the demolition and construction works at 100 Avenue Road, London. The monitoring is being undertaken with reference to existing air quality in the area and relevant air quality legislation, policy and guidance, and is intended to enable the client discharge the following planning condition (application number 2014/1617/P, Condition 24):

“Before any works or construction commences details of at least two real time particulate air quality monitors shall be submitted to and agreed in writing by the Local Planning Authority. 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. The monitors shall be installed 1 month prior to the development taking place and must be retained and maintained on site for the duration of the development in accordance with the details thus approved. Real time data from the monitors should be available online, and council officers provided access to this data. In addition, quarterly reports should be sent to the Air Quality officer for the duration of the works. These should detail any exceedances of the trigger action level (which is 250 $\mu\text{g}/\text{m}^3$), and the action that was taken to remedy this.”

RSK installed two ‘Osiris’ particle monitors at the 100 Avenue Road development site in March 2016 as per the Greater London Authority’s ‘The Control of Dust and Emissions during Construction and Demolition - Supplementary Planning Guidance’ published in April 2014. Due to ongoing delays to the proposed demolition and construction programme, RSK decommissioned the two Osiris particle monitors during October 2017 at the request of the client.

It is understood that some minor demolition works, initially comprising the removal of the staircase at the front of the building, was planned for commencement during December 2017 and as such RSK were instructed to reinstall particle monitors during late October 2017. At this time, 2no. TSI Environmental Dust Trak units (‘TSI Units’) were installed at the site. These monitors are considered to record PM₁₀ and PM_{2.5} concentrations ($\mu\text{g}/\text{m}^3$) more reliably than other monitors, and therefore these were considered a suitable alternative to the Osiris units. The monitors were installed at the same monitoring locations, due to the very short duration of the initially proposed demolition works and on-site constraints in providing an external power supply and appropriate site security.

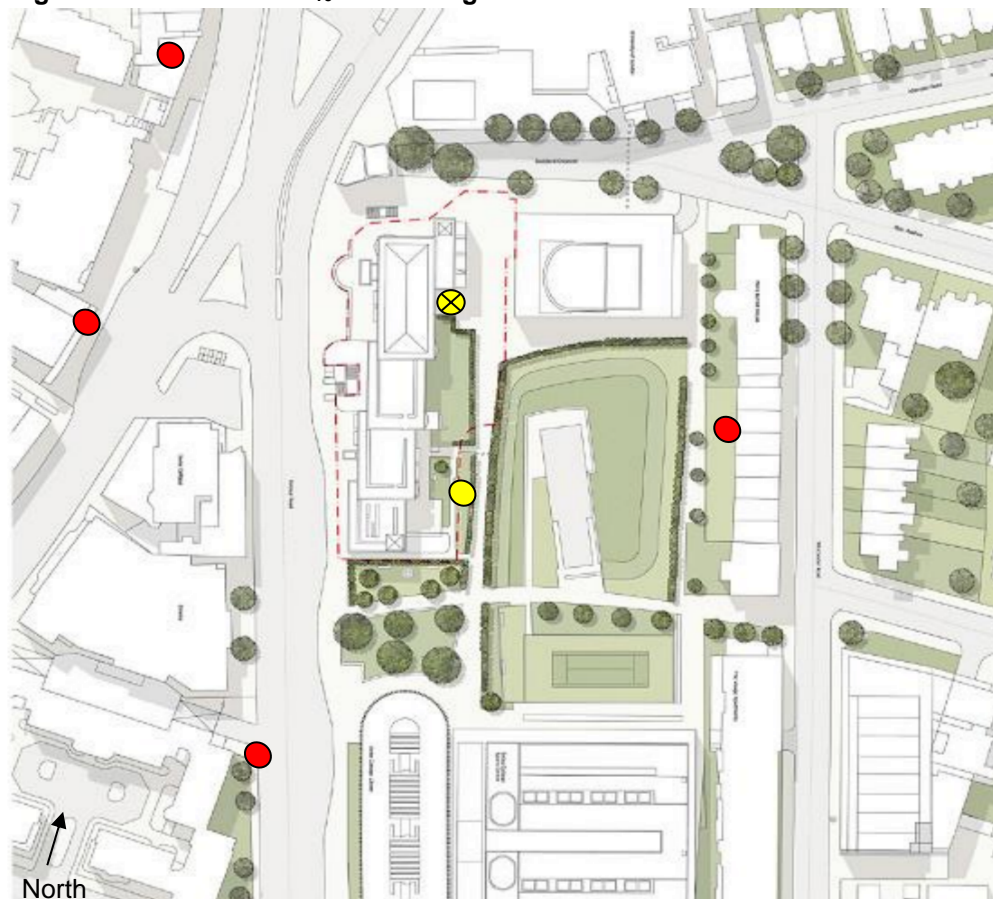
Between 1st June and 5th July 2018, the monitor located at monitoring location two captured zero readings at every interval, such that these data were assumed to be spurious and discarded. After attending site to fix the instrument in July 2018, it briefly worked prior to reporting PM₁₀ concentrations higher than the total suspended particulate concentration; consequently, concentrations from this monitor were also discarded. A replacement instrument was installed on 15th August 2018, after which readings were

thought to be more reliable. Although these data have consequently been reported, some was discarded due to negative values being recorded.

This is the tenth quarterly monitoring report following installation in March 2016 and covers data over the period from 1st June 2018 to 31st August 2018. The data presented in this report refer to the baseline conditions at the site as the demolition and construction works have not yet commenced, including the works proposed for December 2017.

Figure 1.1 shows the location of the worksite (approximate grid reference for the centre of the site is 526709, 184310), and the approximate locations of the air quality monitoring equipment on site. Two nephelometers, with web-based data hosting, were installed at the site. TSI Location 1 was also fitted with wind direction and speed sensors, to enable source directionality analysis. The site is within the jurisdiction of London Borough of Camden (LBC).

Figure 1.1: Dust and PM₁₀ Monitoring Locations at 100 Avenue Road



- TSI Nephelometer 2
- ⊗ TSI Nephelometer 1
- Nearest Existing receptors/1st floor residential receptors
- Site boundary

2 AIR QUALITY MONITORING RESULTS

2.1 PM₁₀ monitoring

Nephelometer instruments are not based on a reference equivalent method for the determination of airborne particulates; however, they do provide indicative continuous data in near real-time that may be related to the occurrence of site events, and are considered by many regulators as an appropriate and economical technique for this type of application.

These instruments measure continuous concentrations of the PM₁₀ fraction of suspended particle matter and these data are posted to a website, to allow 'on request' examination of unratified data.

Table 2.1 shows the particulate results for monitoring locations 1 and 2 for the TSI units, for the monitoring period presented in this report. During this monitoring period, there were no recorded exceedances of the 15-minute average 250µg/m³ PM₁₀ recommended trigger level or of the daily mean PM₁₀ air quality standard (AQS) at either monitoring location. Moreover, the period mean was below the annual mean PM₁₀ AQS at both monitoring locations. However, the results at monitoring location 2 should be treated with caution due to low data capture.

Table 2.1: TSI units - Measured Particulate Concentrations at 100 Avenue Road – Nephelometer monitoring location 1 and 2 for monitoring period 10 (1st June 2018 – 31st August 2018)

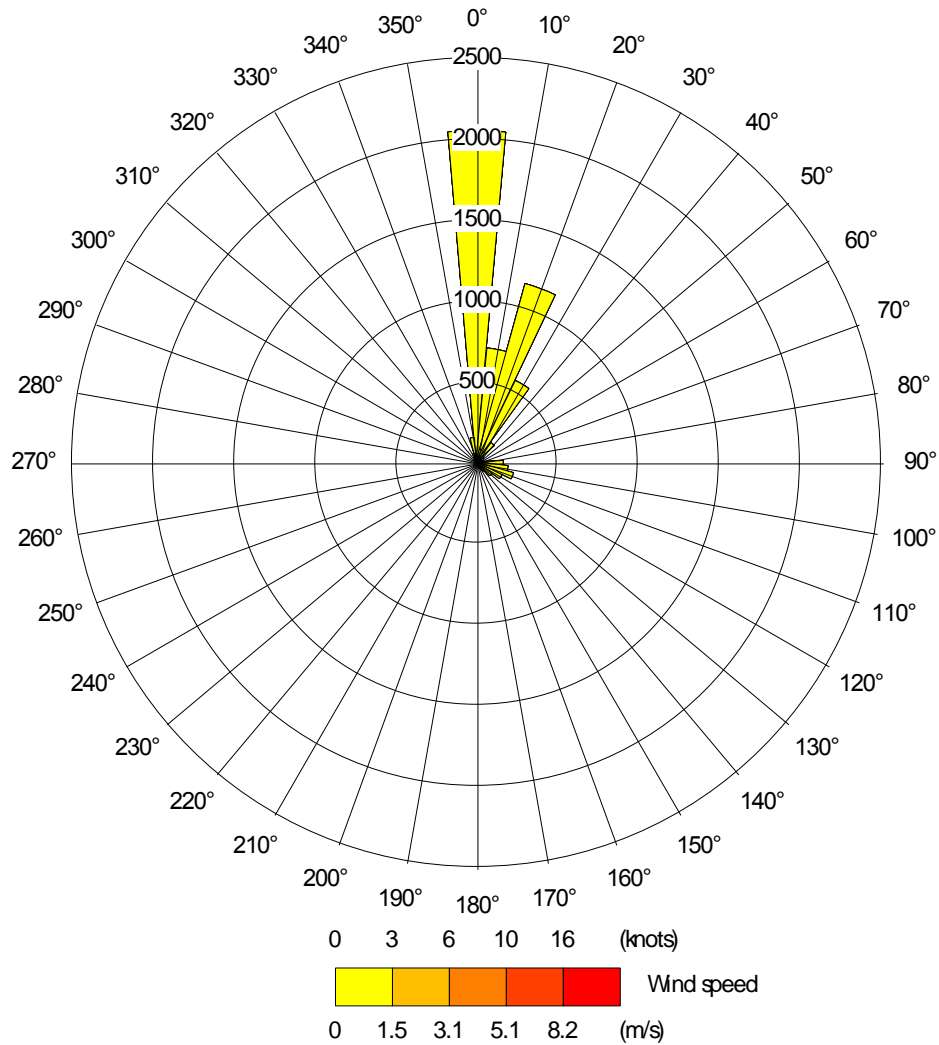
Parameter considered	PM ₁₀ monitoring location 1 – fence (µg/m ³)	PM ₁₀ monitoring location 2 – garden (µg/m ³)
Period Mean	8.95	3.54
Maximum Daily Average	23.76	12.08
Data Capture Rate (%)	99.9	19.2
Number of 15 min periods above 250 µg/m ³ limit	0	0
Number of days above the 50 µg/m ³ objective limit	0	0
Exceedance of the 40 µg/m ³ annual average objective in monitoring period? (Y/N)	No	No
Exceedance of the 50 µg/m ³ daily average objective in monitoring period? (Y/N)	No	No

2.2 Meteorological Monitoring

During the monitoring period presented in this report, from the 1st June to 31st August 2018, the meteorological monitoring station (installed at monitoring location 1) recorded

that the winds were predominantly north to north-easterly, with an average wind speed of 0.38m/s. See the data graphically presented in the windrose in Figure 2.1.

Figure 2.1: Windrose for monitoring period 10 (Location 1)



3 CONCLUSIONS

Two nephelometers measuring particulate matter fractions have been installed at 100 Avenue Road, London as stipulated in Condition 24 of the planning permission issued to the proposed development.

This is the tenth of the reports which will be prepared throughout the proposed site works. The reports will be sent to LBC to discharge the abovementioned Condition 24. This report looks at the particulate and meteorological results for the period from 1st June 2018 to 31st August 2018.

During this monitoring period, there were no recorded exceedances of the 15-minute average $250\mu\text{g}/\text{m}^3$ PM_{10} recommended trigger level or of the daily mean PM_{10} AQS at either monitoring location. Moreover, the period mean was below the annual mean PM_{10} AQS at both monitoring locations. However, the results at monitoring location 2 should be treated with caution due to low data capture. The data capture at monitoring location 2 was low due to technical issues with the instrument. The faulty instrument has now been swapped and the replacement instrument seems to be functioning as would reasonably be expected.