

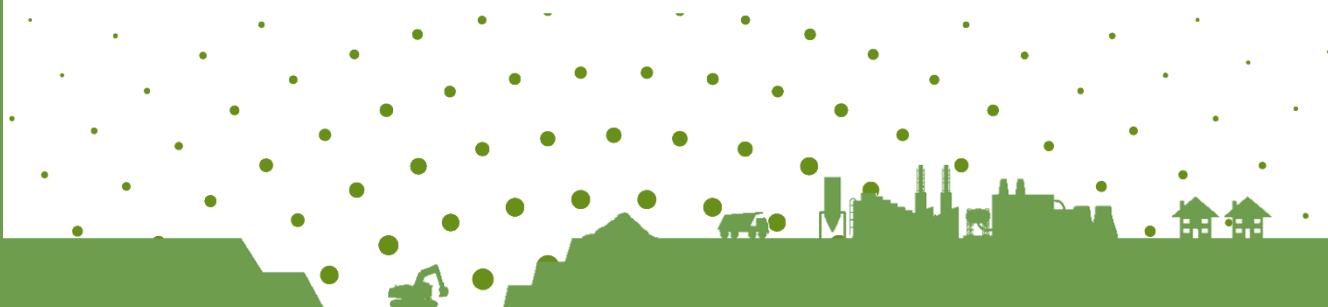


# PM Monthly Summary Report: July 2023

88 & 100 Gray's Inn Road and 127 Clerkenwell Road

September 2023

Lawnmist Limited








## Document Control Sheet

### Project Information

<b>Title</b>	PM Monthly Summary Report: July 2023
<b>Job Code</b>	ZAYGIDM
<b>Report Ref</b>	ZAYGIDM_PM_M2_Final
<b>Report Type</b>	PM <sub>10</sub> Monthly Summary Report
<b>Client</b>	Lawnmist Limited
<b>Client Contact</b>	George Skinner
<b>Revision</b>	Final
<b>Status</b>	Final
<b>Date of Issue</b>	16/10/2023

### Revision History

Revision	Date	Author	Reviewer	Approver	Status
A	14/09/2023	Sarah Doyle	John Bruce	John Bruce	Draft
Final	16/10/2023				

### Distribution

Organisation	Contact	Date of Issue	Copies
Avison Young	George Skinner	16/10/2023	1

### Disclaimer

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party. This report may include data obtained from trusted third party consultants/laboratories that have been supplied to us in good faith. Whilst we do everything we can to ensure the quality of all the data we use, we cannot be held responsible for the accuracy or integrity of third party data.

### Report Prepared By

**DustScanAQ**  
 Unit 8 Nimrod  
 De Havilland Way  
 Witney  
 OX29 0YG  
 Tel: + 44 (0) 1608 810110  
 E-mail: info@dustscan.co.uk

## Table of Contents

<b>1</b>	<b>Introduction</b> .....	<b>5</b>
1.1	Overview.....	5
1.2	Objective.....	5
1.3	Site Location.....	5
<b>2</b>	<b>Relevant Air Quality Standards</b> .....	<b>7</b>
2.1	Air Quality Standards.....	7
2.2	The Control of Dust and Emissions during Construction and Demolition: Supplementary Planning Guidance (2014).....	7
<b>3</b>	<b>Methodology</b> .....	<b>9</b>
3.1	Real-Time PM <sub>10</sub> Monitoring.....	9
<b>4</b>	<b>Results</b> .....	<b>10</b>
4.1	Measurements.....	10
<b>5</b>	<b>Summary</b> .....	<b>12</b>
	<b>Appendix A: Raw PM<sub>10</sub> Daily Averages</b> .....	<b>13</b>
	<b>Appendix B: PM<sub>10</sub> 15-Minute Averages</b> .....	<b>14</b>

## List of Figures

Figure 1.1:	PM Monitoring locations. Source: Google Earth.....	6
Figure 4.1:	Daily average PM <sub>10</sub> concentrations (30/06/23 – 29/07/23).....	11

## List of Tables

Table 2.1:	AQO Relevant to the development.....	7
Table 4.1:	PM <sub>10</sub> data summary (30/06/23 – 29/07/23).....	10

## Glossary of Terms

Term	Definition
AQMA	Air Quality Management Area
AQO	Air Quality Objectives
AY	Avison Young
DS	DustScanAQ
GLA	The Greater London Authority
IAQM	Institute of Air Quality Management
LBC	London Borough of Camden
NO <sub>2</sub>	Nitrogen Dioxide
PM	Particulate Matter

# 1 Introduction

## 1.1 Overview

Avison Young (AY) are assisting their client. Lawnmist Limited, with planning matters relating to a proposed development at 88 & 100 Gray's Inn Road and 127 Clerkenwell Road, London, WC1X 8AL. The site is in the London Borough of Camden.

A Construction Dust Risk Assessment<sup>1</sup> was undertaken by GEM Air Quality Ltd as part of the Air Quality Assessment for the development, and was submitted as part of the planning application. The largest risk associated with dust soiling was considered to be 'Medium' during the demolition and construction phases. With respect to human health impacts, the largest risk classified was 'Medium' during the construction phase.

In response to this, the local planning authority, the London Borough of Camden has advised the project managers for the proposed development of the following draft planning conditions:

*'prior to installing monitors, 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 etc etc' and*

*'prior to commencement, evidence has been submitted demonstrating that the monitors have been in place for at least 3 months prior to the proposed implementation date.'*

The proposed development lies within the London Borough of Camden (LBC) borough wide Air Quality Management Area (AQMA), declared for exceedances of the:

- NO<sub>2</sub> annual mean objective; and
- PM<sub>10</sub> 24-hour mean objective.

Lawnmist Limited commissioned DS to undertake real-time PM<sub>10</sub> continuous monitoring at two site locations to address and discharge this planning condition.

Two Turnkey Osiris real-time continuous PM<sub>10</sub> monitors were installed by DS on 30<sup>th</sup> May 2023. This report summaries PM<sub>10</sub> and PM<sub>2.5</sub> monitoring data collected from 30<sup>th</sup> June – 29<sup>th</sup> July 2023.

## 1.2 Objective

This report provides a review of the 2<sup>nd</sup> month's PM<sub>10</sub> and PM<sub>2.5</sub> monitoring data.

## 1.3 Site Location

---

<sup>1</sup> Assessment based on the following guidance: Greater London Authority (2014), 'The Control of Dust and Emissions during Construction and Demolition SPG'.

The development site is located at 88 & 100 Gray's Inn Road and 127 Clerkenwell Road, with the front of the buildings fronting onto the road, and an access road leading to a service area for the buildings.

Figure 1.1 below shows the approximate location of the two PM monitors at the site (Site 1 and Site 2).

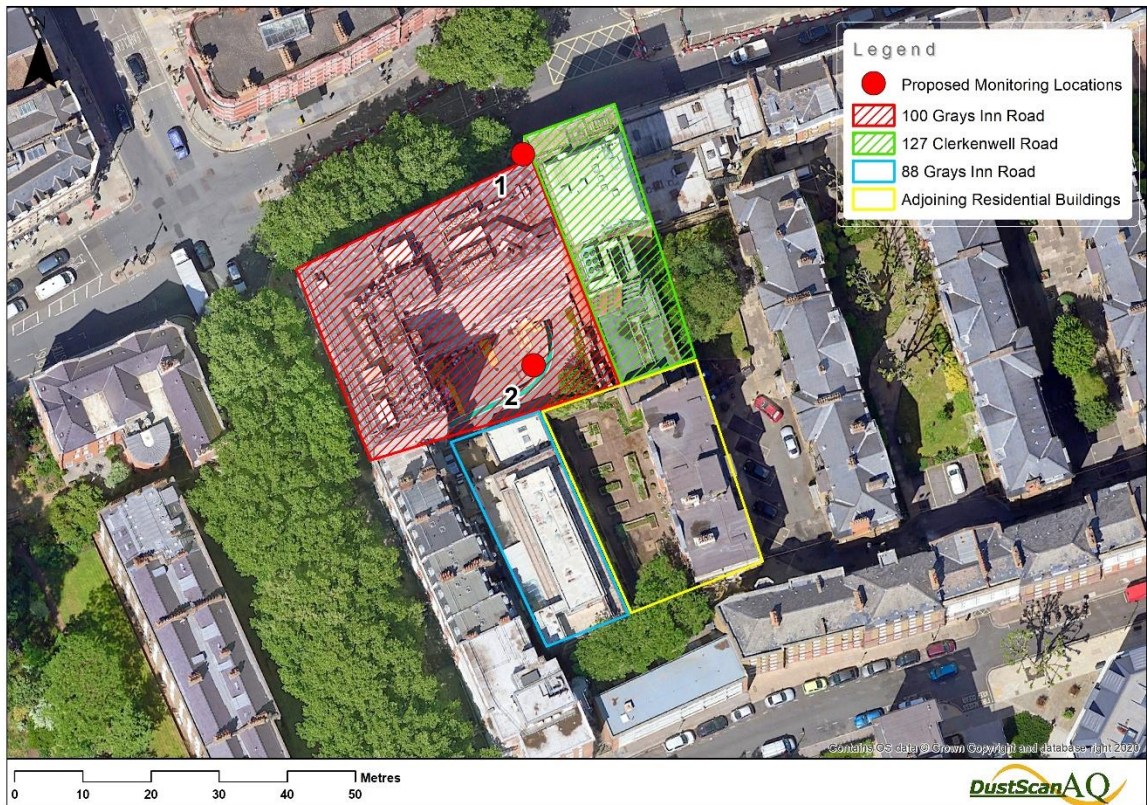


Figure 1.1: PM Monitoring locations. Source: Google Earth<sup>2</sup>

<sup>2</sup> © Google Earth 2023

## 2 Relevant Air Quality Standards

'Dust' is generally regarded as particulate matter with an aerodynamic diameter of 75 µm (microns) and below. Dust can be considered in two categories:

- Fine dust, consisting of particulate matter with an aerodynamic diameter of 10 µm and below (PM<sub>10</sub>); and
- Coarser, 'nuisance' dust consisting of particulate matter with an aerodynamic diameter greater than 10 µm.

PM<sub>10</sub> and PM<sub>2.5</sub> is measured to agreed standards and forms part of the national Air Quality Objectives (AQO), a summary of which can be found in Section 2.1.

There are no official standards or objectives for nuisance dust.

### 2.1 Air Quality Standards

A summary of the relevant AQO as stated in LLAQM.TG (19)<sup>3</sup> are presented in Table 2.1.

**Table 2.1: AQO Relevant to the development**

Pollutant	Air Quality Objectives		Concentration measured as:	Applicable to:
	Concentration	Allowance		
PM <sub>10</sub>	50 µg/m <sup>3</sup>	35 per calendar year	24-hour mean	All local authorities
	40 µg/m <sup>3</sup>	-	Annual mean	All local authorities
PM <sub>2.5</sub> <sup>(a)</sup>	10 µg/m <sup>3</sup>	-	Annual mean	All local authorities

Source: GLA (LLAQM.TG (19))

<sup>(a)</sup> - The annual mean concentration target is that by the end of 31st December 2040 the annual mean level of PM<sub>2.5</sub> in ambient air must be equal to or less than 10 µg/m<sup>3</sup> ("the target level")<sup>4</sup>.

### 2.2 The Control of Dust and Emissions during Construction and Demolition: Supplementary Planning Guidance (2014)

The Greater London Authority Guidance sets out procedures that should be undertaken to mitigate any effects from the construction and demolition of sites at 'Low', 'Medium' and 'High' risk sites.

The Greater London Authority Guidance requires visual monitoring of dust as a minimum. It states for 'Medium risk' sites:

<sup>3</sup> Greater London Authority (2019), 'London Local Air Quality Management (LLAQM) Technical Guidance 2019' (LLAQM.TG (19)).

<sup>4</sup> Statutory Instrument. (2023), 'The Environmental Targets (Fine Particulate Matter) (England) Regulations', No. 96. King's Printer of Acts of Parliament.



*“Operate a minimum of two automatic particulate monitors to measure PM<sub>10</sub> levels at either end of the line – either inside or outside the site boundary. These instruments should provide data that can be download in real-time by the local authority”.*

The approach of the GLA SPG is based on the site evaluation process set out in the IAQM 2014 Construction Dust Risk guidance. IAQM published an updated version of this guidance in August 2023<sup>5</sup>. As stated in the GLA SPG, in reference to the IAQM guidance:

*“This guidance is periodically updated and, therefore, the latest version of the IAQM Guidance should be used.”*

Following new IAQM guidance, the proposed development remains a ‘Medium’ risk site.

---

<sup>5</sup> Institute of Air Quality Management. (2023) ‘Guidance on assessment of dust from demolition and construction. V2.1’. Accessible at: <https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-dust-2023-BG-v6-amendments.pdf>

### **3 Methodology**

#### **3.1 Real-Time PM<sub>10</sub> Monitoring**

Two Turnkey Osiris real-time continuous PM<sub>10</sub> monitors were installed by DS on 30<sup>th</sup> May 2023. These instruments have MCERTS 'indicative' certification and Osiris data may be compared against the relevant AQO for PM<sub>10</sub> and PM<sub>2.5</sub>. One monitor (Site 1) is located at the north of the site on the façade of 129 Clerkenwell Road; the other (Site 2) is located at the south of the development site in the service area. The locations of the monitors are presented in Figure 1.1.

The monitors are set to record PM<sub>10</sub> and PM<sub>2.5</sub> concentrations at 15-minute averaging periods. Initial monitoring is planned for 3 months to establish a baseline for setting alert thresholds. This will enable future site management to take immediate dust mitigating actions if required.

## 4 Results

### 4.1 Measurements

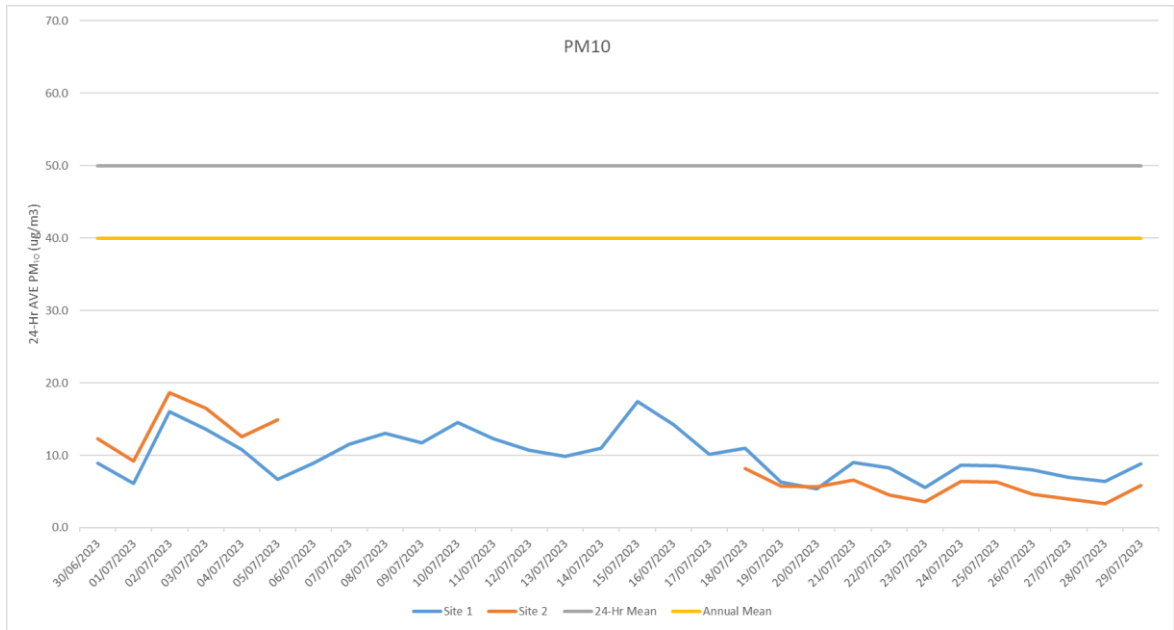
Daily average PM<sub>10</sub> and PM<sub>2.5</sub> concentrations have been calculated for the monitor at Site 1 and Site 2 for the period 30<sup>th</sup> June to 29<sup>th</sup> July 2023 so that they can be compared against the 24-hour average AQO for PM<sub>10</sub>. 24-hour averages have not been calculated when 15-minute average data capture was less than 50% in any 24-hour period.

Table 4.1 summarises the monitored PM<sub>10</sub> and PM<sub>2.5</sub> data for the month from Site 1 and Site 2 and the 24-hour PM<sub>10</sub> mean concentrations are visualised in Figure 4.1.

Summarised daily PM<sub>10</sub> average concentration data are presented in full in Appendix A. The 15-minute PM<sub>10</sub> and PM<sub>2.5</sub> mean concentrations are visualised for Site 1 and Site 2 in Appendix B.

**Table 4.1: PM<sub>10</sub> data summary (30/06/23 – 29/07/23)**

PM <sub>10</sub> / PM <sub>2.5</sub>	Site 1		Site 2	
	PM <sub>10</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Data capture (%)	100	100	61	61
Mean concentration (µg/m <sup>3</sup> )	10.00	5.55	9.87	3.73
Number of 24-hour periods above 50 µg/m <sup>3</sup> mean PM <sub>10</sub> concentration	0	n/a	0	n/a
Number of 15-minute periods above 250 µg/m <sup>3</sup> PM <sub>10</sub> concentration	0	n/a	0	n/a
Maximum recorded 24-hour mean PM <sub>10</sub> concentration (µg/m <sup>3</sup> )	17.47	n/a	23.07	n/a
Maximum recorded 15-minute mean PM <sub>10</sub> concentration (µg/m <sup>3</sup> )	94.50	n/a	195.87	n/a



**Figure 4.1: Daily average PM<sub>10</sub> concentrations (30/06/23 – 29/07/23)**

## 5 Summary

This report provides a monthly review of PM<sub>10</sub> and PM<sub>2.5</sub> monitoring data.

Site 1 had 100% data capture from 30<sup>th</sup> June – 29<sup>th</sup> July, whilst Site 2 only had a 61% data capture with a considerable data gap from 6<sup>th</sup> July – 17<sup>th</sup> July when there was a loss of power at that location on site. PM<sub>10</sub> concentrations at Sites 1 and 2 were still low with a mean concentration of 10.00 µg/m<sup>3</sup> and 8.58 µg/m<sup>3</sup> respectively. PM<sub>2.5</sub> concentrations were also low at Sites 1 and 2 with mean concentrations of 5.55 and 3.63 µg/m<sup>3</sup> respectively.

## Appendix A: Raw PM<sub>10</sub> Daily Averages

Table A1: Daily average PM<sub>10</sub> concentrations (30/06/23 – 29/07/23)

Date	Site 1 (µg/m <sup>3</sup> )	Site 2 (µg/m <sup>3</sup> )
30/06/2023	8.83	12.18
01/07/2023	6.38	9.60
02/07/2023	15.99	18.47
03/07/2023	13.51	16.39
04/07/2023	10.68	12.35
05/07/2023	6.77	15.09
06/07/2023	8.90	18.63
07/07/2023	11.68	
08/07/2023	12.93	
09/07/2023	11.83	
10/07/2023	14.43	
11/07/2023	12.32	
12/07/2023	10.63	
13/07/2023	9.79	
14/07/2023	11.00	
15/07/2023	17.47	
16/07/2023	14.19	
17/07/2023	10.16	
18/07/2023	10.92	8.08
19/07/2023	6.25	5.72
20/07/2023	5.43	5.68
21/07/2023	9.02	6.63
22/07/2023	8.20	4.48
23/07/2023	5.60	3.68
24/07/2023	8.62	6.40
25/07/2023	8.45	6.30
26/07/2023	7.94	4.60
27/07/2023	7.02	3.99
28/07/2023	6.31	3.23
29/07/2023	8.87	5.90

### Appendix B: PM<sub>10</sub> and PM<sub>2.5</sub> 15-Minute Averages

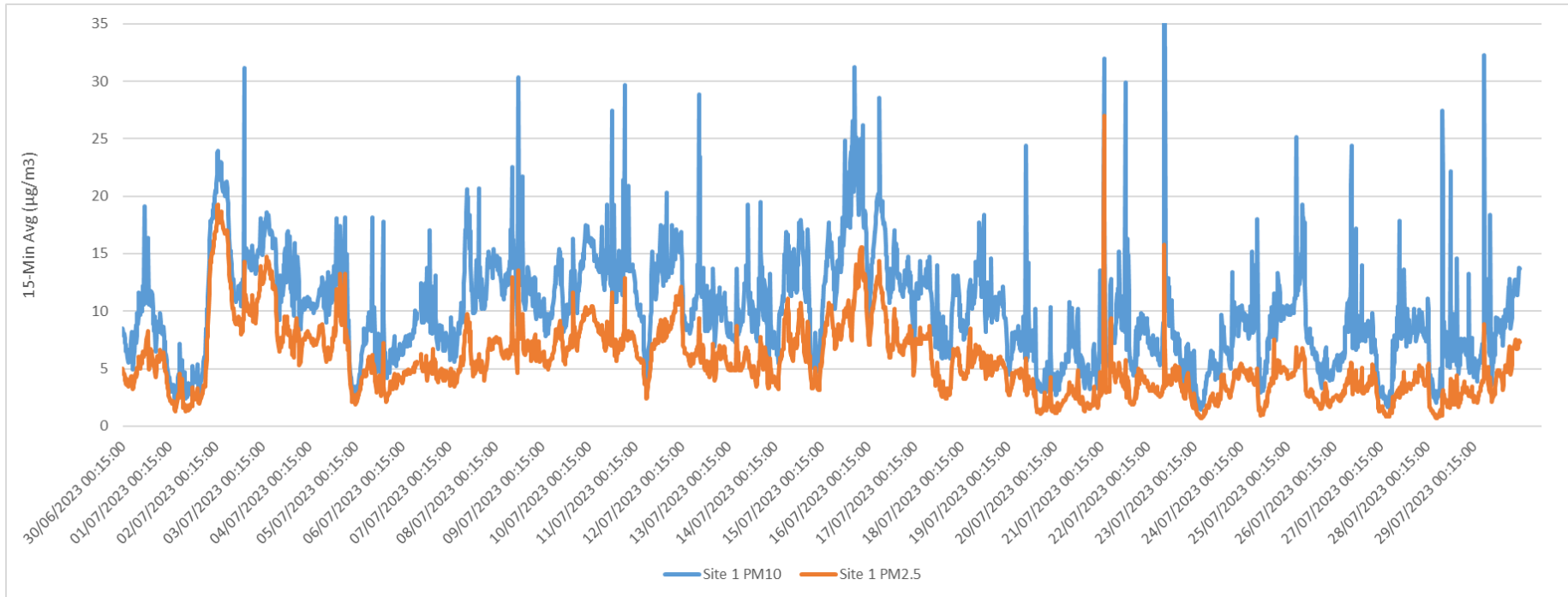
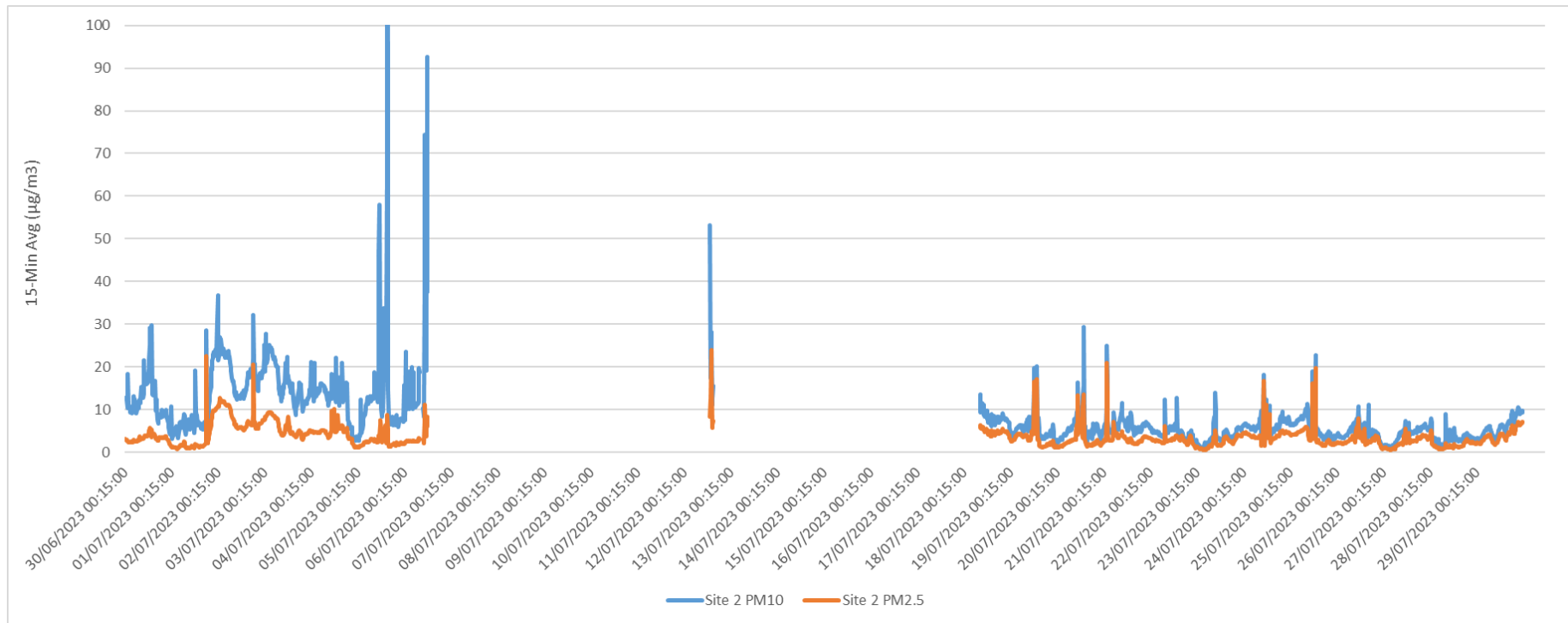


Figure B1: Site 1 15-Minute Average PM<sub>10</sub> and PM<sub>2.5</sub> Concentrations



**Figure B2: Site 2 15-Minute Average PM<sub>10</sub> and PM<sub>2.5</sub> Concentrations**