294-295 High Holborn

PM10 Monthly Summary Report

May, 2021

CHH London Ltd

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Document Control Sheet

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Table of Contents

List of Figures

List of Tables

Glossary of Terms

Term	Definition
AQMA	Air Quality Management Area
AQO	Air Quality Objectives
BL	Beadmans LLP
DS	DustScanAQ
GLA	The Greater London Authority
LBC	London Borough of Camden
NO_2	Nitrogen Dioxide
PM	Particulate Matter

1 Introduction

1.1 Overview

Beadmans LLP (BL) are currently managing a construction project for their client CHH London Ltd at 294-295 High Holborn, London, WC1V 7JG. The site is in the London Borough of Camden.

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

- NO2 annual mean objective; and
- PM10 24-hour mean objective.

BL commissioned DustScanAQ (DS) to undertake real-time PM_{10} continuous monitoring at two site locations to address and discharge planning condition No 16 of planning consent 2017/1827/P.

Two Turnkey Osiris real-time continuous PM_{10} monitors were installed by DS on 13th April 2021. This report summaries PM_{10} monitoring data collected from 13th April to 12th May 2021.

1.2 Objective

This report provides a review of the first month's PM_{10} monitoring data.

1.3 Site Location

The development site is located at 294-295 High Holborn, with the front of the site fronting onto the road, and the rear of the site onto .

Figure 1.1 below shows the approximate location of the two PM_{10} monitors at the site (Site 1 and Site 2).

Figure 1.1 PM_{10} Monitoring locations. Source: Google Earth[1]

[1] © Google Earth 2021

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_{10}); and
- Coarser, 'nuisance' dust consisting of particulate matter with an aerodynamic diameter greater than 10 µm.

PM_{10} 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 TG.16[2] and 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		
Particulate Matter (PM_{10})	50 µg/m^3	35 per calendar year	24-hour mean	All local authorities
	40 µg/m^3	-	Annual mean	All local authorities

Source: Defra (TG16)

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:

> *"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. These instruments should provide data that can be download in real-time by the local authority".*

[2] Department for Environment Food and Rural Affairs (2014): 'Local Air Quality Management Technical Guidance' (TG16).

3 Methodology

3.1 Real-Time PM_{10} Monitoring

Two Turnkey Osiris real-time continuous PM_{10} monitors were installed by DS on 13th April 2021. These instruments have MCERTS 'indicative' certification and Osiris data may be compared against the relevant AQO for PM_{10}. One monitor (Site 1) is located at the north of the site; the other (Site 2) is located at the south of the development site. The locations of the monitors are presented in Figure 1.1.

The monitors currently set to record PM_{10} concentrations at 15-minute averaging periods. If the 15-minute average exceeds 250 $\mu g/m^3$ an alert is sent to DS and passed to site, as recommended by The Greater London Authority Guidance. This enables site management to take immediate dust mitigating actions if required.

4 Results

The daily average PM_{10} concentrations have been calculated for both monitors for the period 13th April to 12th May 2021. 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_{10} data for the month from Sites 1 and 2 and the 24-hour PM_{10} mean concentrations are visualised for both sites in Figure 4.1.

Summarised daily PM_{10} average concentration data are presented in full in Appendix A.The 15-minute PM_{10} mean concentrations are visualised for both sites in Appendix B.

Table 4.1: PM_{10} data summary (13/04/21-12/05/21)

	Site 1	Site 2
Data capture (%)	75	75
Mean PM_{10} concentration (µg/m^3)	103.0	9.99
Number of 24-hour periods above 50 µg/m^3 mean PM_{10} concentration	8	0
Number of 15-minute periods above 250 µg/m^3 PM_{10} concentration	111	0
Maximum recorded 24-hour mean PM_{10} concentration (µg/m^3)	1232.0	29.8
Maximum recorded 15-minute mean PM_{10} concentration (µg/m^3)	6027.1	60.1

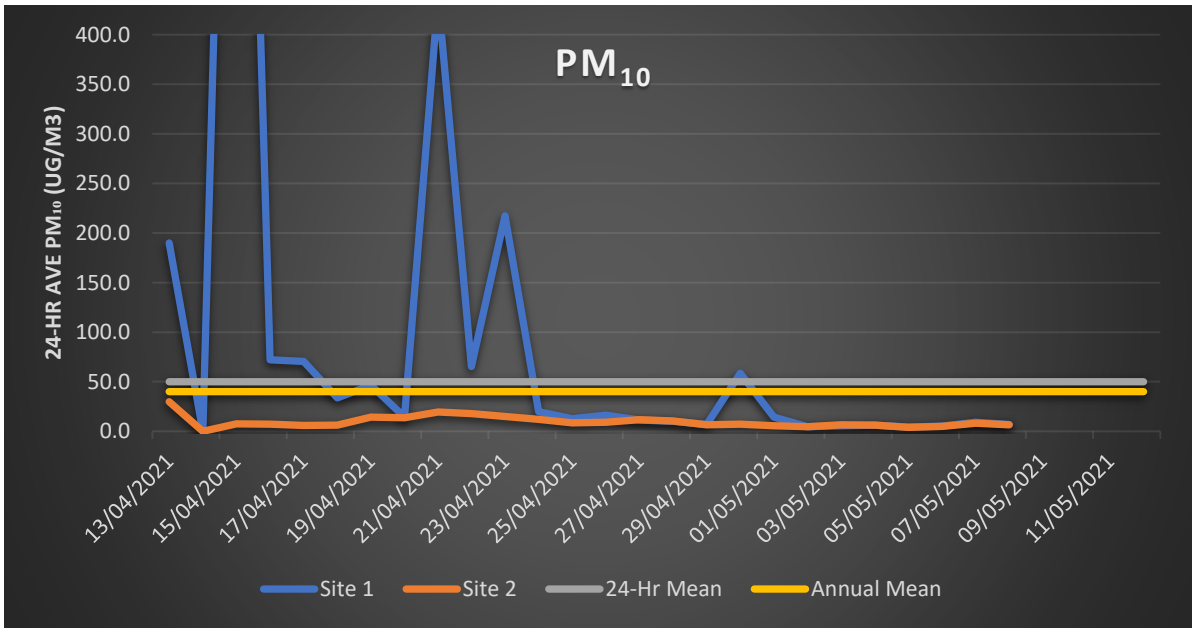

Figure 4.1: Daily average PM_{10} concentrations (13/04/21 – 12/05/21)

5 Summary

This report provides a monthly review of PM_{10} monitoring data.

For the first month of monitoring, both Site 1 and Site 2 had 75 % data capture/.

Appendix A: Raw PM_{10} Daily Averages

Table A1: Daily average PM_{10} concentrations (13/04/21 – 12/05/21)

Date	Site 1 (µg/m^3)	Site 2 (µg/m^3)
13/04/2021	190.1	29.8
14/04/2021		
15/04/2021	1232.0	7.7
16/04/2021	72.2	7.1
17/04/2021	70.6	5.8
18/04/2021	33.8	6.4
19/04/2021	46.7	14.3
20/04/2021	14.2	13.7
21/04/2021	439.0	19.3
22/04/2021	65.2	17.8
23/04/2021	217.4	14.9
24/04/2021	19.9	12.2
25/04/2021	12.6	8.6
26/04/2021	16.3	9.0
27/04/2021	11.5	11.8
28/04/2021	10.3	10.5
29/04/2021	6.9	6.6
30/04/2021	58.7	7.2
01/05/2021	14.4	5.5
02/05/2021	4.7	4.7
03/05/2021	5.7	6.6
04/05/2021	6.3	6.3
05/05/2021	4.4	3.9
06/05/2021	5.4	5.0
07/05/2021	9.2	8.3
08/05/2021	7.0	6.7
09/05/2021		
10/05/2021		
11/05/2021		
12/05/2021		

Appendix B: PM_{10} 15-Minute Averages

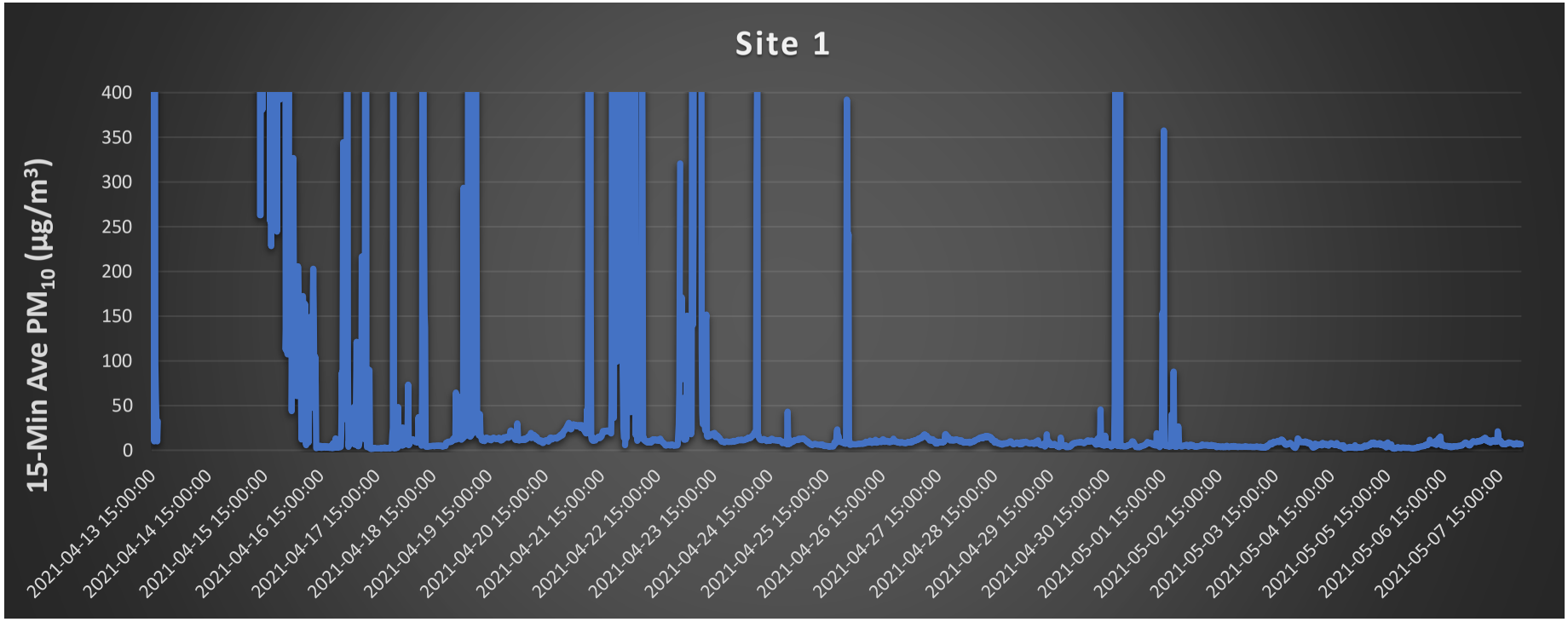

Figure B 1: Site 1 15-Minute Average PM_{10} Concentrations

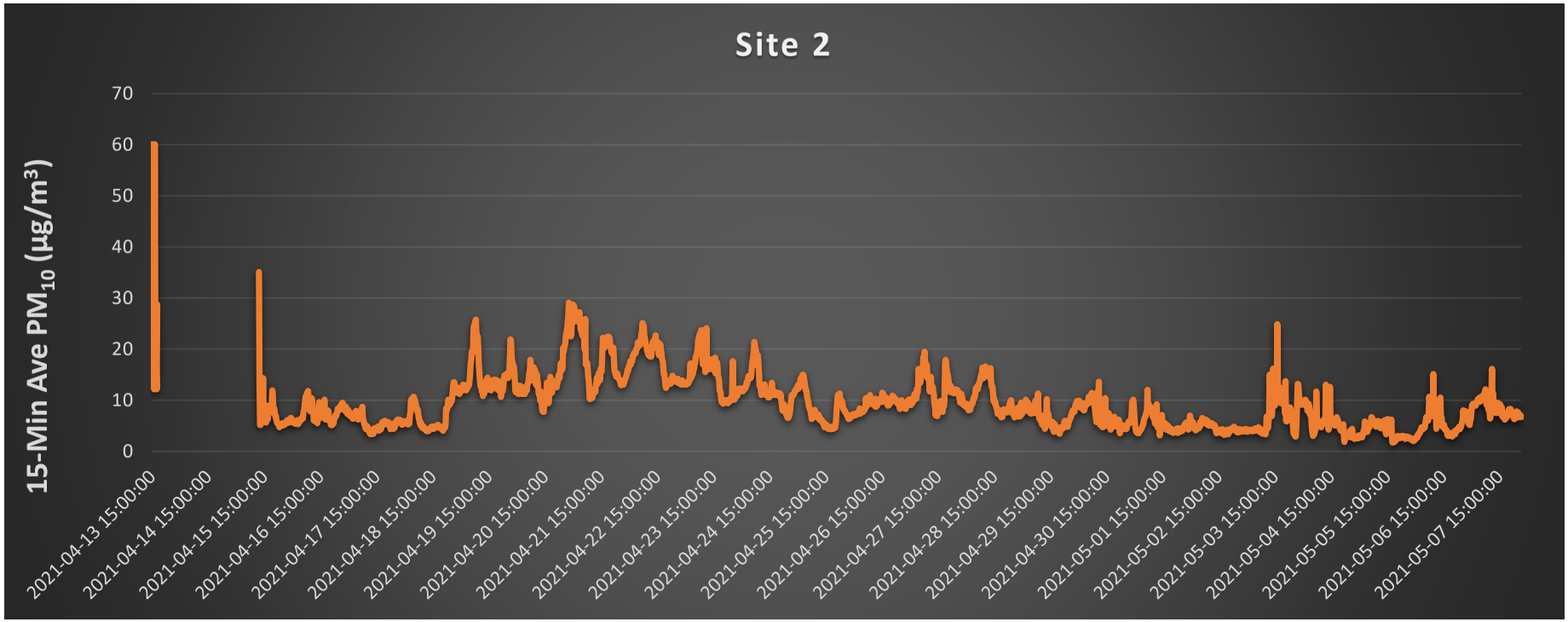

Figure B 2: Site 2 15-Minute Average PM_{10} Concentrations