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Part of the KP Acoustics Group

52 Avenue Road, London NW8 6HP

Air Quality Monitoring Report

Report 26019.5

Thursday 25 May 2023 to Saturday 24 June 2023

Domvs London (Global Holdings) Ltd
22 Wycombe End,
Beaconsfield,
Buckinghamshire,
United Kingdom HP9 1NB

KP monitoring
Part of the KP Acoustics Group

Report 26019.5 Revision History			
First Issue Date: 27/06/2023			
A		D	
B		E	
C		F	
Written by:		**Checked by:**	
Mohamed Salim Environmental Monitoring Project Engineer BEng(Hons), MIET		Richard P Booth Environmental Monitoring Manager MSc, BSc(Hons), MIOA, AMIEnvSc, AMIAQM	

Part of the KP Acoustics Group

Contents

List of Attachments

EXECUTIVE SUMMARY

KP Monitoring Ltd has been commissioned to monitor the air quality levels at the 52 Avenue Road site, 52 Avenue Road, St Johns Wood, London NW8 6HP.

Air quality levels have been measured at 4No. positions around the development site. The measured parameters include PM2.5 particulate, PM10 particulate.

The following dust level exceedances were recorded across the development site during the monitoring period.

Position	Trigger Level Exceedances	Action Level Exceedances	Data Capture Rate
Position 1	N/A	N/A	100%
Position 2	N/A	N/A	100%
Position 3	N/A	N/A	100%
Position 4	N/A	N/A	100%

Table 1 Recorded exceedance events at the development site

The results are presented herein.

1.0 INTRODUCTION

KP Monitoring Ltd have been appointed by Domvs London (Global Holdings) Ltd to monitor the ongoing air quality levels from the site at 52 Avenue Road, and to present the results within baseline monthly reports.

This report details the procedures employed and the data obtained during the monitoring period spanning Thursday 25 May 2023 to Saturday 24 June 2023.

2.0 SITE DESCRIPTION

The monitoring site is located within the London Borough of Camden's jurisdiction. It is bounded by Elsworthy Road to the north, Elsworthy Road to the west, residential properties to the south, and large residential landscapes to the east.

3.0 SITE WORKING HOURS

It is our understanding that no works are currently taking place at the development site. Once work commence, however, we understand that works shall take place between the following hours. These daytime periods shall hereby be referred to as the 'Working Day'.

Day	Start time	End Time
Monday	08:00	18:00
Tuesday	08:00	18:00
Wednesday	08:00	18:00
Thursday	08:00	18:00
Friday	08:00	18:00
Saturday	08:00	13:00
Sunday	No Work	No Work

Table 2 Site working hours referred to as 'Working Day'

4.0 INSTALLED EQUIPMENT

Air quality monitoring equipment was installed at the 52 Avenue Road site, and has been continuously serviced, calibrated, and maintained, since Wednesday, 25 January 2023. The following equipment is currently installed:

Position	Manufacturer	Model	Serial
Position 1	Earthsense	Zephyr	1149
Position 2	Earthsense	Zephyr	1169
Position 3	Earthsense	Zephyr	948
Position 4	Earthsense	Zephyr	1043

Table 3 Installed sensor details

Each of the installed air quality monitoring sensors is equipped with a data logger and modem, and is protected from the elements with an environmental kit.

5.0 MONITORING POSITIONS

Air quality monitoring sensors have been installed at 4No. positions around the development site. See site plan in Appendix D. The following table describes these positions.

Position	Monitoring Position
Position 1	The monitor is situated adjacent to Elsworthy Road at an approximate height of 2.5 metres.
Position 2	The monitor is situated adjacent to Elsworthy Road on the north western area of site and is at an approximate height of 2.5 metres.
Position 3	The monitor is situated on the south eastern area of site and is at an approximate height of 1 metre.
Position 4	The monitor is situated on the north eastern area of site and is at an approximate height of 1 metre.

Table 4 Description of monitoring positions

The above positions were recommended and approved by Camden Council as demonstrated in the attached email chain.

6.0 METHODOLOGY

Fully automated air quality monitoring has been undertaken at the 52 Avenue Road site, from Thursday 25 May 2023 to Saturday 24 June 2023.

Our dust monitors utilise an Optical Particle Sensor (OPC) to measure particulate matter. The sensor counts and sizes individual particles as they pass through the sensing element. Particle counts are aggregated into particle fractions (PM1, PM2.5 & PM10) and density applied producing a concentration value. A hygroscopy factor is applied which corrects for humidity effects that otherwise produce false readings.

7.0 AIR PARTICULATE (DUST)

7.1 Measured Particulates

Fully automated dust monitoring has been undertaken to measure PM2.5, and PM10 particulate at the 52 Avenue Road site.

7.2 Project Trigger & Action Levels

It is our understanding that there are currently no defined air particulate Trigger and Action levels for this project.

Position	Trigger Level (PM10, µg/m^3, 15min)	Action Level (PM10, µg/m^3, 15min)
Position 1	N/A	N/A
Position 2	N/A	N/A
Position 3	N/A	N/A
Position 4	N/A	N/A

Table 5 Defined Trigger and Action levels at the development site

The following contacts are current recipients of the above alerts by email and/or SMS.

Recipient Name	Organisation
max.obrien@domvslondon.com	Domvs London (Global Holdings) Ltd

Table 6 Trigger and Action alert recipients

7.3 Air Particulate Monitoring Results

The measured dust levels are shown in Appendix B and the associated graphs. The following dust level exceedances were recorded across the development site during the monitoring period.

Position	Trigger Level Exceedances	Action Level Exceedances	Data Capture Rate
Position 1	N/A	N/A	100%
Position 2	N/A	N/A	100%
Position 3	N/A	N/A	100%
Position 4	N/A	N/A	100%

Table 7 Recorded exceedance events at the development site

The following contacts are current recipients of the above alerts by email and/or SMS.

Recipient Name	Organisation
max.obrien@domvslondon.com	Domvs London (Global Holdings) Ltd

Table 8 Trigger and Action alert recipients

During the monitoring period of Thursday 25 May 2023 to Saturday 24 June 2023, there were 0No. days when PM10 particulate matter levels exceeded 50µg/m^3 over a 15-minute period at Position 1.

During the monitoring period of Thursday 25 May 2023 to Saturday 24 June 2023, there were 1No. days when PM10 particulate matter levels exceeded 50µg/m^3 over a 15-minute period at Position 2.

During the monitoring period of Thursday 25 May 2023 to Saturday 24 June 2023, there were 0No. days when PM10 particulate matter levels exceeded 50µg/m^3 over a 15-minute period at Position 3.

During the monitoring period of Thursday 25 May 2023 to Saturday 24 June 2023, there were 0No. days when PM10 particulate matter levels exceeded 50µg/m^3 over a 15-minute period at Position 4.

Using the data collected from the beginning of the project on 23 January 2023, we have estimated the Annual Mean PM10 particulate matter for each monitoring location. This Annual Mean has been seasonally corrected to allow for the short-term monitoring period, and is presented below.

Background Site	Annual Mean 2022 (Am)	Period Mean 2023 (Pm)	Ratio (Am/Pm)
London Bloomsbury	17.3	15.1	1.1
Euston Road, Camden	20.6	16.4	1.6
Coopers Lane, Camden	16.5	15.1	1.1
		Average (Ra)	1.3

Table 9 Annualised Continuous Monitoring Data for 25 May 2023 to 24 June 2023

The Period Mean PM 10 particulate matter at Position 1 was 10.22µg/m^3. The best estimate of the Annual Mean at Position 1 for 2023 is 13.28µg/m^3. The total data capture rate at this location was 94% for the monitoring period of 23 January 2023 to 24 June 2023.

The Period Mean PM 10 particulate matter at Position 2 was 14.53µg/m^3. The best estimate of the Annual Mean at Position 1 for 2023 is 18.59µg/m^3. The total data capture rate at this location was 98% for the monitoring period of 23 January 2023 to 24 June 2023.

The Period Mean PM 10 particulate matter at Position 3 was 11.05µg/m^3. The best estimate of the Annual Mean at Position 1 for 2023 is 14.36µg/m^3. The total data capture rate at this location was 91% for the monitoring period of 23 January 2023 to 24 June 2023.

The Period Mean PM 10 particulate matter at Position 4 was 10.69µg/m^3. The best estimate of the Annual Mean at Position 1 for 2023 is 13.89µg/m^3. The total data capture rate at this location was 97% for the monitoring period of 23 January 2023 to 24 June 2023.

8.0 DISCUSSION

Environmental air quality monitoring has been undertaken at the 52 Avenue Road site, during the period spanning Thursday 25 May 2023 to Saturday 24 June 2023.

The results are presented herein.

APPENDIX A – AIR QUALITY TERMINOLOGY

PMx Particulate Matter

Used as a measurement of air particles where x is the size of the particle measured in micrometres (or µm). PM10 describes inhalable particles, with diameters that are 10 micrometres and smaller. Sources include crushing or grinding operations and dust stirred up by vehicles on roads. PM2.5 describes fine particles that are 2.5 micrometres or smaller in diameter and can only be seen with an electron microscope and are able to penetrate to the lungs. Typical sources include all types of combustion, including motor vehicles, power plants and agricultural burning. PM1 describes particles that are 1 micrometre or smaller in diameter.

TSP Total Suspended Particles

Used as a measure of the mass concentration of particulate matter in the air. TSP covers the full range of particle sizes and is commonly measured alongside PM10 and PM2.5.

Nephelometer

Sometimes referred to as a turbidimeter, these devices are used to measure the concentration of particulates suspended in a fluid. Suspended particulates are measured by employing a light beam and a light detector set to one side (often 90°) of the source beam. Particle density is then a function of the light reflected into the detector from the particles.

APPENDIX B – MAXIMUM PM2.5/PM10 LEVELS

The following table presents the maximum PM2.5 levels measured during the period Thursday 25 May 2023 to Saturday 24 June 2023.

Date	Position 1	Position 2	Position 3	Position 4
25/05/2023	8	16	8	11
26/05/2023	6	10	6	6
27/05/2023	7	12	8	7
28/05/2023	No Work	No Work	No Work	No Work
29/05/2023	4	8	5	5
30/05/2023	6	10	7	6
31/05/2023	6	10	7	6
01/06/2023	10	18	10	10
02/06/2023	6	9	6	7
03/06/2023	9	16	9	8
04/06/2023	No Work	No Work	No Work	No Work
05/06/2023	6	9	6	11
06/06/2023	5	8	5	5
07/06/2023	9	14	8	11
08/06/2023	7	11	7	8
09/06/2023	12	22	11	12
10/06/2023	17	29	17	16

Date	Position 1	Position 2	Position 3	Position 4
11/06/2023	No Work	No Work	No Work	No Work
12/06/2023	22	42	24	24
13/06/2023	14	26	15	14
14/06/2023	12	22	12	12
15/06/2023	9	16	9	10
16/06/2023	7	16	8	12
17/06/2023	10	17	9	9
18/06/2023	No Work	No Work	No Work	No Work
19/06/2023	10	23	11	11
20/06/2023	15	25	15	15
21/06/2023	5	13	6	6
22/06/2023	7	16	7	8
23/06/2023	8	18	8	8
24/06/2023	8	18	7	9

Table 10 Measured maximum PM2.5 levels at the development site

The following table presents the 24-hour mean average PM2.5 levels measured during the period Thursday 25 May 2023 to Saturday 24 June 2023.

Date	Position 1	Position 2	Position 3	Position 4
25/05/2023	7	11	7	7
26/05/2023	5	9	5	5
27/05/2023	7	11	7	7
28/05/2023	No Work	No Work	No Work	No Work
29/05/2023	4	7	4	4
30/05/2023	4	8	5	4
31/05/2023	4	8	4	4
01/06/2023	7	11	7	7
02/06/2023	5	8	5	5
03/06/2023	6	10	6	6
04/06/2023	No Work	No Work	No Work	No Work
05/06/2023	5	9	5	5
06/06/2023	5	8	5	5
07/06/2023	7	12	7	7
08/06/2023	6	10	6	6
09/06/2023	9	17	9	9
10/06/2023	13	24	13	13
11/06/2023	No Work	No Work	No Work	No Work

Date	Position 1	Position 2	Position 3	Position 4
12/06/2023	16	29	16	16
13/06/2023	11	22	11	11
14/06/2023	8	14	8	8
15/06/2023	8	13	8	8
16/06/2023	8	13	8	8
17/06/2023	10	18	10	10
18/06/2023	No Work	No Work	No Work	No Work
19/06/2023	8	16	8	8
20/06/2023	6	11	6	6
21/06/2023	4	9	4	5
22/06/2023	5	10	5	6
23/06/2023	5	10	5	6
24/06/2023	5	11	5	6

Table 1 Measured 24-hour mean average PM2.5 levels at the development site

The following table presents the maximum PM10 levels measured during the period Thursday 25 May 2023 to Saturday 24 June 2023.

Date	Position 1	Position 2	Position 3	Position 4
25/05/2023	11	14	13	16
26/05/2023	10	11	13	10
27/05/2023	10	13	13	11
28/05/2023	No Work	No Work	No Work	No Work
29/05/2023	5	9	7	6
30/05/2023	8	11	9	8
31/05/2023	9	11	11	9
01/06/2023	13	20	15	13
02/06/2023	7	10	8	9
03/06/2023	14	17	15	13
04/06/2023	No Work	No Work	No Work	No Work
05/06/2023	8	10	8	14
06/06/2023	7	9	7	6
07/06/2023	13	16	13	15
08/06/2023	9	13	10	11
09/06/2023	17	24	17	16
10/06/2023	24	30	25	23
11/06/2023	No Work	No Work	No Work	No Work

Date	Position 1	Position 2	Position 3	Position 4
12/06/2023	36	52	40	40
13/06/2023	19	28	23	21
14/06/2023	16	24	17	16
15/06/2023	11	18	13	13
16/06/2023	9	15	11	17
17/06/2023	13	20	14	13
18/06/2023	No Work	No Work	No Work	No Work
19/06/2023	15	25	17	16
20/06/2023	22	28	23	23
21/06/2023	6	15	8	7
22/06/2023	10	18	12	12
23/06/2023	11	20	11	12
24/06/2023	11	19	12	13

Table 12 Measured maximum PM10 levels at the development site

The following table presents the 24-hour mean average PM10 levels measured during the period Thursday 25 May 2023 to Saturday 24 June 2023.

Date	Position 1	Position 2	Position 3	Position 4
25/05/2023	10	13	11	10
26/05/2023	8	10	10	8
27/05/2023	10	11	11	10
28/05/2023	No Work	No Work	No Work	No Work
29/05/2023	5	7	6	5
30/05/2023	6	9	8	7
31/05/2023	5	8	6	5
01/06/2023	11	14	11	11
02/06/2023	6	9	7	6
03/06/2023	10	12	12	11
04/06/2023	No Work	No Work	No Work	No Work
05/06/2023	7	9	7	7
06/06/2023	6	8	7	6
07/06/2023	10	13	11	10
08/06/2023	9	11	9	9
09/06/2023	12	17	13	12
10/06/2023	17	24	19	17
11/06/2023	No Work	No Work	No Work	No Work

Date	Position 1	Position 2	Position 3	Position 4
12/06/2023	25	33	26	26
13/06/2023	16	25	17	17
14/06/2023	10	15	11	11
15/06/2023	9	14	10	11
16/06/2023	8	13	9	9
17/06/2023	10	15	10	10
18/06/2023	No Work	No Work	No Work	No Work
19/06/2023	13	21	15	14
20/06/2023	10	14	11	10
21/06/2023	5	9	6	6
22/06/2023	7	12	8	9
23/06/2023	7	12	8	8
24/06/2023	9	14	10	10

Table 93 Measured 24-hour mean average PM10 levels at the development

APPENDIX C – PM10 Air Particulate Level Statistics for Thursday 25 May 2023 to Saturday 24 June 2023

The tables below present the PM10 monitoring statistics for working hours and non-working hours during the monitoring period.

Position	Mean Average 15 min PM10 Dust Level (µg/m³)	Minimum 15 min PM10 Dust Level (µg/m³)	Maximum 15 min PM10 Dust Level (µg/m³)	Data Capture Rate
Position 1	10	3	36	100%
Position 2	14	6	52	100%
Position 3	11	3	40	100%
Position 4	10	3	40	100%

Table 14 Working Day PM10 dust level statistics

Position	Mean Average 15 min PM10 Dust Level (µg/m³)	Minimum 15 min PM10 Dust Level (µg/m³)	Maximum 15 min PM10 Dust Level (µg/m³)
Position 1	10	2	35
Position 2	14	6	42
Position 3	11	3	35
Position 4	11	2	36

Table 15 Out of hours PM10 dust level statistics

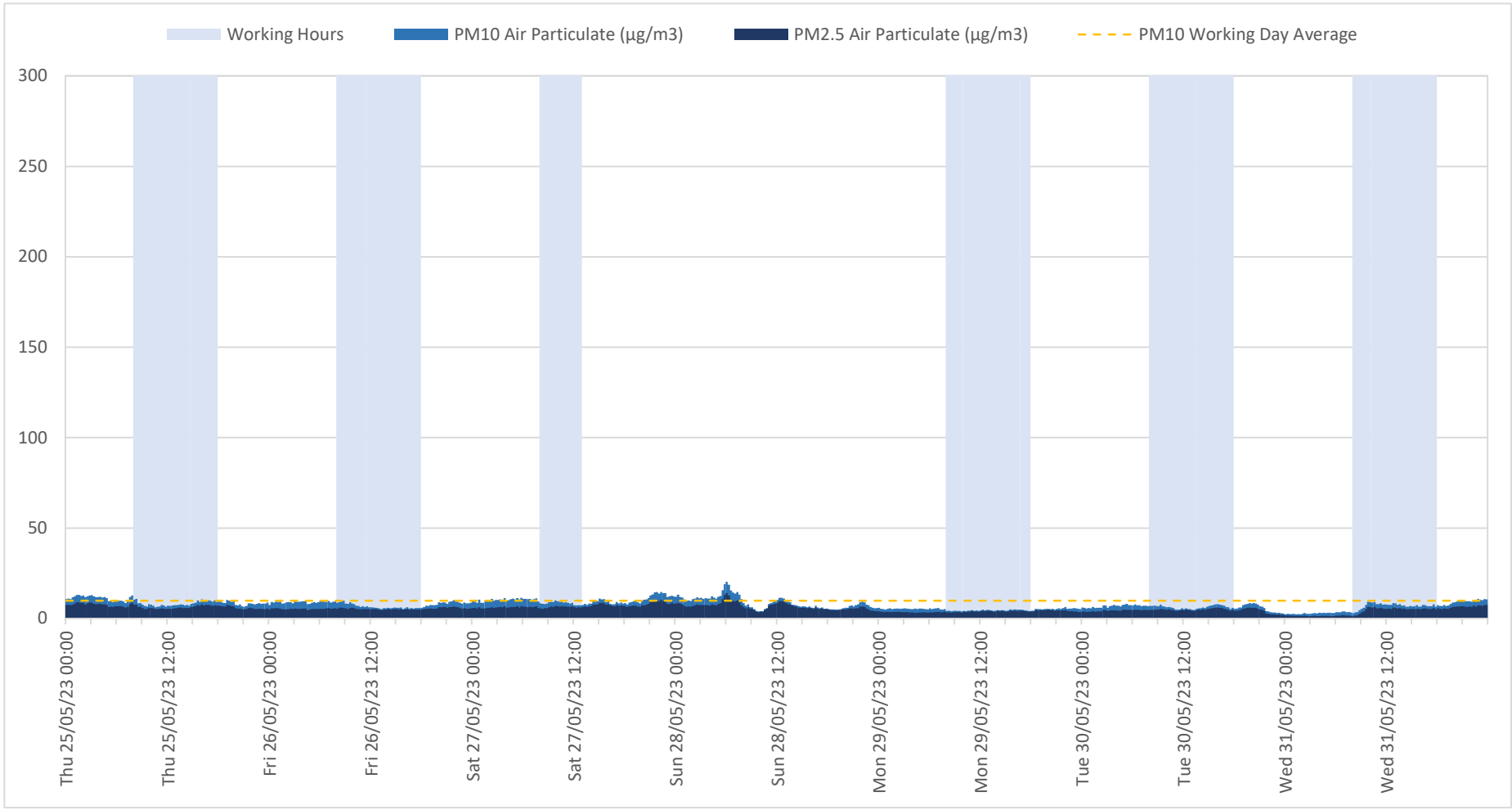
APPENDIX D – Environmental Monitoring Site Plan

Environmental Monitoring Positions	52 Avenue Road	Revision: -	Not to Scale	KP monitoring Part of the KP Acoustics Group

52 Avenue Road

Position 1

Thursday 25/05/2023 to Wednesday 31/05/2023



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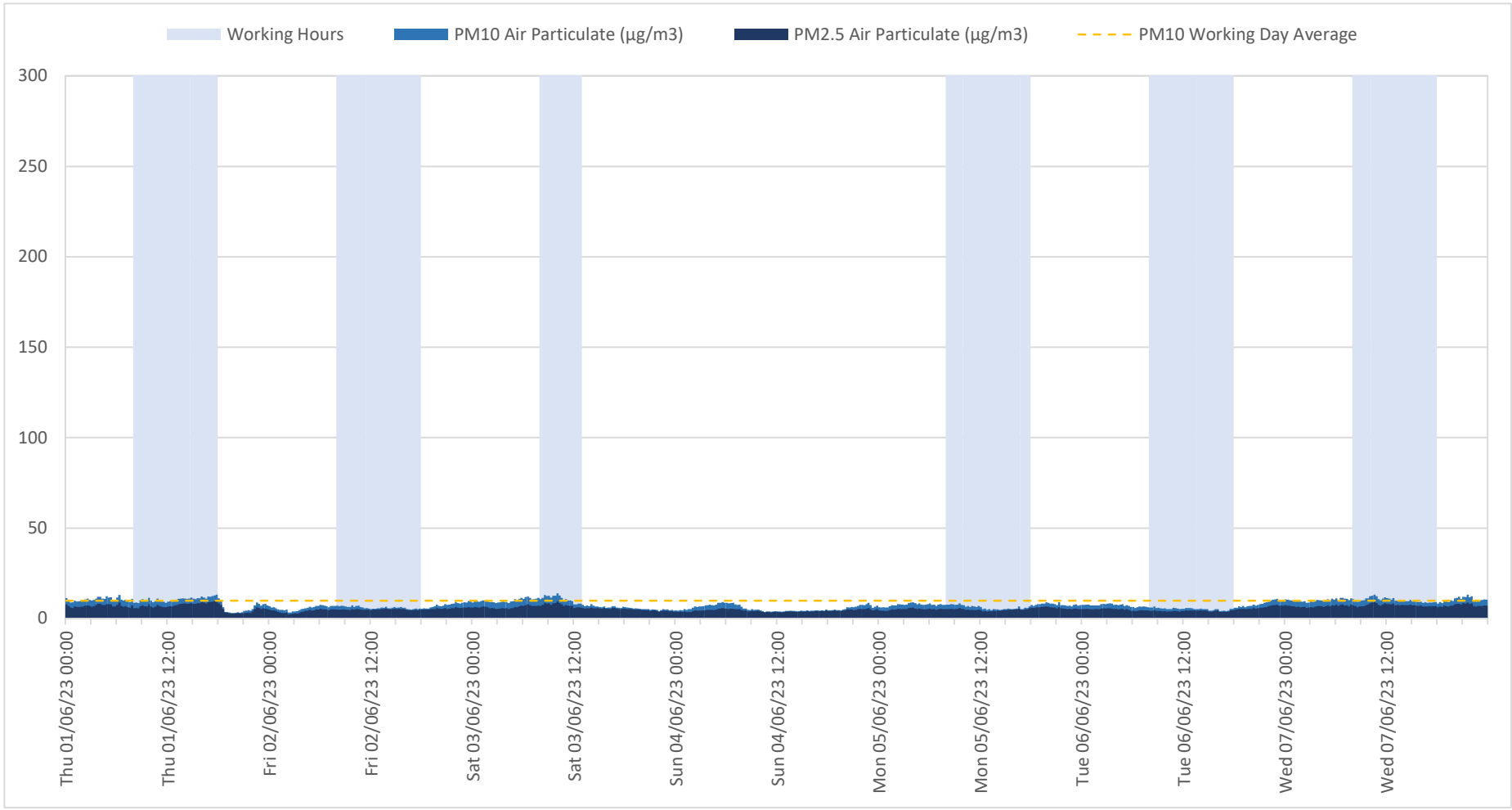
52 Avenue Road

Position 1

Thursday 01/06/2023 to Wednesday 07/06/2023

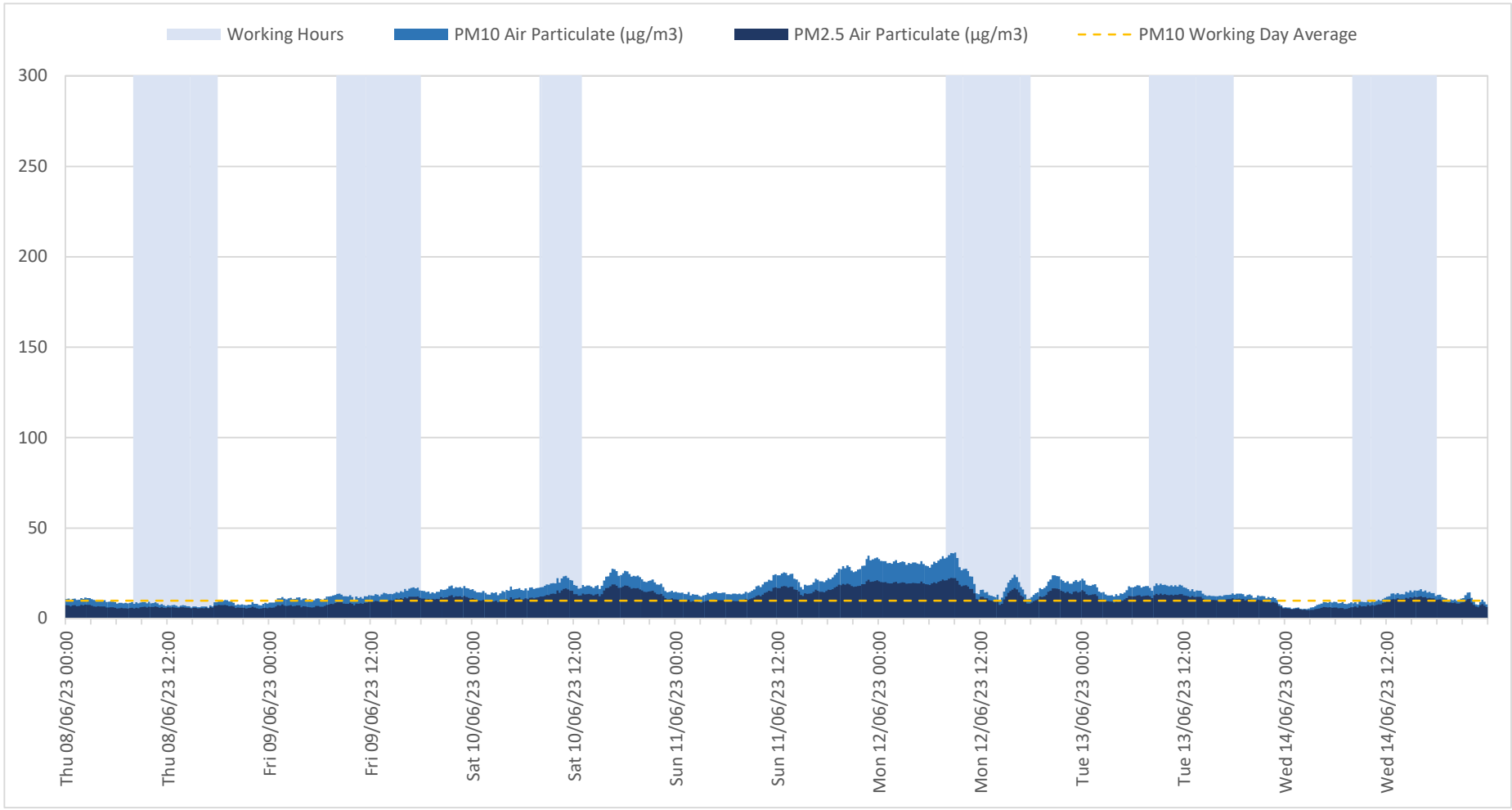


KPM-AP:26019-5.1-2

52 Avenue Road

Position 1

Thursday 08/06/2023 to Wednesday 14/06/2023



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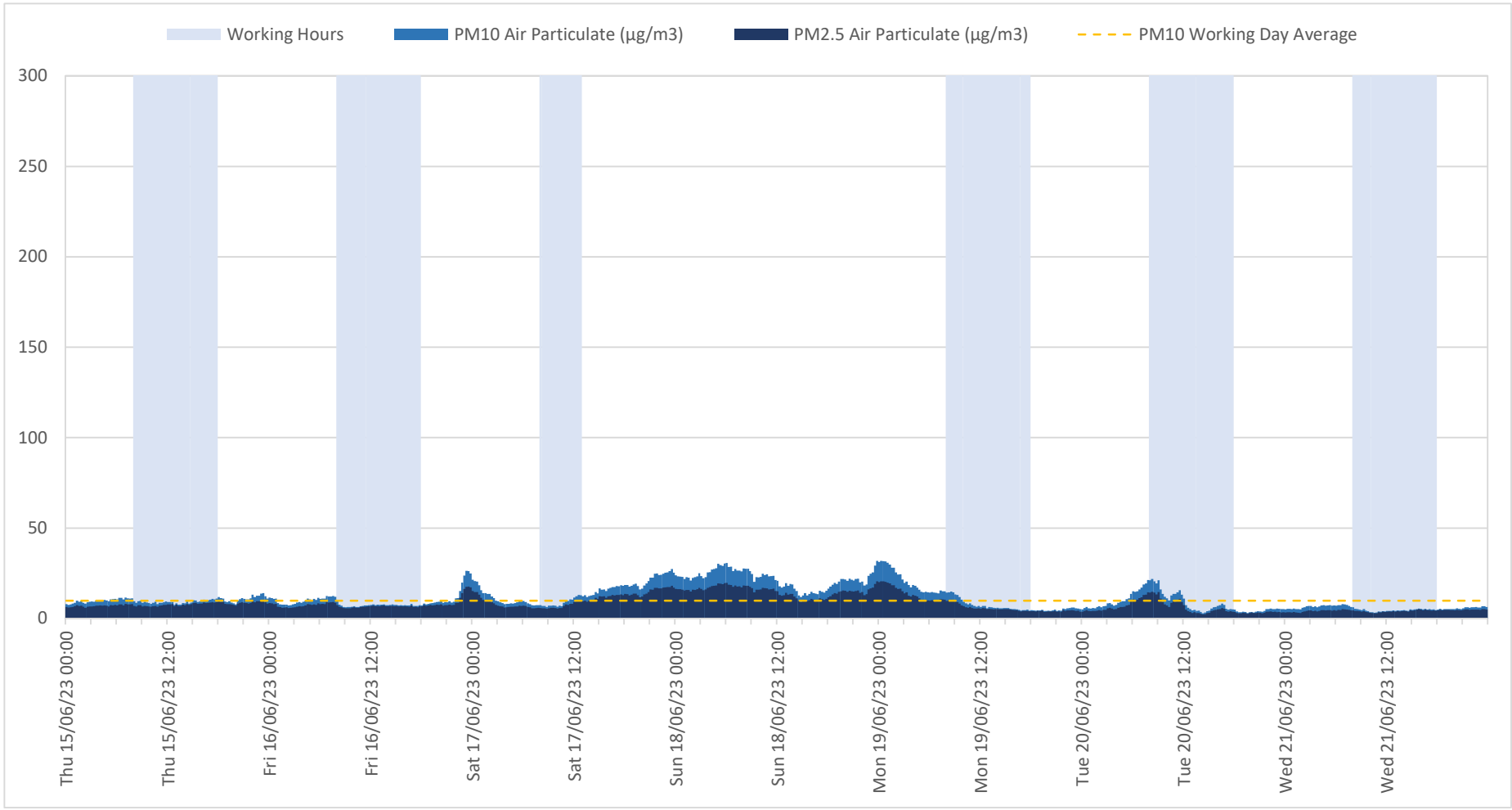
52 Avenue Road

Position 1

Thursday 15/06/2023 to Wednesday 21/06/2023



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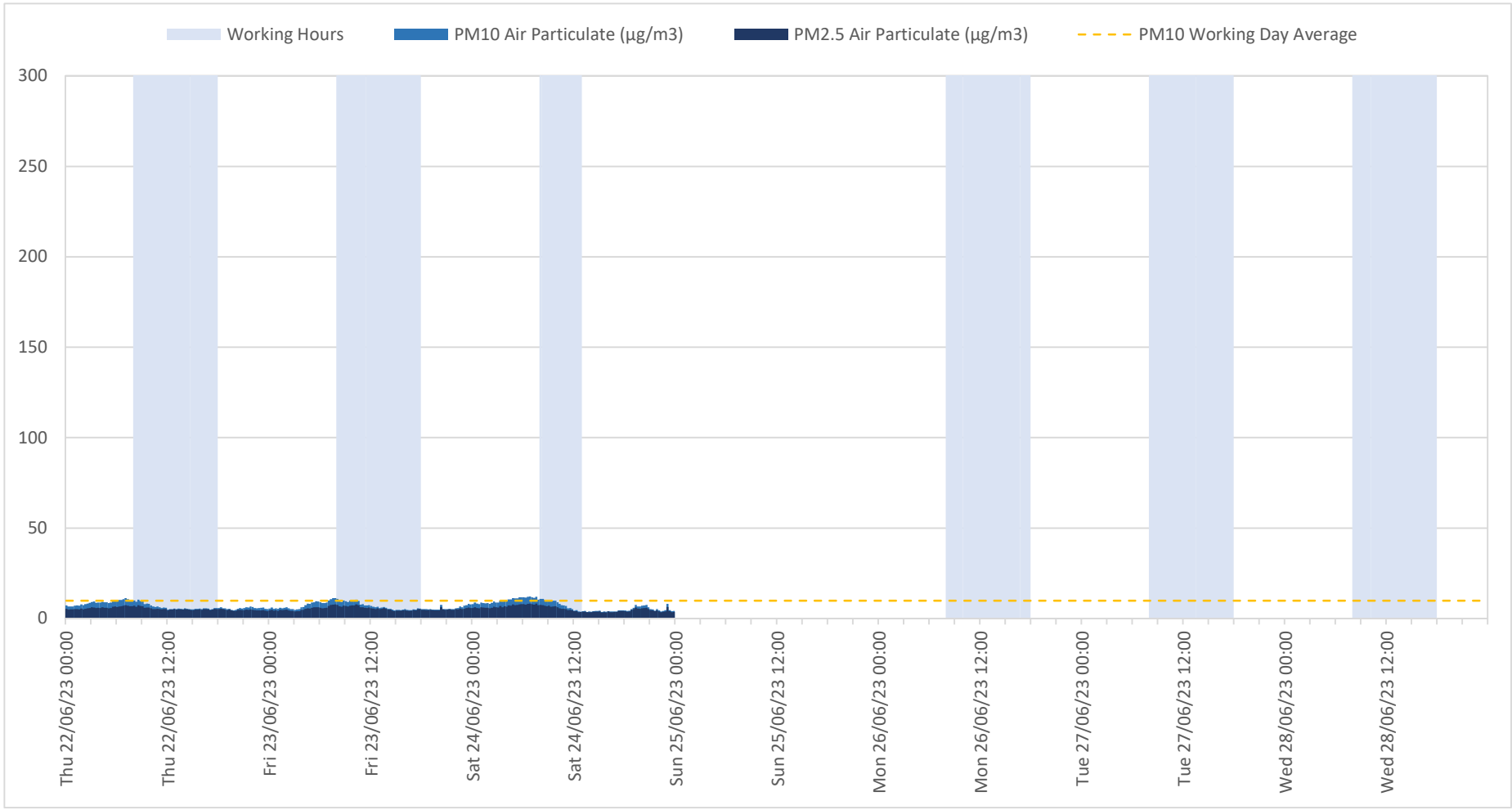
52 Avenue Road

Position 1

Thursday 22/06/2023 to Wednesday 28/06/2023



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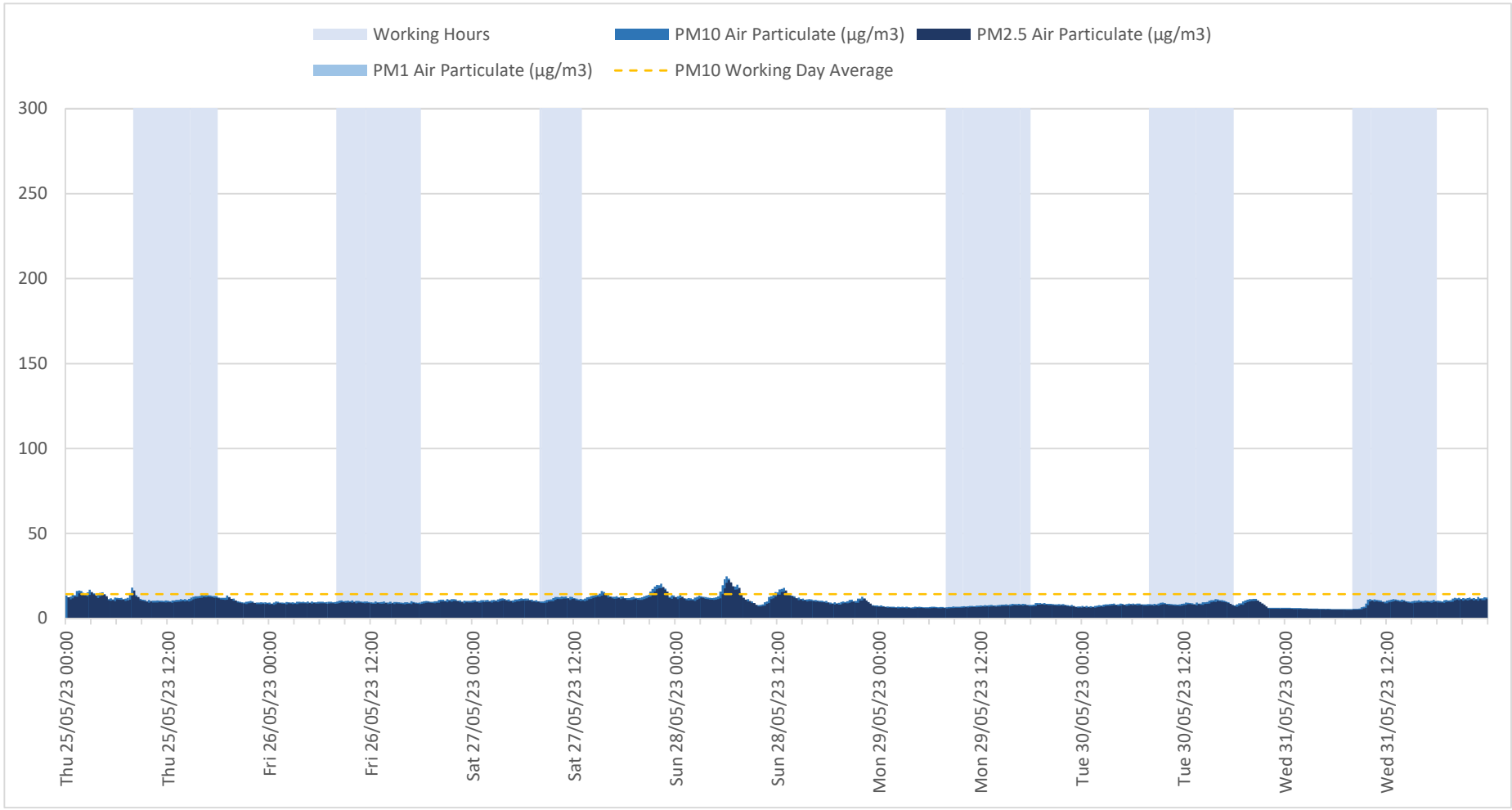
52 Avenue Road

Position 2

Thursday 25/05/2023 to Wednesday 31/05/2023

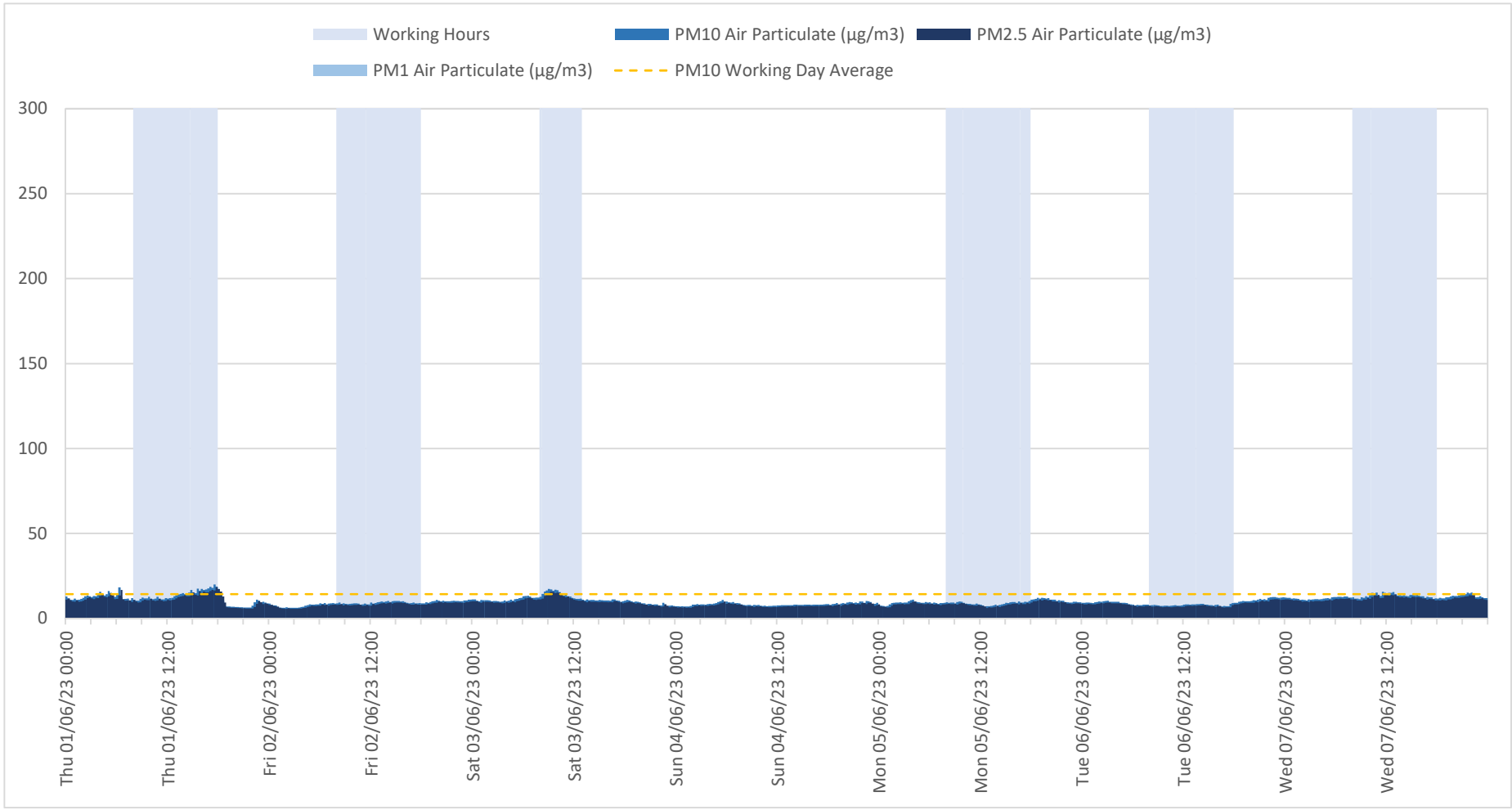


KPM-AP:26019-5.2-1

52 Avenue Road

Position 2

Thursday 01/06/2023 to Wednesday 07/06/2023



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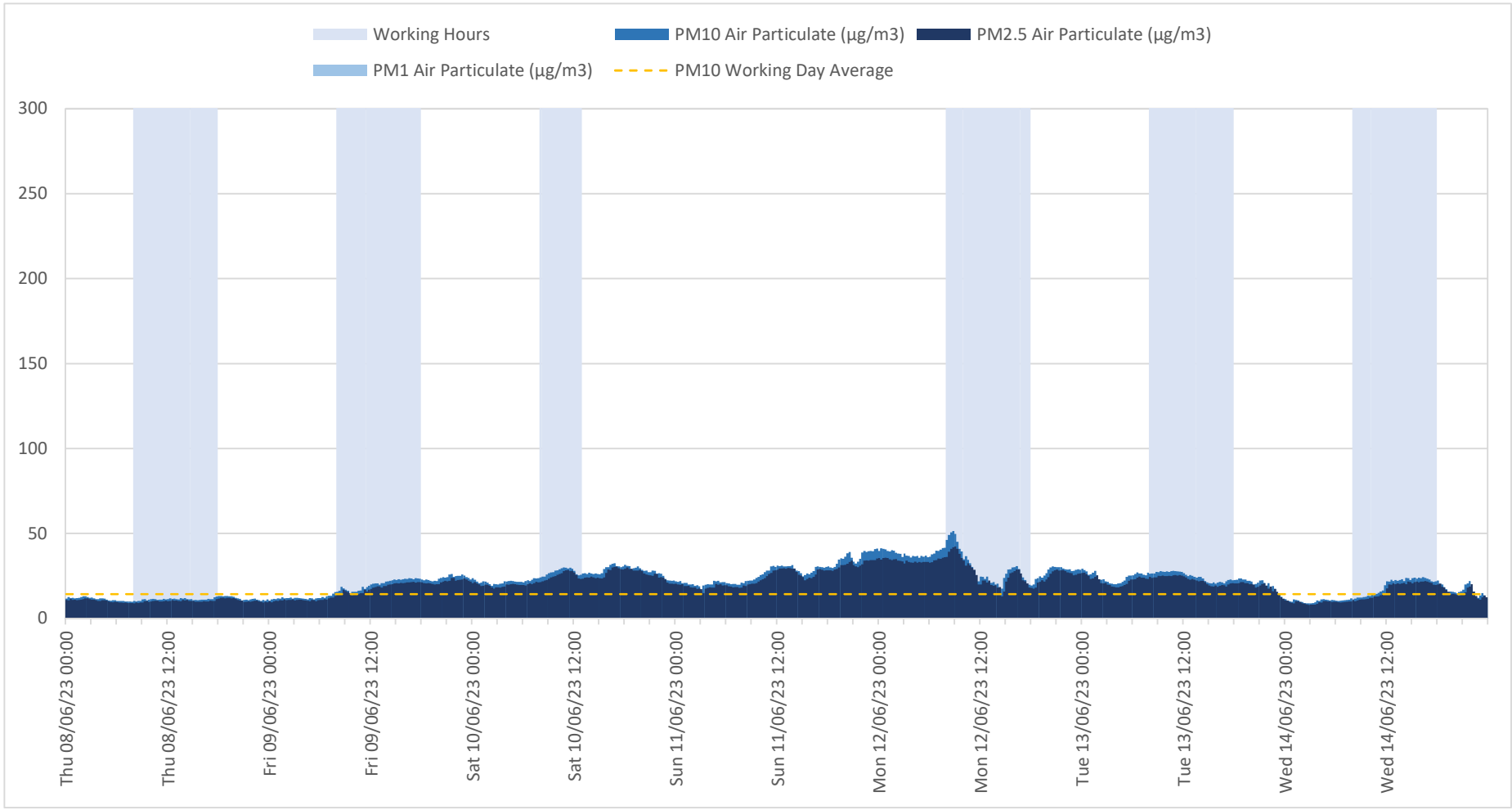
52 Avenue Road

Position 2

Thursday 08/06/2023 to Wednesday 14/06/2023



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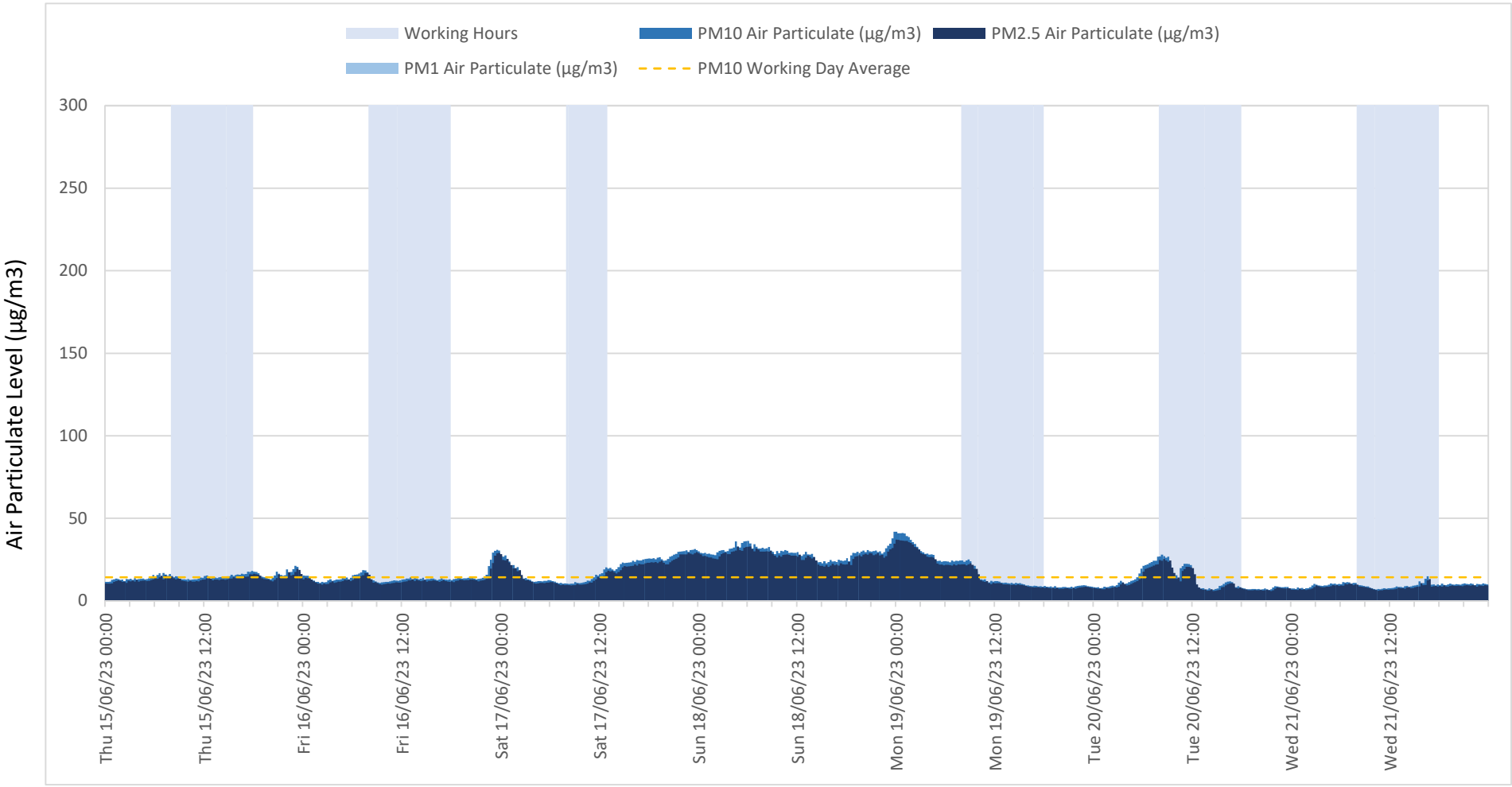
52 Avenue Road

Position 2

Thursday 15/06/2023 to Wednesday 21/06/2023



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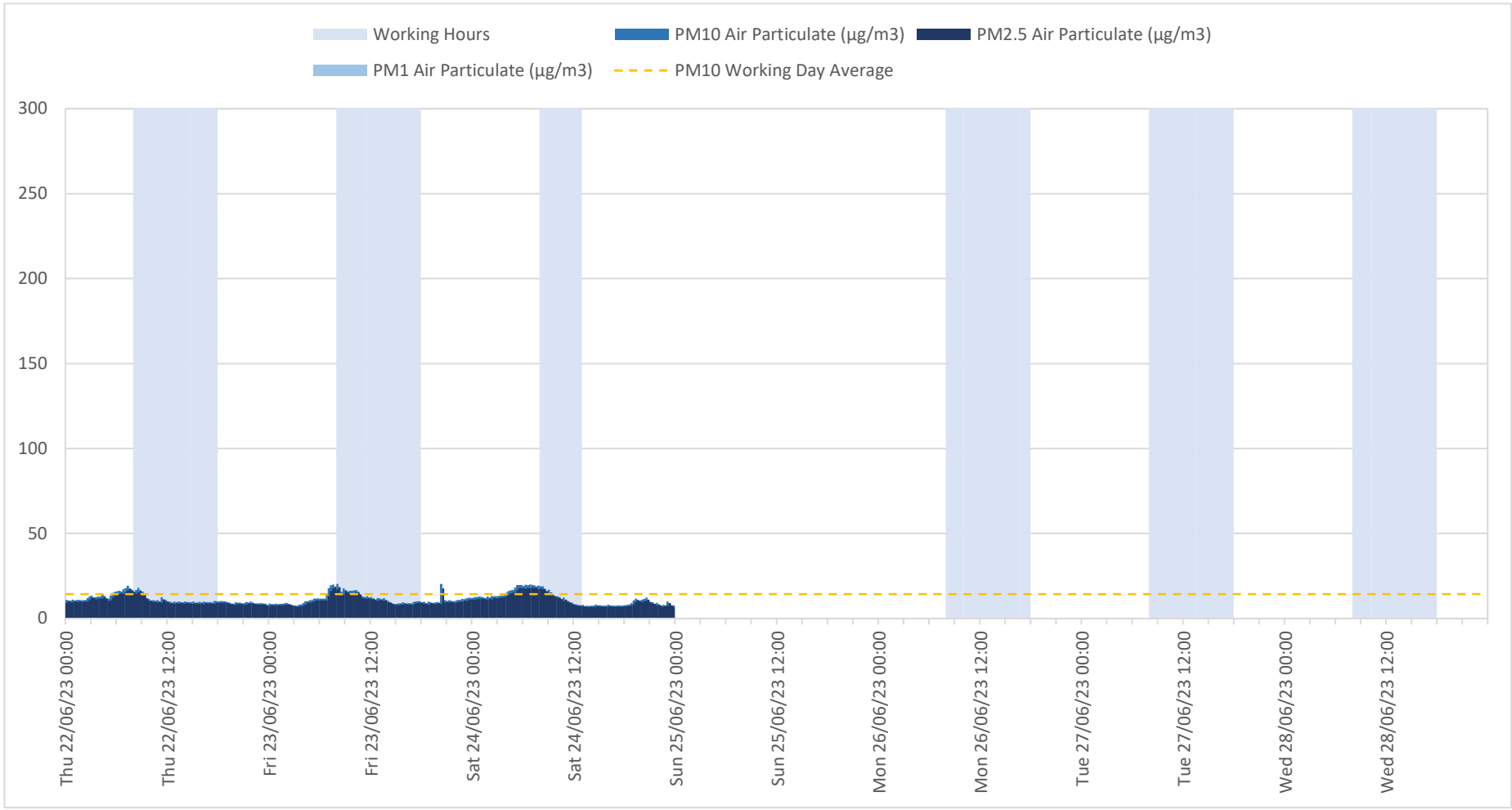
52 Avenue Road

Position 2

Thursday 22/06/2023 to Wednesday 28/06/2023



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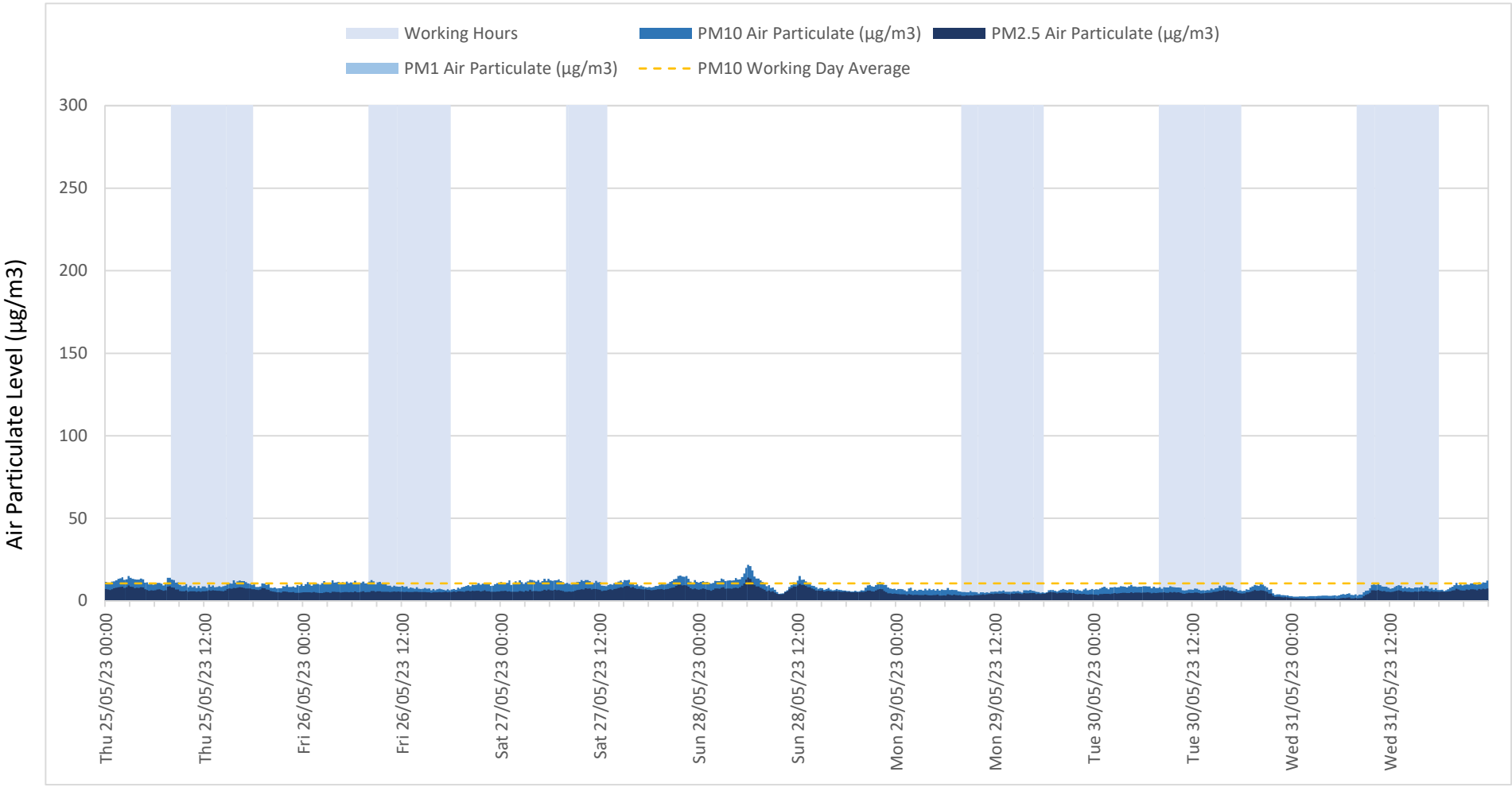
52 Avenue Road

Position 3

Thursday 25/05/2023 to Wednesday 31/05/2023



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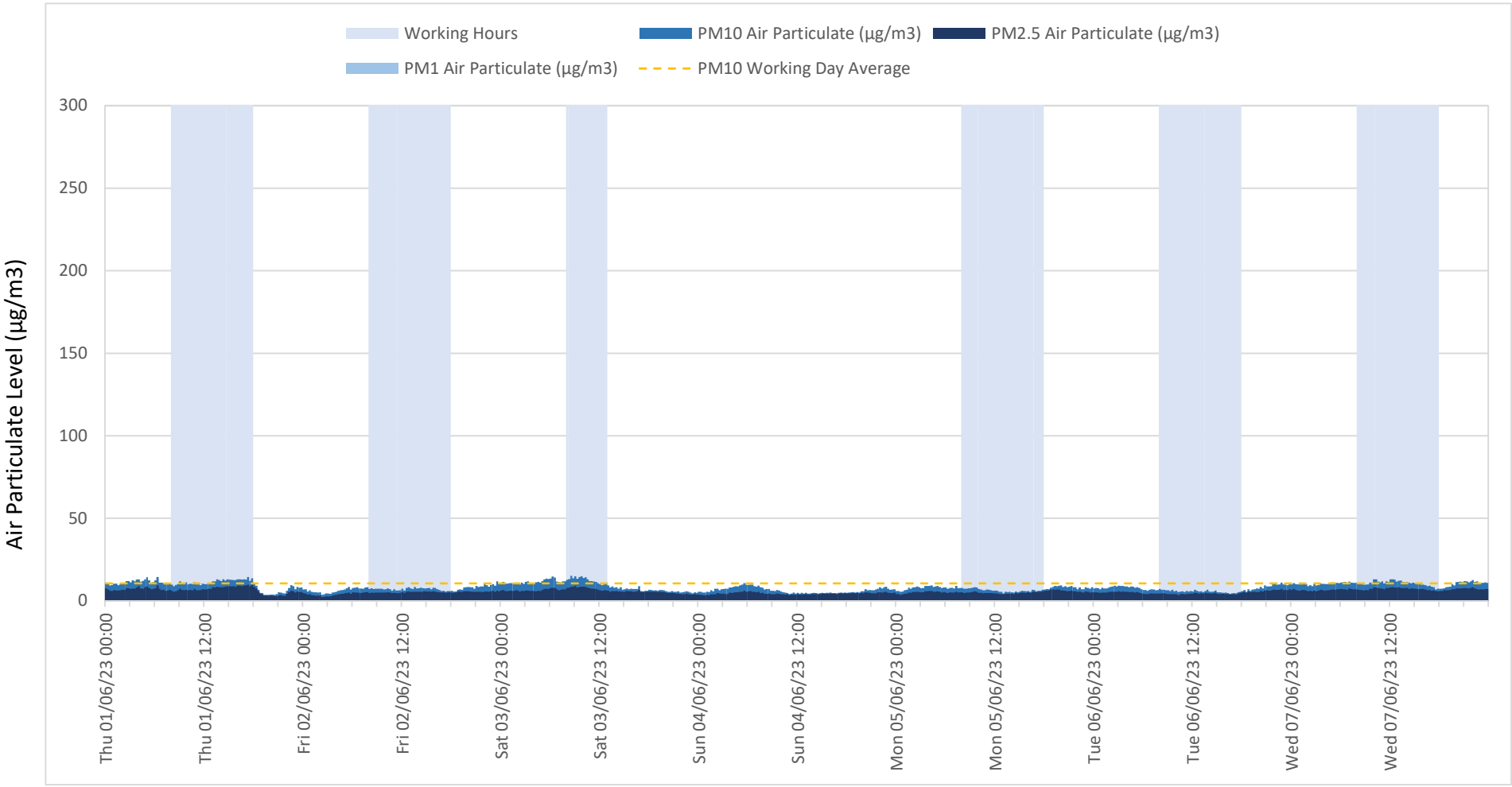
52 Avenue Road

Position 3

Thursday 01/06/2023 to Wednesday 07/06/2023



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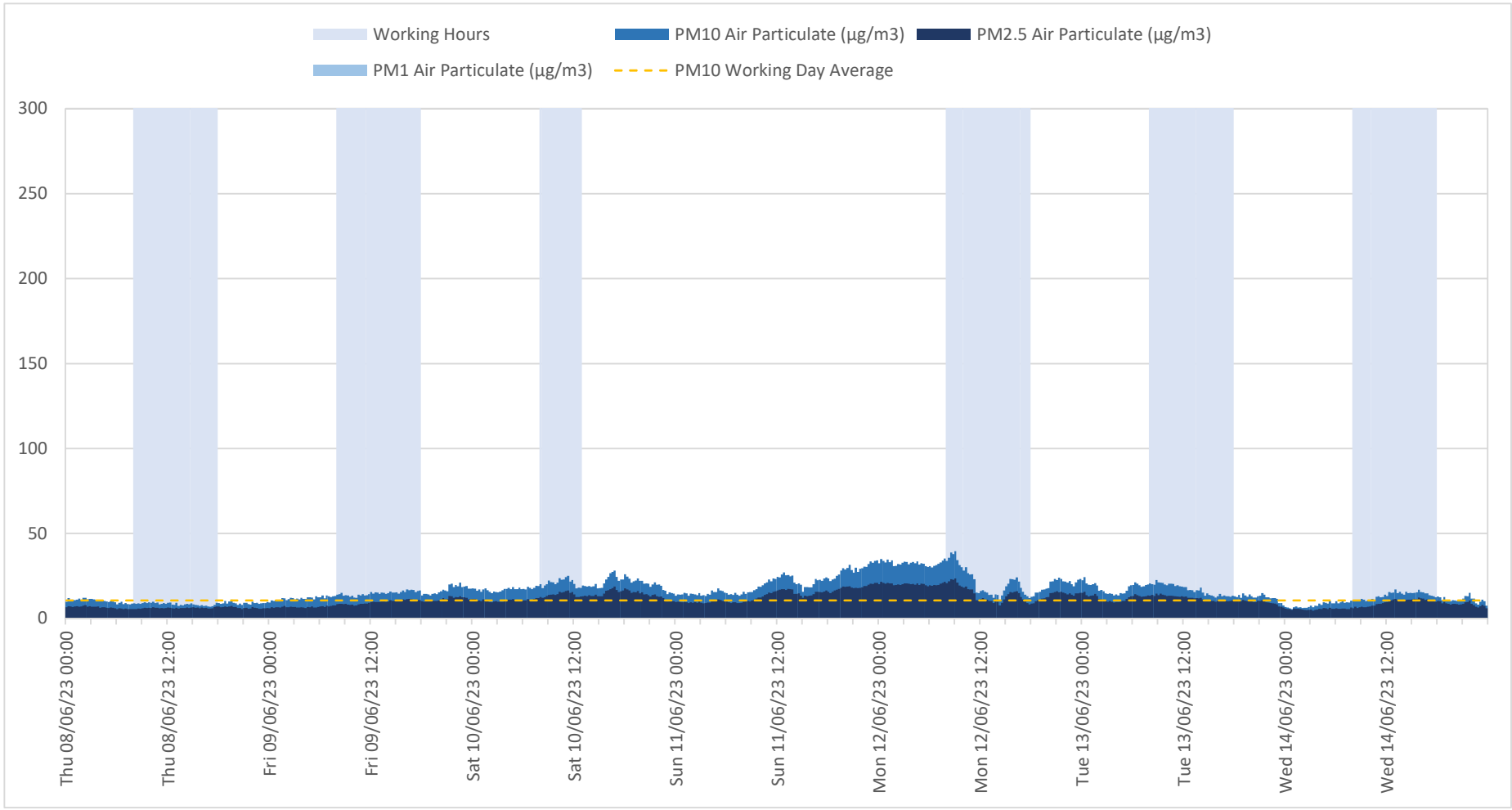
52 Avenue Road

Position 3

Thursday 08/06/2023 to Wednesday 14/06/2023

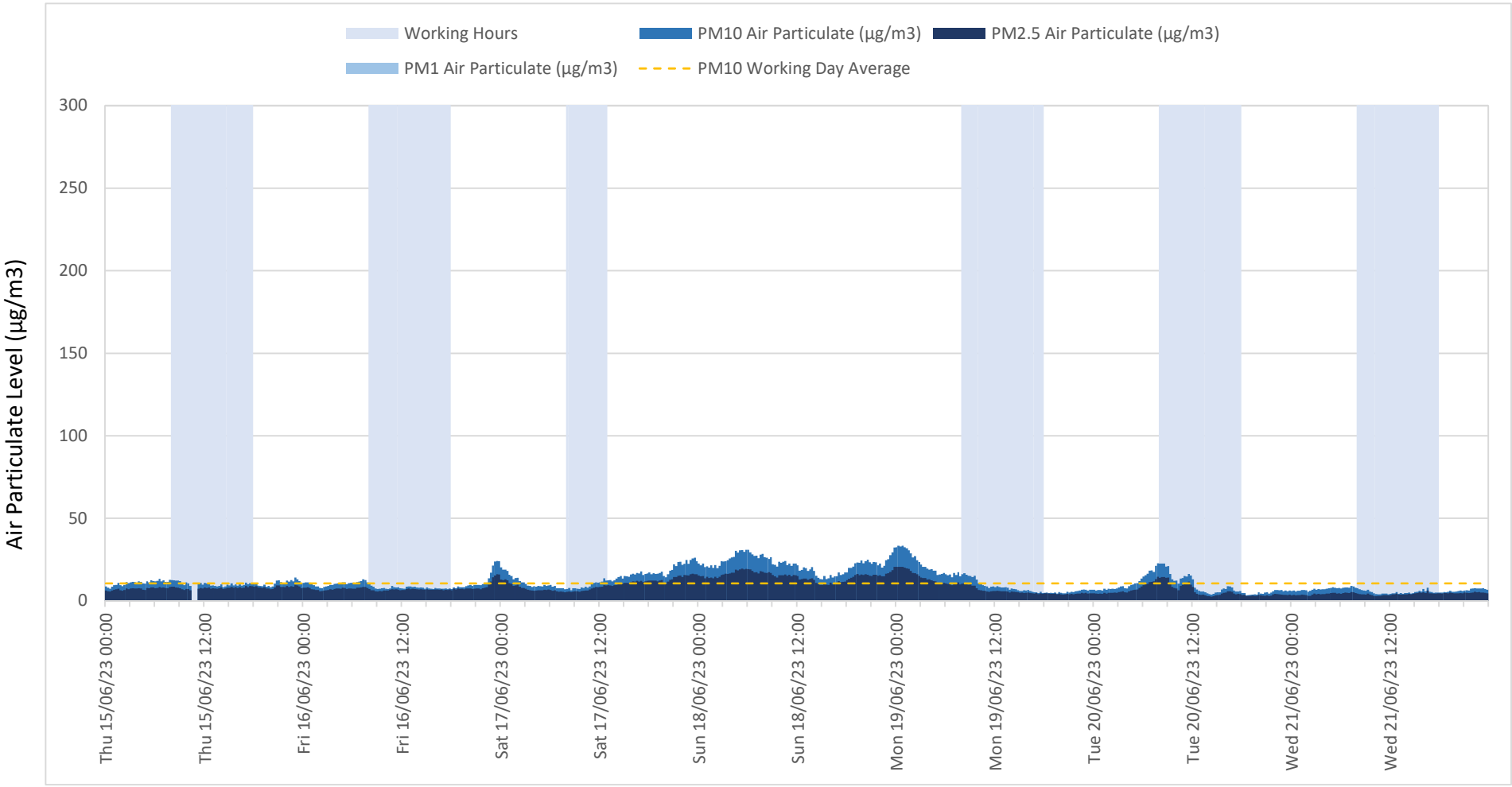


KPM-AP:26019-5.3-3

52 Avenue Road

Position 3

Thursday 15/06/2023 to Wednesday 21/06/2023

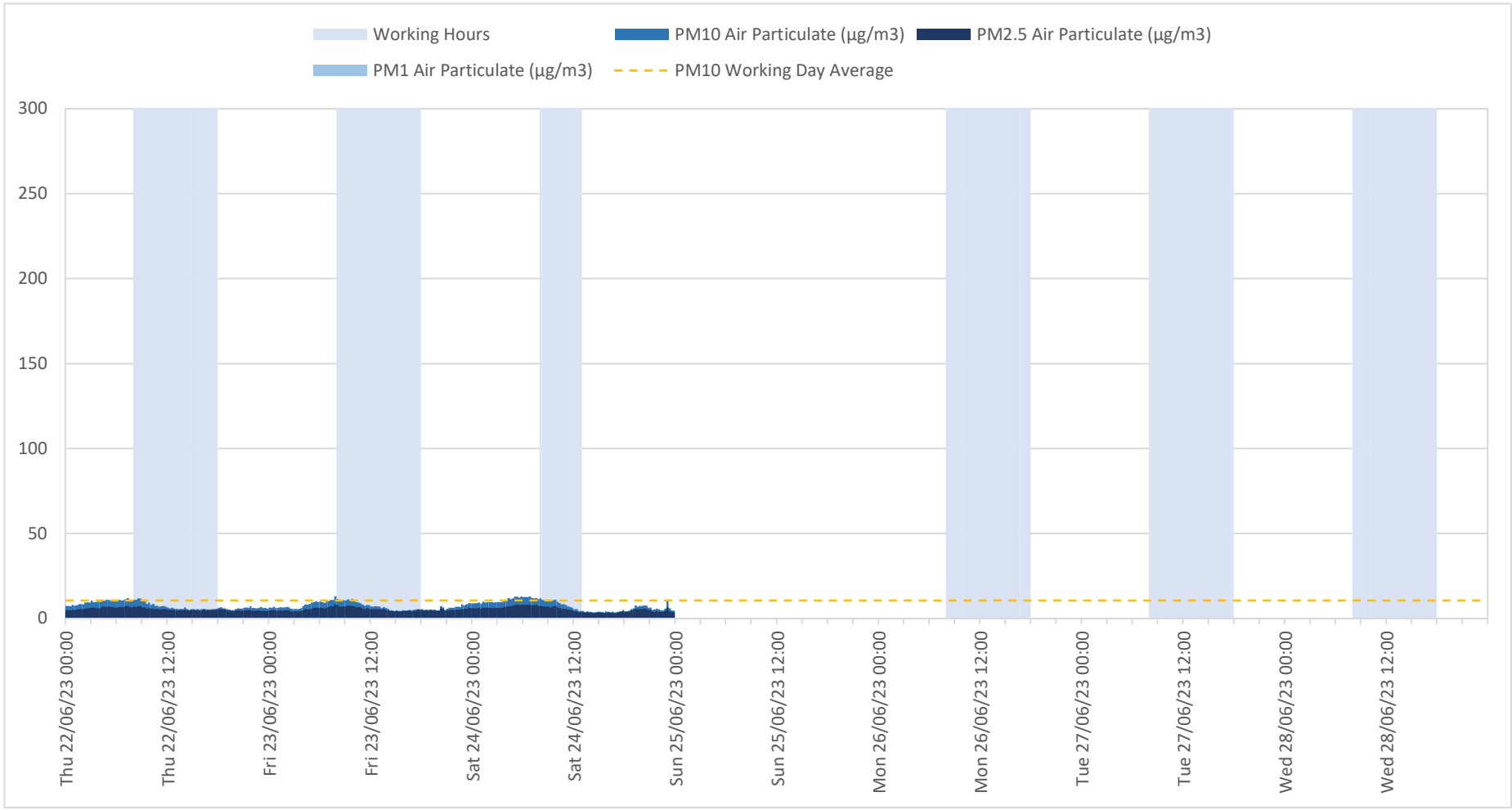


KPM-AP:26019-5.3-4

52 Avenue Road

Position 3

Thursday 22/06/2023 to Wednesday 28/06/2023

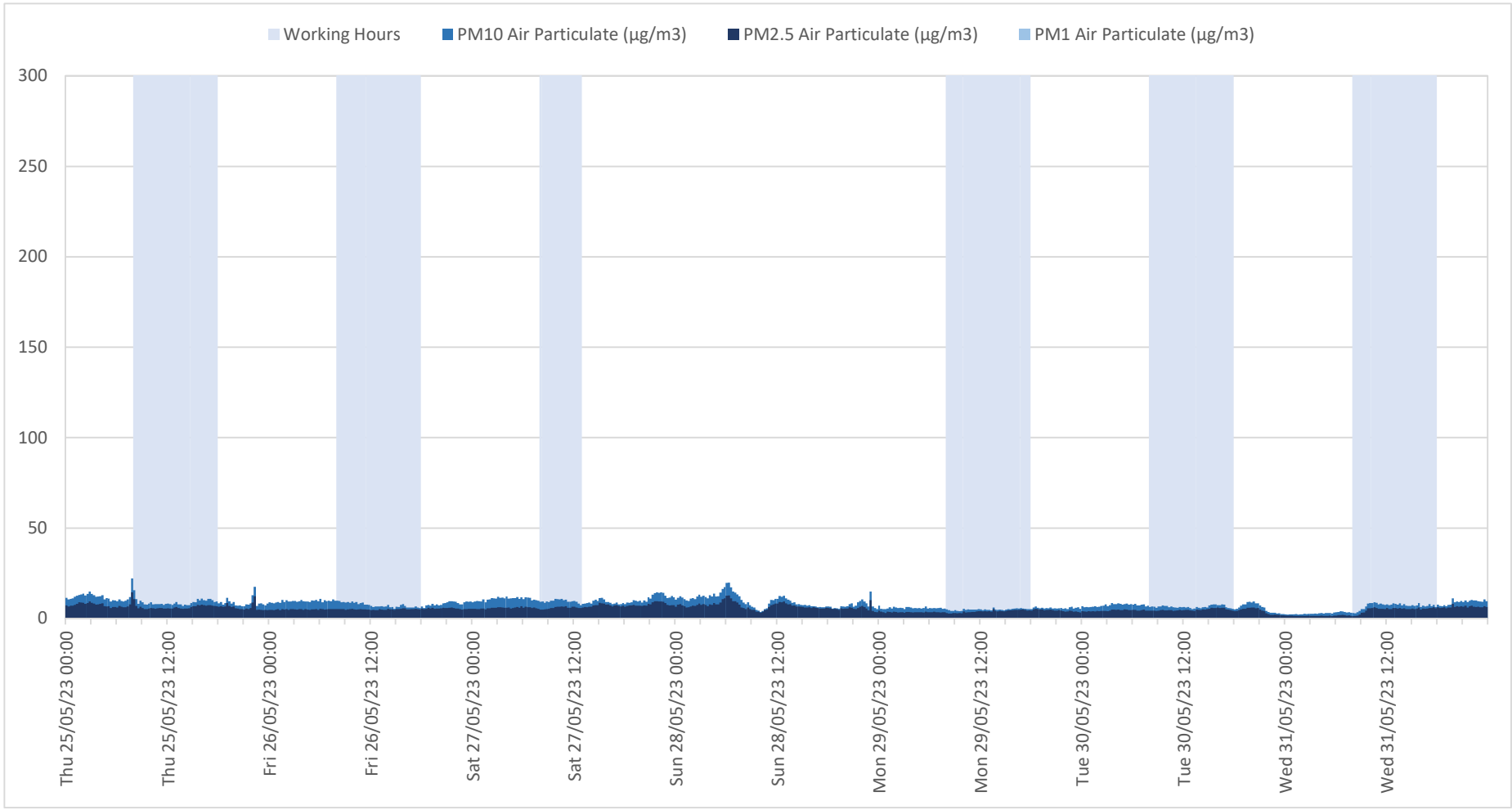


KPM-AP:26019-5.3-5

52 Avenue Road

Position 4

Thursday 25/05/2023 to Wednesday 31/05/2023



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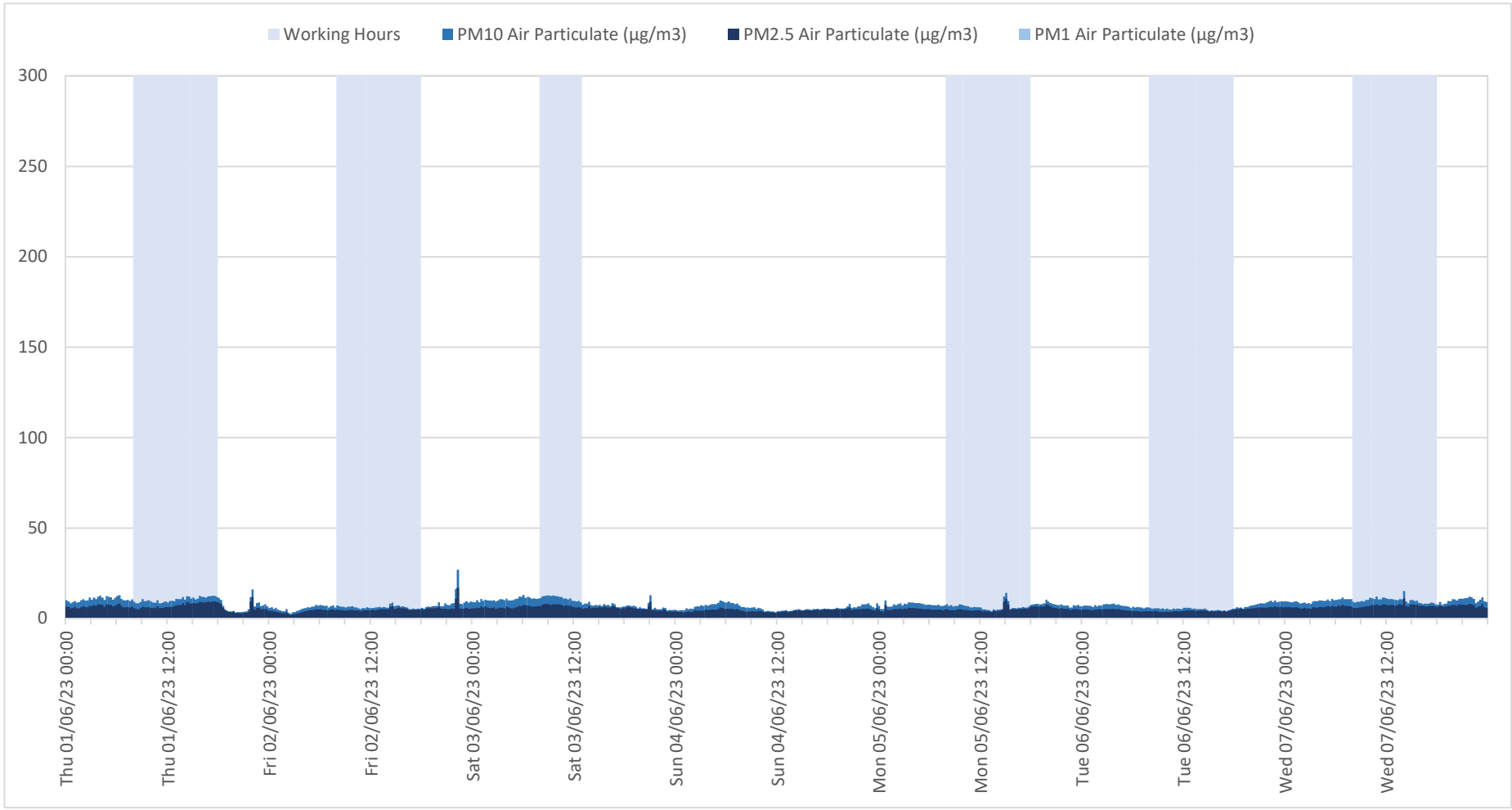
52 Avenue Road

Position 4

Thursday 01/06/2023 to Wednesday 07/06/2023



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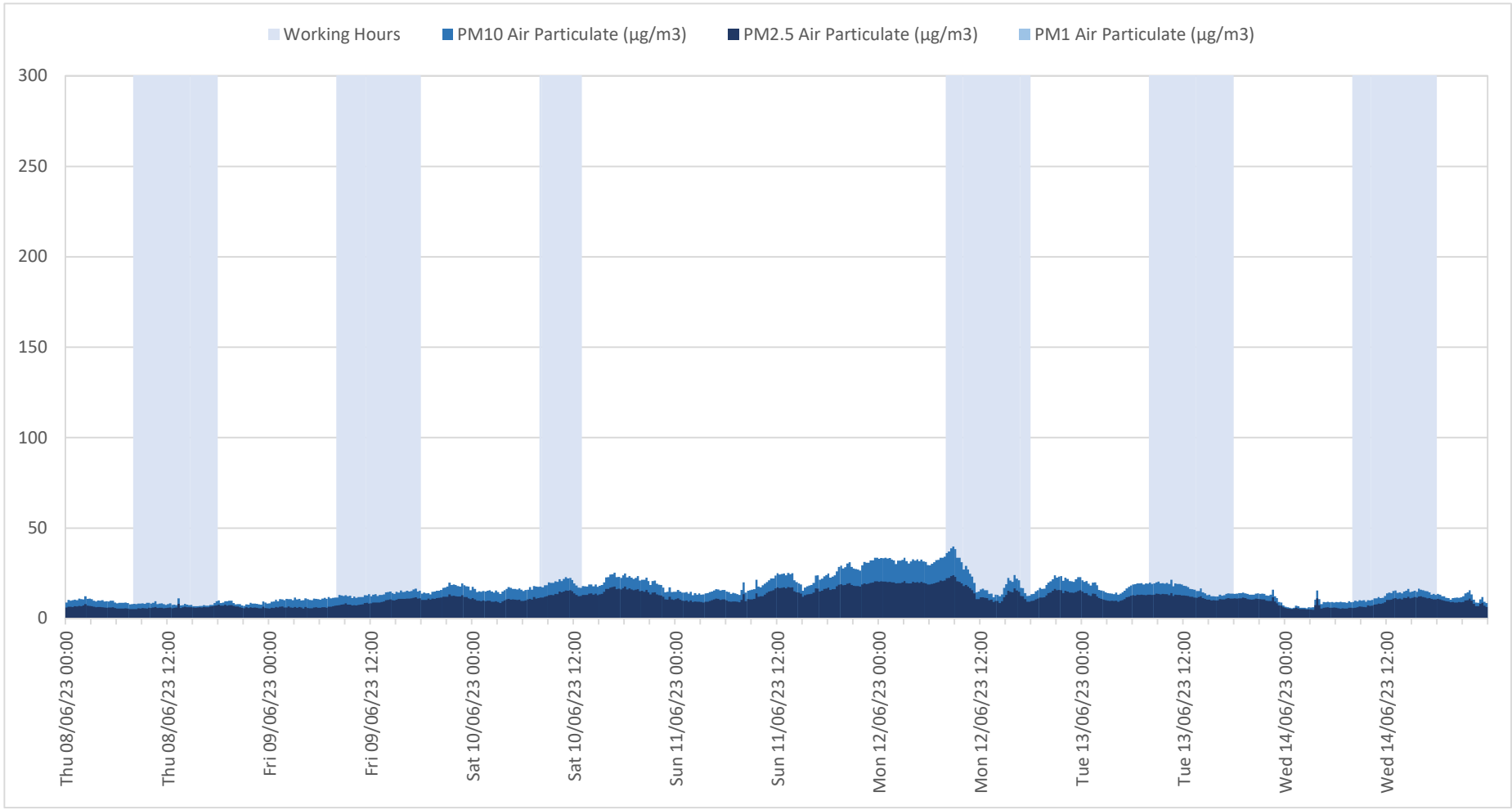
52 Avenue Road

Position 4

Thursday 08/06/2023 to Wednesday 14/06/2023

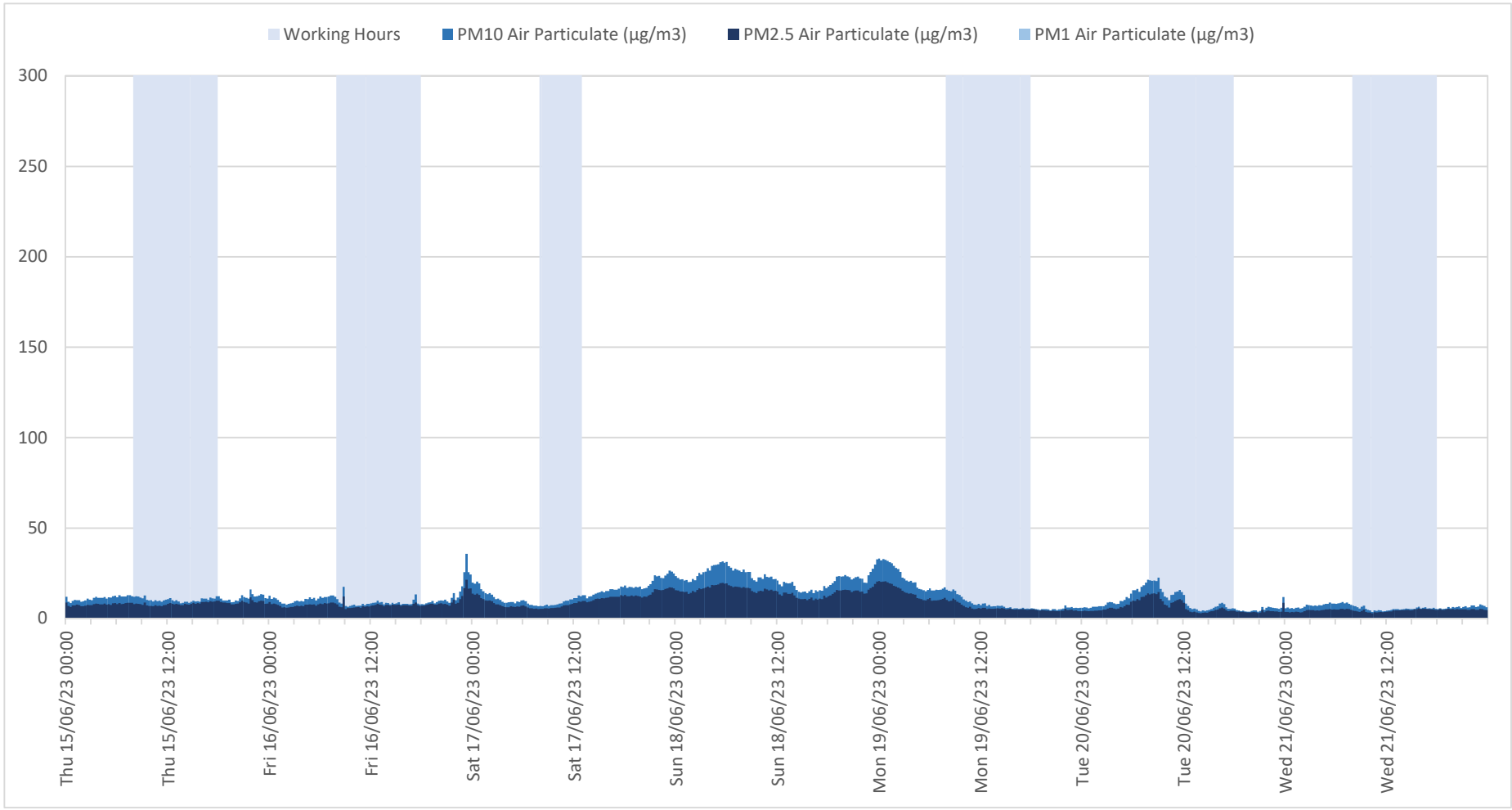


KPM-AP:26019-5.4-3

52 Avenue Road

Position 4

Thursday 15/06/2023 to Wednesday 21/06/2023

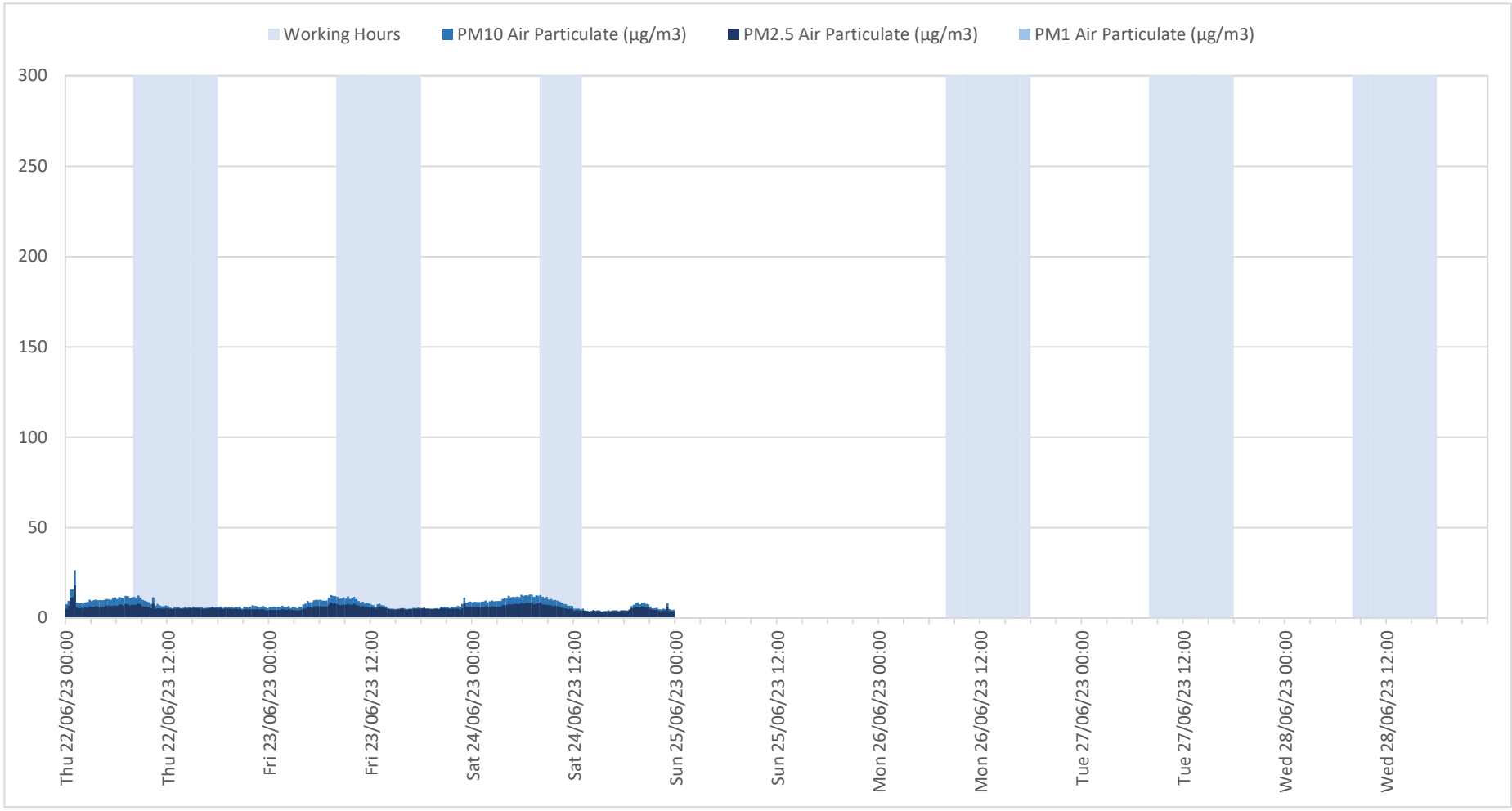


KPM-AP:26019-5.4-4

52 Avenue Road

Position 4

Thursday 22/06/2023 to Wednesday 28/06/2023



KPM-AP:26019-5.4-5