HS2

January 2025

Air Quality and Dust Monitoring Monthly Report – January 2025

Birmingham City Council

Department for Transport

High Speed Two (HS2) Limited has been tasked by the Department for Transport (DfT) with managing the delivery of a new national high speed rail network. It is a non-departmental public body wholly owned by the DfT.

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A report prepared by EWCs and MWCCs on behalf of HS2 Ltd.

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Monthly Summary

1.1.1 This Summary Report is published in fulfilment of commitments detailed in the High Speed Rail (London-West Midlands) Environmental Minimum Requirements, Annex 1: Code of Construction Practice, for the nominated undertaker to present the results of dust monitoring undertaken within Birmingham City Council (BCC) during January 2025.

1.1.2 Figure 1 to Figure 3 in Appendix A present the current worksites together with the dust monitoring locations.

1.1.3 This summary should be read in conjunction with the overview monitoring report monthly available from www.gov.uk/government/collections/monitoring-the-environmental-effects-of-hs2, which highlights: the applicable standards and guidance, as well as the air quality and dust monitoring methodologies to be implemented by nominated undertakers throughout construction.

1.1.4 The current worksites, as presented in Appendix A, Figure 1 to Figure 3, include:

Sublot 4

Washwood Heath

- Traffic on main site haul road, including haul road maintenance with excavator, articulated dump trucks (ADTs), dozer and roller to compact.
- Vehicle delivery check area, including reversing vehicles and loading / unloading plant / material deliveries.
- Excavators, cranes and concrete pumps working in permanent brook conducting FRC works.
- Excavators and rollers working south of the brook backfilling behind fibre-reinforced concrete (FRC) wall.
- Stockpile management area including tipping and loading of ADTs and wagons, excavators and dozers.
- Tarmac batching plant operations, including delivery of aggregates, operating plant and concrete wagons.

Curzon Street

- Deck and deck finishing construction – reinforced concrete (RC) works for robust kerbing, parapet stitch and overhead catenary system (OCS) foundations.
- Drainage – excavation, manhole and pipe installation.
- RC works using concrete pump.
- Tower crane working (manitou + rubber duck + dumper).
- GL 7 sheet pile and platform built up works – rubber duck and roller – for sheet piles – excavator plus movax attachment.

Bromford East Tunnel Portal (Sublot 1B)

- Operation and maintenance of two tunnel boring machines (TBMs).
- Operation and maintenance of two slurry treatment plants (STPs).
- Deliveries of equipment and segments for tunnel construction.
- Operation of a Sub-station which is owned by a different company.
- Construction of a mechanical, electrical and plumbing (MEP) building for Bromford Tunnel Intermediate Shaft (BTIS) and Bromford Tunnel East Portal (BTEP).
- Operation and maintenance of two grout batching plants.
- Use of gantry crane, tower crane and several crawler cranes.
- The transport of muck from muck bin 1 /2 to Sublot Delta via articulated dump truck (ADT).
- Construction of acoustic platform.

Curzon Street Station – Main works

- Installation of bearing and secant piles
- Import of materials required for piling activities
- Export of excavated materials
- Earthworks required for installation of site compound.

1.1.5 Eight (8) dust monitors are installed around these worksites, where works are underway. These sites returned a low to high dust risk rating.

1.1.6 Dust monitoring locations and results are presented in Appendix B, Table 1, together with line charts of monthly data from each dust monitor, presented in Figure 4. All continuous dust monitoring is undertaken using indicative monitors. Despite being Environment Agency (MCERTS) certified, indicative monitors carry a higher level of uncertainty than reference monitors, and therefore cannot be strictly compared with Air Quality Standards for human health and the environment. The purpose of the monitoring undertaken is to ensure the effectiveness of the on-site mitigation.

1.1.7 The trigger level for PM_{10} concentrations of 190 µg/m^3, over a 1-hour period, in accordance with the updated guidance document '*Guidance on Monitoring in the Vicinity of Demolition and Construction Sites (October 2018)*' has been applied.

1.1.8 Details of the trigger alert investigations and remediations are presented in Appendix B, Table 2.

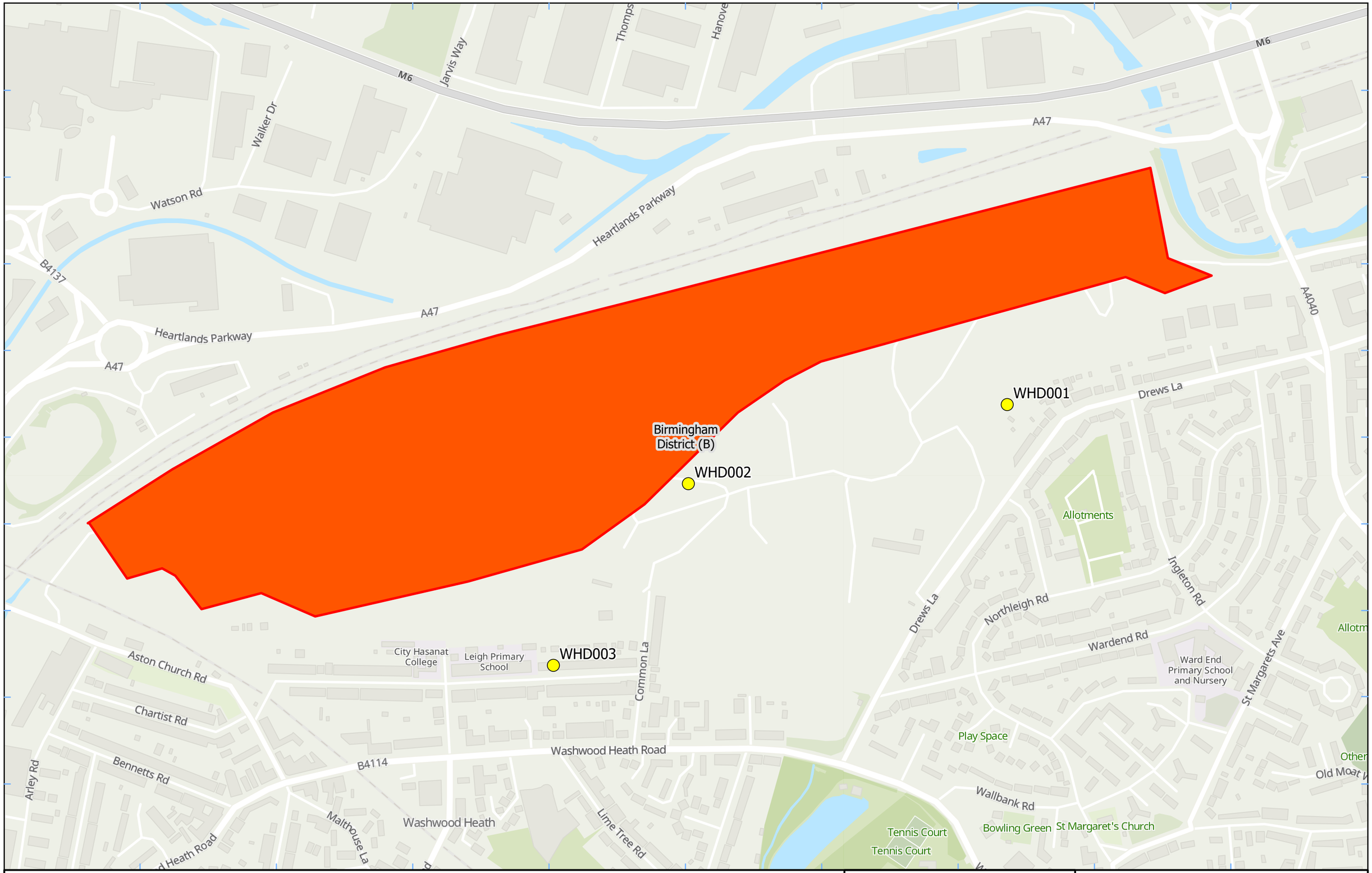
1.1.9 Data capture was below 90% for multiple monitors due to:

- Monitor BETP001 – A battery refresh was done on 9th January 2025. After the battery refresh, the power supply issues were resolved.
- Dust monitor 00437 provided incorrect readings between 01/01/25 – 13/01/2025 and this data has been disregarded due to the data being inaccurate. The monitor was replaced on the 13/01/2025.

1.1.10 There were no (0) complaints received during the reporting period (January 2025).

Appendix A – Worksites and Monitoring Locations

Figures 1 - 3: Worksites and Monitoring Locations within BCC



Legend

District Borough Unitary Boundaries Worksite

Dust Monitor

Map Number

Map Name

Worksite and Monitoring Locations In BCC (Sheet 1)

Birmingham City Council

Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway, Birmingham B4 6GA.

Scale at A3: 1:5,000

Metres

Doc Number:

Date: 22/01/24

Legend

District Borough Unitary Boundaries Worksite

Dust Monitor

Map Number

Map Name

Worksite and Monitoring Locations In BCC (Sheet 2)

Birmingham City Council

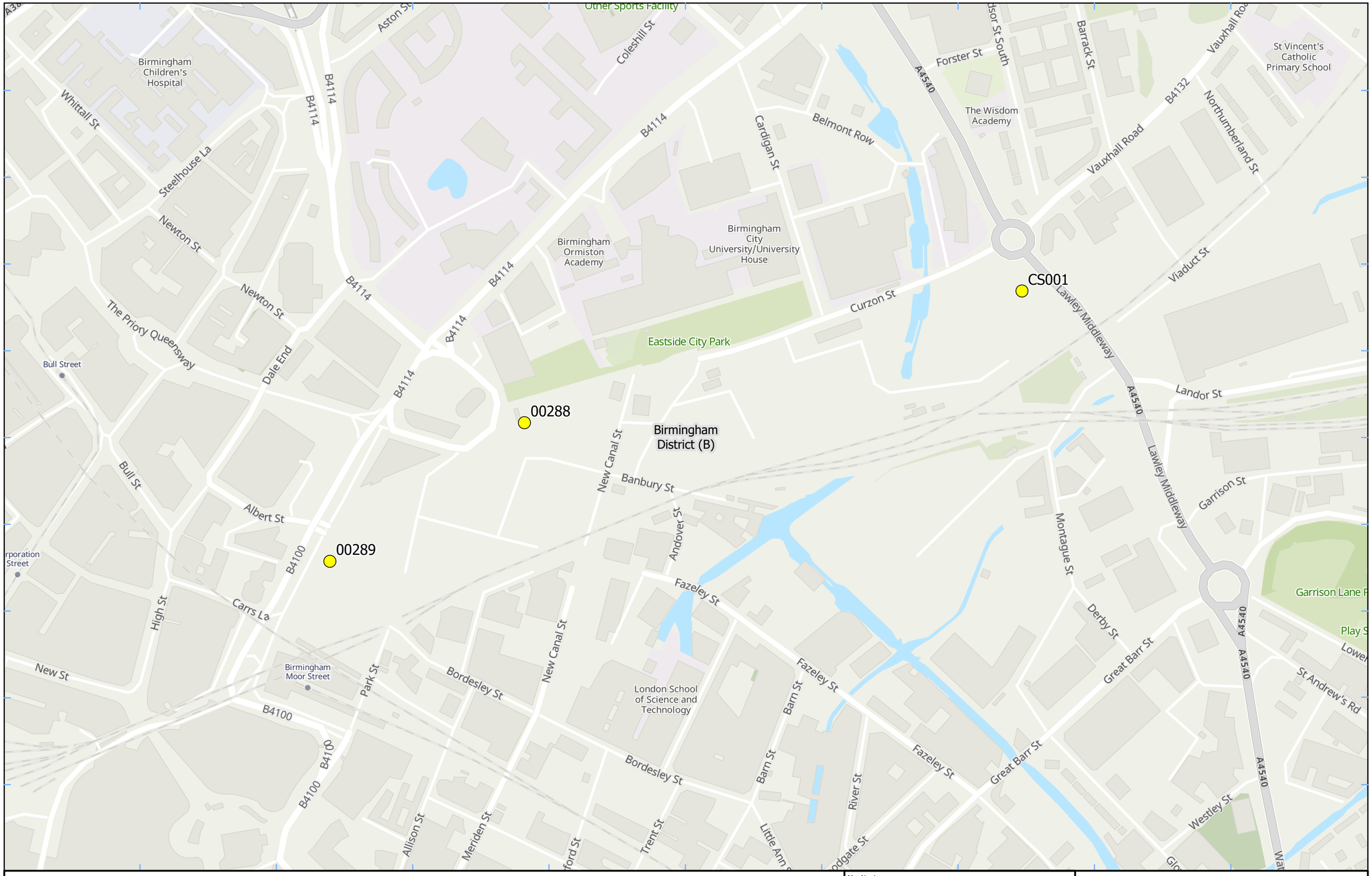
Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway, Birmingham B4 6GA.

Scale at A3: 1:4,000

Metres

Doc Number:

Date: 22/01/24



Legend

- Dust Monitor
- District Borough Unitary Boundaries

Map Number

Map Name

Monitoring Locations In BCC (Sheet 3)

Birmingham City Council

Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway, Birmingham B4 6GA.

Scale at A3: 1:4,000

Metres

Doc Number:

Date: 02/07/24

Appendix B – Dust Monitoring Results

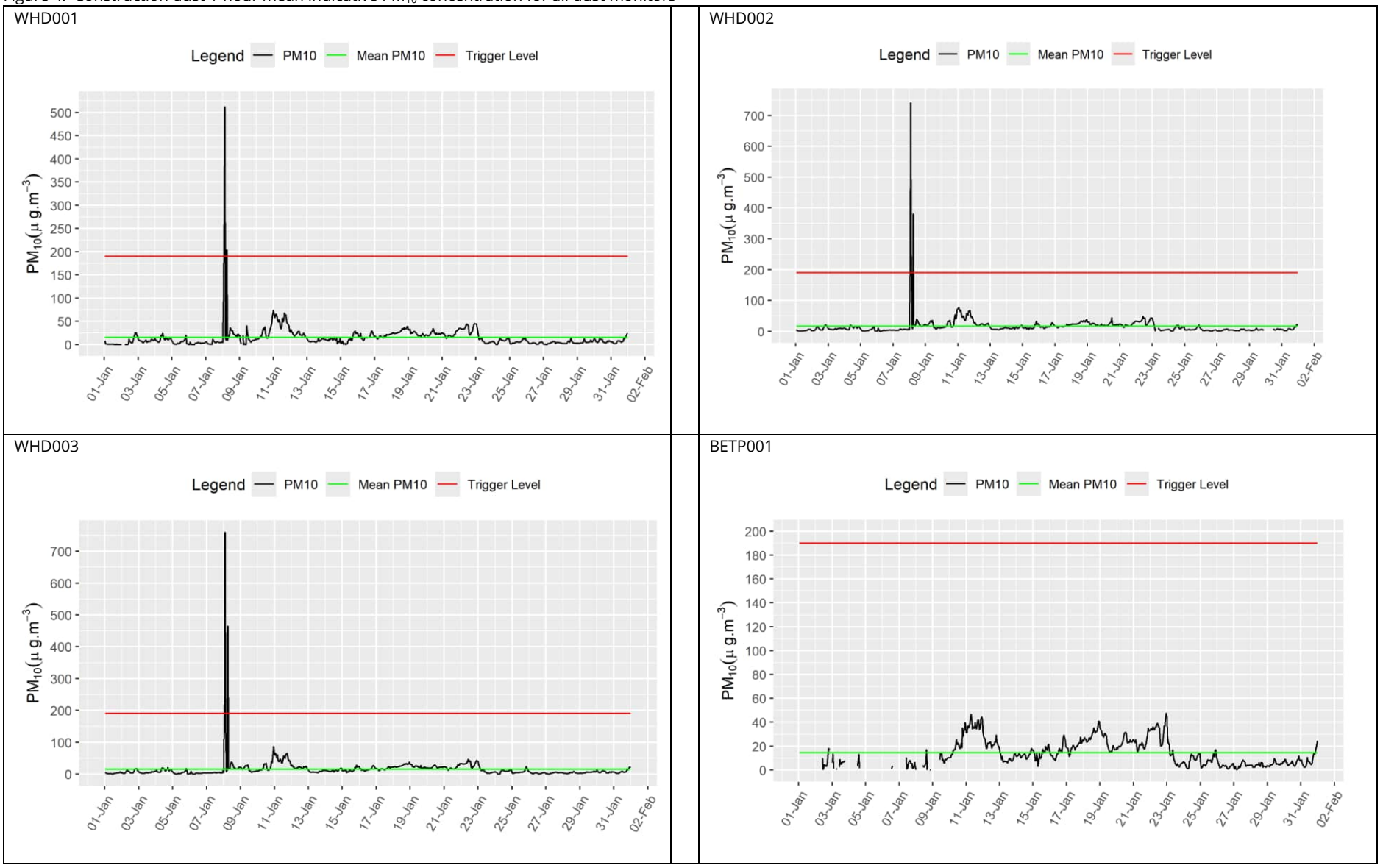
Table 1: Dust Monitoring Locations and Results

Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM10 concentration (µg/m3)	Minimum 1-hour PM10 concentration (µg/m3)	Maximum 1-hour PM10 concentration (µg/m3)	Number of 1-hour periods exceeding trigger level of 190 µg/m3	Data capture (%)
WHD001	411221, 289245	Washwood Heath Depot, near receptors on Drews Lane	M	Yes	No	15.4	0.1	512.3	3	97.7
WHD002	410758, 289130	Washwood Heath Depot, near receptors on Common Lane	M	Yes	No	16.5	0.2	740.9	3	98.1
WHD003	410562, 288866	Washwood Heath Depot, near receptors on Warren Road	M	Yes	No	15.3	0.1	759.9	3	99.7
BETP001	416719, 290767	Bromford East Tunnel Portal, Twisted Oak Stables	L	Yes	No	14.5	0.1	47.5	0	81.3
BETP002	417406, 290605	Bromford East Tunnel Portal, Attleboro Lane	M	Yes	No	10.5	0.1	87.5	0	99.7
CS001	408254, 287210	University Locks, Curzon Street	M	Yes	No	15.5	0.2	88.9	0	100.0
00288	407676, 287057	Curzon St – East Side City Park	H	Yes	No	15.3	0.5	162.9	0	99.3
00289	407450, 286896	Curzon St – Moor St Queensway	H	Yes	No	14.0	3.0	59.8	0	58.9

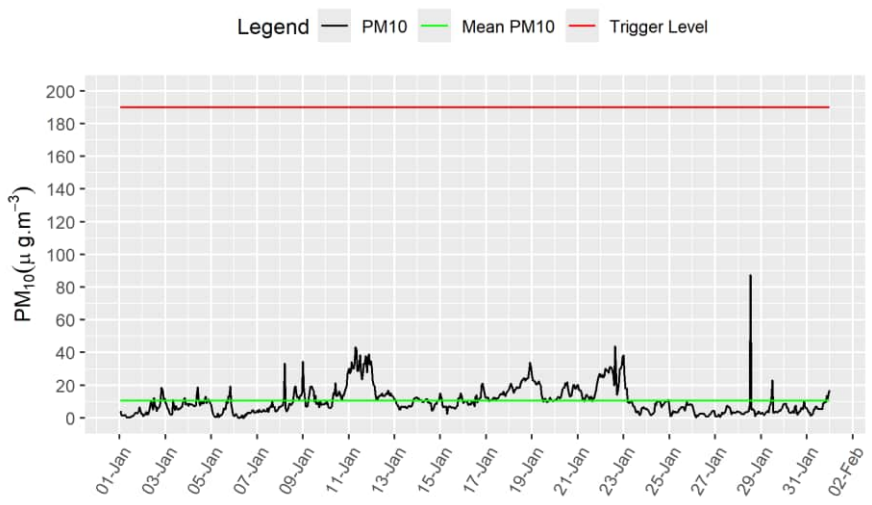
Table 2: Summary of exceedances during period (January 2025)

Monitoring Site ID	Period of trigger alert & Concentration recorded	Investigation	Outcomes / Resolution / Remedial measures implemented
WHD001	08/01/2025 01:01 – 02:00; 258 µg/m^3 02:01 – 03:00; 512 µg/m^3 05:01 – 06:00; 205 µg/m^3	Exceedance was recorded outside of current BBV working hours, so these exceedances were not associated with current HS2 construction works.	N/A
WHD002	08/01/2025 01:01 – 02:00; 741 µg/m3 02:01 – 03:00; 246 µg/m3 05:01 – 06:00; 381 µg/m3		
WHD003	08/01/2025 01:01 – 02:00; 217 µg/m^3 02:01 – 03:00; 760 µg/m^3 05:01 – 06:00; 466 µg/m^3		

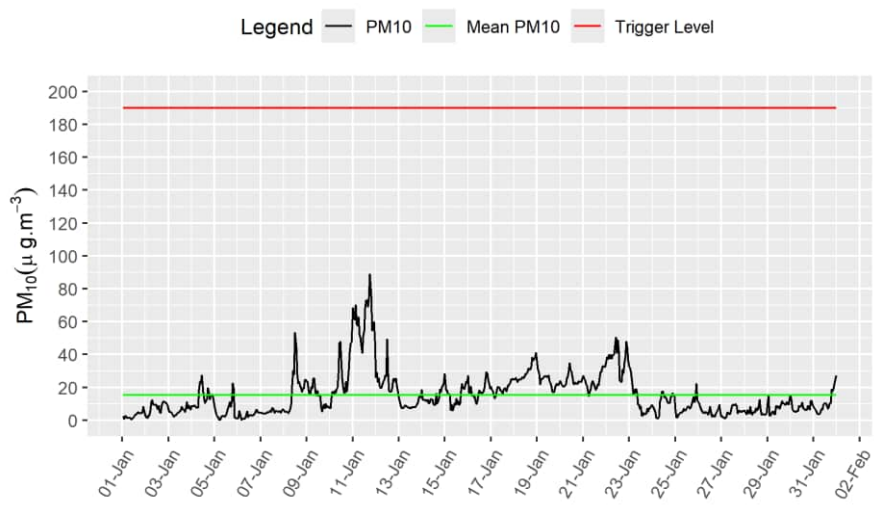
Figure 4: Construction dust 1-hour mean indicative PM_{10} concentration for all dust monitors



BETP002



CS001



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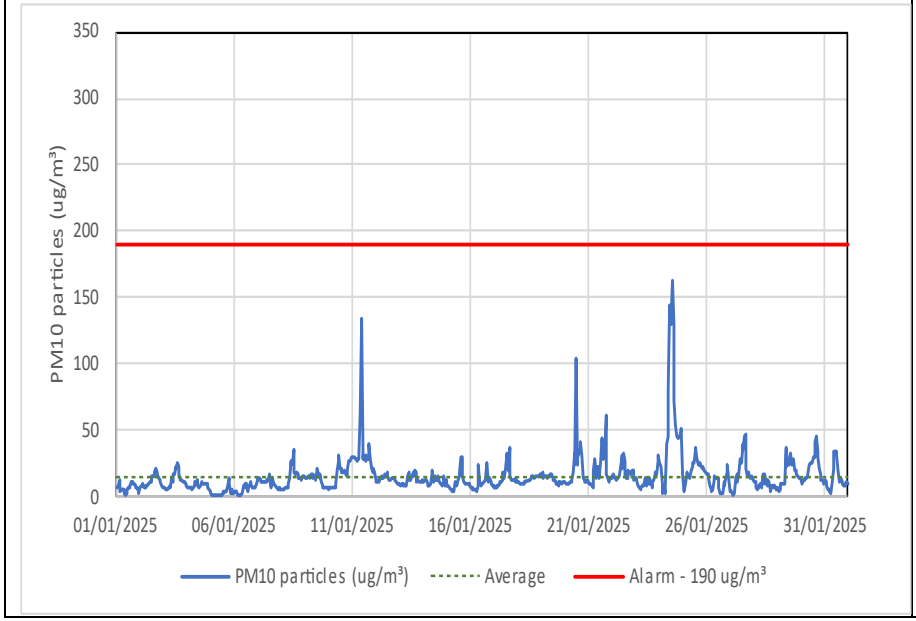

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