

Air Quality and Dust Monitoring Monthly Report – April 2021

Three Rivers District 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 in the Three Rivers District Council (TRDC) area during April 2021.

1.1.2 Figure 1 in Appendix A presents the current worksite together with the dust monitoring locations for April 2021.

1.1.3 This summary should be read in conjunction with the overview monitoring report 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 phase of works at the South Portal site commenced within TRDC in July 2017 and is currently ongoing. The South Portal site presented in Appendix A, Figure 1, includes the following ongoing activities:

- General Plant: wheel washers, generators and site wide support plant;
- Earthworks and Drainage: soil strip, excavation, filling, subgrade and ground stabilisation;
- Road and Hardstanding: surfacing, grading and excavation;
- Civils: platforms, accommodation and slabs, and removal of materials stored in SP10 (car park extension);
- Superstructure;
- I&M Installation: Tilehouse Lane cutting;
- Tilehouse Lane Overbridge: ground beams and parapet;
- Stockpiling: INNS stockpile management and storage of excavated materials from CSP in SP10;
- Batching Plant 1, 2 and 3: Collection of concrete for D-wall activity at vent shaft sites and batching plant 2&3-deliveries and operation;
- Demolition Works: removal of tarmac batching plant;
- Site Installation: TBM and STP gantry installation;
- Tunnel Amenities: Cooling plant and A&B component grouting plant;
- Tunnel Precast Factory: Factory NB1 and NB2 production;
- Shire Lane Culvert: preparing ground, backfilling, foundation slab, walls, roof slab, wing walls and transition;
- CVV Jetty pre-cast yard: Yard Operation;
- Casing retrieval and pile cropping;
- Pynesfield ground stabilisation: band drains;
- TLO & Shire Lane Culvert Concrete Pours; and
- Extended Hours Stockpiling SP10 and West Hyde Embankment.

- 1.1.5 Four (4) dust monitors are installed around the worksite, where earthworks, construction and trackout activities are underway. This site returned a medium dust risk rating.
- 1.1.6 Dust monitoring locations and results for April 2021 are presented in Appendix B, Table 2, together with a line chart of monthly data from each dust monitor, presented in Figures 2, 3, 4 and 5. 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 PM₁₀ concentrations of 190 µg/m³, 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 There were no (0) dust trigger alerts recorded during the monitoring period (April 2021).
- 1.1.9 Data capture for various monitors was below 90% for the month of April 2021 due to intermittent monitor connection issues with the supplier's remote software, as well as loss of power due to insufficient sunlight/wind for monitors using solar/wind power. Monitor SP-AQMP4 was deployed onsite on the 15/04/2021 and experience some further missing data due to a faulty power connection which has since been replaced. All concerned issues have been or are in the process of being resolved.
- 1.1.10 Table 1 provides a summary of the complaint information related to dust or air quality received during this reporting period, together with the findings of any related investigations.

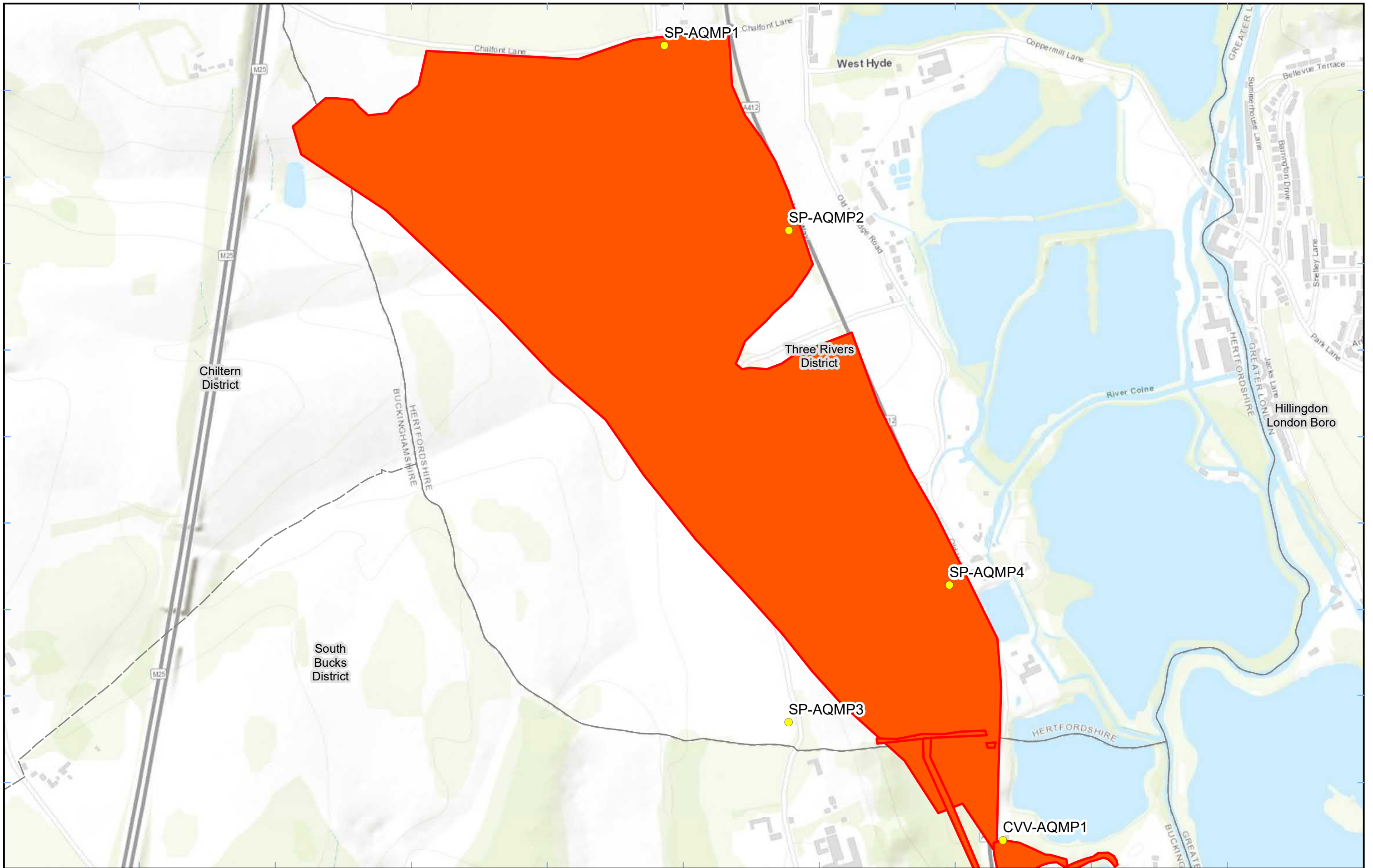
Table 1: Summary of complaints received during April 2021

Complaint Reference No.	Worksite Reference	Description of complaint	Results of investigation
HS2-21-41795-C	South Portal site works	Reported increased level of dust in the area on 16/04/21.	Dust as a result of the on-site activities is managed through a range of mitigation measures deployed on site – these are set out in the Code of Construction Practice. These will continue to be implemented across all HS2 sites.

Appendix A – Worksite and Dust Monitoring Locations

Figure 1: Three Rivers District Council Worksites and Monitoring locations during April 2021





Legend
 Dust Monitor
 Worksite
 District Borough Unitary Boundaries

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Map Number
 Worksite and Monitoring Locations
 In TRDC (Sheet 1)
 Three Rivers District Council

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Appendix B – Dust Monitoring Results

Table 2: Dust monitoring locations and April 2021 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 PM ₁₀ concentration (µg/m ³)	Minimum 1-hour PM ₁₀ concentration (µg/m ³)	Maximum 1-hour PM ₁₀ concentration (µg/m ³)	Number of 1-hour periods exceeding trigger level of 190 µg/m ³	Data capture (%)
SP-AQMP1	502922, 191467	On the northern boundary of the site at Chalfont Lane	M	Yes	Yes	9.1	2.0	82.0	0	83.3
SP-AQMP2	503176, 191090	On the eastern boundary of the site at Denham Way	M	Yes	Yes	12.2	3.0	105.0	0	73.5
SP-AQMP3	503175, 190086	On the southern boundary of the site at Tilehouse Lane	M	Yes	Yes	9.3	2.0	100.0	0	86.4
SP-AQMP4	503503, 190366	On the eastern boundary of the site on the A412	M	Yes	Yes	8.6	2.0	30.00	0	41.4

Figure 1: Continuous dust 1-hour mean indicative PM₁₀ concentration for SP-AQMP1 for April 2021

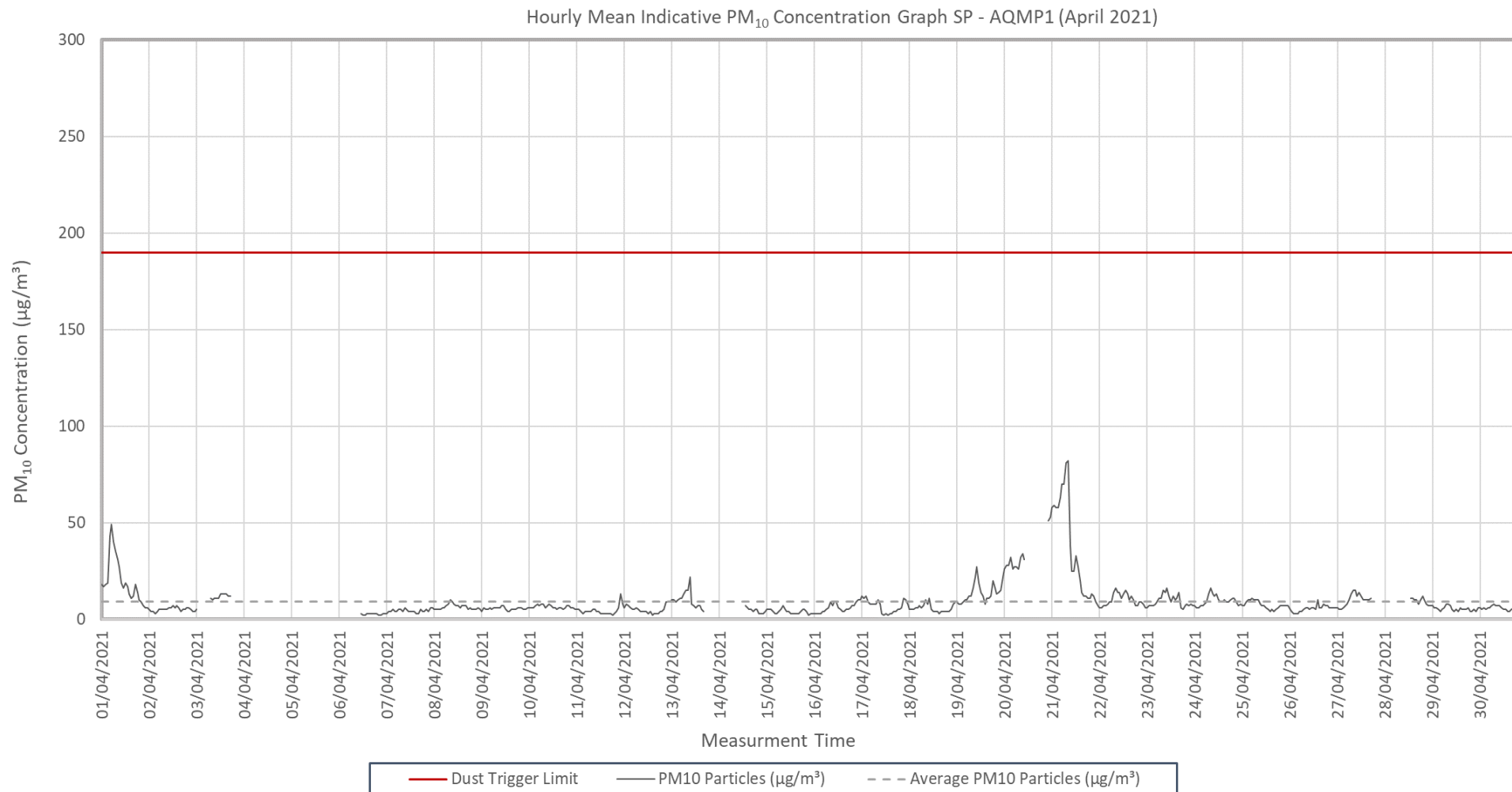


Figure 3: Continuous dust 1-hour mean indicative PM₁₀ concentration for SP-AQMP2 for April 2021

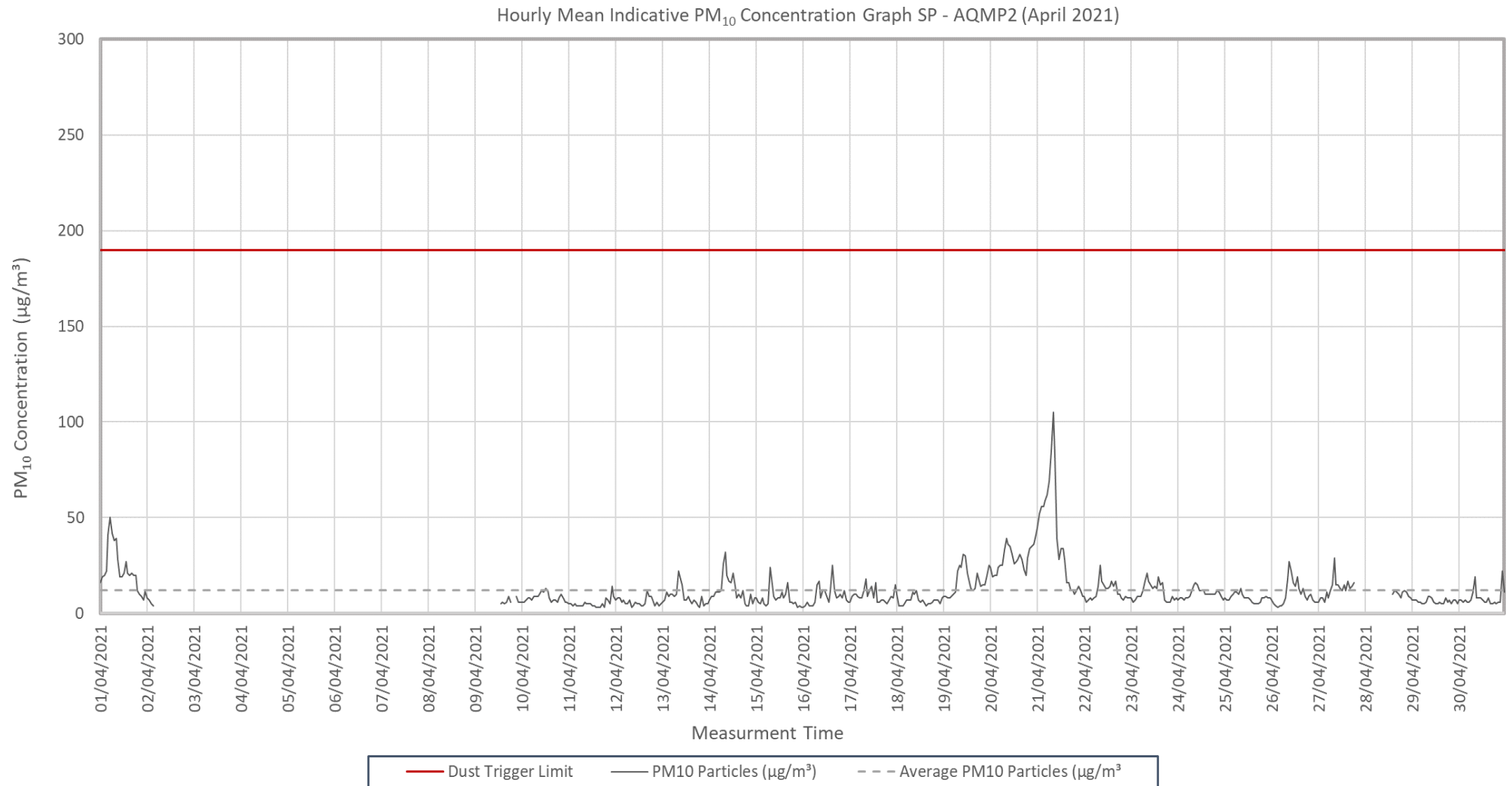


Figure 4: Continuous dust 1-hour mean indicative PM₁₀ concentration for SP-AQMP3 for April 2021

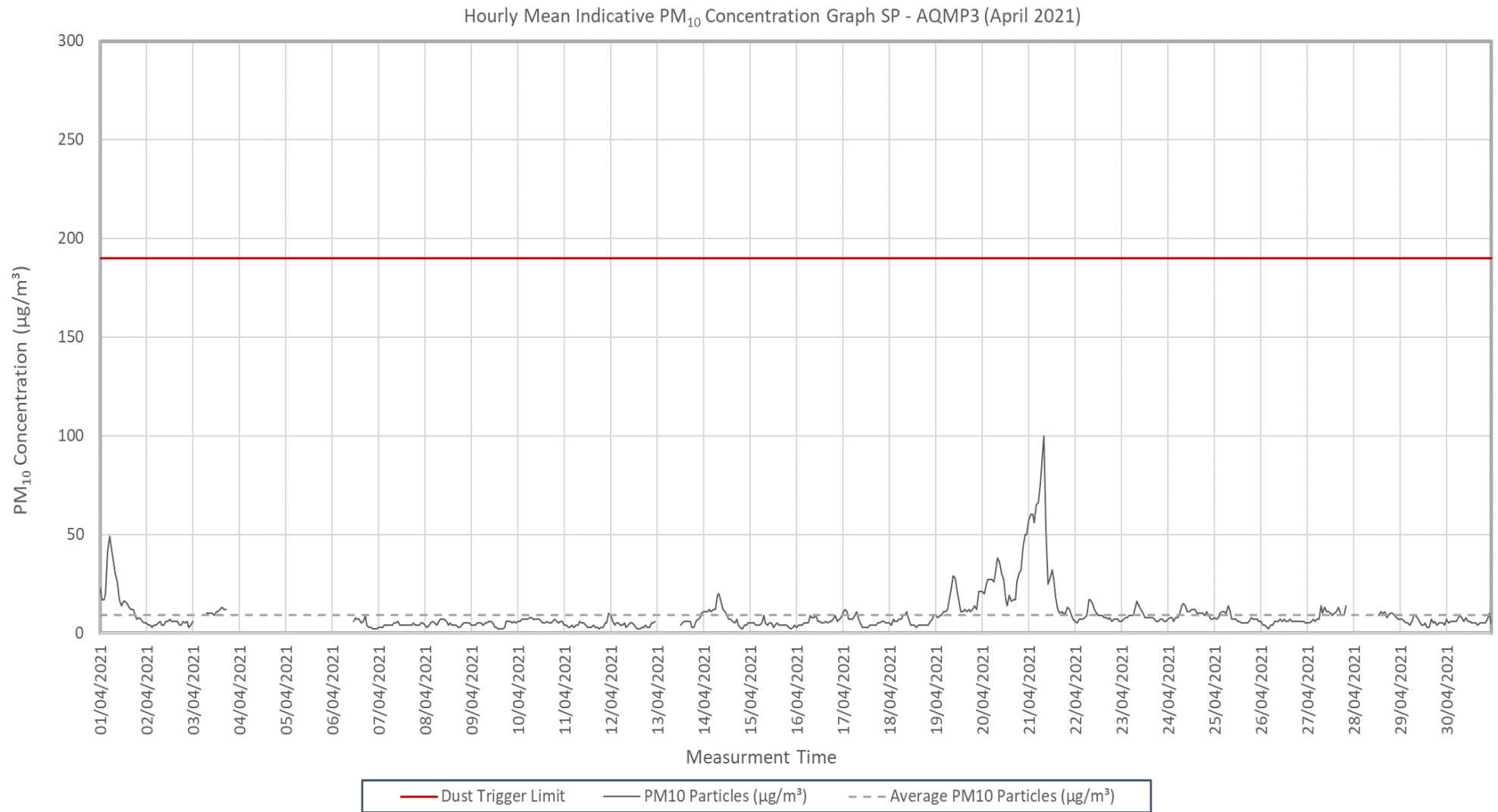


Figure 5: Continuous dust 1-hour mean indicative PM₁₀ concentration for SP-AQMP4 for April 2021

