

Air Quality and Dust Monitoring Monthly Report – August 2021

Three Rivers District Council



Department for Transport

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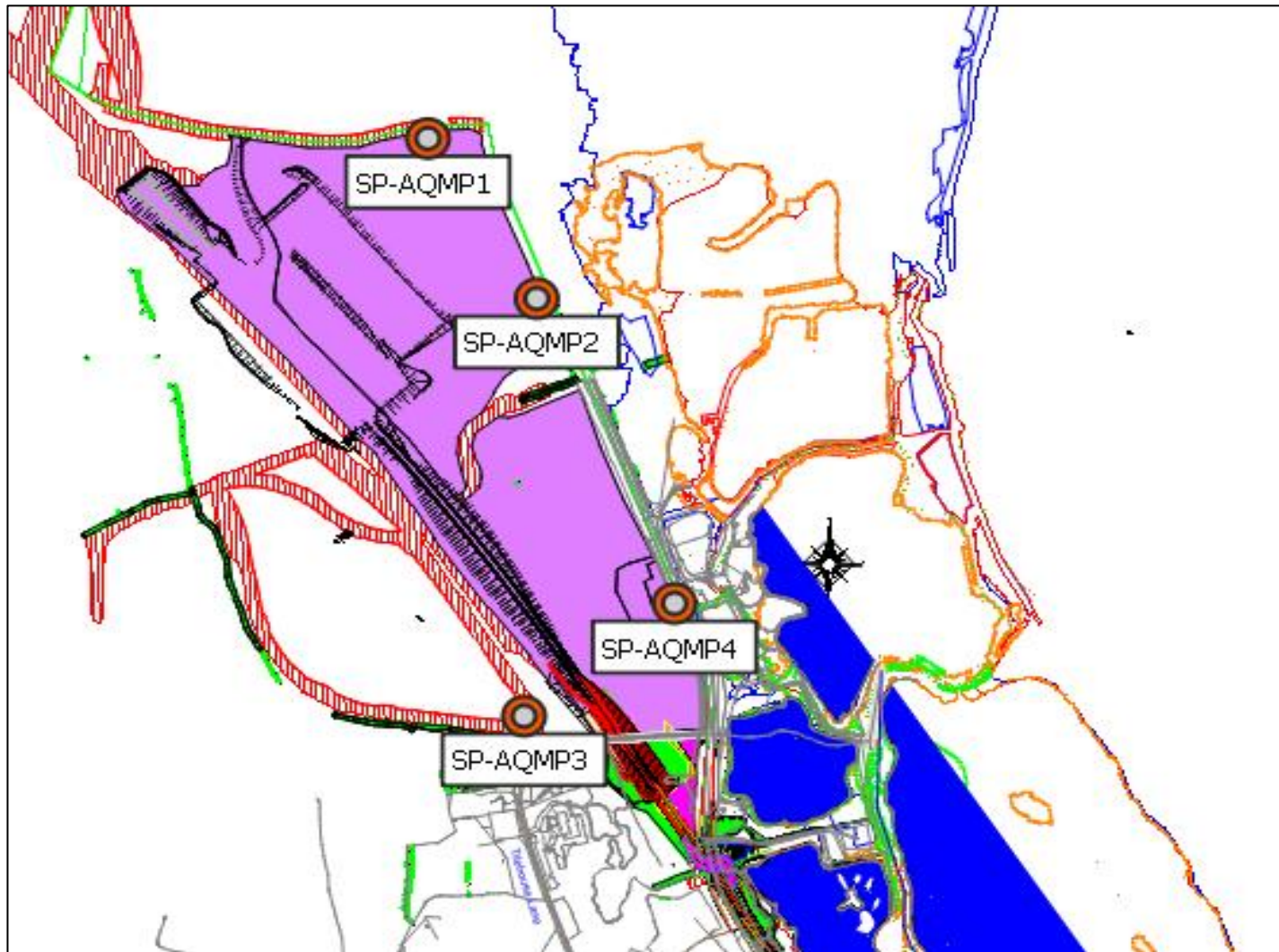
Monthly Summary

- 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 August 2021.
- 1.1.2 Figure 1 in Appendix A presents the current worksite together with the dust monitoring locations for August 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: Pynesfield quarry and site wide;
 - Tilehouse Lane realignment and quarry road: earthworks cut and fill, and civils and surfacing;
 - Stockpiling: INNS stockpile management and storage of excavated materials from CSP in SP10 and West Hyde Embankment;
 - Utilities: Thames Water Sewer Diversions;
 - Chalfont Lane Establishment - phase d & f fencing; STP acid storage fencing;
 - Batching Plant 1, 2 and 3: collection of concrete for D-wall activity at vent shaft sites and batching plant 1, 2 & 3 - deliveries and operation;
 - Site Installations: tunnel boring machine;
 - Tunnel Precast Factory: Factory NB2 – production and factory NB1 – production;
 - Shire Lane Culvert: preparing ground and backfilling and foundation slab, walls, roof slab, wing walls and transition;
 - Pynesfield Cake Placement: earthworks chalk cake placement;
 - Tunnelling Works (Surface Support);
 - CVV Jetty Pre-Cast Yard Operation; and
 - Launching Girder Installation and assembly.

- 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 August 2021 are presented in Appendix B, Table 1, 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 mean 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 was one (1) exceedance of the 1-hour average dust trigger alert. Details of the trigger alert investigation and remediations are presented in Appendix B, Table 2.
- 1.1.9 Data capture for monitoring site SP-AQMP4 was below 90%, due to a connection issue between the monitor and the server. The issue has since been resolved.
- 1.1.10 There were no (0) complaints relating to dust or air quality during this reporting period (August 2021).

Appendix A – Worksite and Dust Monitoring Locations

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



Appendix B – Dust Monitoring Results

Table 1: Dust monitoring locations and August 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	6.0	1.0	31.0	0	100.0
SP-AQMP2	503176, 191090	On the eastern boundary of the site at Denham Way	M	Yes	Yes	6.2	1.0	298.0	0	100.0
SP-AQMP3	503175, 190086	On the southern boundary of the site at Tilehouse Lane	M	Yes	Yes	5.4	1.0	49.0	0	100.0
SP-AQMP4	503503, 190366	On the eastern boundary of the site on the A412	M	Yes	Yes	6.7	1.0	33.0	0	71.0

Table 2: Summary of exceedances during period (August 2021)

Monitoring Site ID	Period of trigger alert & Concentration recorded	Investigation	Outcomes / Resolution / Remedial measures implemented
SP-AQMP2	03/08/2021 21:01-22:00 – 298 µg/m ³	<p>On investigation it was noted that the alert was one-off exceedance, outside of working hours, where no dusty activities were being undertaken. All other, surrounding time periods levels were low.</p> <p>As such, it does not appear to be the result of dust leaving the site (as this would repeat regularly). It is anticipated that the alert could have been a localised disturbance from a vehicle on nearby A412.</p>	On-going mitigation, as outlined in the Code of Construction Practice.

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

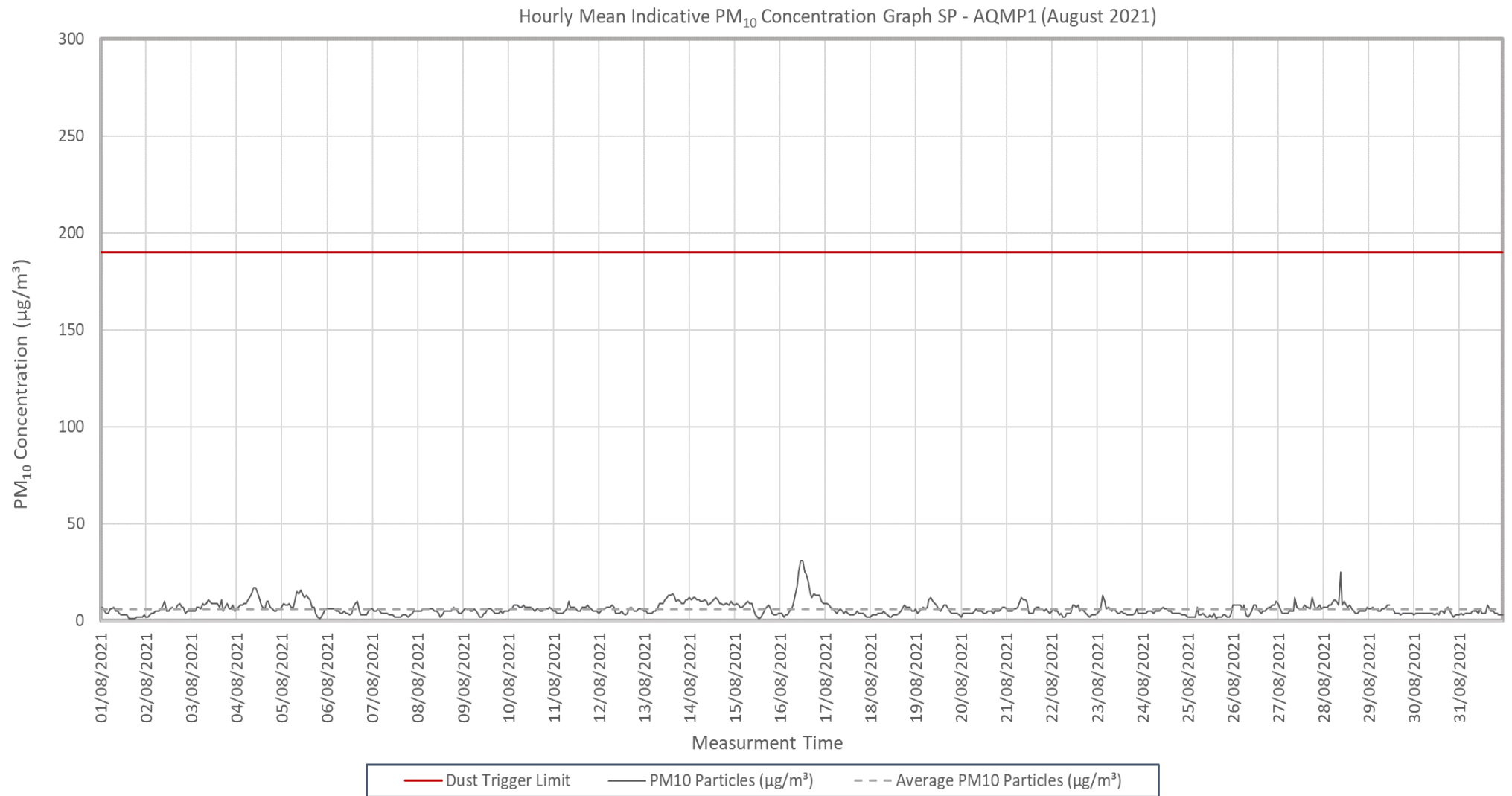


Figure 3: Continuous dust 1-hour mean indicative PM₁₀ concentration for SP-AQMP2 for August 2021

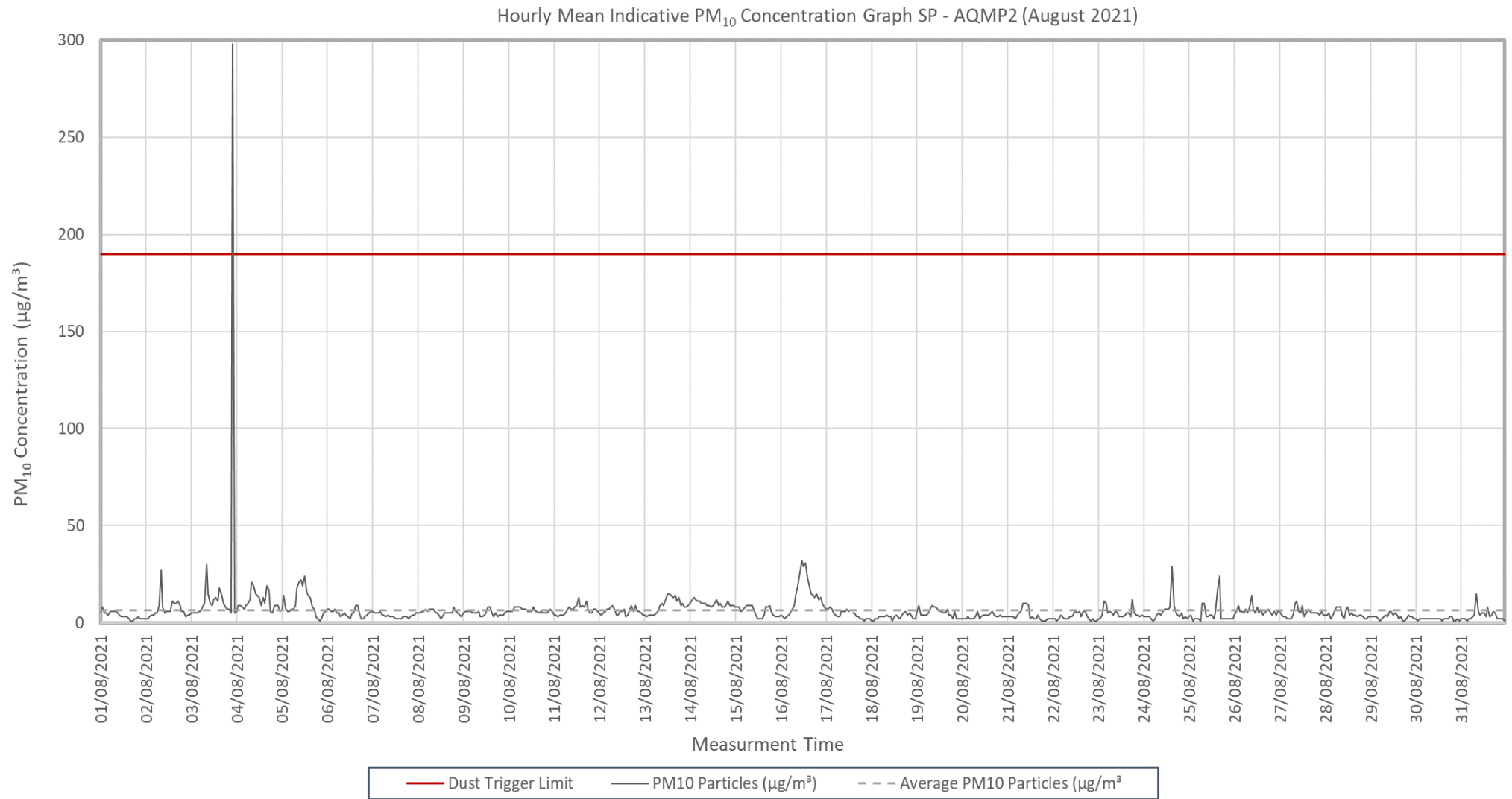


Figure 4: Continuous dust 1-hour mean indicative PM₁₀ concentration for SP-AQMP3 for August 2021

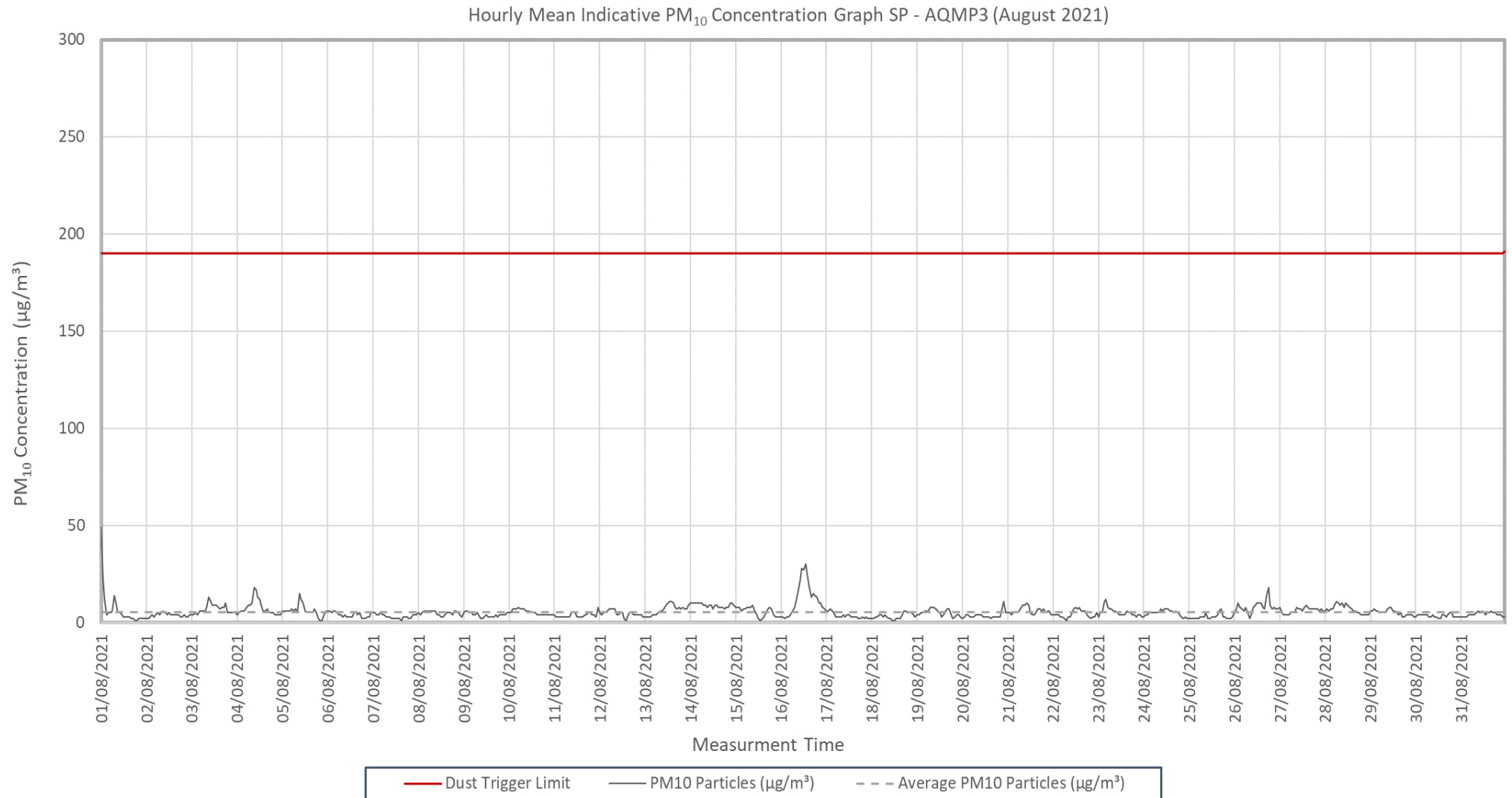


Figure 5: Continuous dust 1-hour mean indicative PM₁₀ concentration for SP-AQMP4 for August 2021

