HS2

October 2020

Air Quality and Dust Monitoring Monthly Report – **October** 2020

Three Rivers District Council

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Department for Transport

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High Speed Two (HS2) Limited,
Two Snowhill
Snow Hill Queensway
Birmingham B4 6GA

Telephone: 08081 434 434

General email enquiries: HS2enquiries@hs2.org.uk

Website: www.gov.uk/hs2

A report prepared by Align JV 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 October 2020.

1.1.2 Figure 1 in Appendix A indicates the current worksite together with the dust monitoring locations for October 2020.

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 worksite as presented in Appendix A, Figure 1 includes the following ongoing works:

- General Plant: wheel washers, generators and site wide support plant;
- Earthworks and Drainage: soil strip, excavate, 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 and Chalfont Lane;
- Tilehouse Lane Overbridge: abutment and wing walls;
- Stockpiling: INNS stockpile management and storage of excavated materials from CSP in SP10;
- Utilities: Thames Water Sewer diversions;
- Chalfont Lane Establishment - Phase D & F Fencing and STP acid storage fencing;
- Temporary Batching Plant: batching aggregate and cement delivery, and batching plant operation;
- Batching Plant 1, 2 and 3: Installation of batching plant units and collection of concrete for D-wall activity at vent shaft sites;
- Site Installation: slurry treatment plant, TBM parts delivery, TMB and factory fit-outs; and
- Pynesfield Ground Stabilisation: earthworks and band drains.

1.1.5 Three (3) dust monitors are installed around the worksite, where earthworks, construction and trackout activities are underway. This site returned a medium dust risk rating (for works currently active on site).

1.1.6 Dust monitoring locations and results are presented in Appendix B, Table 1, together with a line chart of monthly data from each dust monitor presented in Figures 2, 3 and 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 mitigations.

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.

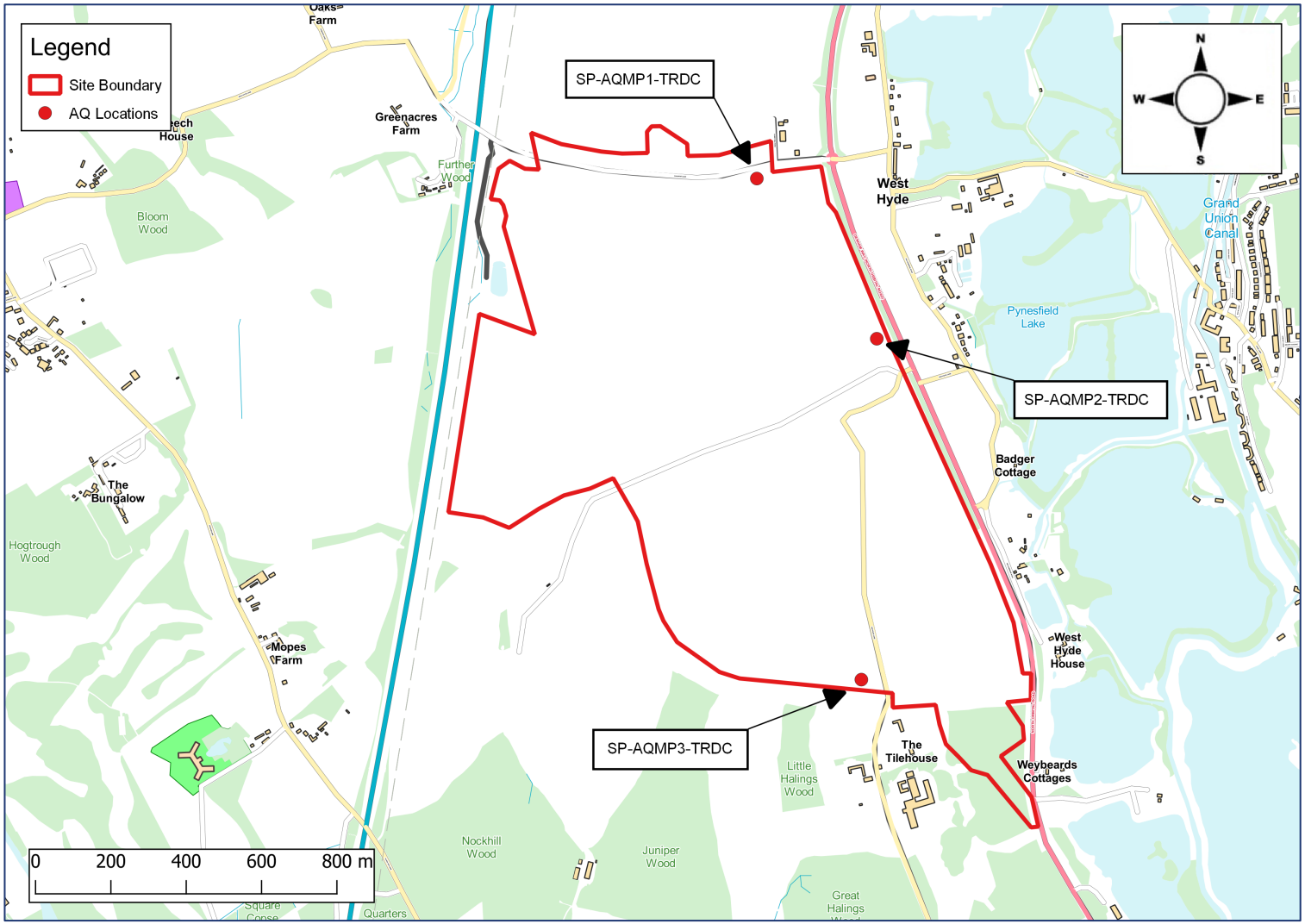
1.1.8 There was one (1) dust trigger alert recorded during this monitoring period (October 2020). Exceedances are presented in Appendix B, Table 2. All other results were in line with expected ranges.

1.1.9 Data capture was below 90% for SP-AQMP2-TRDC for the month of October. This was due to the loss of solar power and the loss of power supply from the leisure batteries, caused by a lack of sunlight. An alternative power source is being explored to resolve the intermittent solar power issue.

1.1.10 There were no (0) complaints received, relating to air quality, during this reporting period (October 2020).

Appendix A –Monitoring Locations

Figure 1: Worksites and Monitoring locations during October 2020



Appendix B – Dust Monitoring Results

Table 1: Dust monitoring locations and October 2020 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 ($\mu g/m^3$)	Minimum 1-hour PM_{10} concentration ($\mu g/m^3$)	Maximum 1-hour PM_{10} concentration ($\mu g/m^3$)	Number of 1-hour periods exceeding trigger level of 190 $\mu g/m^3$	Data capture (%)
SP-AQMP1-TRDC	502885, 191488	On the northern boundary of the site at Chalfont Lane	M	Yes	Yes	9.1	1.2	256.9	1	100.0
SP-AQMP2-TRDC	503209, 190991	On the eastern boundary of the site at Denham Way	M	Yes	Yes	11.8	1.3	56.1	0	79.8
SP-AQMP3-TRDC	503154, 190062	On the southern boundary of the site at Tilehouse Lane	M	Yes	Yes	11.6	1.3	56.5	0	100.0

Table 2: Summary of exceedances during period (October 2020)

Monitoring Site ID	Period of trigger alert & Concentration recorded	Investigation	Outcomes / Resolution / Remedial measures implemented
SP-AQMP1_TRDC	10/10/2020 08:01 - 09:00: 256.9 $\mu g/m^3$	Works being undertaken at the time of the trigger alert included sawing and cutting concrete to improve the concrete joints in the induction car park. Works were being undertaken directly beneath the monitor.	The cutter was damped down to prevent excess concrete dust and cutting was limited to areas only where essential. Hoarding is erected in this area.

Figure 2: Continuous dust 1-hour mean indicative PM_{10} concentration for SP-AQMP1-TRDC for October 2020

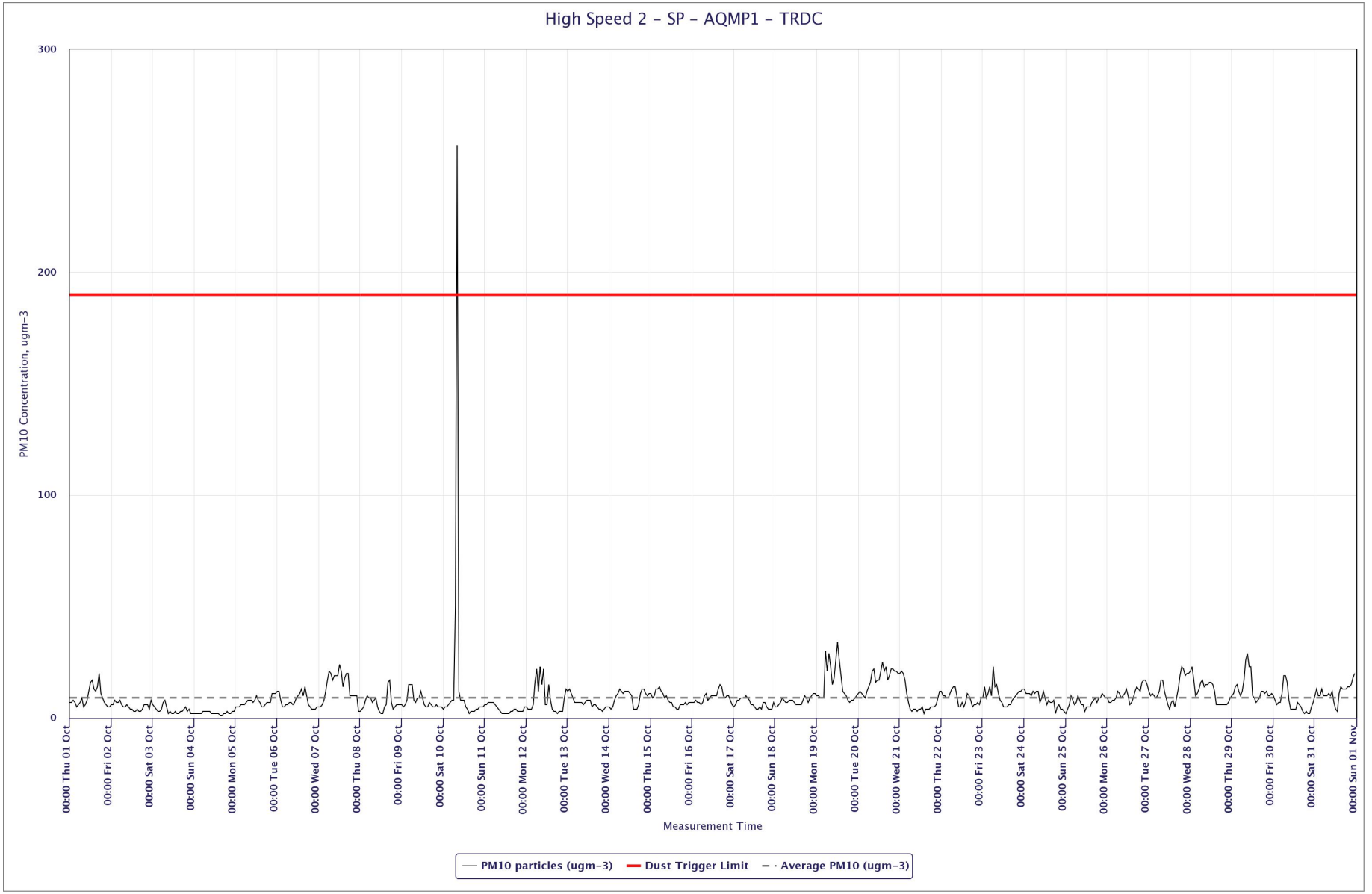


Figure 3: Continuous dust 1-hour mean indicative PM_{10} concentration for SP-AQMP2-TRDC for October 2020

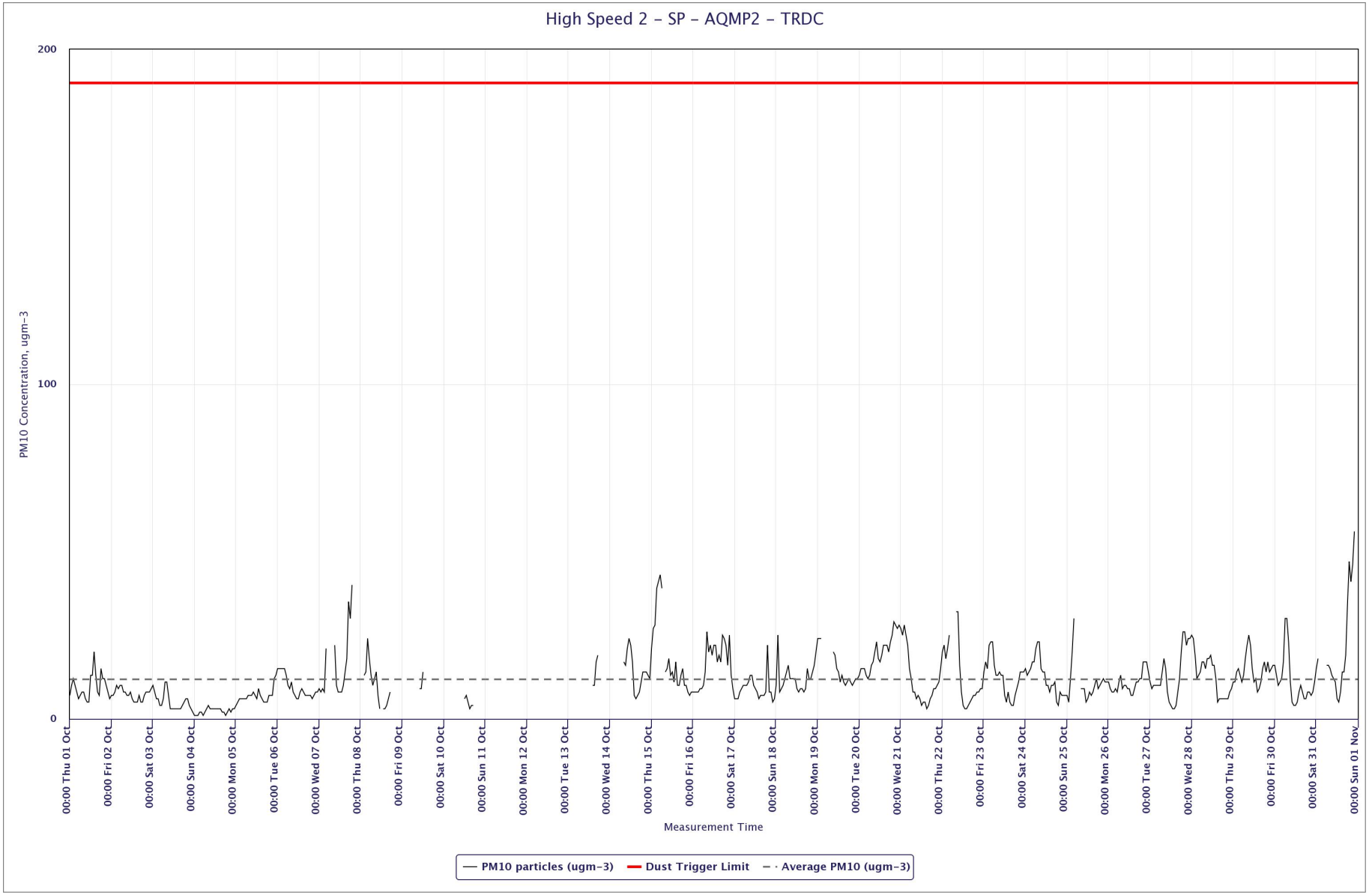


Figure 4: Continuous dust 1-hour mean indicative PM_{10} concentration for SP-AQMP3-TRDC for October 2020