

## Air Quality and Dust Monitoring Monthly Report – **August** 2020

**Buckinghamshire** 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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# 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 Buckinghamshire Council (BC) area during August 2020.
- 1.1.2 Figures 1 to 4 in Appendix A presents the current worksites together with the dust monitoring locations for August 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](http://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 that commenced within BC during January 2020 and is expected to be completed by the end of May 2021. The current worksites at Colne Valley Viaduct (CVV) LTP1, Chalfont St Peter Vent Shaft, Amersham Vent Shaft and Lower Bottom House Farm Lane are presented in Appendix A, Figures 1 to 3. Activities in August included:
- Ongoing works at the CVV compound, including fence installation and lifting new welfare units into place;
  - Ongoing works at the Chalfont St. Peter Vent Shaft, including D-wall site set up (installation of desander, centrifuge, desilter, and bentonite pool), drilling trials and grout injection, excavation of panel 1 of the D-wall, erection of site hoarding, electrical and lighting works and installation of wheel wash;
  - Ongoing works at the Amersham Vent Shaft, including the installation of service ducts, drainage installation, earthworks including formation of site office platform and ground level formation for infiltration area and attenuation tanks and installation of sheet piled retaining wall adjacent to the A404; and
  - Ongoing works at the Lower Bottom House Farm Lane site, which include earthworks, construction and track out activities. Main construction works comprise topsoil stripping, new haul road, installation of ducting and drainage, cut/filling, utility diversion, installation works for a temporary bridge as well as signage and landscaping.
- 1.1.5 Seven (7) dust monitors are installed around the worksites, where demolition, earthworks, construction and track out activities are underway. Two (2) are located at the CVV LTP1 compound, two (2) are located at the Chalfont St Peter worksite, two (2) are located at the Amersham worksite and one (1) is located at Lower Bottom House Farm Lane site. Dust Risk Assessments for each worksite 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 5 to 11. 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<sub>10</sub> concentrations of 190 µg/m<sup>3</sup>, 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 at LTP1-AQMP1-BC during the August 2020 monitoring period. Details of the trigger alert investigations and remediations are presented in Appendix B, Table 2. All other results were in line with expected ranges.
- 1.1.9 Data capture for monitor CHSP-AQMP1-BC was below 90% during this monitoring period (August 2020). This was due to the loss of external power supplying the monitor and a fault with the monitor. The monitor was connected to continuous site generator power on 03/08/20 and monitoring resumed. The monitor was subsequently replaced on 03/09/20.
- 1.1.10 There were no (0) complaints received, relating to dust or air quality, during this reporting period (August 2020).

# Appendix A –Monitoring Locations

Figure 1: Worksite and Monitoring locations during August 2020 – CVV LTP1



Figure 2: Worksite and Monitoring locations during August 2020 – Chalfont St Peter Vent Shaft

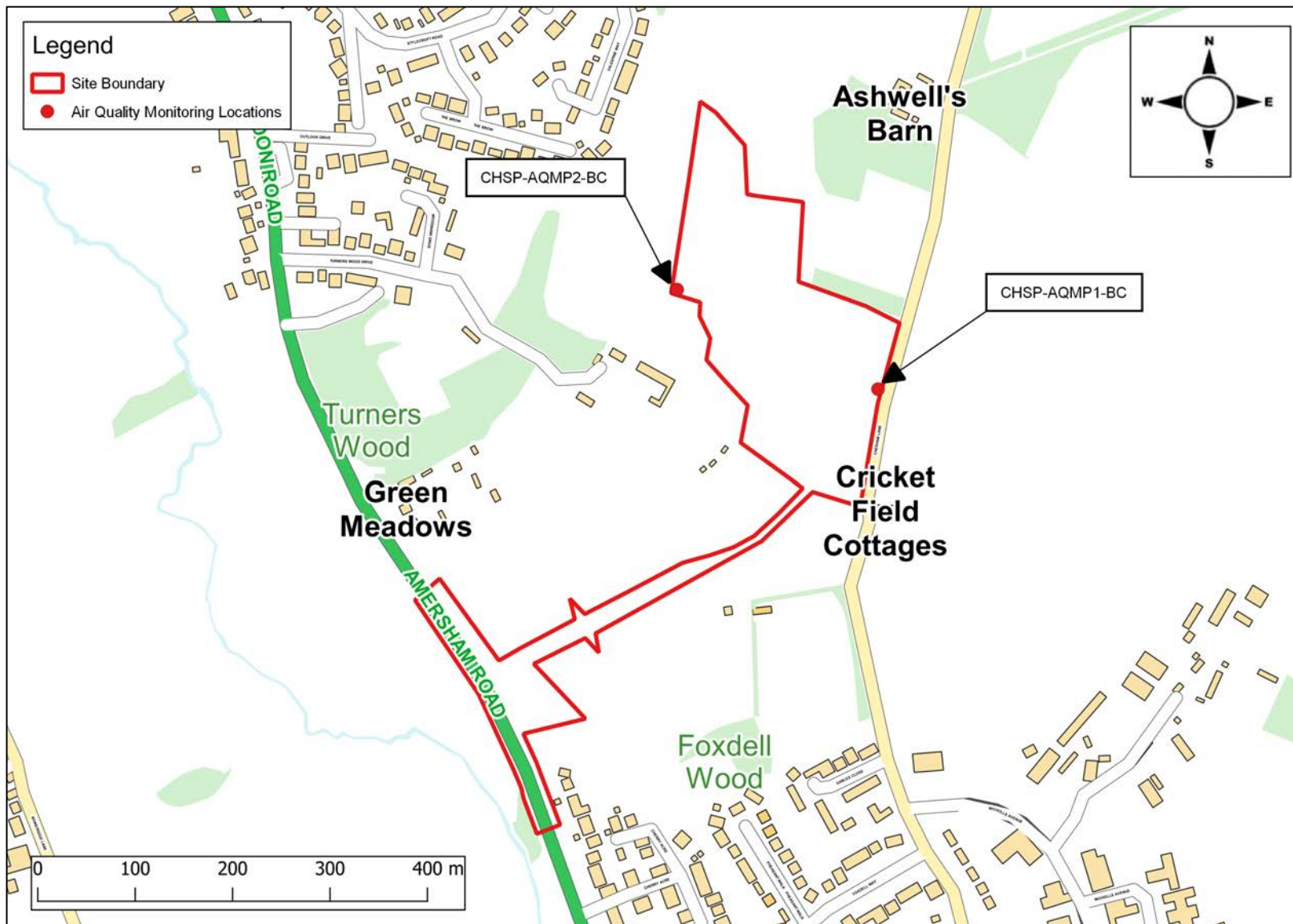


Figure 3: Worksite and Monitoring locations during August 2020 – Amersham Vent Shaft

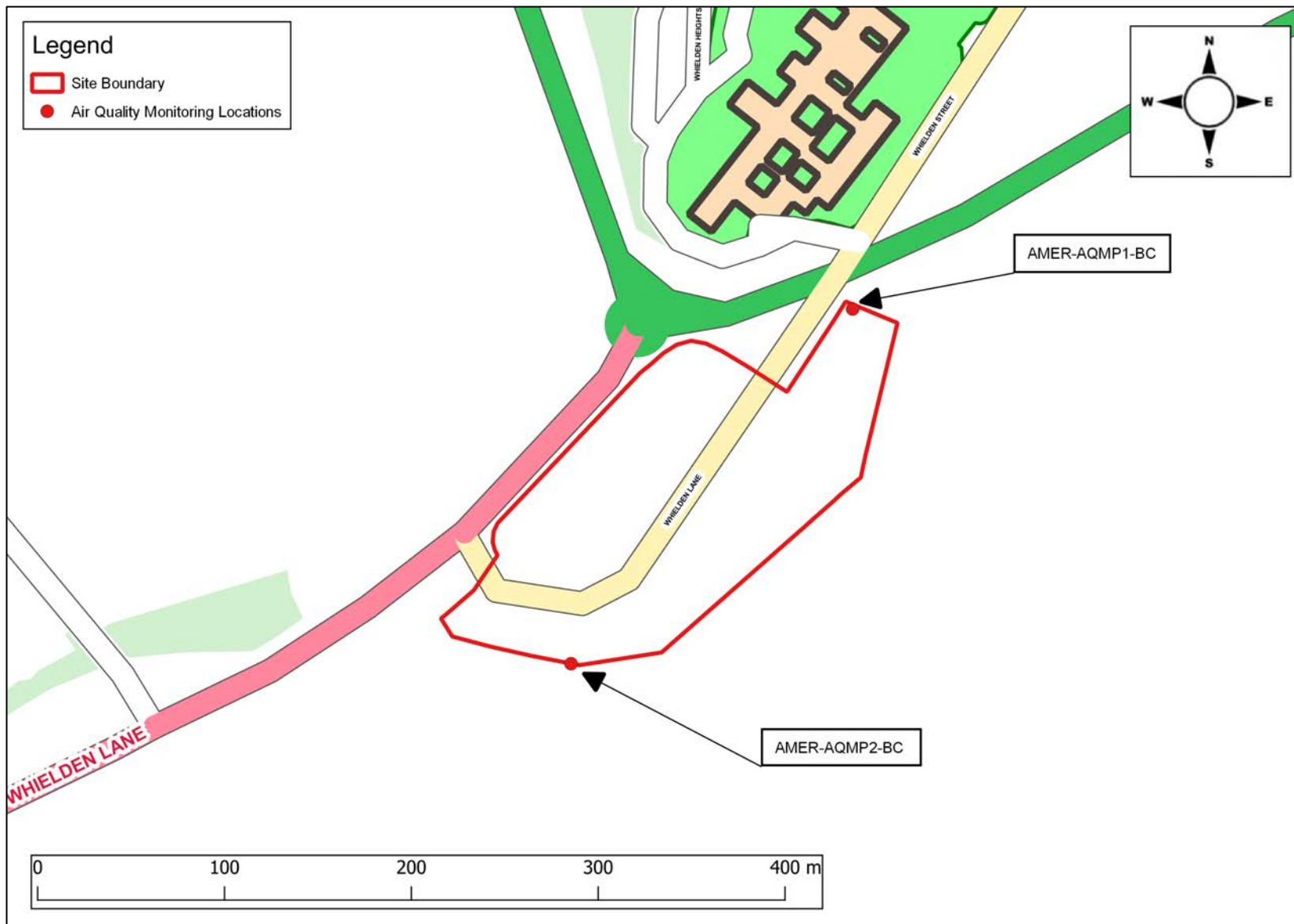


Figure 4: Worksites and Monitoring locations during August 2020





## Appendix B – Dust Monitoring Results

Table 1: Dust monitoring locations and August 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 <sub>10</sub> concentration (µg/m <sup>3</sup> )	Minimum 1-hour PM <sub>10</sub> concentration (µg/m <sup>3</sup> )	Maximum 1-hour PM <sub>10</sub> concentration (µg/m <sup>3</sup> )	Number of 1-hour periods exceeding trigger level of 190 µg/m <sup>3</sup>	Data capture (%)
CHSP-AQMP1-BC	500114, 193104	On the eastern boundary of the site with Chesham Lane	M	Yes	Yes	17.4	2.1	117.4	0	55
CHSP-AQMP2-BC	499903, 193181	On the western boundary of the site	M	Yes	Yes	11.7	1.6	192.8	1	100
LTP1-AQMP1-BC	503602, 189832	On the north boundary of LTP1	M	Yes	Yes	11.1	1.9	79.3	0	100
LTP1-AQMP2-BC	503654, 189795	On the South boundary of LTP1	M	Yes	Yes	12.8	2.1	50.2	0	100
AMER-AQMP1-BC	495440, 196733	On the North-eastern boundary of Amersham	M	Yes	Yes	8.6	2.6	20.8	0	100
AMER-AQMP2-BC	495280, 196532	On the South-western boundary of Amersham	M	Yes	Yes	7.4	1.7	18.4	0	100
3252Dust2	498390, 195434	On the boundary with Elm Tree Cottage, Bottom House Farm Lane	M	Yes	No	11.6	1.9	69.1	0	100

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

Monitoring Site ID	Period of trigger alert & Concentration recorded	Investigation	Outcomes / Resolution / Remedial measures implemented
CHSP-AQMP2-BC	<u>11/08/2020</u> 12:01 - 13:00: 192.8 µg/m <sup>3</sup>	At the time of the trigger alert, fence installation works were being undertaken in close proximity to the monitor (c. 2-3m).	Works were halted and reviewed. The drilling excavation position was altered, and works were undertaken with due care and diligence to limit dust release. No further alerts received.

Figure 5: Continuous dust 1-hour mean indicative PM<sub>10</sub> concentration for CHSP-AQMP1-BC for August 2020

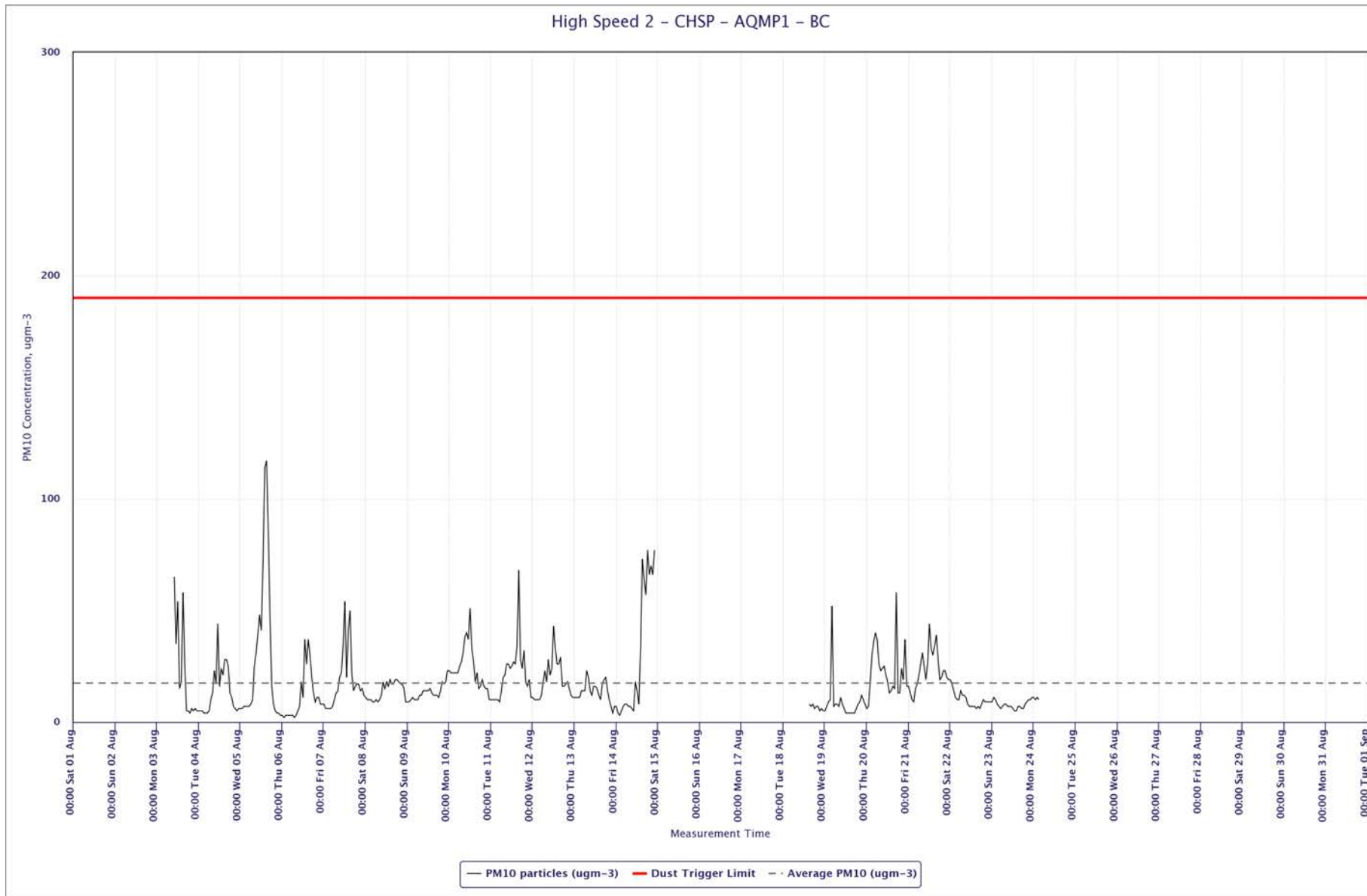


Figure 6: Continuous dust 1-hour mean indicative PM<sub>10</sub> concentration for CHSP-AQMP2-BC for August 2020

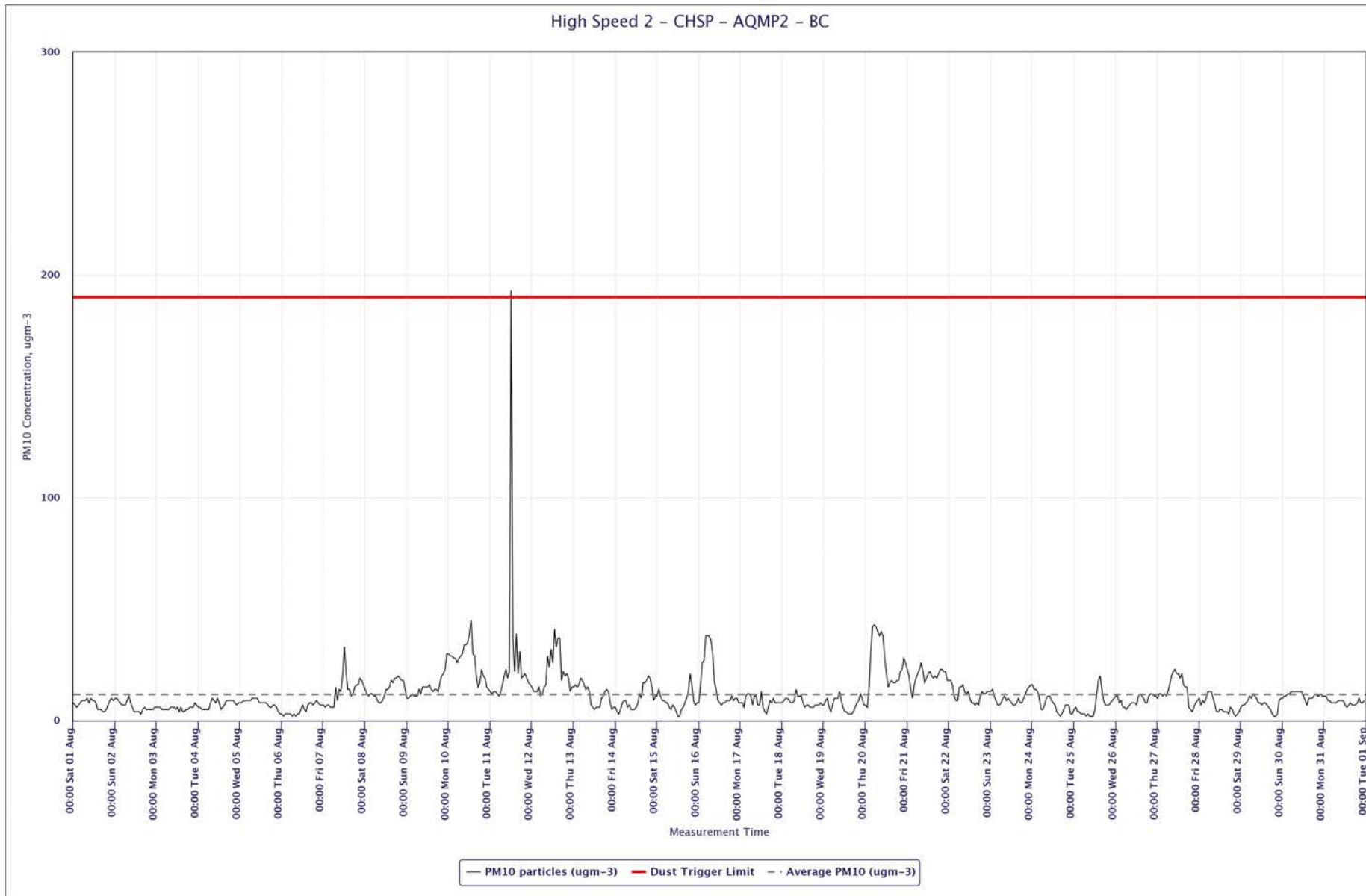


Figure 7: Continuous dust 1-hour mean indicative PM<sub>10</sub> concentration for LTP1-AQMP1-BC for August 2020

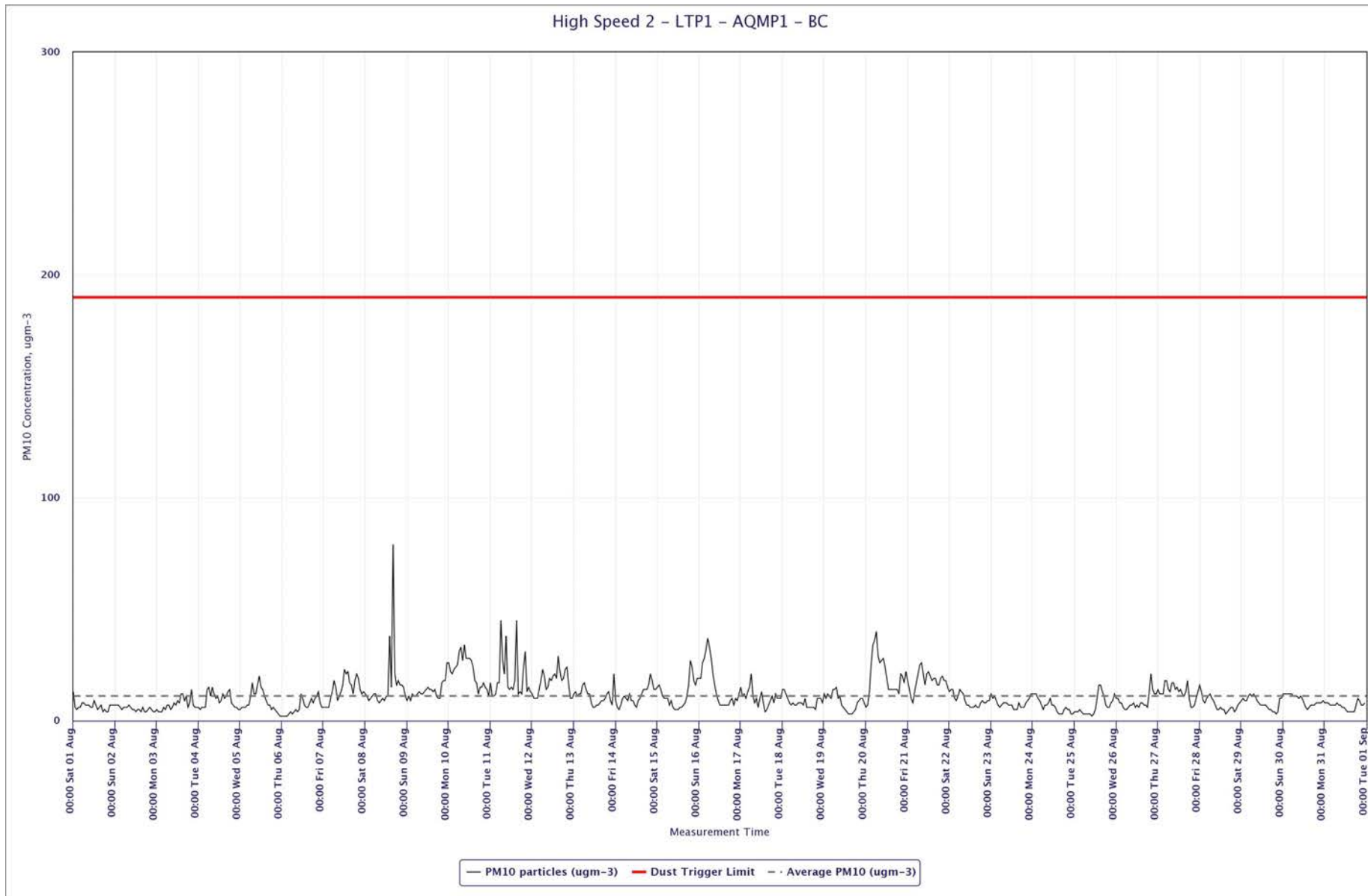


Figure 8: Continuous dust 1-hour mean indicative PM<sub>10</sub> concentration for LTP1-AQMP2-BC for August 2020

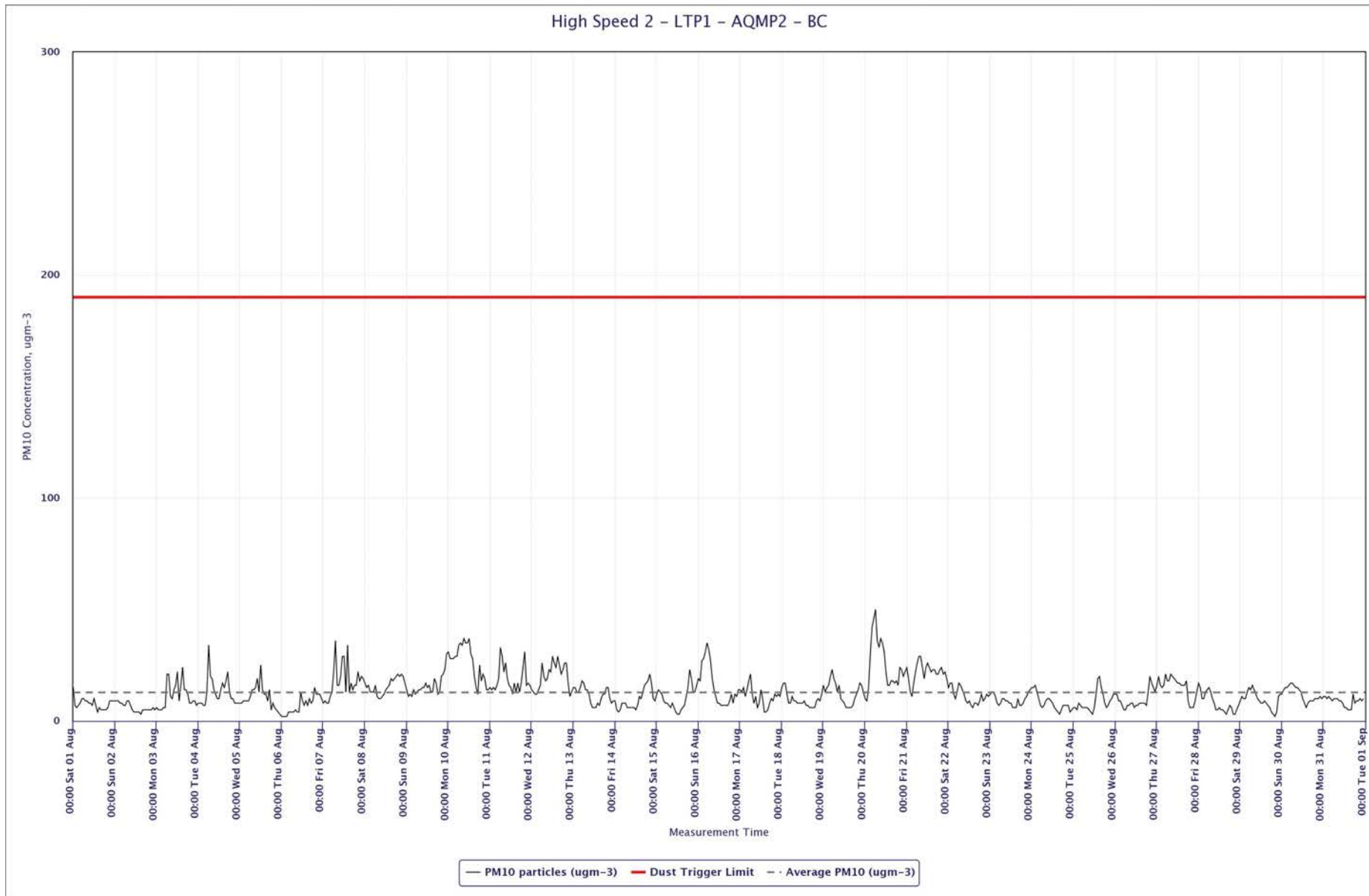


Figure 9: Continuous dust 1-hour mean indicative PM<sub>10</sub> concentration for AMER-AQMP1-BC for August 2020

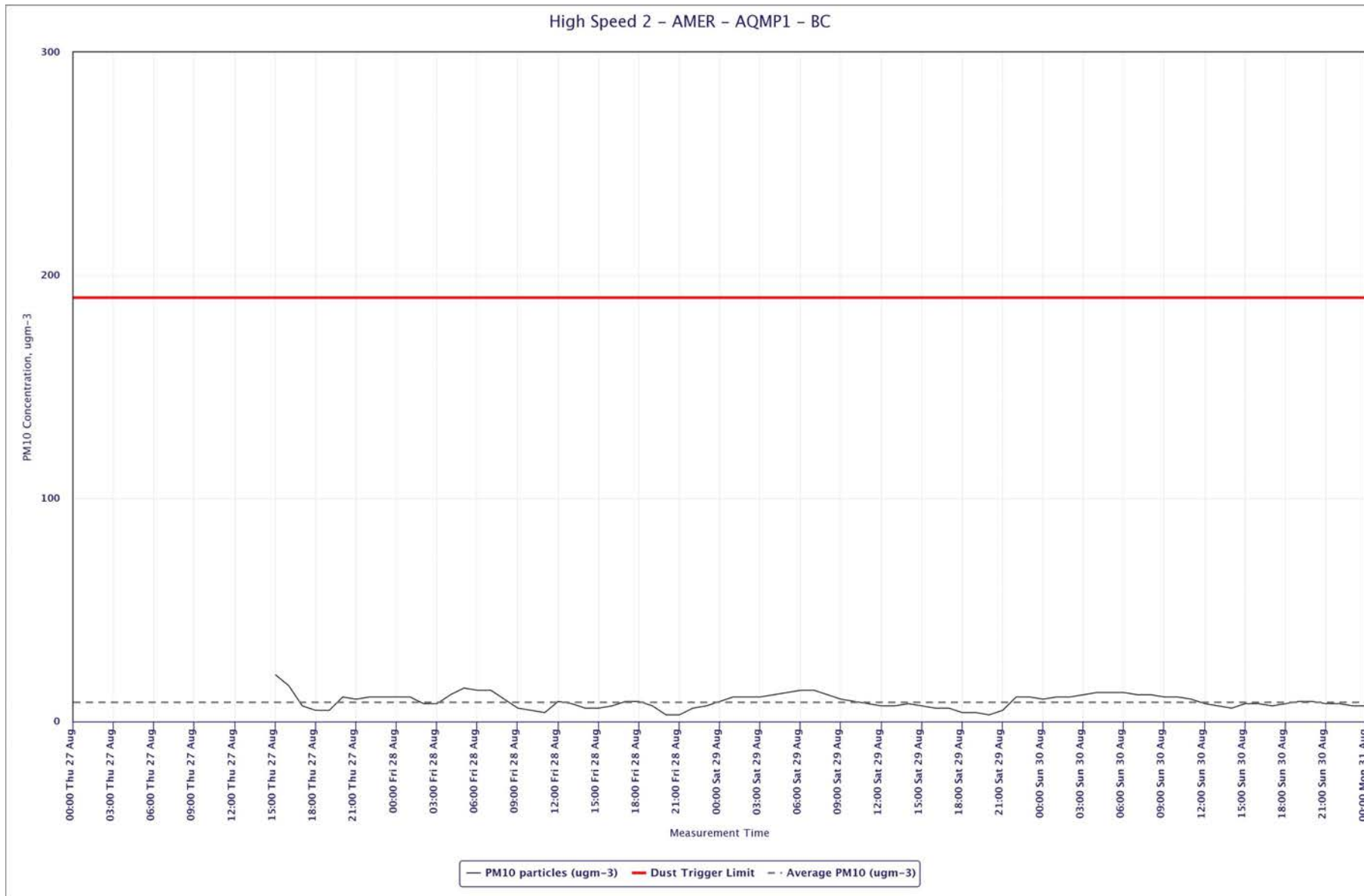


Figure 10: Continuous dust 1-hour mean indicative PM<sub>10</sub> concentration for AMER-AQMP2-BC for August 2020

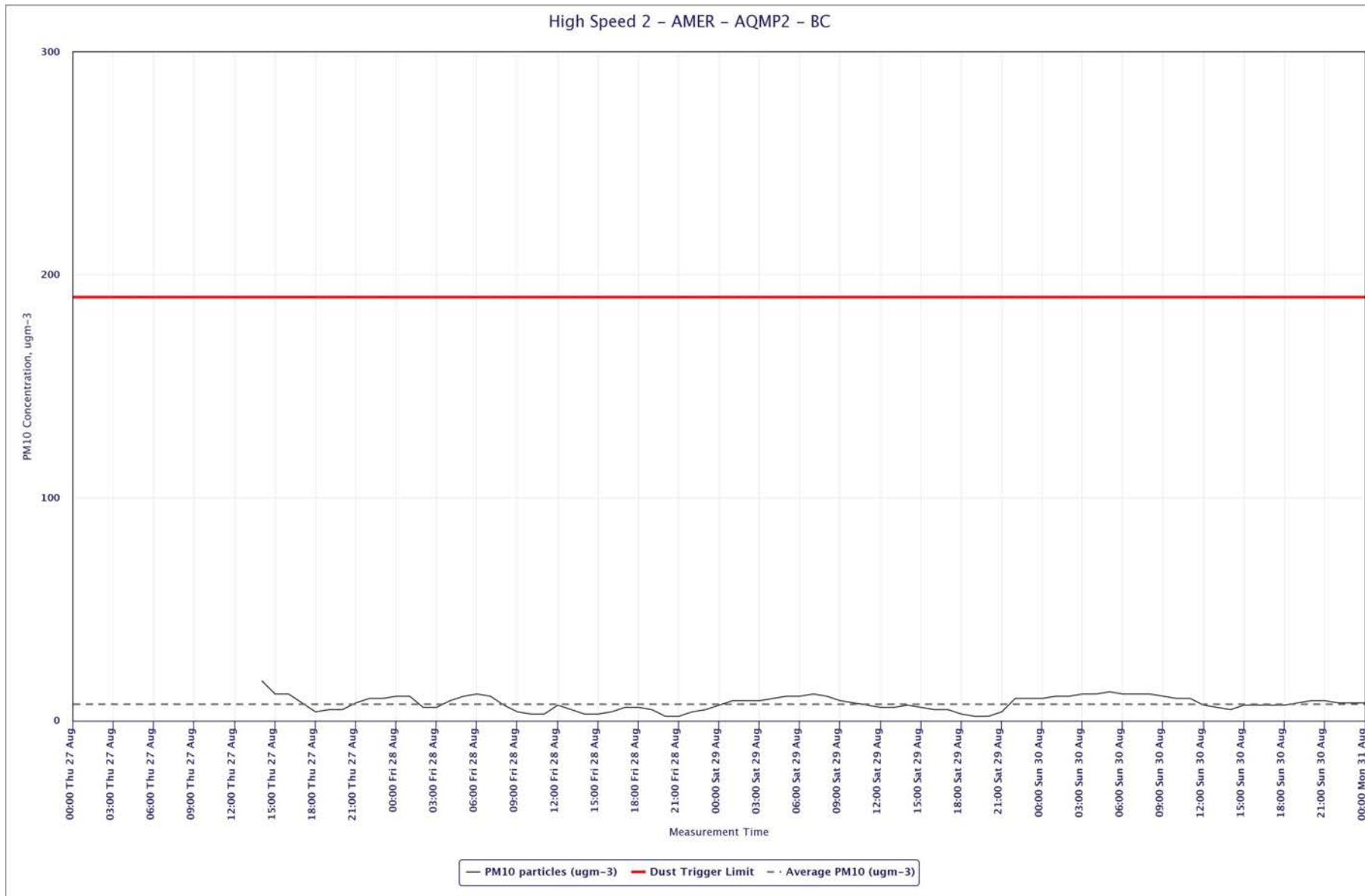




Figure 11: Continuous dust 1-hour mean indicative PM<sub>10</sub> concentration for 3252Dust2 for August 2020

