

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

Buckinghamshire 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 Buckinghamshire Council (BC) area during July 2020.
- 1.1.2 Figures 1 to 3 in Appendix A indicates the current worksites together with the dust monitoring locations for July 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 that commenced within BC during February 2020 and is expected to be completed by the end of May 2021. The current worksites at the Colne Valley Viaduct (CVV) LTP1, Chalfont St. Peter Compound and Chalfont St. Giles are presented in Appendix A, Figure 1 to 3. Activities in July included:
- Ongoing works at the CVV compound, where minor excavation and compaction works, the repositioning of skip bins and car park and the installation of 28 no. welfare cabins with a 55 t crane are occurring;
 - Ongoing works at the main site compound at the Chalfont St. Peter compound, which included stockpiling bulk materials from the access road, drainage installation, levelling of piling platform, installation of infiltration boreholes, excavation for pumping station and attenuation pond, block work, deliveries of plant and equipment and excavations on the piling platform for the bentonite plant set up;
 - Ongoing works at the access road to the Chalfont St. Peter compound, which included excavation of infiltration pond and ducting and stabilisation on the access road; and
 - Ongoing works at the access road along Bottom House Farm Lane in Chalfont St. Giles, which included earthworks, topsoil stripping, installation of ducting and drainage, and installation works for a temporary bridge.
- 1.1.5 Five (5) dust monitors are installed around the worksites, where demolition, earthworks, construction and trackout activities are underway. Two (2) are located at Chalfont St Peter worksite, two (2) are located at the CVV LTP1 compound and one (1) is located at the Chalfont St Giles worksite. Dust Risk Assessments for these three (3) sites all 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 2, together with a line chart of monthly data from each dust monitor presented in Figures 4 to 8. 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 For the monitors installed at the Chalfont St Peter worksite, Chalfont St Giles site and LTP1-AQMP2-BC at the CVV LTP1 worksite, there were no (0) dust trigger alerts recorded during the July 2020 monitoring period. One (1) dust trigger alert was recorded at LTP1-AQMP1-BC during the July 2020 monitoring period.
- 1.1.9 Details of the trigger alert investigations and remediations are presented in Appendix B, Table 3. All other results were in line with expected ranges.
- 1.1.10 Data capture at the Chalfont St Peter worksite was below 90% for the month of July at CHSP-AQMP1-BC. Missing data at CHSP-AQMP-BC was due to the ongoing loss of external battery power supplying the monitor. The battery was replaced, and monitoring resumed following each instance of power loss.
- 1.1.11 Table 1 provides a summary of the complaint information related to dust or air quality received during the reporting period (July 2020), together with the findings of any related investigations.

Table 1: Summary of complaints received during July 2020 in BC

Complaint Reference No.	Worksite Reference	Description of complaint	Results of investigation
AQ-Comp 1	Chalfont St Peter	Dust, noise and vibration associated with the South Portal.	The stakeholder was informed that we would reduce speeds of trucks to mitigate dust and increase damping down within the area. A further explanation about our noise monitors and how we investigate any noise complaints.

Appendix A –Monitoring Locations

Figure 1: Worksites and Monitoring locations during July 2020 – Chalfont St Peter Vent Shaft

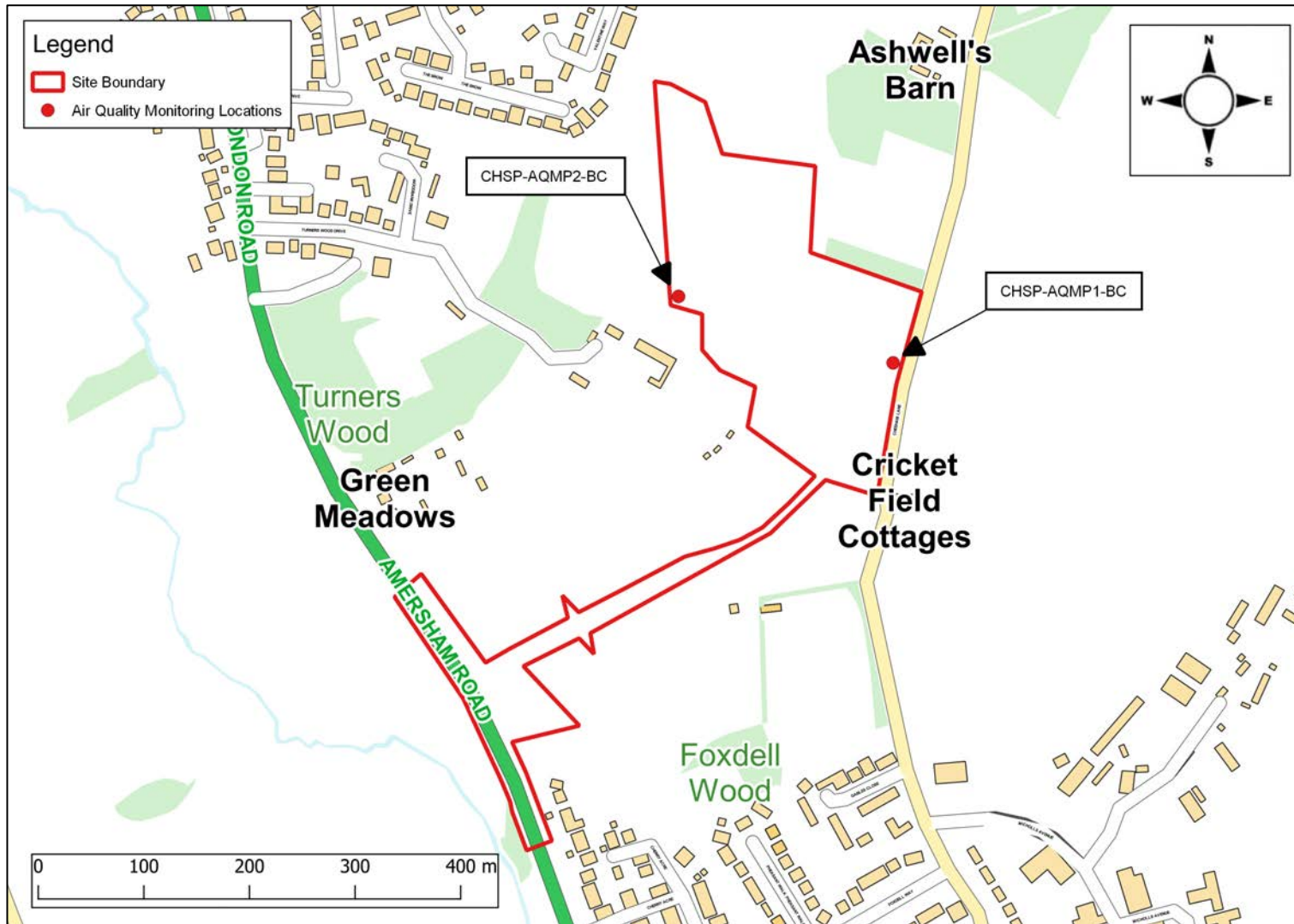


Figure 2: Worksites and Monitoring locations during July 2020 – CVV LTP1

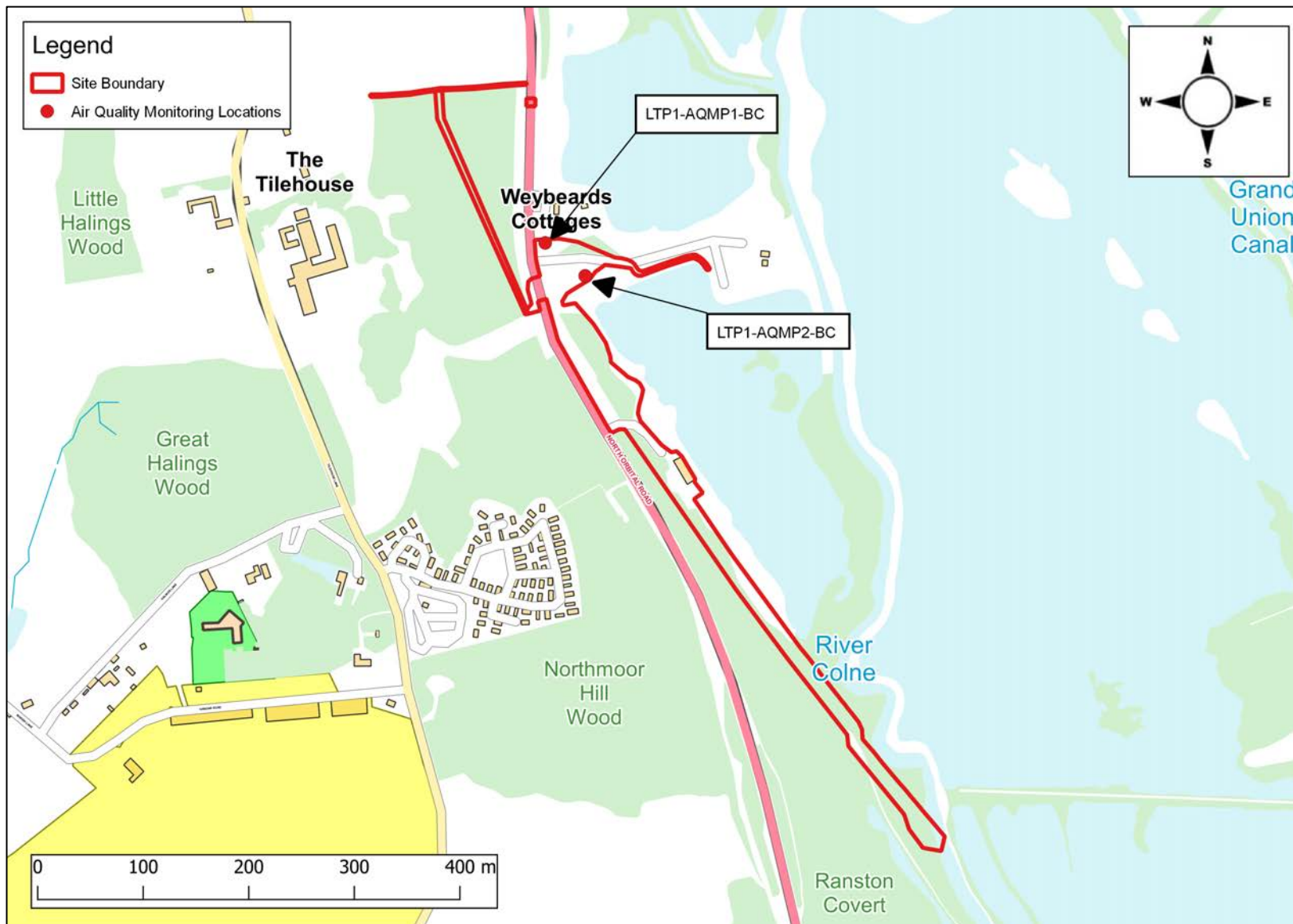


Figure 3: Worksites and Monitoring locations during July 2020



Appendix B – Dust Monitoring Results

Table 2: Dust monitoring locations and July 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 (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 (%)
CHSP-AQMP1-BC	500114, 193104	On the eastern boundary of the site with Chesham Lane	M	Yes	Yes	13.6	0.9	159.1	0	53
CHSP-AQMP2-BC	499903, 193181	On the western boundary of the site	M	Yes	Yes	9.4	0.6	146.8	0	100
LTP1-AQMP1-BC	503602, 189825	On the north boundary of LTP1	M	Yes	Yes	16.2	3.3	407.2	1	100
LTP1-AQMP2-BC	503654, 189795	On the South boundary of LTP1	M	Yes	Yes	12.4	2.6	96.7	0	100
3252Dust2	498390, 195434	On the boundary with Elm Tree Cottage, Bottom House Farm Lane	M	Yes	No	9.7	0.9	78.5	0	100

Table 3: Summary of exceedances during period (July 2020)

Monitoring Site ID	Period of trigger alert & Concentration recorded	Investigation	Outcomes / Resolution / Remedial measures implemented
LTP1-AQMP1-BC	<u>26/07/2020</u> 04:01 - 05:00: 407.2 µg/m ³	The trigger alert occurred outside of working hours. No works were being undertaken during this period. It is unclear what may have resulted in the trigger alert. The alert is not believed to be attributed to the site activities.	Good housekeeping measures to be continued on site, in line with the Code of Construction Practice.

Figure 4: Continuous dust 1-hour mean indicative PM₁₀ concentration for CHSP-AQMP1-BC for July 2020

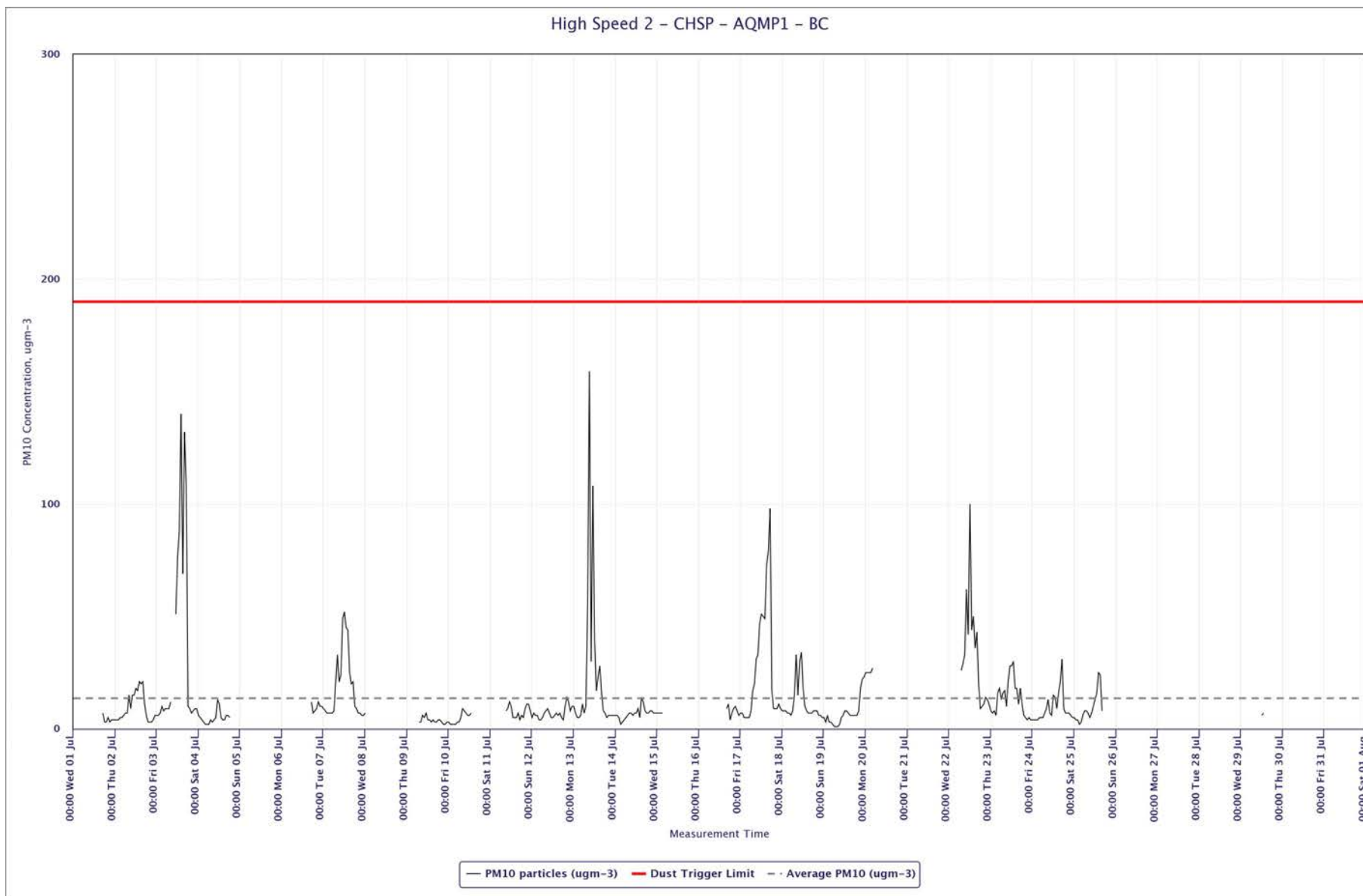


Figure 5: Continuous dust 1-hour mean indicative PM₁₀ concentration for CHSP-AQMP2-BC for July 2020

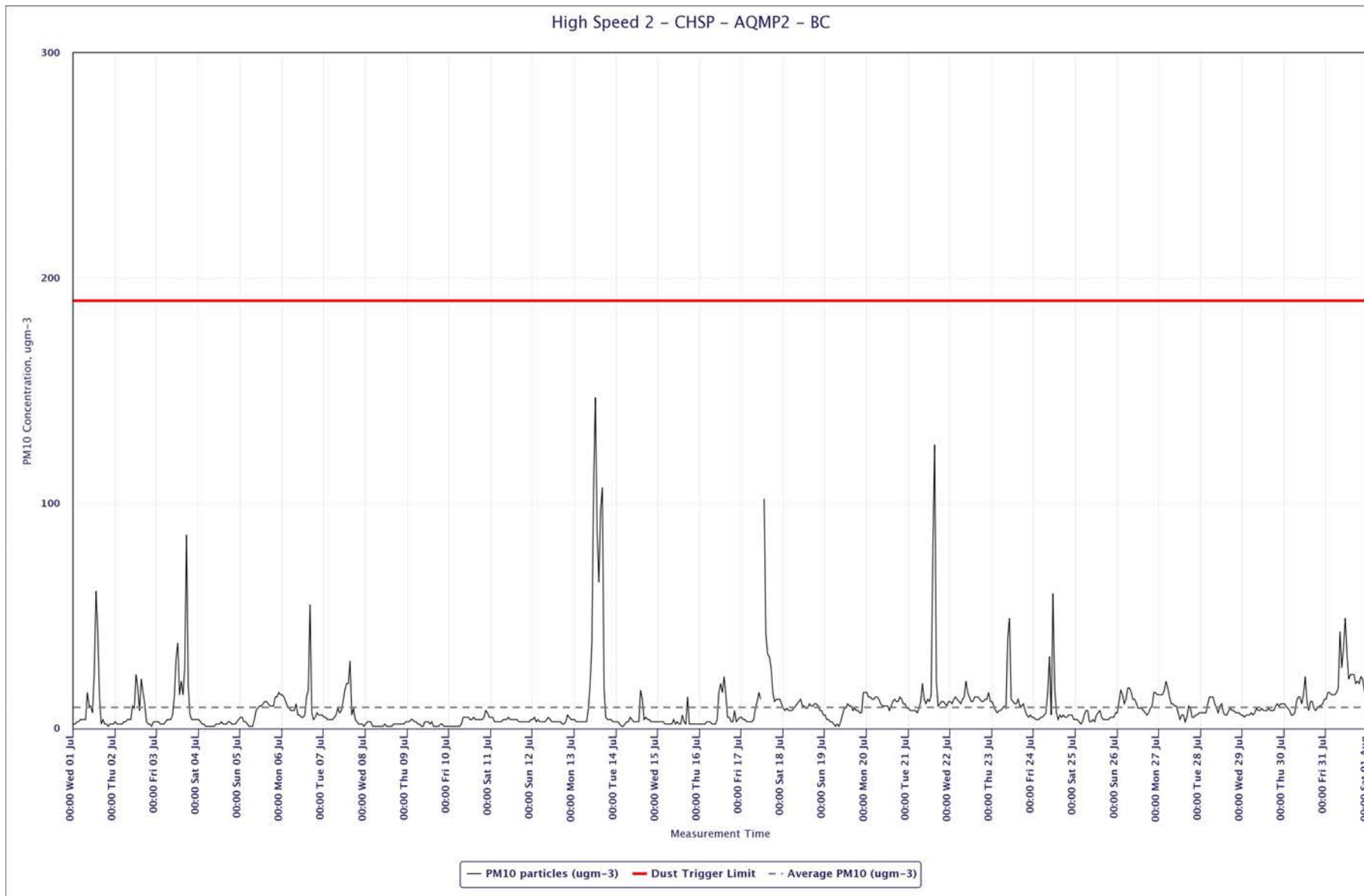


Figure 6: Continuous dust 1-hour mean indicative PM₁₀ concentration for LTP1-AQMP1-BC for July 2020

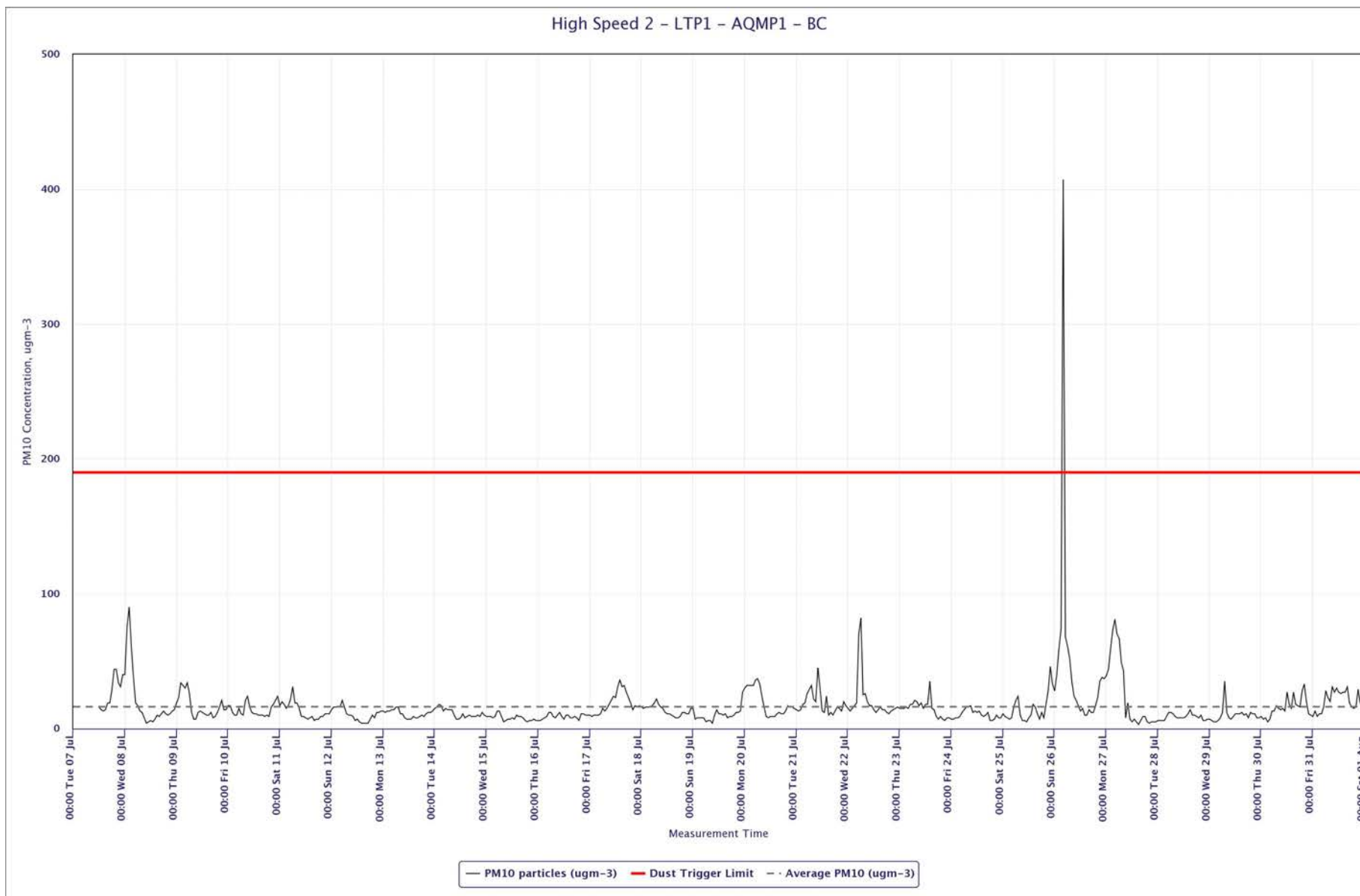


Figure 7: Continuous dust 1-hour mean indicative PM₁₀ concentration for LTP1-AQMP2-BC for July 2020

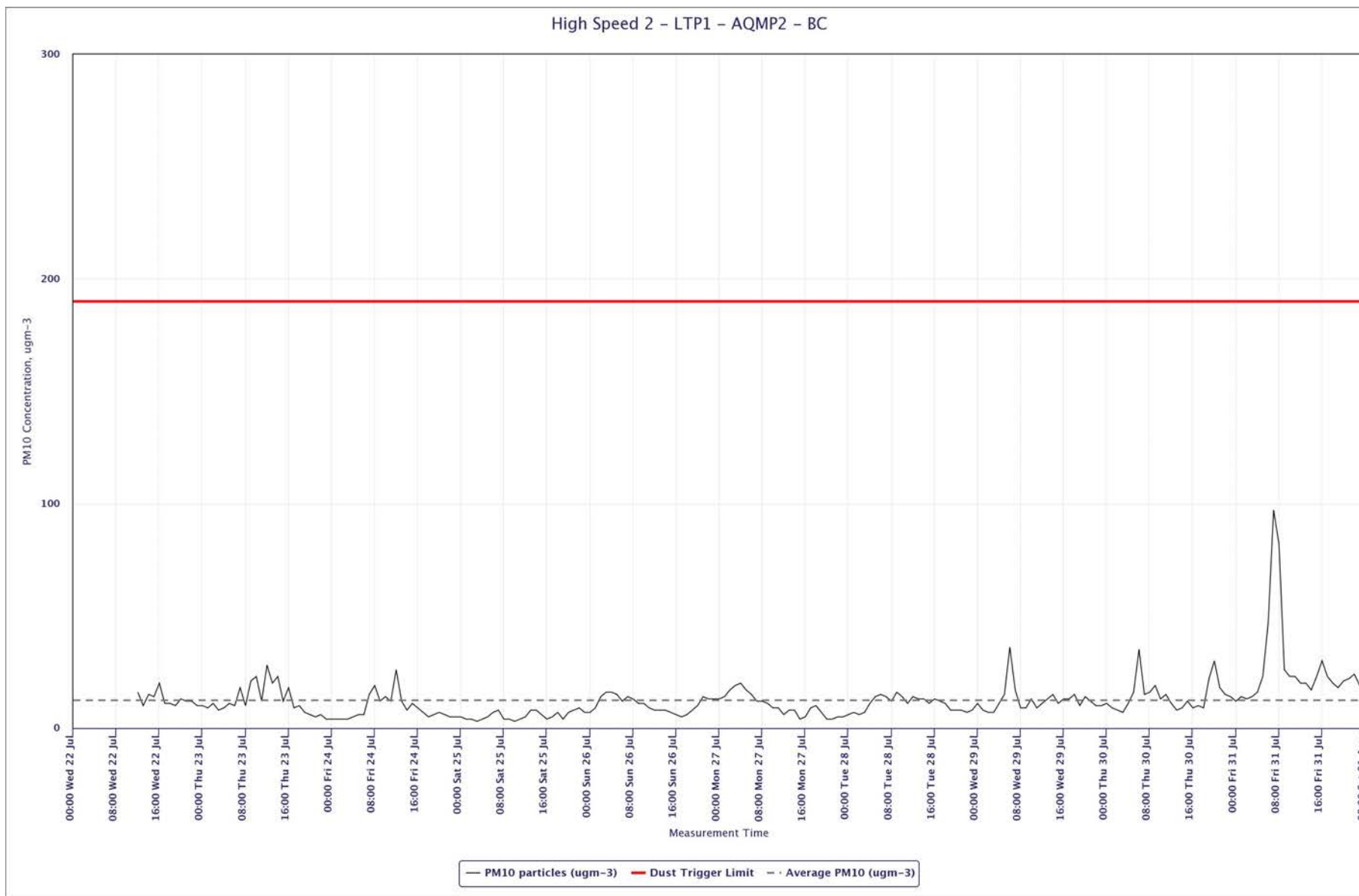


Figure 8: Construction dust 1-hour mean indicative PM₁₀ concentration for dust monitors

