

Air Quality and Dust Monitoring Monthly Report – January 2020

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) during January 2020.
- 1.1.2 Figure 1 in Appendix A indicates the current worksite together with the dust monitoring locations for January 2020.
- 1.1.3 This summary should be read in conjunction with the overview monitoring report monthly 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 commenced within TRDC during July 2017 and is expected to be completed by May 2020. The current worksite at the Chiltern Tunnel South Portal Compound is presented in Appendix A, Figure 1. Ongoing preconstruction works at the Chiltern Tunnel South Portal compound within January included:
- Supportive earthworks to facilitate the cutting and filing of the main platforms and the Chalfont Lane bund;
 - Excavation of Southern Portal cutting for the 2nd lift of soil nails;
 - Foundation treatment works at West Hyde Embankment;
 - Capping layers/hardstandings above the first temporary platforms;
 - Drainage and civil works on the amenities and logistics platform;
 - Foundation works for the main office, canteen and warehouse;
 - Start of roller compacted concrete (RCC) on road 11a;
 - Ongoing grouting works at the top of the South Portal Headwall;
 - Ongoing soil nailing works at the Southern Portal; and
 - Start of compaction grouting works at the interface South portal cutting/West Hyde Embankment.
- 1.1.5 Two (2) dust monitors are installed around the worksite, where earthworks, construction and trackout activities are underway. These sites 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 and 3. 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 of $190 \mu\text{g}/\text{m}^3$, 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 were five (5) dust trigger alerts recorded during the monitoring period (January 2020). Trigger Alerts are presented in Appendix B, Table 2. All other results were in line with the expected ranges.
- 1.1.9 There were no (0) complaints, relating to dust or air quality, received during the monitoring period (January 2020).

Appendix A – Monitoring Locations

Figure 1: Worksites and Monitoring locations during January 2020



Appendix B – Dust Monitoring Results

Table 1: Dust monitoring locations and January 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 (%)
AQMP1	502885, 191488	On the northern boundary of the site with Chalfont Lane	M	Yes	Yes	16.9	0.8	631.1	5	94
AQMP2	502872, 190833	On the southern boundary of the site with Denham Way	M	Yes	Yes	11.6	0.6	65.9	0	100

Table 2: Summary of trigger alerts during period (January 2020)

Monitoring Site ID	Period of trigger alert & Concentration recorded	Investigation	Outcomes / Resolution / Remedial measures implemented
AQMP1	<u>01/01/2020:</u> 01:00 - 02:00: 631.1 µg/m ³ 02:00 - 03:00: 405.4 µg/m ³ 08:00 - 09:00: 204.3 µg/m ³	The trigger alerts occur outside of working hours, investigations took place the following day suggested possibility of an issue with the heated inlet.	Engineer attended site on 03/01/2020. Heated inlet connection damaged and replaced on 03/01/20. Unit left functioning, operation continuing to be monitored.
AQMP1	<u>02/01/2020:</u> 12:00 - 01:00: 210.0 µg/m ³ 01:00 - 02:00: 211.6 µg/m ³		

Figure 2: Continuous dust 1-hour mean indicative PM₁₀ concentration for AQMP1 for January 2020

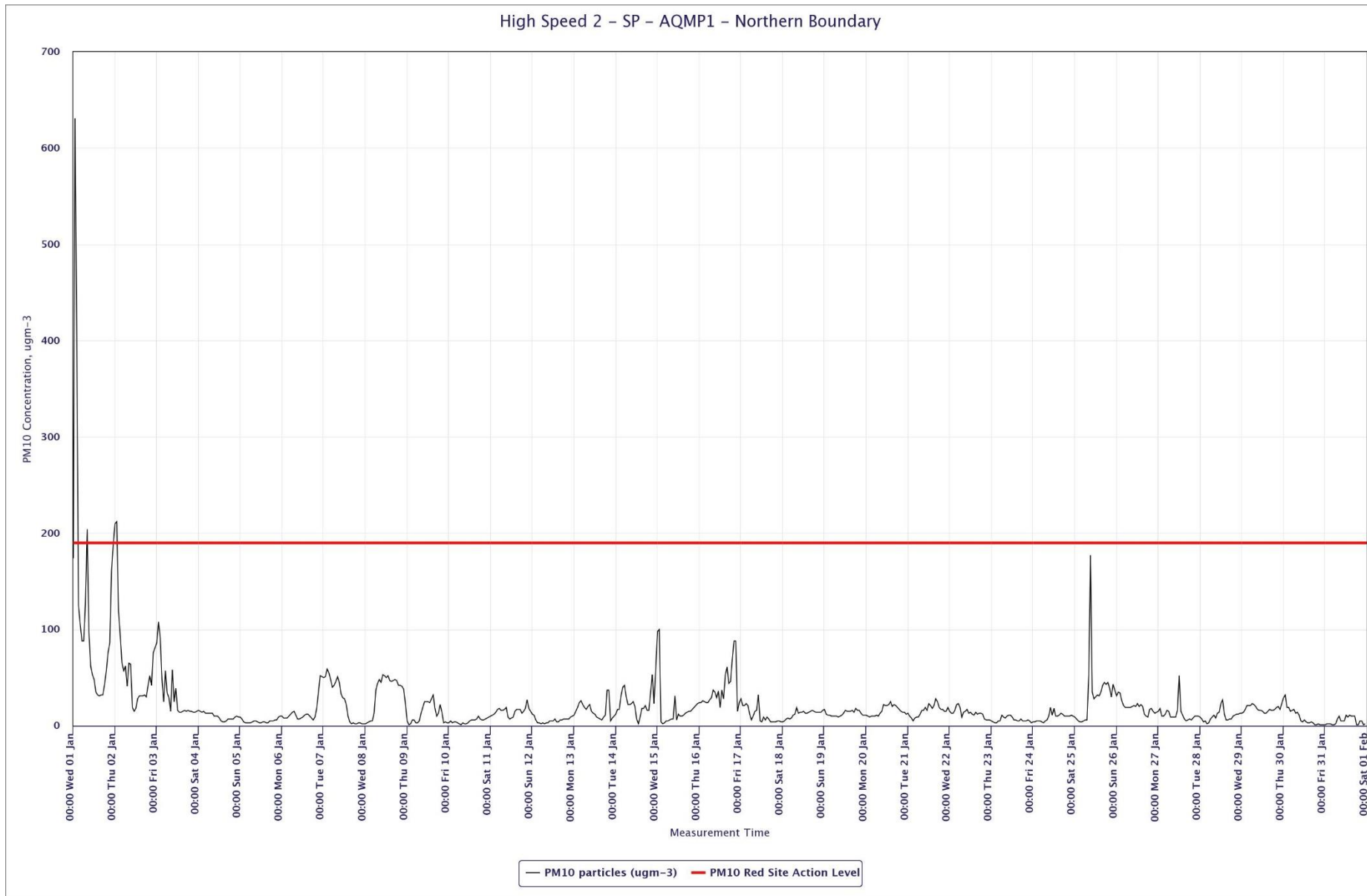


Figure 3: Continuous dust 1-hour mean indicative PM₁₀ concentration for AQMP2 for January 2020

