

Air Quality and Dust Monitoring Monthly Report – December 2021

Three Rivers District 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.

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

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Monthly Summary

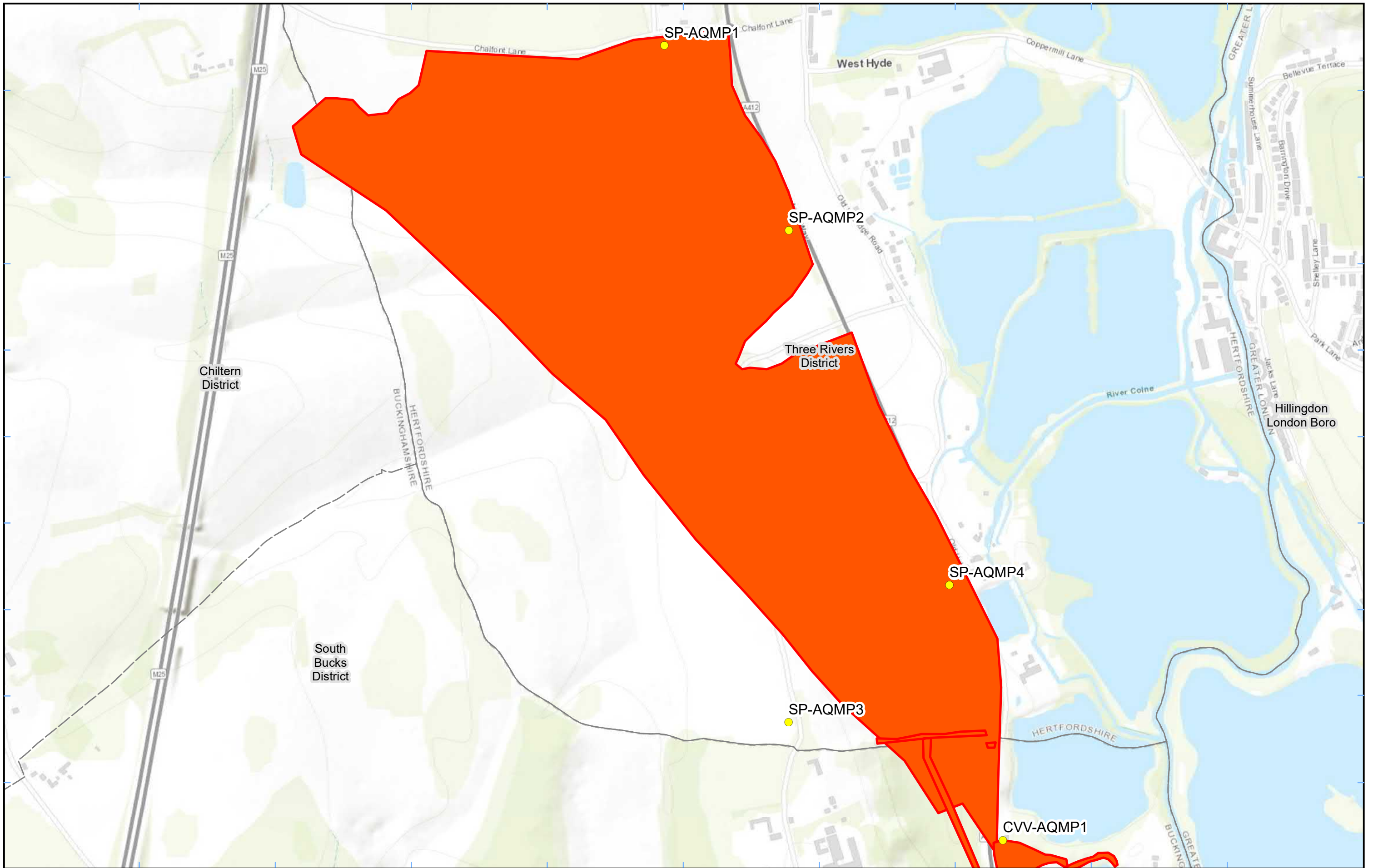
- 1.1.1 This Summary Report is published in fulfilment of commitments detailed in the High Speed Rail (London-West Midlands) Environmental Minimum Requirements, Annex 1: Code of Construction Practice, for the nominated undertaker to present the results of dust monitoring undertaken in the Three Rivers District Council (TRDC) during December 2021.
- 1.1.2 Figure 1 in Appendix A indicates the current worksite together with the dust monitoring locations for December 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 commenced in July 2017. The current worksites, as presented in Appendix A, Figure 1, include:
- 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);
 - I&M Installation: site wide;
 - Stockpiling: INNS stockpile management and storage of excavated materials from CSP in SP10 and West Hyde Embankment;
 - 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;
 - Tunnel Precast Factory: factory NB2 production, factory NB1 production and viaduct precast factory;
 - Western Valley Slope Cake Placement: earthworks chalk cake placement;
 - Tunnelling Works (Surface Support);
 - CVV Jetty Pre-Cast Yard Operation;
 - Launching Girder Installation and assembly: girder assembly; and
 - Concrete Breaking Activities.
- 1.1.5 Four (4) dust monitors are installed around the worksite, where works are underway. These sites returned a medium dust risk rating.

- 1.1.6 Dust monitoring locations and results are presented in Appendix B, Table 1, together with line charts of monthly data from each dust monitor, presented in Figure 2. 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, measured as a 1-hour mean, 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 No (0) dust trigger alerts were recorded during the monitoring period (December 2021).
- 1.1.9 Data capture was below 90% for multiple monitors in December 2021 due to loss of power.
- 1.1.10 No (0) complaints were received for dust or air quality during the reporting period (December 2021).

Appendix A – Worksite and Dust Monitoring Locations

Figure 1: Worksites and monitoring locations within the TRDC






Legend
● Dust Monitor District Borough Unitary Boundaries
 Worksite

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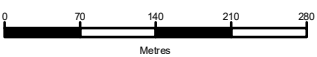
Map Number
 Worksite and Monitoring Locations
 In TRDC (Sheet 1)
 Three Rivers District Council


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Appendix B – Dust Monitoring Results

Table 1: Dust monitoring locations and December 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 until 20/12/2021	Yes	7.7	1.0	39.0	0	99.9
SP-AQMP2	503176, 191090	On the eastern boundary of the site at Denham Way	M	Yes until 20/12/2021	Yes	8.4	1.0	50.0	0	26.3
SP-AQMP3	503175, 190086	On the southern boundary of the site at Tilehouse Lane	M	Yes until 20/12/2021	Yes	5.8	1.0	19.0	0	18.0
SP-AQMP4	503503, 190366	On the eastern boundary of the site on the A412	M	Yes until 20/12/2021	Yes	6.4	1.0	34.0	0	23.3

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Figure 2: Continuous dust 1-hour mean indicative PM₁₀ concentration for all monitors

