

Air Quality and Dust Monitoring Monthly Report – December 2022

Three Rivers District Council



Department for Transport

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A report prepared by EWCs and MWCCs on behalf of HS2 Ltd.

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Monthly Summary

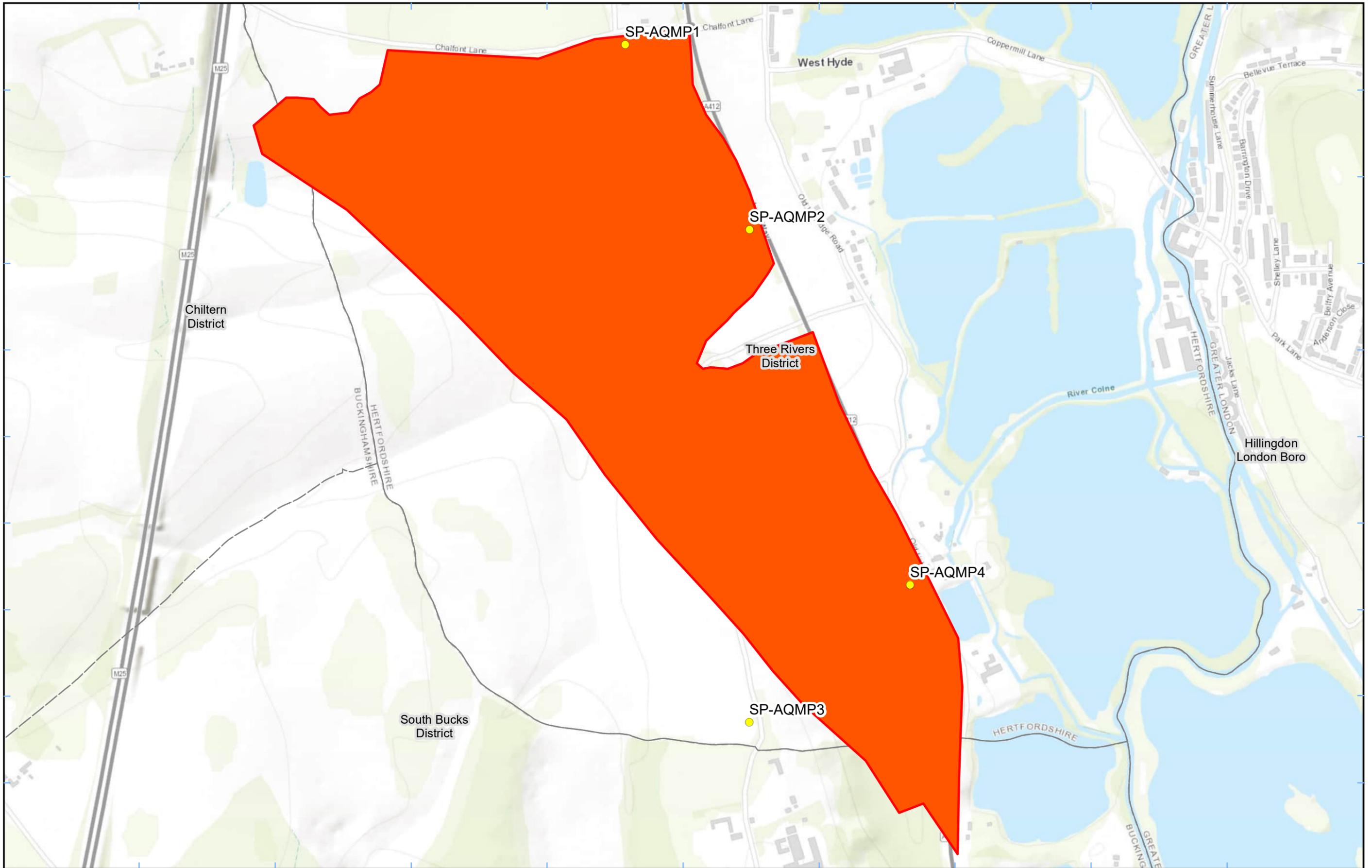
- 1.1.1 This Summary Report is published in fulfilment of commitments detailed in the High-Speed Rail (London-West Midlands) Environmental Minimum Requirements, Annex 1: Code of Construction Practice, for the nominated undertaker to present the results of dust monitoring undertaken in the Three Rivers District Council (TRDC) during December 2022.
- 1.1.2 Figure 1 in Appendix A indicates the current worksite together with the dust monitoring locations for December 2022.
- 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 October 2022 and is currently ongoing. 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;
 - Civils: platforms, accommodation and slabs;
 - I&M Installation: site-wide;
 - Stockpiling: INNS stockpile management and storage of excavated materials from CVV pile arisings and vent shaft sites in SP10 and West Hyde Embankment;
 - Site Wide Fencing-Phase D & F Fencing and STP Acid Storage Fencing;
 - Batching Plant 1, 2 and 3: collection of concrete for activity at vent shaft sites and batching plant 1, 2 & 3 - deliveries and operation;
 - Tunnel Precast Factory: factory NB2 production and factory NB1 production;
 - Viaduct Precast Factory;
 - Western Valley Slope Cake Placement: earthworks chalk cake placement;
 - Tunnelling Works (Surface Support);
 - CVV Jetty Pre-Cast Yard Operation;
 - Concrete Breaking Activities;
 - Pugmill Plant Operation;
 - Pugmill Plant South Portal Permanent Works;
 - Surface Water Management;
 - CVV Formwork Assembly; and
 - Road and Hardstanding: surfacing, grading and excavation.

- 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 a line chart 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 - (December 2018)*' has been applied.
- 1.1.8 There were no (0) trigger alerts recorded during the monitoring period (December 2022).
- 1.1.9 Data capture was below 90% for multiple monitors due to technical issues and/or loss of power due to insufficient sunlight/wind for monitors using solar/wind power.
- 1.1.10 No (0) complaints were received during the monitoring period (December 2022).

Appendix A – Worksite and Dust Monitoring Locations

Figure 1: Worksites and Monitoring locations within the TRDC





Legend
 Dust Monitor
 Worksite
 District Borough Unitary Boundaries

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Map Number
 Map Name
**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 2022 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	Yes	12.9	1.0	56.0	0	100.0
SP-AQMP2	503176, 191090	On the eastern boundary of the site at Denham Way	M	Yes	Yes	13.4	1.0	64.0	0	53.5
SP-AQMP3	503175, 190086	On the southern boundary of the site at Tilehouse Lane	M	Yes	Yes	13.5	1.0	87.0	0	57.0
SP-AQMP4	503503, 190366	On the eastern boundary of the site on the A412	M	Yes	Yes	15.4	1.0	87.0	0	60.3

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

