

Air Quality and Dust Monitoring Monthly Report – September 2023

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.

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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 September 2023.
- 1.1.2 Figure 1 in Appendix A indicates the current worksite together with the dust monitoring locations for September 2023.
- 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 worksites, as presented in Appendix A, Figure 1, include:

South Portal site (Phase 8)

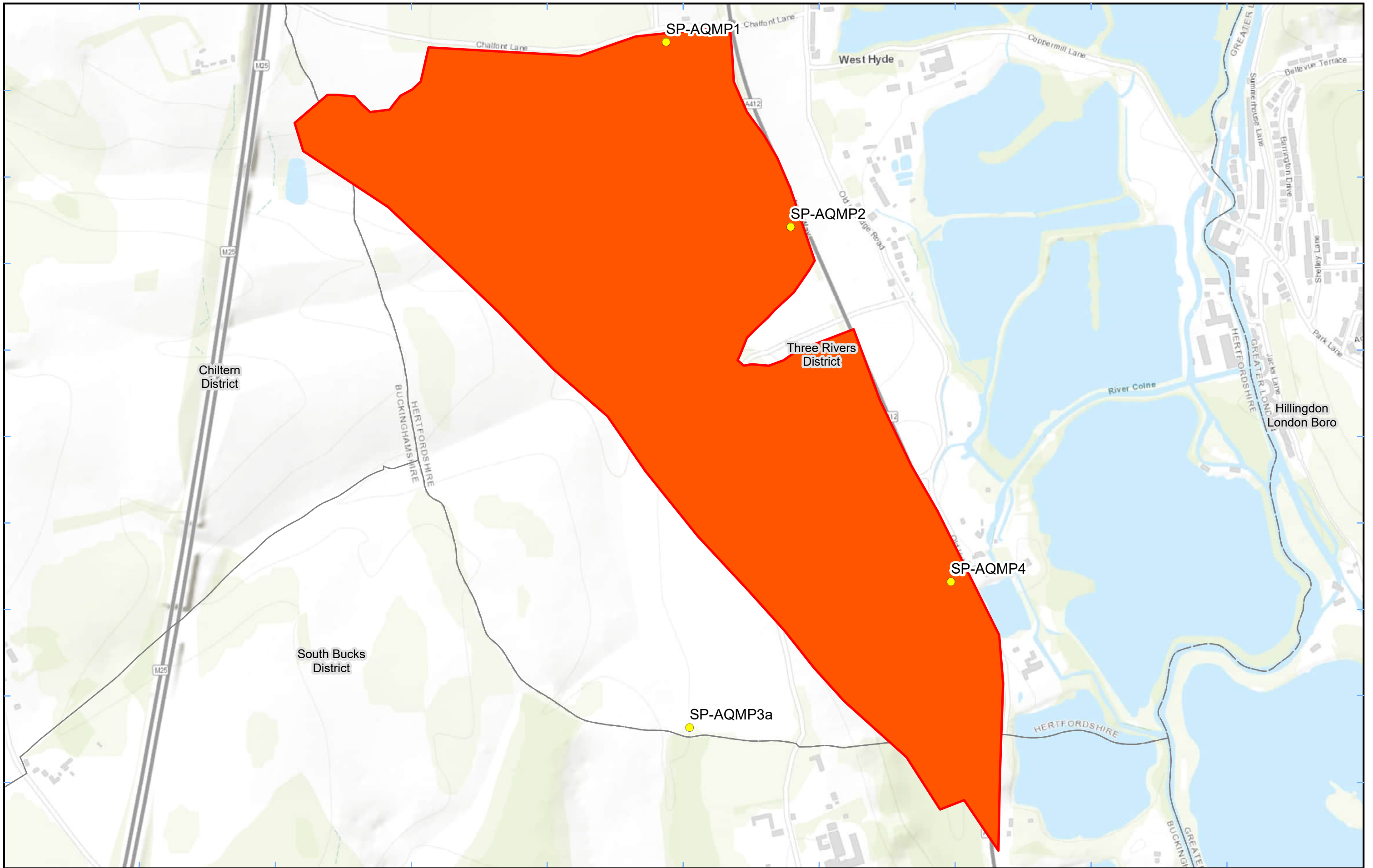
- General Plant: wheel washers, generators and site-wide support plant;
- Earthworks and Drainage: soil strip, excavation, filling, subgrade and ground stabilisation;
- Civils: platforms, accommodation and slabs;
- I&M Installation: site-wide;
- Stockpiling: INNS stockpile management and storage of excavated 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;
- South Portal Civils Works: permanent works and porous works;
- Surface Water Management;
- CVV Formwork Assembly;
- Road and Hardstanding: surfacing, grading and excavation; and
- CVV Bridge Parapet Mock-up Works.

- 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 for 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 IAQM 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 at during the monitoring period (September 2023).
- 1.1.9 Data capture was below 90% for SP-AQMP3a due to limited solar power due to solar panel location. The issue is in the process of being resolved.
- 1.1.10 No (0) complaints were received during the reporting period (September 2023).

Appendix A – Worksite and Dust Monitoring Locations

Figure 1: Worksites and Monitoring locations within 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 September 2023 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 PM10 concentration (µg/m3) | Minimum 1-hour PM10 concentration (µg/m3) | Maximum 1-hour PM10 concentration (µg/m3) | Number of 1-hour periods exceeding trigger level of 190 µg/m3 | Data capture (%) |
|--------------------|-------------------|--|---------------------------|--------------------------------------|---|--|---|---|---|------------------|
| SP-AQMP1 | 502922, 191467 | On the northern boundary of the site at Chalfont Lane | M | Yes | Yes | 10.3 | 1.0 | 60.0 | 0 | 100.0 |
| SP-AQMP2 | 503176, 191090 | On the eastern boundary of the site at Denham Way | M | Yes | Yes | 10.1 | 1.0 | 60.0 | 0 | 98.5 |
| SP-AQMP3a | 502970, 190069 | On the southern boundary of the site at Old Shire Lane | M | Yes | Yes | 8.6 | 1.0 | 61.0 | 0 | 44.0 |
| SP-AQMP4 | 503503, 190366 | On the eastern boundary of the site on the A412 | M | Yes | Yes | 9.4 | 1.0 | 56.0 | 0 | 100.0 |

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

