

## Air Quality and Dust Monitoring Monthly Report – July 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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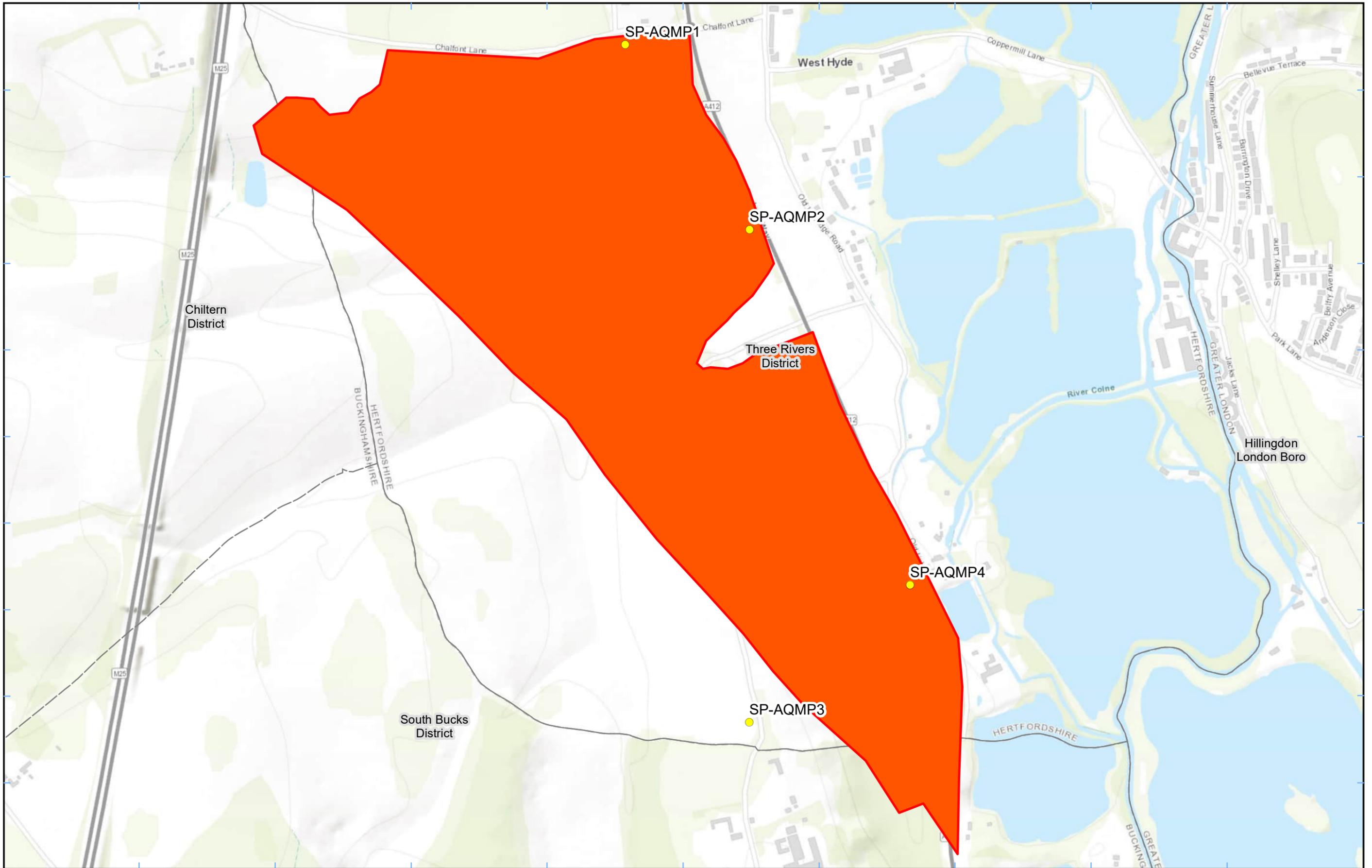
# Monthly Summary

- 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 July 2022.
- 1.1.2 Figure 1 in Appendix A indicates the current worksite together with the dust monitoring locations for July 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](http://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 July 2017 and is currently ongoing. The current worksite, as presented in Appendix A, Figure 1, includes:
- General Plant: wheel washers, generators and site wide support plant;
  - Earthworks and Drainage: soil strip, excavation, filling, subgrade and ground stabilisation; Cranfield trails - earthworks and fencing;
  - Road and Hardstanding: surfacing, grading and excavation;
  - Civils: platforms, accommodation and slabs;
  - I&M Installation: site wide;
  - Stockpiling: INNS stockpile management and storage of excavated materials from CV 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 D-wall 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;
  - Launching Girder Installation and Assembly: girder assembly;
  - Concrete Breaking Activities;
  - Pugmill Plant South Portal Permanent Works;
  - South Portal Permanent Works;
  - Surface Water Management;
  - Cranfield Trials: field trail construction; and
  - Abutment precast works & relocation of segment breakout area.

- 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 July 2022 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 PM<sub>10</sub> concentrations of 190 µg/m<sup>3</sup>, 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 Details of trigger alert investigations and remediations are presented in Appendix B, Table 2.
- 1.1.9 Data capture was below 90% for multiple monitors due to data transfer issues, technical issues and/or loss of power.
- 1.1.10 No (0) complaints were received for dust or air quality during the monitoring period (July 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 July 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 <sub>10</sub> concentration (µg/m <sup>3</sup> ) | Minimum 1-hour PM <sub>10</sub> concentration (µg/m <sup>3</sup> ) | Maximum 1-hour PM <sub>10</sub> concentration (µg/m <sup>3</sup> ) | Number of 1-hour periods exceeding trigger level of 190 µg/m <sup>3</sup> | Data capture (%) |
|--------------------|-------------------|--|---------------------------|--------------------------------------|---|---|--|--|---|------------------|
| SP-AQMP1           | 502922, 191467    | On the northern boundary of the site at Chalfont Lane  | M                         | Yes                                  | Yes   | 6.2   | 1.0  | 49.0   | 0   | 100.0            |
| SP-AQMP2           | 503176, 191090    | On the eastern boundary of the site at Denham Way      | M                         | Yes                                  | Yes   | 9.5   | 1.0  | 77.0   | 0   | 98.7             |
| SP-AQMP3           | 503175, 190086    | On the southern boundary of the site at Tilehouse Lane | M                         | Yes                                  | Yes   | 5.5   | 1.0  | 30.0   | 0   | 42.7             |
| SP-AQMP4           | 503503, 190366    | On the eastern boundary of the site on the A412        | M                         | Yes                                  | Yes   | 8.8   | 1.0  | 558.0  | 1   | 89.1             |

Table 2: Summary of exceedances during period (July 2022)

| <b>Monitoring Site ID</b> | <b>Period of trigger alert &amp; Concentration recorded</b> | <b>Investigation</b>   | <b>Outcomes / Resolution / Remedial measures implemented</b>   |
|---------------------------|---|--|--|
| SP-AQMP4                  | 14/07/2022<br>23:00 – 23:59; 558.0 µg/m <sup>3</sup>        | Exceedance likely due to wind whipping of nearby (within 3m) loose earth mounds and monitor being located immediately adjacent to site-vehicle haul route. | Concentrations at this monitor are to be closely monitored. Ensure earth mounds are appropriately controlled (dampened or seeded where appropriate) and haul routes are regularly inspected. |

Figure 2: Continuous dust 1-hour mean indicative PM<sub>10</sub> concentration for all monitors

