

Air Quality and Dust Monitoring Monthly Report – June 2022

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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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 June 2022.
- 1.1.2 Figure 1 in Appendix A indicates the current worksite together with the dust monitoring locations for June 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 July 2017 and is currently ongoing. The current worksite, as presented in Appendix A, Figure 1, includes:
- Activity 1 – General Plant; Wheel Washers, Generators, Site-Wide Support Plant
 - Activity 2 – Earthworks and Drainage; Soil Strip, Excavate, Drainage, Filling and Subgrade, and Ground Stabilisation
 - Activity 3 – Road and Hardstanding; Surfacing and Grading
 - Activity 4 – Civils; Platforms, Accommodation and Slabs
 - Activity 5 – Instrumentation and Monitoring (I&M) Installation; Site-Wide
 - Activity 6 – Stockpiling; INNS Stockpile Management, Storage of Excavated materials from CVV pile arisings and vent shaft sites in West Hyde EmbankmentRM-CS02_CL03-000031
 - Activity 7 – Site-wide Fencing; Fencing
 - Activity 8 – Batching Plant 1, 2 and 3; Batching Plant 1 – Deliveries and Operation, Batching Plant 2 and 3 – Deliveries and operation, Collection of concrete for activities at vent shaft sites
 - Activity 9 - Tunnel Precast Factories; Factory NB2 – Production; Factory NB1 – Production
 - Activity 10 – Viaduct Precast Factory, Viaduct Precast Production
 - Activity 11 – Western Valley Slopes Chalk Cake Placement; Earthworks Chalk Cake Placement
 - Activity 12 – Tunnelling Works (Surface Support); Slurry Treatment Plant Operation, A&B Component Compound Operation, Cooling Plant, Rolling Stock Gantry Crane and Associated Equipment, Ventilation Fans, Pond Water Treatment Plant, Multi-Service Vehicles, Storage on top of South Portal

- Activity 13 – CVV Jetty Precast Yard; CVV Jetty Precast Yard Operation, CVV Formwork assembly: Added by Variation 1MC05-ALJ-EV-FRM-CS02-CL03-000031
- Activity 14 – Launching Girder Installation and Assembly; Container Delivery and Unloading, Area Preparation, Girder Assembly, Commissioning and Load Testing
- Activity 15 – Concrete Breaking Activities; Concrete Breaking Activities.
- Activity 16 – Pugmill Plant Operation; Pugmill Plant Operation
- Activity 17 – South Portal Permanent Works; South Portal Permanent Works
- Activity 18 – Surface Water Management; Surface Water Management
- Activity 19 – Cranfield Trials; Field Trial Construction

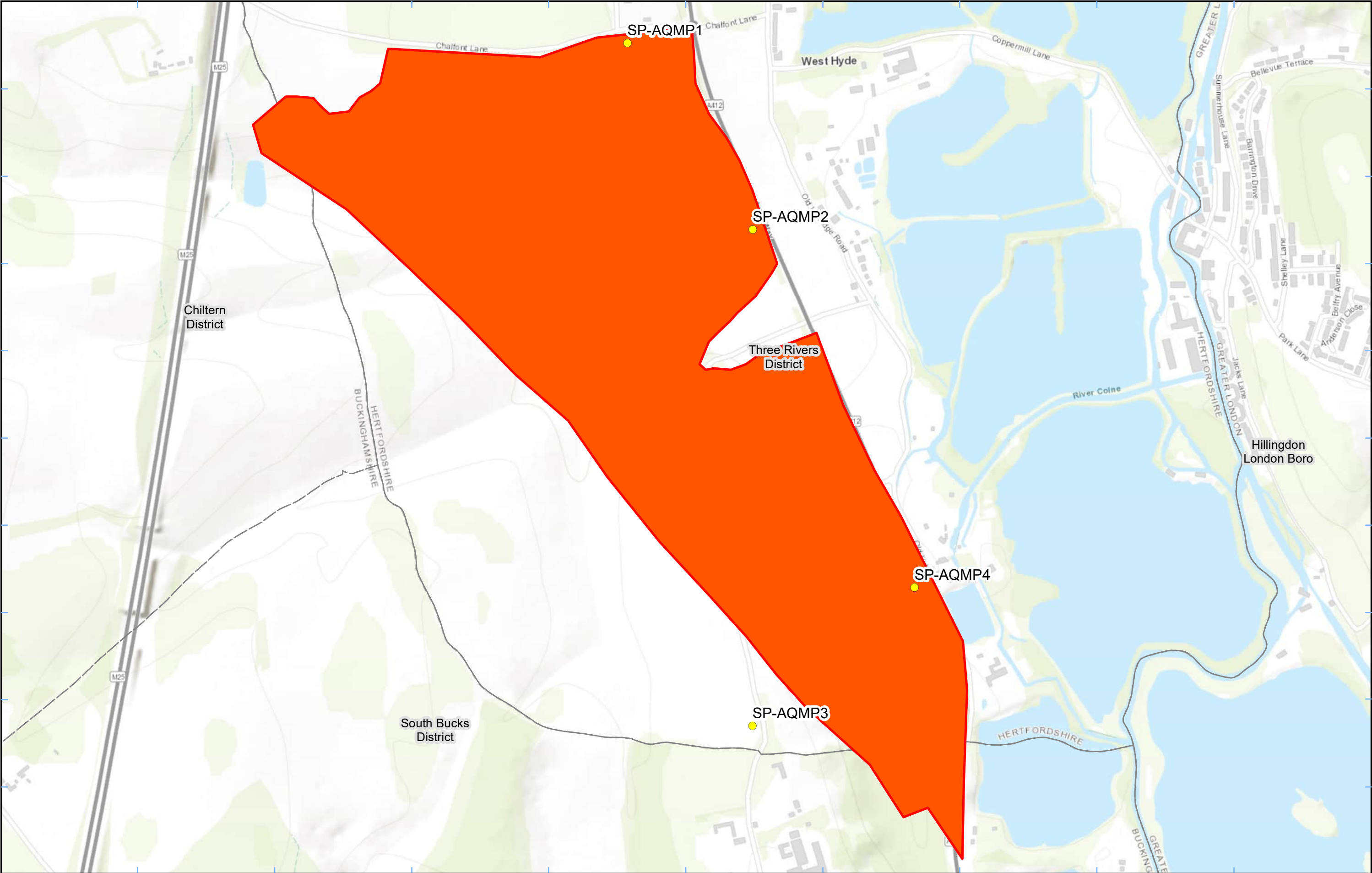
- 1.1.5 Four (4) dust monitors are installed around the worksite, where works are underway. These sites returned a medium dust risk rating.
- 1.1.6 Dust monitoring locations and results for June 2022 are presented in Appendix B, Table 1, together with line charts of monthly data from each dust monitor, 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 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 There were no (0) dust trigger alerts recorded during the monitoring period (June 2022).
- 1.1.9 Data capture was below 90% for monitor SP-AQMP3 due to technical issues and/or loss of power due to insufficient sunlight/wind for monitors using solar/wind power.
- 1.1.10 Table 1 provides a summary of the complaint information related to dust or air quality received during the reporting period, together with the findings of any related investigations.

Table 1: Summary of complaints received during June 2022 in TRDC

Complaint Reference No.	Worksite Reference	Description of complaint	Results of investigation
HS2-22-43745-C	N/A	Dust from heavy machinery and lorries alongside Old Shire Lane and Tilehouse Lane. Intensified by recent dry weather.	Dust management practices are in place across the entire site, including dampening down of haul roads and the use of screening where practicable. Site teams have confirmed that dust suppression is constantly deployed when works occur in the area adjacent to Old Shire Lane.

Appendix A – Worksite and Dust Monitoring Locations

Figure 1: Worksites and monitoring locations within the TRDC



Dust Monitor

District Borough Unitary Boundaries

Worksite

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Map Number

Map Name

Worksite and Monitoring Locations
In TRDC (Sheet 1)

Three Rivers District Council

hs2

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Doc Number:

Scale at A3: 1:7,000

0

70

140

210

280

Metres

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N

Date: 28/04/22

Appendix B – Dust Monitoring Results

Table 1: Dust monitoring locations and June 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	7.2	1.0	30.0	0	96.5
SP-AQMP2	503176, 191090	On the eastern boundary of the site at Denham Way	M	Yes	Yes	8.3	1.0	44.0	0	92.8
SP-AQMP3	503175, 190086	On the southern boundary of the site at Tilehouse Lane	M	Yes	Yes	8.2	3.0	37.0	0	22.9
SP-AQMP4	503503, 190366	On the eastern boundary of the site on the A412	M	Yes	Yes	7.9	1.0	152.0	0	100.0

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

