

Air Quality and Dust Monitoring Monthly Report – January 2024

Lichfield 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 air quality and dust monitoring undertaken in Lichfield District Council (LDC) during January 2024.
- 1.1.2 Figure 1 in Appendix A presents the current worksites together with the dust monitoring locations.
- 1.1.3 This summary should be read in conjunction with the overview monitoring report monthly 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:

Shaw Lane Embankment and Underbridge (Sublot 8.2)

- No works occurred at this worksite.

Streethay Cutting Retaining Structure (Sublot 8.3)

- Deck construction including Formwork installation, steel fixing, hand tools (compressors, impact drives), concrete pumps, crawler crane, ongoing deliveries, and collections).
- Earthworks activities: Excavation using excavators, dumpers, road going tippers.
- Pile cropping activities with pile breaker and brexto.
- Small items of plant, including plate compacters, excavators, and dumpers.

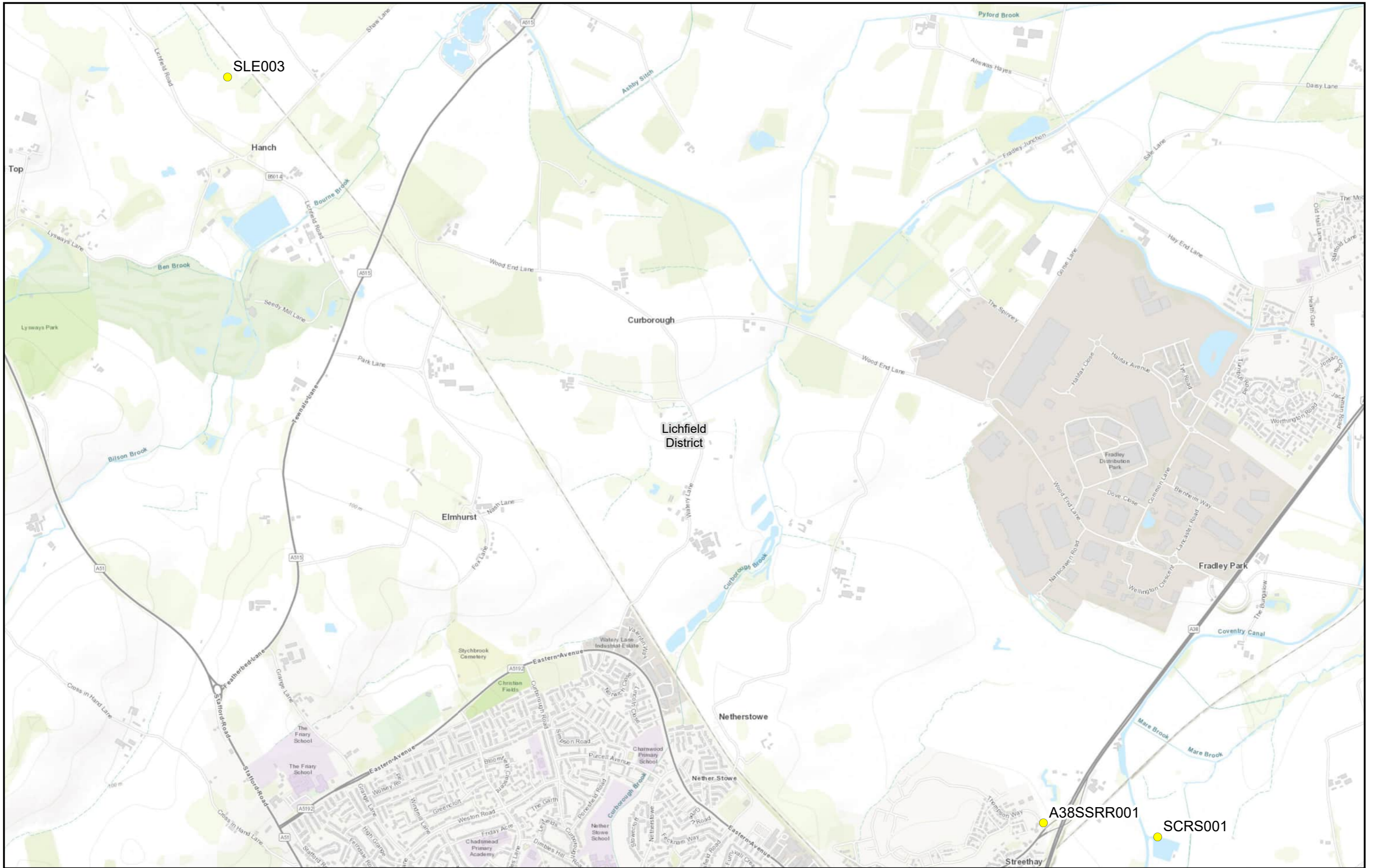
- 1.1.5 Three (3) dust monitors are installed around these worksites, where works are underway. These sites returned a low dust risk rating.
- 1.1.6 Dust monitoring locations and results are presented in Appendix B, Table 1, together with line charts of monthly data from the dust monitors presented in 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, over a 1-hour period, 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 (January 2024).
- 1.1.9 Data capture was below 90% for multiple monitors due to fewer daylight hours and wetter than usual weather conditions in January resulted in less power generated by the solar panels for the monitors external batteries, leading to more battery failures over the course of the month. During the evening, the monitors rely mostly on battery power. Since there was not enough sunlight to charge the batteries during the day, the batteries did not have enough energy stored to power the monitors during the evening, therefore most of the battery failures occurred overnight. Battery refreshes were scheduled regularly throughout the month to mitigate this problem.
- 1.1.10 There were no (0) complaints received during the reporting period (January 2024).

Appendix A – Worksites and Monitoring Locations

Figure 1: Worksites and Monitoring Locations within LDC






Legend
 Dust Monitor
 District Borough Unitary Boundaries

Service Layer Credits: World Topographic Map: Esri UK, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA


Map Number	
Map Name	Monitoring Locations In LDC (Sheet 1)
	Lichfield District




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Scale at A3: 1:18,000



Metres

Date: 22/11/23

Appendix B – Dust Monitoring Results

Table 1: Dust Monitoring Locations and 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 for Month (%)
SLE003	410041, 314481	New Lane Produce South, Shaw Lane Embankment	L	Yes	No	1.6	0.1	17.8	0	80.8
SCRS001	414913, 310498	Streethay Cutting Retaining Structure, King's Orchard Marina	L	Yes	No	11.3	0.1	163.1	0	70.2
A38SSRR001	414315, 310571	Thompson Way, Streethay, Fradley and Streethay	L	Yes	No	7.0	0.1	46.0	0	91.0

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

