

## **Air Quality and Dust Monitoring Monthly Report – June 2018**

**Three Rivers District Council**



## Department for Transport

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High Speed Two (HS2) Limited,  
Two Snowhill  
Snow Hill Queensway  
Birmingham B4 6GA

Telephone: 08081 434 434

General email enquiries: [HS2enquiries@hs2.org.uk](mailto:HS2enquiries@hs2.org.uk)

Website: [www.gov.uk/hs2](http://www.gov.uk/hs2)

A report prepared by Osborne 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 2018.
- 1.1.2 Figure 1 in Appendix A indicates the current work sites together with dust monitoring locations for June 2018.
- 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 commenced July 2017, and is expected to be completed in January 2019. The current worksites, as presented in Appendix A, Figure 1, include:
- Construction of a new entry slip onto the clockwise M25, from Shire Lane to include: associated drainage, utilities, lighting, signage and road markings to full motorway standards.
  - Construction of a new exit slip from the anti-clockwise M25, connecting to Chalfont Lane to include: associated drainage, utilities, lighting, signage and road markings to full motorway standards.
  - Construction of a Chalfont Lane diversion road between Shire Lane and Hornhill Road to include a temporary road to Local Authority Highway standards, a junction with Shire Lane and Hornhill Lane and associated signage on local roads.
  - Construction of a new junction for access to Orchards caravan park and footpath CSP/16/1.
  - Widening of Chalfont Lane between the M25 exit slip and Denham Way to include: a bell mouth access to a future Scottish and Southern Energy (SSE) sub-station, accesses to the future High Speed 2 (HS2) construction compound south of Chalfont Lane and construction of BT and City Fibre ducts and chamber diversions along Chalfont Lane.
- 1.1.5 One (1) dust monitor is installed around the worksite, where construction works are underway. This site returned a medium dust risk rating.
- 1.1.6 The dust monitoring location and results are presented in Appendix B, Table 1, together with line charts of monthly data from the dust monitor.
- 1.1.7 Twenty-two (22) exceedances of the dust trigger level were recorded during the month of June 2018. Eight (8) of these triggers occurred outside of construction site hours. For the remainder of alarm triggers, investigations determined that exceedances were not resultant

from HS2 site activities as dust-generating activities were either not programmed or performed at the time of the alert.

- 1.1.8 A neighbouring contractor Kier, working on behalf of Affinity Water, were undertaking construction works near the monitoring location at Chalfont Lane. Kier construction activities included: water main commissioning and steel fixing operations.
- 1.1.9 Following an initial alert and subsequent HS2 investigation, correspondence was issued to Kier for additional investigations and a request for the implementation of mitigation measures if works were the source of the dust origination. Kier investigations considered the majority of triggers to have resulted from prevailing winds and weather-related conditions which facilitated the movement of dust particles from neighbouring rural properties.
- 1.1.10 A haul road was also recognized as a source of dust on the Keir construction site. As a result, Kier implemented a reduced vehicle speed limit of 5 miles/hour and undertook localized dust suppression measures where an alerts were associated with construction activities. HS2 contractors and personnel also possessed rights of access to the haul road Bellmouth throughout the duration of June works.
- 1.1.11 Exceedances are presented in Appendix B, Table 2. All other results were in line with the expected ranges.
- 1.1.12 A collaboration meeting was held 17/07/2018 between HS2, Osborne, Kier, and Fusion teams involved with the construction works at the Chalfont Lane South Portal work zone. The discussion reviewed:
- Current dust related management procedures and reporting obligations by Osborne who is functioning as the Primary Contractor on site
  - HS2 reaffirmed the responsibilities required of the contractors in respect of the Environmental Minimum Requirements. Dust mitigation is outlined in section 7 of the Code of Construction Practise which requires frequent monitoring during construction works, inspections and mitigation measures following monitor alerts, and control of dust generation throughout the duration of construction works.
  - Revising the current correspondence programme with the Local Authority to provide a more robust and frequent reporting process to detail the investigations and daily summary of monitor exceedances. The primary contractor is responsible for liaising with the Local Authorities.

1.1.13 A complaint from a resident was communicated to the Hertfordshire County Council 18/06/2018 for the dust generation situated at Old Uxbridge Road. The concern was raised as a discussion topic in an HS2 Contractor Coordination Meeting to reinforce the contractor's responsibilities associated with dust compliance and management in accordance with the Code of Construction Practice. Works at this site during the complaint were limited in scope and included:

- Fusion completing utility surveys;
- Kier working on behalf of Affinity Water to commission a new water main;
- ALIGN undertaking ground investigations; and
- Osborne working on slip road developments at Chalfont Lane.

1.1.14 Osborne have continued to dampen-down the haul road as required during the unseasonably dry weather. Kier have continued to dampen grounds at the localized construction site to reduce dust generation.

# Appendix A – Worksites and Monitoring Locations

Figure 1: Worksite locations within TRDC

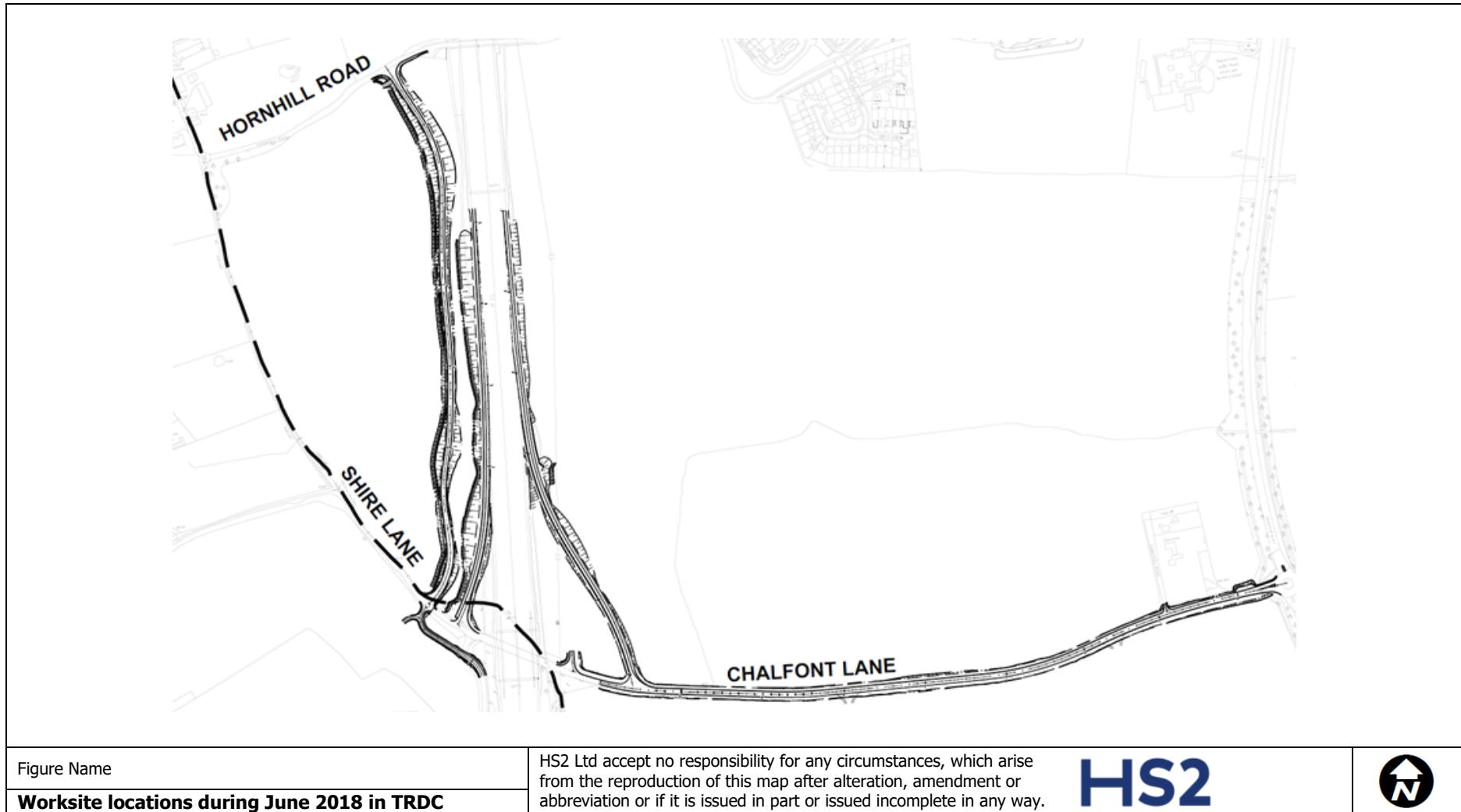


Figure 2: Dust monitoring locations within TRDC

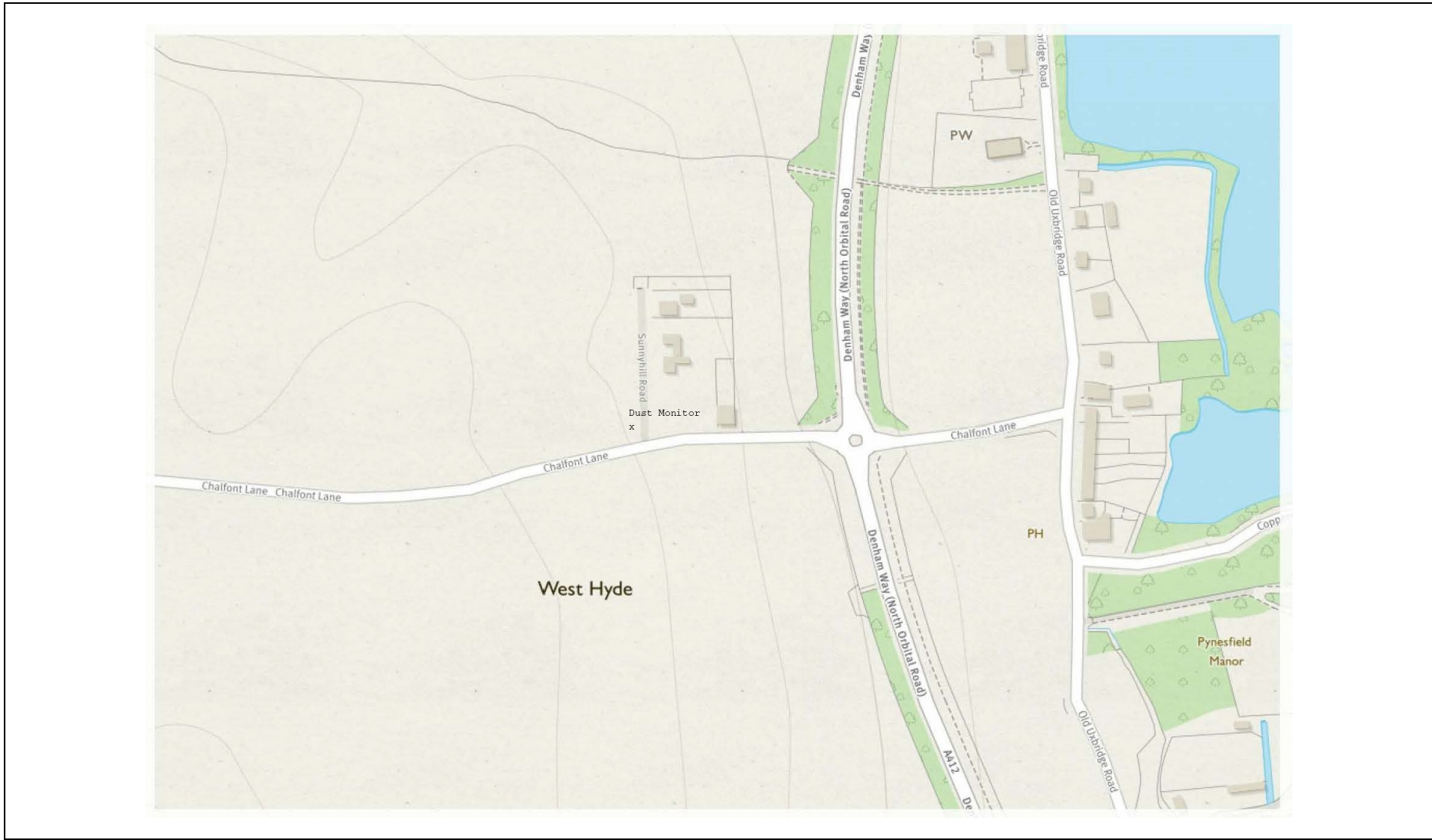



Figure Name	HS2 Ltd accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.	<b>HS2</b>	
<b>Monitoring locations during June 2018 in TRDC</b>			

# Appendix B – Dust Monitoring Results

Table 1: Dust monitoring locations and June 2018 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 15-minute PM10 concentration ( $\mu\text{g}/\text{m}^3$ )	Minimum 15-minute PM10 concentration ( $\mu\text{g}/\text{m}^3$ )	Maximum 15-minute PM10 concentration ( $\mu\text{g}/\text{m}^3$ )	Number of 15-min periods exceeding trigger level of $250 \mu\text{g}/\text{m}^3$	15-min data capture (%)
M25 Slip Roads	51.613059, -0.515667	Chalfont Lane	M	Yes	No	17.1	0.7	813	22	100.0



Table 2: Summary of exceedances of trigger level in June 2018

Period exceeding trigger level	Worksite reference	Monitoring site ID	Complaint reference number (if applicable)	Reason	Resolution
13/06/2018 13:00:00	Chalfont Lane	M25 Slip Roads	N/A	<p>No site work activities were programmed or being undertaken at the time of the exceedances from the HS2 Contractor.</p> <p>Kier were notified of the exceedance and the HS2 contractor requested a follow-up investigation.</p> <p>June 13<sup>th</sup> – Kier concluded the triggers resulted from weather wind movements. Conditions on site from the investigation comprised: light rain, wind speed of 11mph, SW gust up to 17 mph.</p> <p>June 16<sup>th</sup> – Kier concluded the triggers resulted from weather wind movements.</p> <p>June 18<sup>th</sup>/ 19<sup>th</sup> / 20<sup>th</sup> / 25<sup>th</sup> 26<sup>th</sup> – Kier concluded the weather as a factor of dust triggers. Where construction induced dust generation was noted, suppressant measures were applied to the haul road from Kier/Osborne.</p>	<p>Kier site team were informed of the alarm exceedances.</p> <p>Kier conducted a supplementary investigation. No further action was warranted as the event was weather induced and not associated with either contractor.</p> <p>Damping measures on the haul road have been regularly implemented by Osborne as required. Kier have implemented suppressant measures on the direct site works to reduce dust generation. Speed limits have also been reduced along the haul road passage to 5 / Mph.</p>
13/06/2018 14:30:00					
13/06/2018 16:30:00					
13/06/2018 17:45:00					
16/06/2018 13:00:00					
16/06/2018 15:15:00					
18/06/2018 09:00:00					
19/06/2018 10:45:00					
19/06/2018 09:15:00					
20/06/2018 12:45:00					
20/06/2018 16:30:00					
25/06/2018 08:15:00					
26/06/2018 11:00					
26/06/2018 12:00:00					
13/06/2018 19:15:00					
15/06/2018 02:00:00					
16/06/2018 06:15:00					
17/06/2018 05:45:00					
20/06/2018 04:00:00					
23/06/2018 01:45:00					
23/06/2018 04:30:00					
25/06/2018 22:00:00					

Figure 3: Construction dust 15-minute mean indicative PM<sub>10</sub> concentration for dust monitors

