February 2024

HS2

Air Quality and Dust Monitoring Monthly Report - February 2024 **Buckinghamshire** Council

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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 Buckinghamshire Council (BC) during February 2024.
- 1.1.2 Figures 1-7 in Appendix A present the current worksites together with the dust monitoring locations.
- 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, Figures 1-7, include:

CVV LTP1 worksite

- North Embankment Compound: compound operation;
- DWSC Compound: compound operation;
- Haul Road and Jetty Maintenance River Colne to GUC: operation and maintenance;
- ATFS: site preparation, bulk earthworks and permanent drainage;
- Water pumping management;
- Satellite welfare;
- Generator farms;
- North Abutment: transportation (yard supporting activities) and FRC works for ancillary items;
- A412 Gas Crossing Emergency Dismantling;
- Environmental Maintenance;
- River Colne Crossing: Emergency removal of obstruction to RC Crossing;
- Deck Finishes Logistics: preparation and operation of storage yards and installation of below deck access provision, traffic management on the deck surface, installation of parapets, noise barriers, troughs, pipes, steel works and other minor material to the storage yards and deck, installation of accesses top of the deck (HAKI stairs) and deck finishes support plan;
- Deck Finishes On-deck Construction: construction of robust kerbs, installation of parapets, construction of concrete stitch, filling of voids and top openings, verge deck waterproofing, trough installation, noise barriers installation and north abutment works;
- Deck Finishes In-deck Construction: diaphragm walls and concrete works within the deck, drainage works within the deck and steel works within the deck;
- Landscaping: advanced works including removal of cofferdams, early earthworks including ground profiling and cut, Initial ground drainage including manhole chamber,

- early soil (subsoil and topsoil) placement, hardstanding removal and tree removal & vegetation removal; and
- Removal of the Grand Union Canal scaffold bridge in prep for the launching girder span in early March.

Chalfont St Peter Vent Shaft

- General Site Activities;
- Road Maintenance Works;
- Connection to Tunnels
- Ground Level Works: external works; and
- Building Trades: external and internal works including steel and zinc cladding.

Amersham Vent Shaft

- General Site Activities;
- Tunnel Connections;
- External Works Phase 1; and
- Headhouse Superstructure Concrete Works.

Chalfont St Giles Vent Shaft

- General Site Activities;
- Road Maintenance Works; and
- Building Trades: external works and internal works.

Little Missenden Vent Shaft

- General site activity;
- Tunnel Connection;
- Small basement construction; headhouse basement internals;
- Headhouse Superstructure Concrete Works;
- · ATS Building;
- Phase 1 of external works; and
- Both internal and external Building Trades.

Chesham Vent Shaft

- General site activity;
- Ground Level Works: headhouse ATS concrete works and external works; and
- Building Trades: internal and external works.

North Portal work site

- General Plant: site support;
- Piling Platform Reinstatement: scraping/hardstanding/earthworks and dismantling piling platforms;
- TBM Arrival: preparation for TBM break-through; and TBM dismantling; and

• Batching Plant installation.

North Chilterns Area

Potters Row, Grimms Ditch

• Earthworks (movement of materials).

Chesham Lane, Wendover Bus 55

- Earthworks (movement of materials on Haul Road).
- Removal of hedge line.
- Pond Maintenance, Surface Water Management

Ellesborough Road

- Ellesborough Road Tie-in
- VRS installation
- Assembling/Construction of Utilities bridge
- Installation of Kerbs and signposts
- Installation of fencing around west chicane

Nash Lee Road, Nash Lee Lane

- Earthworks (stockpile maintenance)
- Earthworks (excavate and replace)
- Construction of Mill House North Culvert
- Temporary Surface Water Management.
- SAR extension and installation of GS6
- UKPN 1207 utilities diversion
- Removal of roots and Tree Felling for Utilities Diversion

Bacombe Lane

- Installation of Drainage for Bacombe Lane Link Road.
- Construction of Access/Haul Road
- Installation of Laydown area and move material to said laydown area.
- Moving of Stockpiles

Grove Farm

- Maintenance / dewatering
- Site Deliveries

Small Dean Viaduct

- Loading/lifting of diaphragms and girders.
- Construction of scaffolding foundations
- Assembly of scaffold for pier access

- Sheet Piling for P3 & P4
- Welding assembly trestles
- Earthworks (Small Dean South Embankment)

Wendover Town

- Water Utility installation (Foley Bridge)
- Topsoil strip for Slurry Wall works
- Surface Water Management
- · Trial pit and borehole drilling

Calvert Area

<u>Calvert (FCC and School Hill Monitor)</u>

- School Hill batching plant production of concrete
- School Hill culvert waterproofing and technical backfill.
- School Hill overbridge dig and replace (D&R) under structure and piling platform.
- Calvert Green overbridge piling works.
- Aggregate deliveries along the site access road (SAR).
- Calvert Cutting earthworks drainage and general maintenance activities.

Woodlands

- Adams Accommodation underbridge construction of steel reinforcement cages for wingwalls.
- River Ray culvert waterproofing and technical backfill.
- Aggregate deliveries along the SAR.

Quainton

No works.

Other works ongoing in Calvert not within proximity (greater than 1km) to dust monitors include:

- West Street overbridge
- Portway culvert
- Perry Hill overbridge
- EWR culvert
- IMD West culvert
- IMD East Culvert
- Addison Road highway
- Shepherds Furze earthworks (stockpile maintenance)
- Shepherds Furze culvert
- MCJ4 chord earthworks
- Infrastructure maintenance depot (IMD) earthworks
- Secant retaining wall
- Bat mitigation structure

- SCL/13 overbridge
- FCC Cell 6 earthworks (stockpile maintenance)
- Sheephouse Wood North culvert
- Greatmoor no. 4 culvert and CAG2 underbridge
- Megaditch retaining wall
- Greatmoor no. 3 culvert
- GUN28 overbridge
- QUA36 overbridge
- Hills farm earthworks (stockpile maintenance)
- Edgcott Road overbridge
- QUA26 Underbridge
- Woods drop inlet culvert
- Doddershall Embankment earthworks
- Quainton cutting.

Twyford to Greatworth

- PRD Drilling
- Piling Works
- Loading 1A1 to the south
- Concreting
- Steel fixing.

Aylesbury

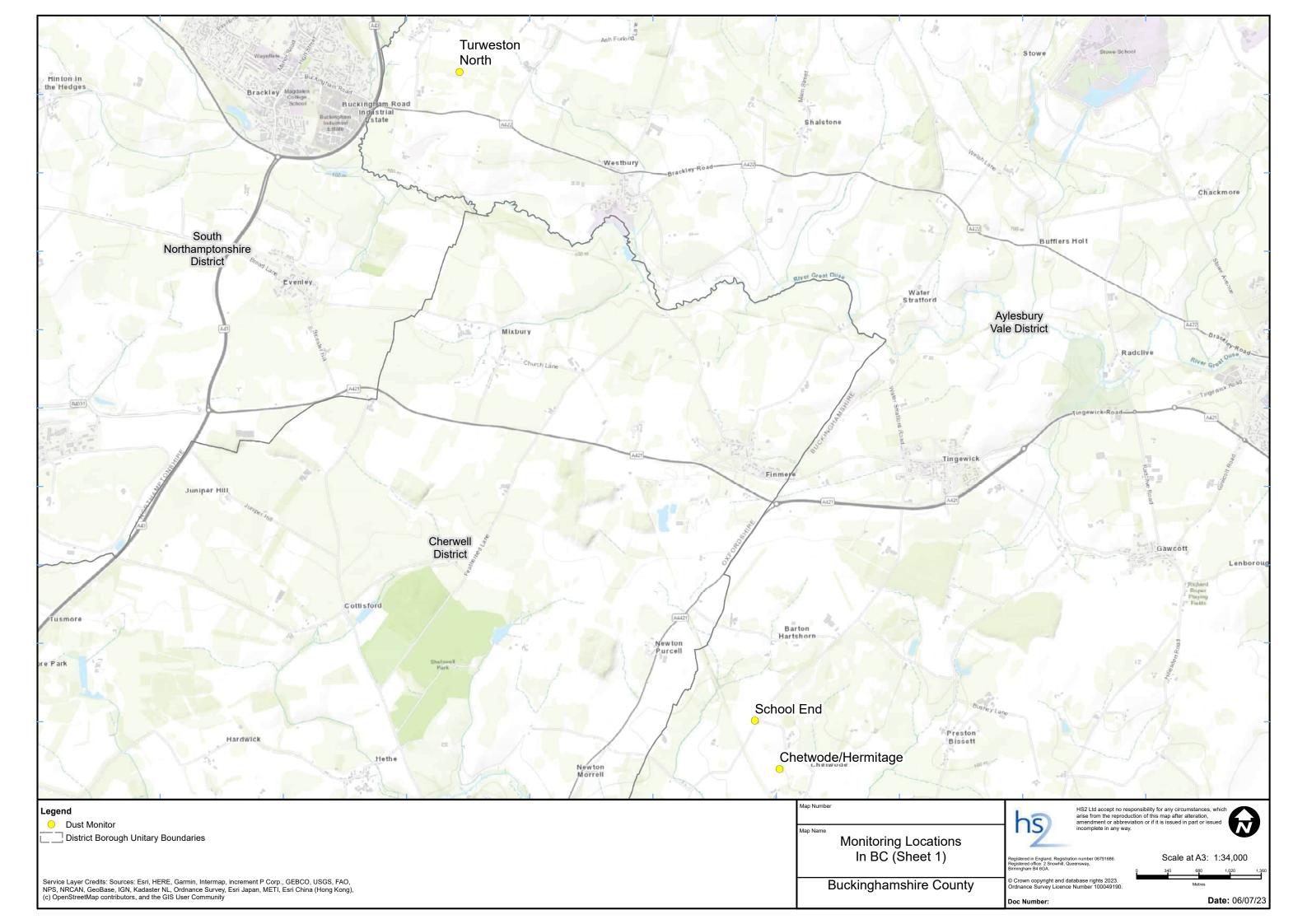
Glebe House

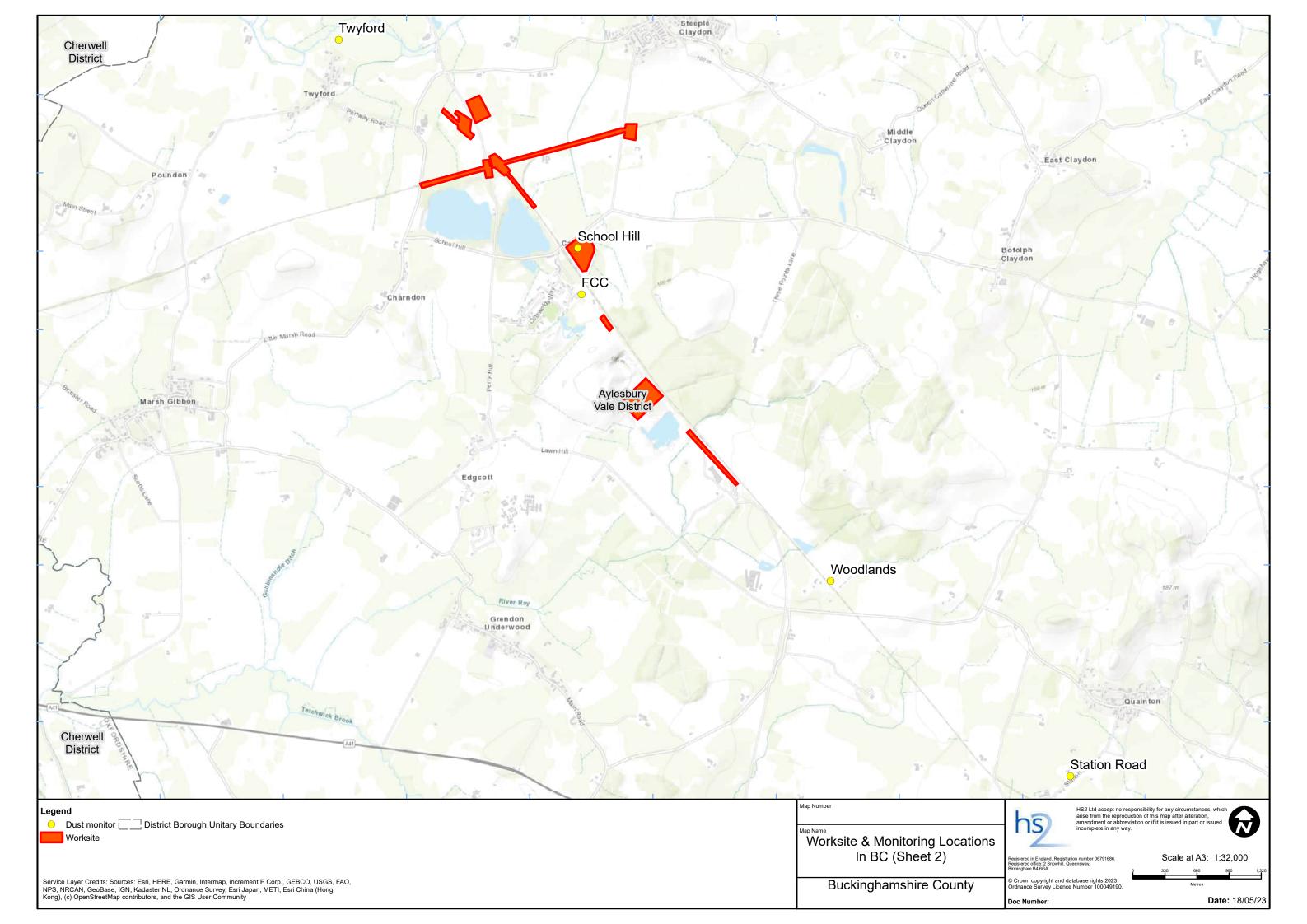
- Earthworks A418 realignment east and west link
- A418 Overbridge abundments, deck, piers and FRC
- TW connection and backfilling
- Earthworks.
- 1.1.5 Thirty-two (32) dust monitors are installed around these worksites, where works are underway. These sites returned a medium dust risk rating.
- 1.1.6 Dust monitoring locations and results are presented in Appendix B, Table 1, together with line charts of monthly data from each dust monitor presented in Figure 8. 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_{10} concentrations of 190 μ g/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 (December 2018)' has been applied.

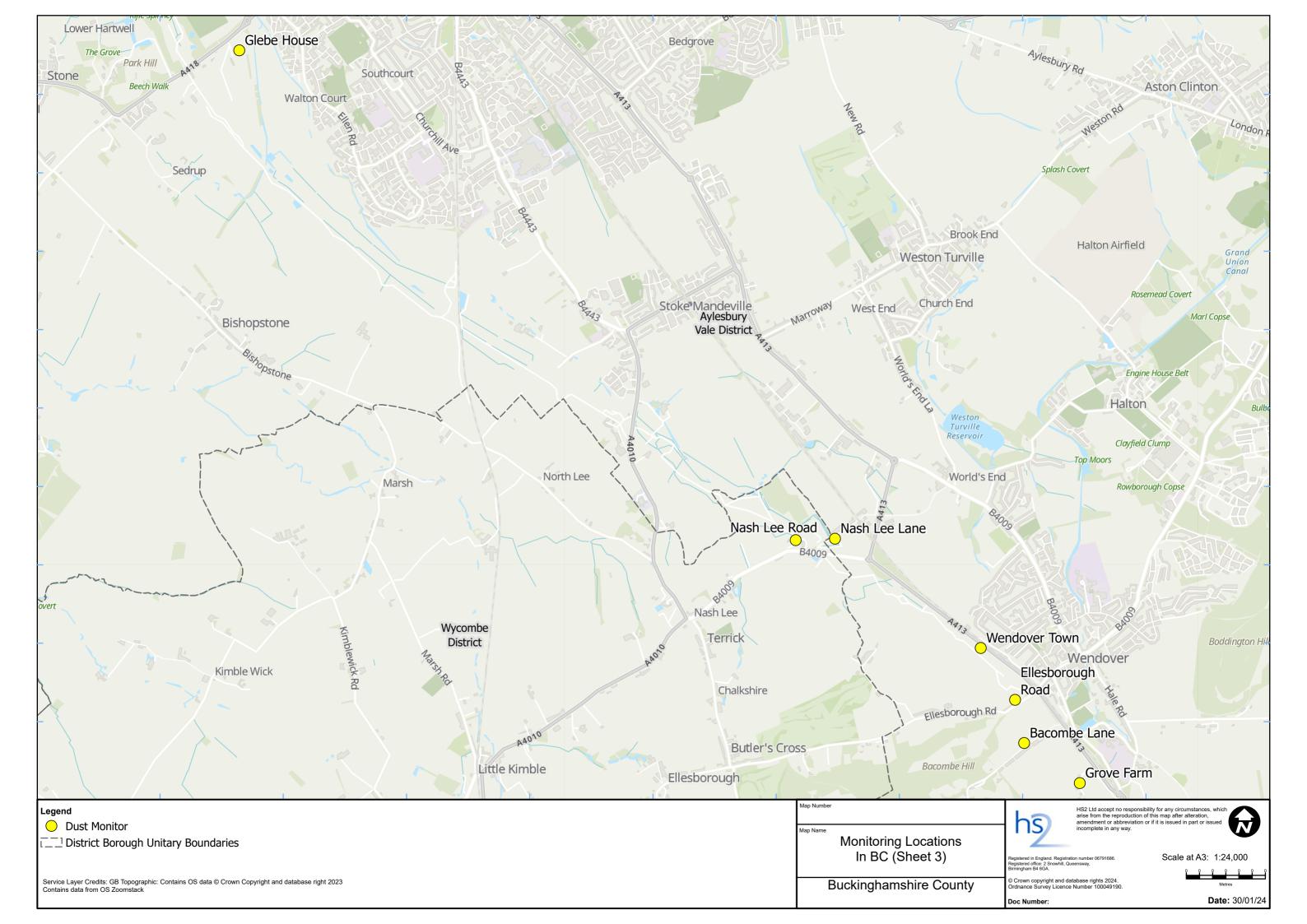
- 1.1.8 No (0) dust trigger alerts were recorded during the monitoring period (February 2024).
- 1.1.9 Data capture was below 90% for multiple monitors due to a lack of solar charge. CHStG-AQMP1 suffered a controller failure on Feb 19th which was replaced on March 1st and sent its first data packet at 09:00. Potters Row had a suspected battery fault and a lack of solar charge. Ellesborough Road had a communication cable fault. No data was captured for Twyford for the month of February 2024. This was due to the monitor being retrieved on the 17th January 2024 for laboratory calibration. No data was captured for Turweston North for the month of February 2024. This was due to the monitor being retrieved on the 8th December 2023 because of a power fault.
- 1.1.10 There were no (0) complaints received during the reporting period (February 2024).

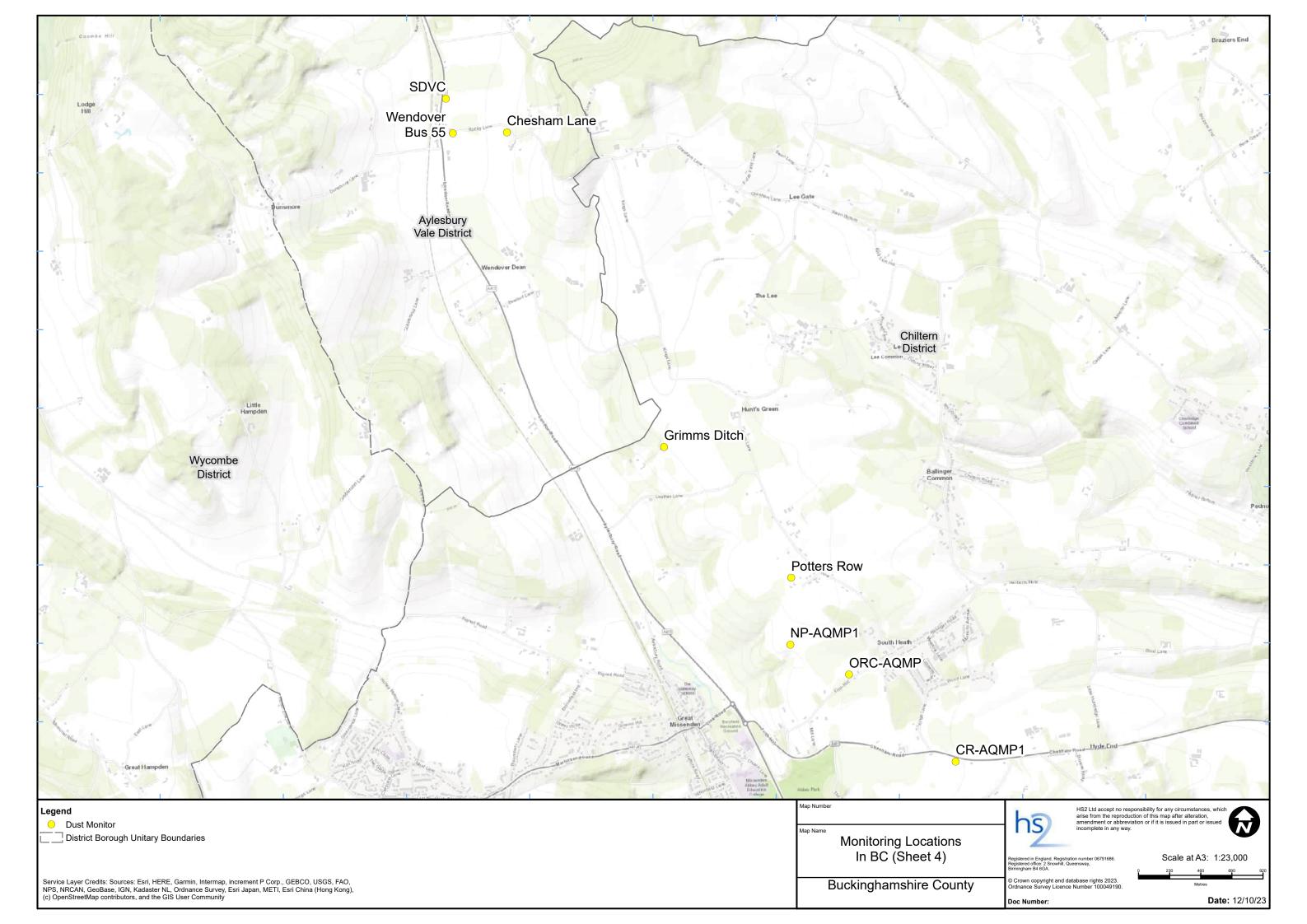
Appendix A - Worksite and Dust Monitoring Locations

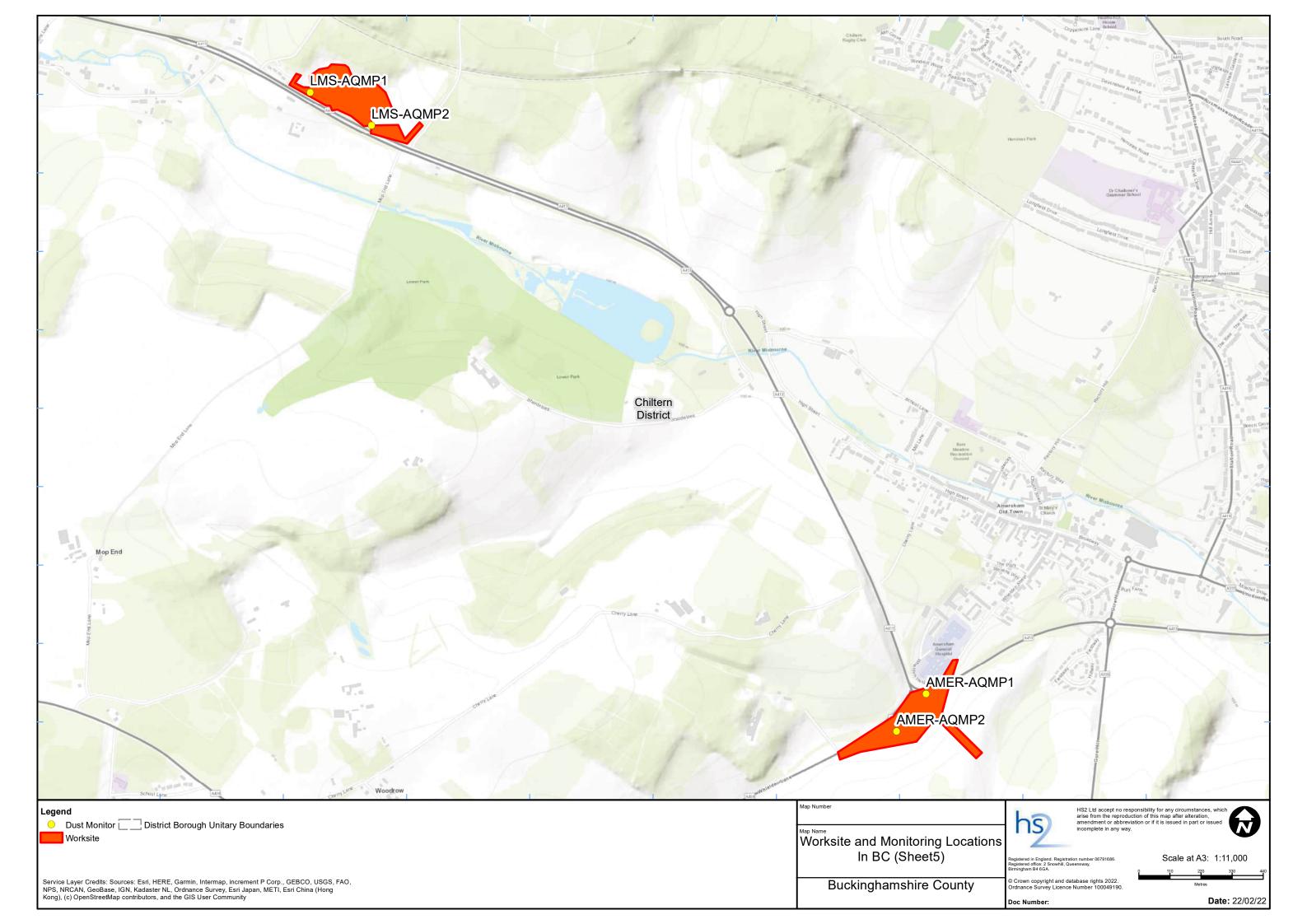
Figures 1-7: Worksite and Monitoring locations within BC

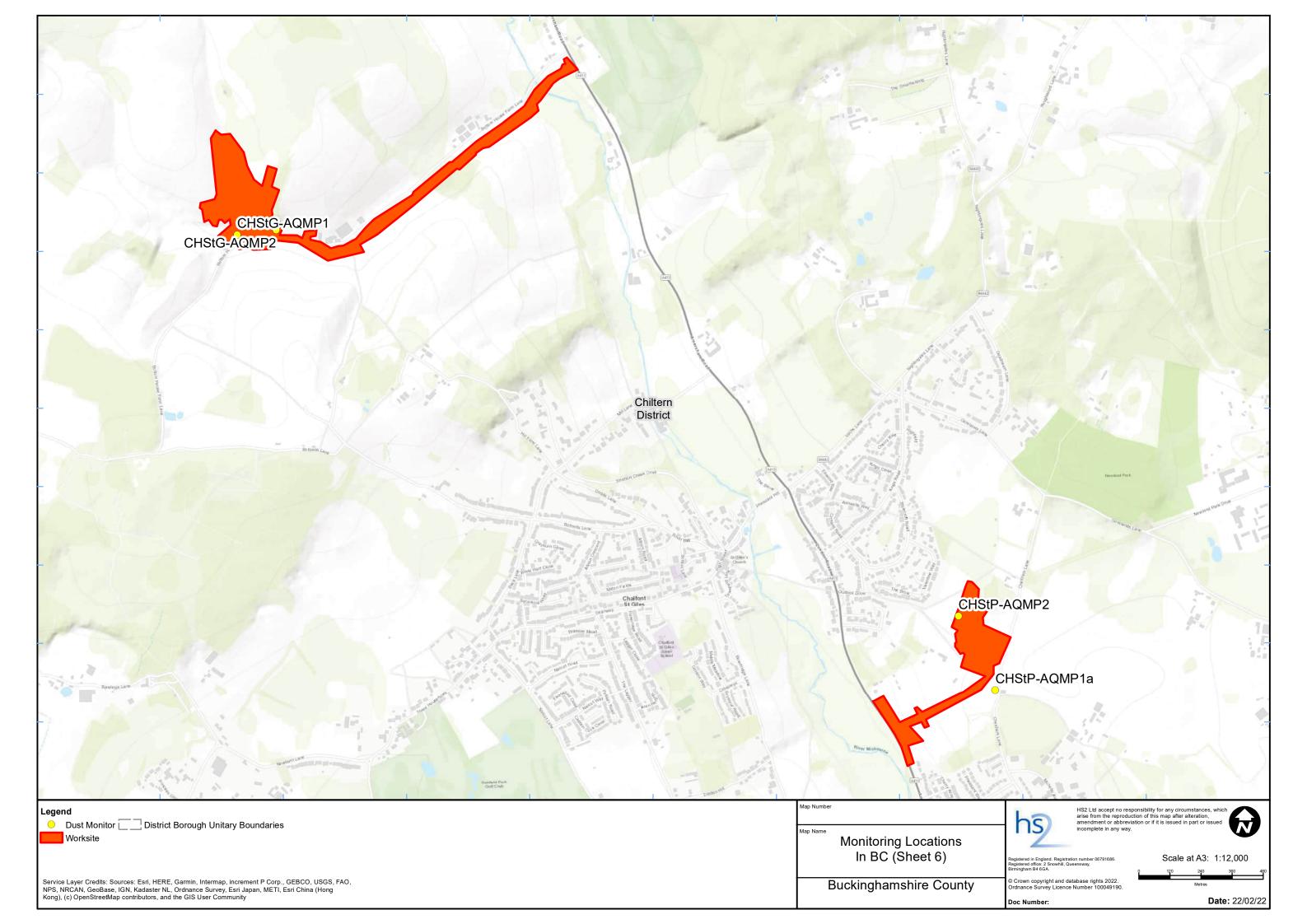


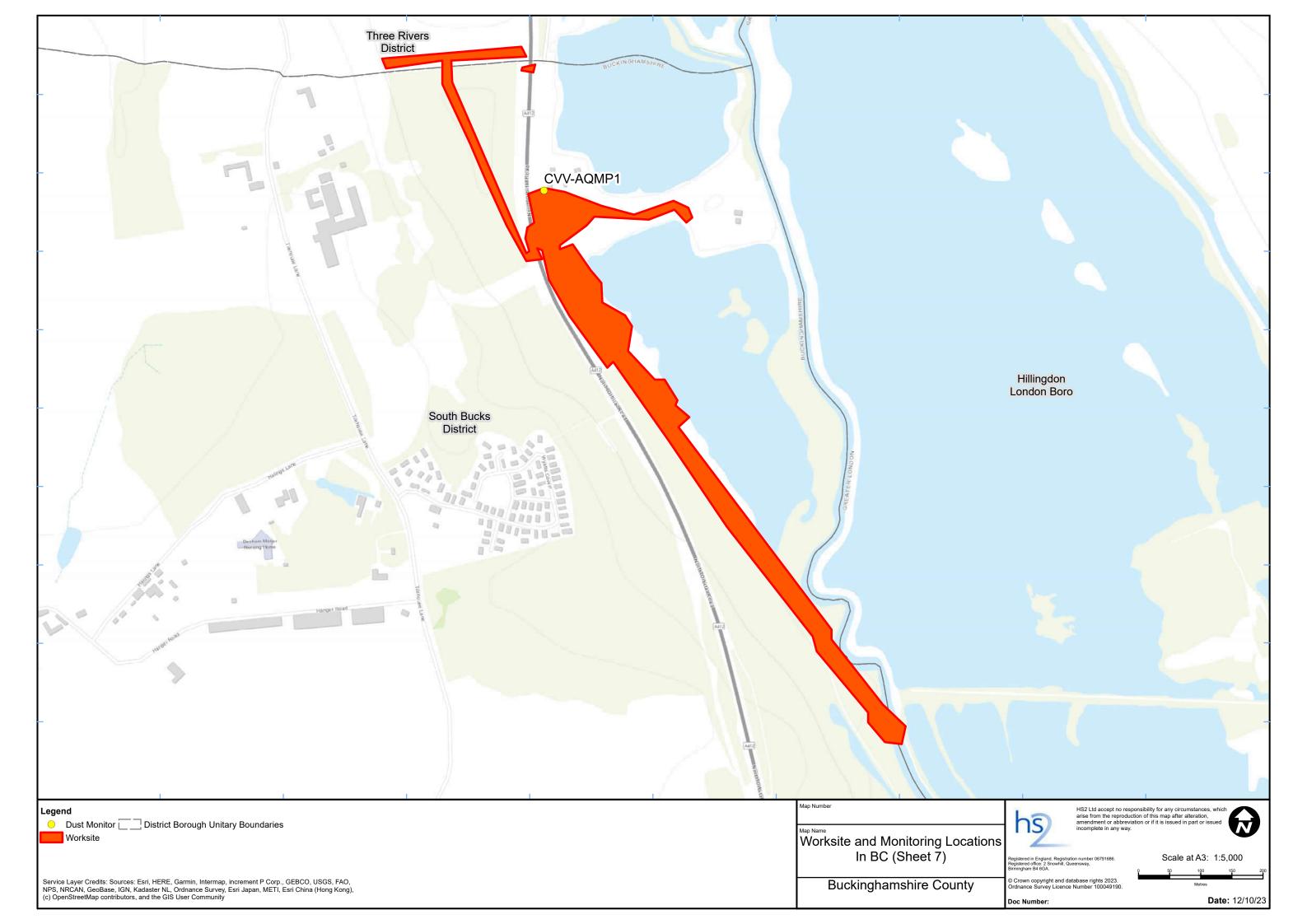












Appendix B - Dust Monitoring Results

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/m³)	Minimum 1-hour PM ₁₀ concentration (µg/m³)	Maximum 1-hour PM ₁₀ concentration (µg/m³)	Number of 1-hour periods exceeding trigger level of 190 µg/m³	Data capture (%)
CVV-AQMP1	503612, 189846	On the north boundary of LTP1	М	Yes	No	5.8	1.0	49.0	0	100.0
CHStP-AQMP1a	500093, 192996	Relocated from CHStP-NMP1 to site-boundary outside residence	М	Yes	Yes	4.8	1.0	15.0	0	100.0
CHStP-AQMP2	499951, 193282	On the western boundary of the site	М	Yes	Yes	3.6	1.0	21.0	0	100.0
AMER-AQMP1	495367, 196722	On the north- eastern boundary of Amersham	М	Yes	Yes	5.8	1.0	19.0	0	98.1
AMER-AQMP2	495263, 196590	On the south- western boundary of Amersham	М	Yes	Yes	4.4	1.0	15.0	0	98.1
CHStG-AQMP1	497170, 194752	On the southern boundary close to Hobbs Hole Cottage	М	Yes	Yes	5.4	1.0	16.0	0	65.1
CHStG-AQMP2	497320, 194770	On southern boundary next to carpark	М	Yes	Yes	5.5	1.0	35.0	0	99.0
LMS-AQMP1	493190, 198848	On the south-west of the site	М	Yes	Yes	5.2	1.0	16.0	0	100.0
LMS-AQMP2	493407, 198731	On the south-east of the site	М	Yes	Yes	5.5	1.0	17.0	0	99.1
CR-AQMP1	491291, 201143	On the Chesham Road Vent Shaft	М	Yes	Yes	5.5	1.0	43.0	0	98.0

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/m³)	Minimum 1-hour PM ₁₀ concentration (μg/m³)	Maximum 1-hour PM ₁₀ concentration (μg/m³)	Number of 1-hour periods exceeding trigger level of 190 µg/m³	Data capture (%)
ORC-AQMP	490503, 201786	Orchard Cottage South-eastern Site Boundary	М	Yes	Yes	5.0	1.0	19.0	0	100.0
NP-AQMP1	490069, 202008	North Portal Site Entrance	М	Yes	Yes	5.1	1.0	20.0	0	96.8
School Hill (CAL- AQMP2) - Dust	469003, 224740	School Hill Compound	М	Yes	Yes	5.5	1.0	26.0	0	81.5
School End – Dust	463666, 230049	School End, Chetwode	М	Yes	Yes	6.1	1.0	36.0	0	82.0
Potter Rows – Dust	490075, 202502	Potters Row, South Heath	М	Yes	Yes	5.9	1.0	17.0	0	12.8
Grimms Ditch - Dust	489135, 203468	Leather Lane, The Lee, South Heath	М	Yes	Yes	3.1	1.0	9.0	0	71.4
Chesham Lane - Dust	487974, 205794	Chesham Lane, The Lee, Wendover	М	Yes	Yes	6.1	1.0	17.0	0	89.8
Wendover Bus 55 - Dust	487574, 205787	Chesham Lane, The Lee, Wendover	М	Yes	Yes	6.1	1.0	22.0	0	71.1
Twyford - Dust	466544, 226883	Twyford, Buckinghamshire	М	No	Yes	-	-	-	-	-
Chetwode/Hermitage - Dust	463936, 229521	Hermitage, Chetwode	М	Yes	Yes	5.6	1.0	19.0	0	81.9
Glebe House - Dust	480475, 212560	A418 Aylesbury	М	Yes	Yes	6.5	1.0	21.0	0	85.1
Turweston North - Dust	460439 , 237140	Turweston, Buckinghamshire	М	No	No	-	-	-	-	-
FCC - Dust	469042 , 224263	Adjacent Red Kite View, Calvert	М	Yes	Yes	6.5	1.0	21.0	0	78.7
Ellesborough Road - Dust	486458 , 207550	Ellesborough Road, Wendover	М	No	Yes	-	-	-	-	-
Nash Lee Road - Dust	484766 , 208782	Nash Lee Lane (west)	М	Yes	Yes	5.4	1.0	36.0	0	32.8

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/m³)	Minimum 1-hour PM ₁₀ concentration (µg/m³)	Maximum 1-hour PM ₁₀ concentration (µg/m³)	Number of 1-hour periods exceeding trigger level of 190 µg/m³	Data capture (%)
Nash Lee Lane - Dust	485069 , 208793	Nash Lee Lane (east)	М	Yes	Yes	5.6	1.0	17.0	0	22.8
Bacombe Lane – Dust	486528 , 207217	Bacombe Lane, Wendover	М	Yes	Yes	6.8	1.0	30.0	0	80.9
SDVC – Dust	487522, 206043	Small Dean Viaduct, London Road	М	Yes	Yes	5.2	1.0	23.0	0	80.2
Station Road - Dust	474068, 219307	Station Road, Quainton	М	Yes	Yes	5.9	1.0	22.0	0	92.8
Wendover Town - Dust	486193, 207950	Wendover Bypass, Wendover	М	Yes	Yes	5.5	1.0	23.0	0	91.1
Woodlands - Dust	471603, 221315	Station Rd, Quainton, Woodlands Farmhouse	М	Yes	Yes	4.9	1.0	17.0	0	77.9
Grove Farm	486957, 206908	Grove Farm, London Road, Wendover	М	Yes	Yes	5.0	1.0	17.0	0	76.1

Figure 8: Continuous dust 1-hour mean indicative PM₁₀ concentration for all dust monitors

