May 2025

HS2

Air Quality and Dust Monitoring Monthly Report - May 2025 **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 May 2025.
- 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 <a href="www.gov.uk/government/collections/monitoring-the-environmental-effects-of-hs2">www.gov.uk/government/collections/monitoring-the-environmental-effects-of-hs2</a>, 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 Maintenance: Haul road maintenance;
- ATFS: permanent drainage, soiling and seeding, ATFS access road construction, slab removal;
- Pumping Water Management: pumping water management;
- Satellite Welfares;
- South Abutment: drainage works, South Abutment construction stage 2 earthworks, yard supporting activities, soiling and seeding works, launching girder platform removal;
- Environmental Maintenance;
- Stockpiling Activity HOAC: stockpile management;
- Deck Finishes Logistics: preparation and operation of storage yards and installation of below deck access provision, traffic management on the deck surface, delivery of parapets, noise barriers, troughs, pipes, steel works and other minor material to the storage yards and deck, installation of access at the top of the deck (HAKI stairs) and finishes support plan;
- Deck Finishes On-deck Construction: north abutment works, deck waterproofing, SFRC slab construction, North embankment and south embankment noise barriers and foundations, noise barrier and concrete panel installation at north embankment, and masking wall installation at north embankment and south embankment;
- Deck Finishes In-deck Construction: structural health monitoring;
- Landscaping: advanced works including removal of cofferdam, initial ground drainage including manhole chamber, landscaping, hardstanding removal and tree removal & vegetation clearance, and streetworks – bellmouth road construction; and

General site activities.

## **Chalfont St Peter Vent Shaft**

- General Site Activities;
- Road Maintenance Works;
- Ground Level Works (External Works Part 2);
- Building Trades: brickworks and internals; and
- Demobilisation.

#### **Amersham Vent Shaft**

- General Site Activities;
- External Works Phases 1&2;
- Precast Boundary Wall;
- Internal Works;
- · Steel Works and Zinc Cladding; and
- Whielden Land Drainage Works.

#### **Chalfont St Giles Vent Shaft**

- General Site Activities;
- Road Maintenance Works;
- External Works Phase 2;
- Building Trades: brickworks and internal works; and
- Demobilisation.

## Little Missenden Vent Shaft

- General site activity;
- Tunnel Connection;
- Internal Works;
- · Steel Works and Cladding; and
- External Works Phase 1 and Phase 2.

## **Chesham Vent Shaft**

- General site activity:
- External Works;
- Internal Works;
- Zinc Cladding Works;
- Demobilisation; and
- Landscaping.

#### North Portal work site

- General Plant: Site Activities;
- Tracks Platform;

- Piling Platform Reinstatement;
- Porous Portal Structure;
- North Portal Building;
- Tunnel Support: Batching Plant operation and concrete distribution and tunnel walkway slip forming; and
- Tracks Drainage and Utilities.

#### **South Heath**

- South Heath Earthworks & Drainage: Cutting and landscaping;
- General Earthworks: Site operations & support vehicles, stockpile management, surface water management, compounds and general maintenance;
- South Heath drainage: Earthworks for track drainage, stockpile and landscaping bunds drainage and collection chamber construction;
- Utilities: Excavation and construction, installation of utilities and connection of new utilities;
- Great Missenden Compound: Plant and compound maintenance, utilities work and site security at Great Missenden round-about;
- GMI/2 Overbridge: Site security, construction of FRC structure, deck finishes and cutting finishes;
- GMI/12 Overbridge: Site security, excavation & pile cropping, construction of FRC structure, deck finishes and cutting finishes;
- Ground Investigation Works: borehole drilling, geo-phys investigations and ground investigation and mitigation;
- Site Access Road and Mass Haul Route construction and maintenance: lime spreading and tarmac & concrete surfacing; and
- Roads utilisation: SAR utilisation and MHR utilisation.

#### **North Chilterns Area**

#### **Grimms Ditch**

- Minor Excavation works to expose front of the sheet pile retaining walls
- Concrete finishing works and application of joint sealant
- Installation of Monitoring prisms and ATS machine.

## Chesham Lane, Wendover Bus 55

- Rocky Lane Underbridge
- Installation catchpits and pipe run
- Back of wall Drainage works
- Cutting, testing, filling and compaction work for Rocky Lane Realignment
- Concrete finishing works and application of waterproofing for the underbridge structures
- Utility works Micro Substation, BT chambers and Thames water main.

## Ellesborough Road

- Excavation continuing in phase 2/4 (Wendover Green Tunnel South)
- Excavation continuing in phase 3 (Wendover Green Tunnel North).

#### Nash Lee Road, Nash Lee Lane

- Nash Lee Overbridge A3 (East)
- Backwall Pour (42.5m3).
- Wingwall E2 base Slab poured (80m3).
- Fixing and reinforcement of the E1 & E2 wingwalls.
- E3 Blinding poured, E3 base slab reinforcement
- Nash Lee Overbridge A0 (West)
- Fixing and reinforcement for the W1 wingwalls
- Nash Lee Overbridge
- Bearing plinths poured for A0, P1, P2, A3
- Finished trimming EM platform for beam installation works
- Eiffage Metal mobilised ready to begin beam installation
- AC8 Culvert
- Backfilled around the culvert boxes and headwalls.

#### **Bacombe Lane**

- TBM Drive from Chamber 002 continues with the Rings being installed as the drive-in
- Installation of the rail in the tunnel to transport the segments through.

## **Grove Farm**

- Grove Farm Underbridge:
- cropping the wingwall piles on each section to the correct level
- Excavating below stone level
- Striking the shutters of the base slab
- cutting the rebars to give easy access when cutting the piles
- TR2 Wall being dismantled and scaffolds being removed
- Grove Farm Culvert:
- Installing the first 12 segments of chamber 001
- fixing the mesh and chairs for the collar of chamber 001 (POI001) and pouring the concrete after
- Placing of Jacking Rams and handrails on Chamber 001
- Grove Farm Attenuation Tank
- Completion of the SPI Platform
- Pre-Augering of the sheet piling line had commenced
- mobilisation of the materials, such as the sheet piling and the ABI TM20 Leader Rig.

#### Small Dean Viaduct

- Steel fixing top of viaduct deck
- Formwork installation top of viaduct deck
- Slab installation bottom and top of viaduct deck

- Pour of top deck from Mid span 3 to Mid span 6
- steel fixing and formwork installation inside of viaduct deck
- Pour of Span 1 bottom stitch
- Steel fixing at A7
- Formwork installation at A7
- A7 backwall first pour
- A0 steel fixing.

## Wendover Town

- Wendover North Portal:
- De-vegetation/clearance of Wellwick farm
- Connecting welfare unit to mains water
- Removal of 1206 UKPN Cable
- LPW Construction:
- Continued LPW panel installation using two unrestricted hydraulic grabs at Wendover and 1 long-reach excavator at Nash Lee.
- One pre-treatment rig was operational.
- Daily water deliveries, with on average 12 lorries delivering 320,000L per working day.
- Continued stoning up new SAR.
- Phase 1 Precast Installation:
- Continued construction of phase 1 tunnel
- 153no. segments installed in May
- Compound Works:
- Installation of drainage network around compound
- Installation of manholes, catch pits and filter drains
- Installation of NSFA125 hydrocarbon interceptor
- Phase 3 Dewatering:
- Devegetation of western ditch alongside A413 for dewatering discharge
- Mobilisation of dewatering system
- Mobilisation of abstraction pumps and MT8 monitoring tank
- Mobilisation of pipelines
- Mobilisation of discharge pumps
- Dewatering system commissioned. First dewatering 14th May
- Waterproofing:
- Mobilisation of overwaterproofing gantry
- Started construction of gantry at north of phase 1
- Sealed of ring gaps around extrados of constructed tunnel

#### **Calvert Area**

### **Quainton**

- Earthworks Ongoing
- Utility diversions.
- Station Road Realignment (East tie-in) de-vegetation, old tarmac removal.

## **Woodlands**

- Woodlands Cutting Dig & Replace.
- Woodland Drop Inlet Culvert works.
- Adamas Accommodation Technical backfill and back of wall drainage.
- Aggregate deliveries along the SAR.

### FCC / School Hill (Calvert)

- School Hill batching plant production of concrete.
- School Hill Overbridge FRC works.
- School Hill Road Realignment VacEx for utilities
- Calvert Green overbridge FRC works.
- Aggregate deliveries along the site access road (SAR).
- Calvert Cutting earthworks drainage and general maintenance activities.
- CBGM batching plant production of CBGM.

## 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)
- FCC Access Road Retaining Wall
- 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
- Doddershall Embankment earthworks
- Doddershall No. 6 and No. 7 Culvert

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- Quainton cutting
- QUA28 overbridge
- Station Road overbridge
- Station Road Network Rail overbridge.

## **Twyford to Greatworth**

## **School End**

- School End Overbridge- Parapet Installation, Parapet Stitch.
- School End Highways-Temporary Road Crossing Remove and Install new at grade crossing (Phase 2)
- School End Highways- Temporary Road Crossing School End Access Road Closure (Anglian Water & Giga Clear)
- Installation of POI-1 to POI-2 on south verge.
- Use and maintenance of SAR and MHR.
- Stockpiling.

## **Twyford**

- Twyford Embankment- Soil Stabilisation, Bulk Dig.
- Twyford Viaduct- South Abutment A0 Pile cap Concrete, South Abutment A0 Stem
   Steel fixing & FWK, South Pier P1 Pier Shell Core Concrete, North A3 Blinding,
   North Pier P2 Pile cap blinding, steel fixing and concrete.
- Use and maintenance of SAR and MHR.
- Stockpiling.

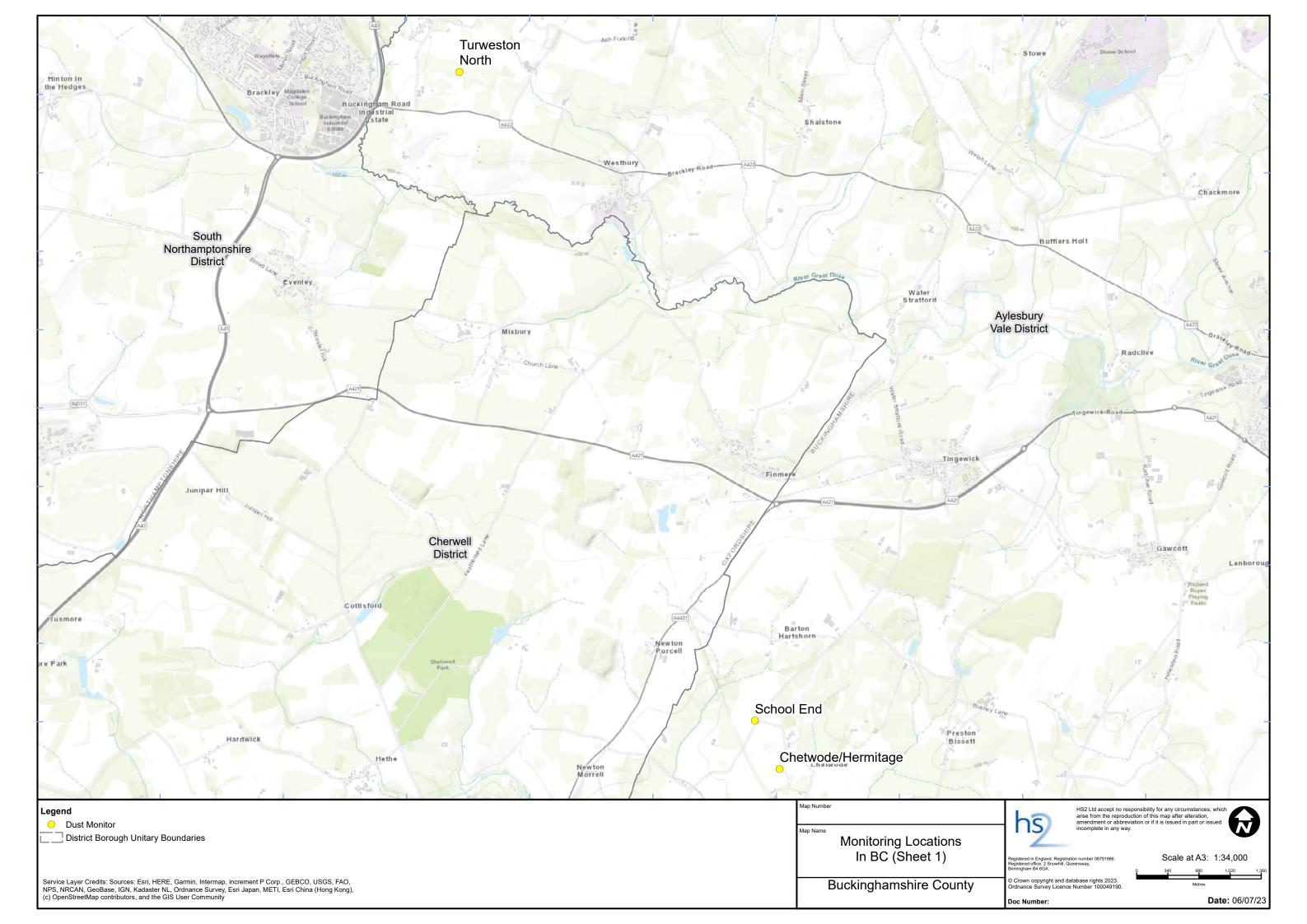
#### **Hermitage**

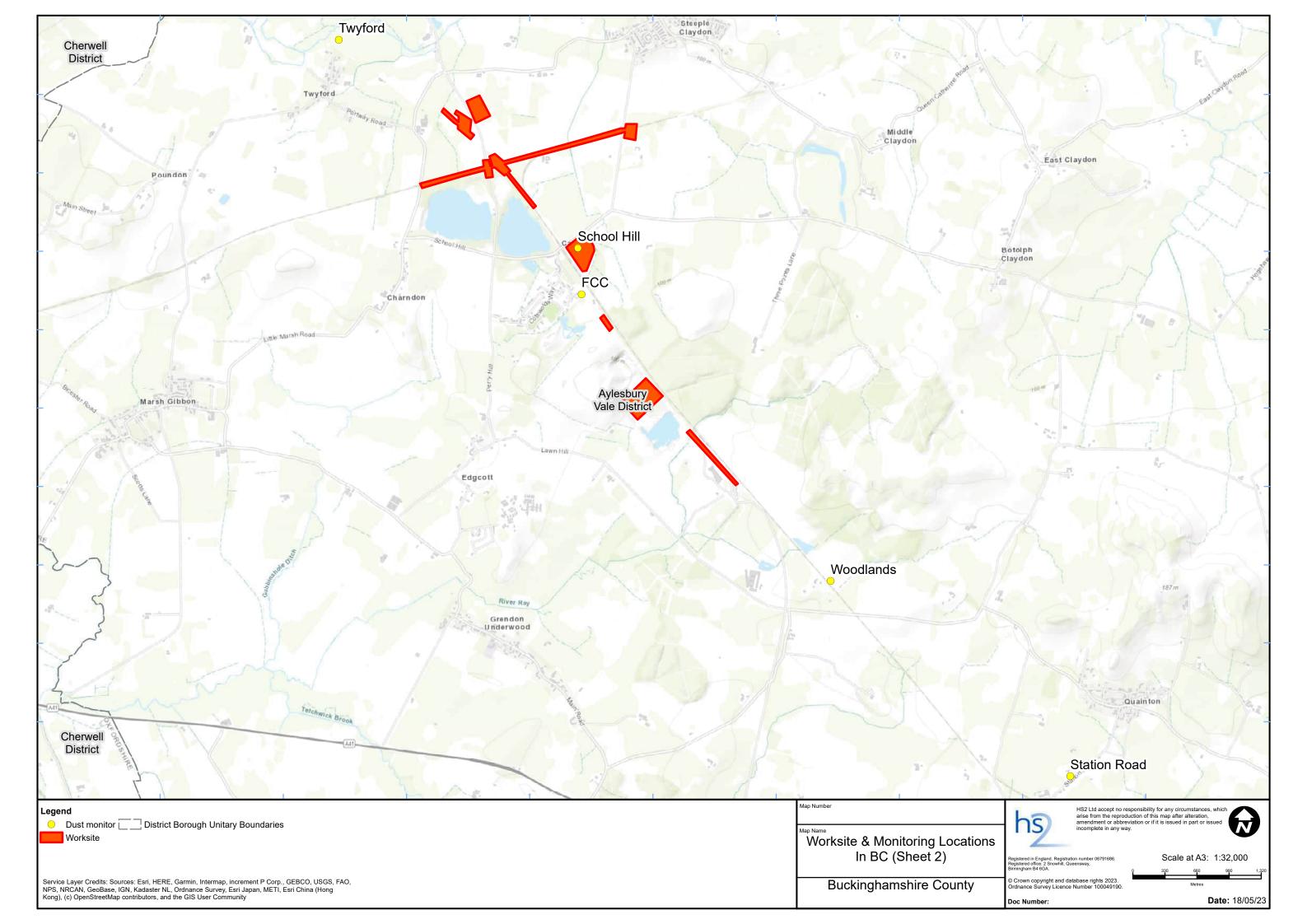
- CHW18 O/B: Parapet Installation, Parapet Stitch
- Chetwode Cutting Landscape Earthworks: Bulk Dig and Structural Backfill.
- Chetwode Cutting South: Bulk Dig.
- Use and maintenance of SAR and MHR.
- Stockpiling.
- 1.1.5 Thirty-three (33) dust monitors are installed around these worksites, where works 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.

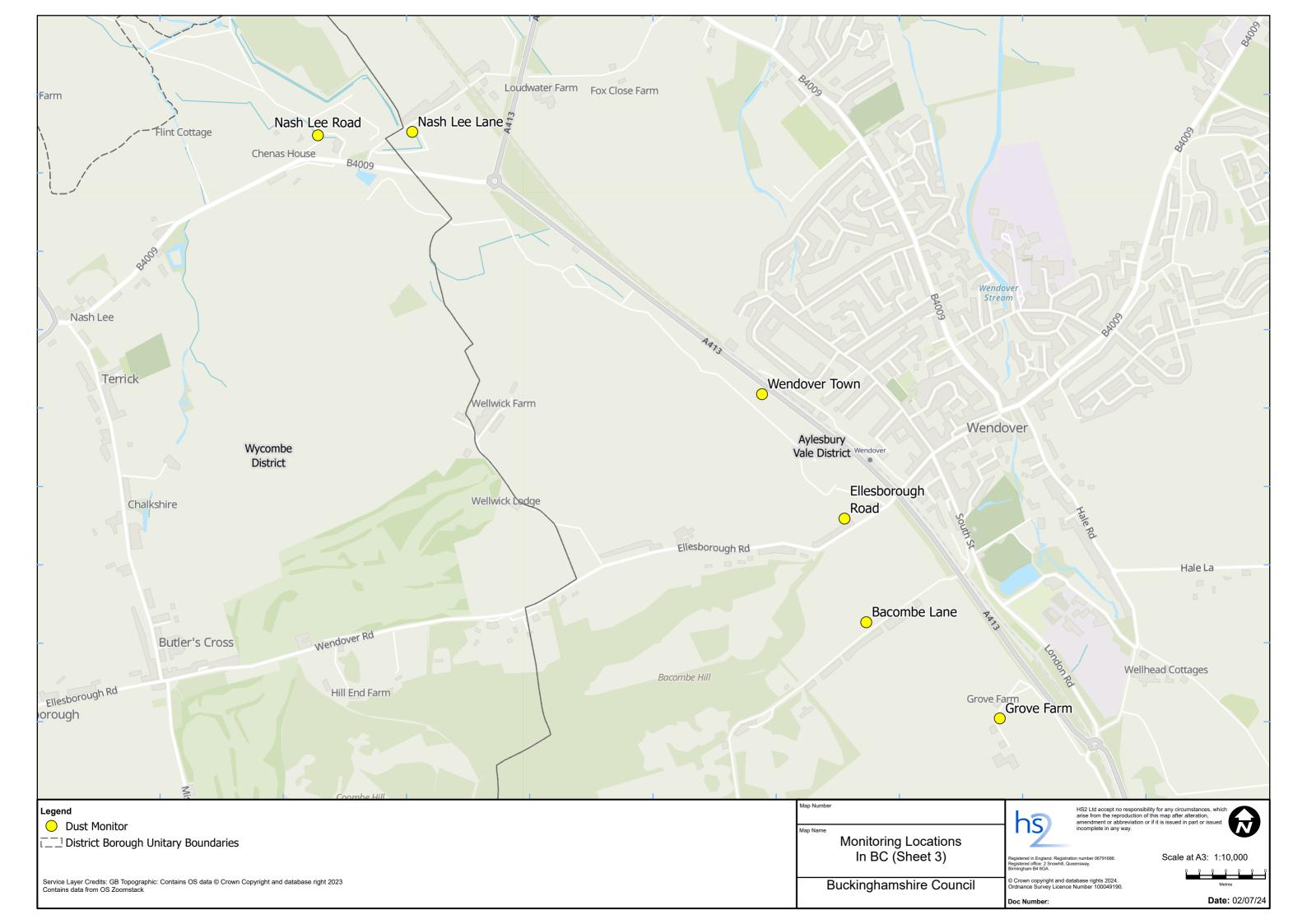
- 1.1.7 The trigger level for  $PM_{10}$  concentrations of 190  $\mu$ g/m<sup>3</sup>, measured as a 1-hour mean, in accordance with the updated guidance document 'Guidance on Monitoring in the Vicinity of Demolition and Construction Sites (December 2018)' has been applied.
- 1.1.8 No (0) dust trigger alerts were recorded during the monitoring period (May 2025).
- 1.1.9 AMER-AQMP2 was removed on the 14<sup>th</sup> of April and there are currently no plans to relocate this monitor.
- 1.1.10 Data capture was below 90% for multiple monitors due to:
  - School End had no data capture from 1st to 7th May 2025 due to the monitor being retrieved for calibration. New dust monitor installed on 8th May 2025.
  - NP-AQMP1 had the mains power disconnected on the 24th of May and has been fixed on the 2nd of June.
- 1.1.11 There were no (0) complaints received during the reporting period (May 2025).

# **Appendix A - Worksite and Dust Monitoring Locations**

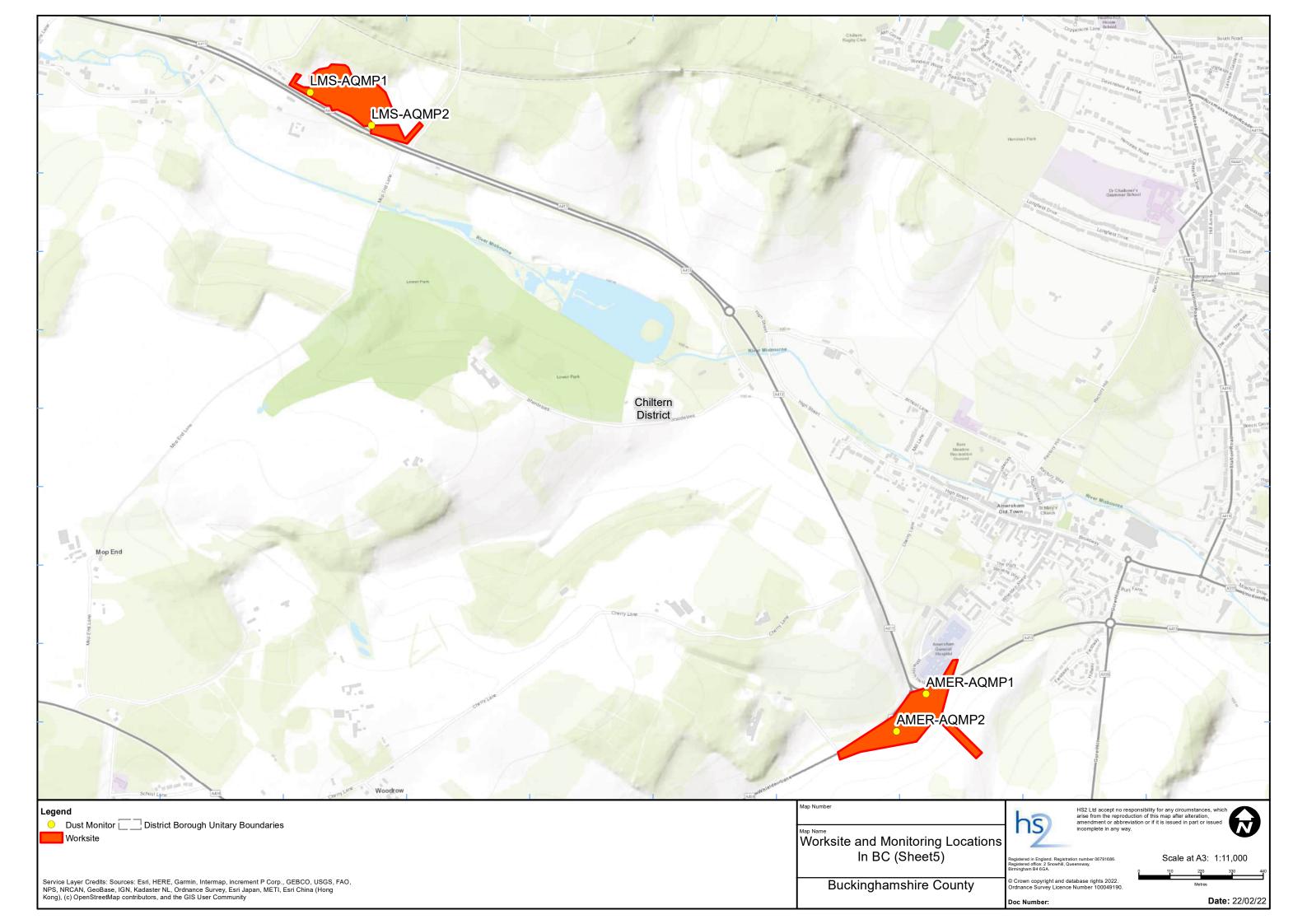
Figures 1-7: Worksite and Monitoring locations within BC

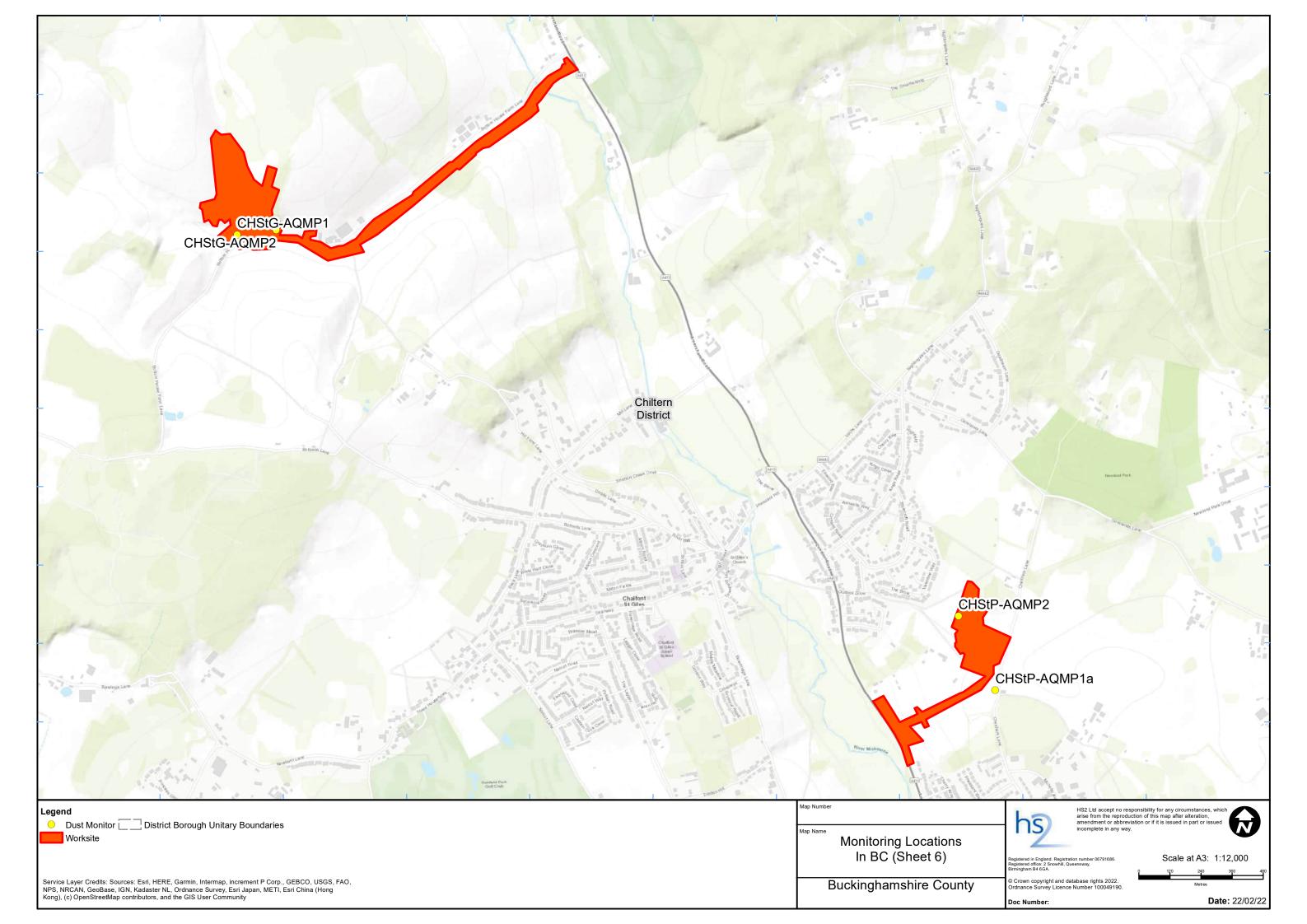


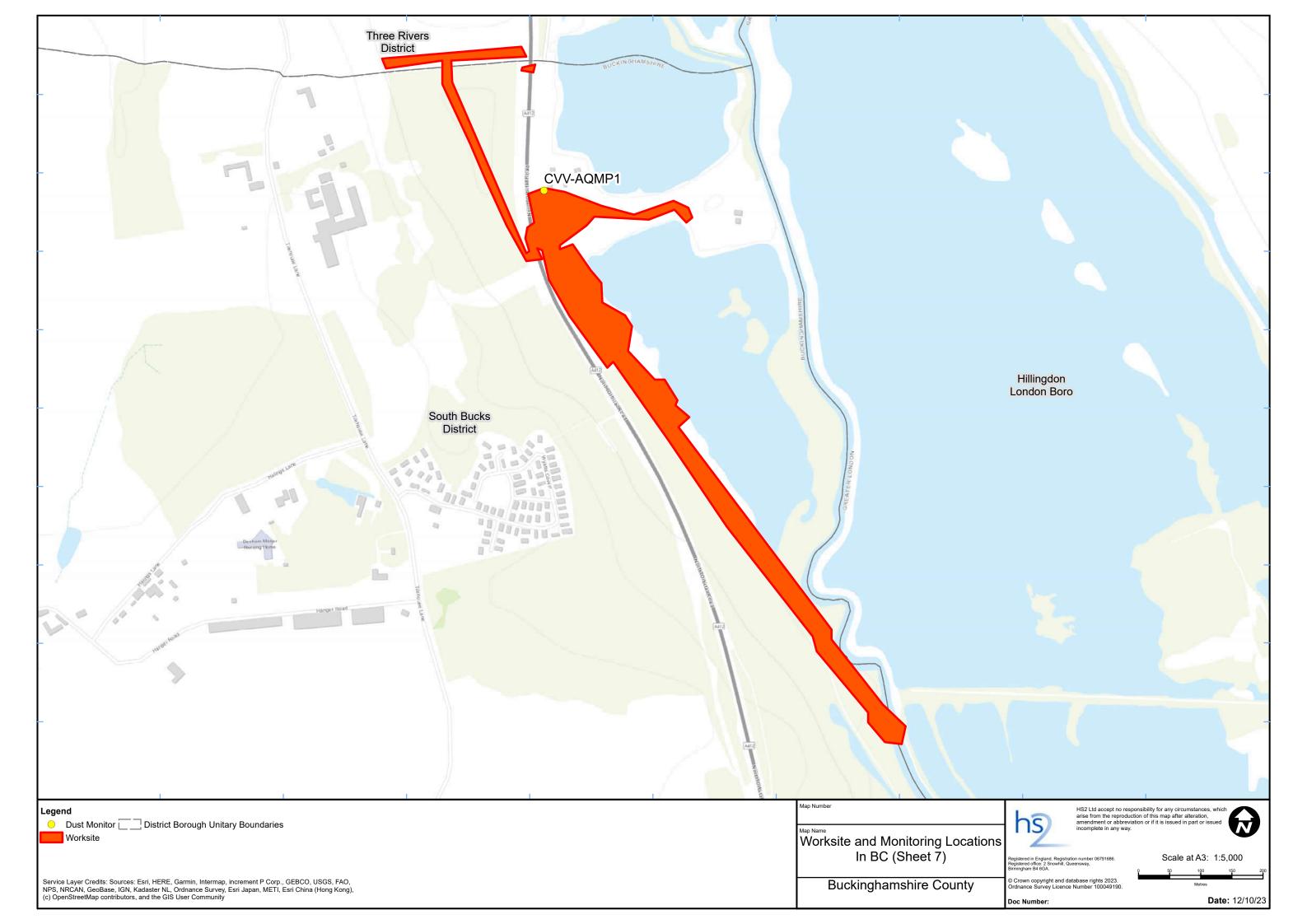












# **Appendix B - Dust Monitoring Results**

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 <sub>10</sub> concentration (µg/m³)	Minimum 1-hour PM <sub>10</sub> concentration (µg/m³)	Maximum 1-hour PM <sub>10</sub> 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	4.9	1.0	36.0	0	98.5
CHStP-AQMP1a	500093, 192996	Relocated from CHStP-NMP1 to site-boundary outside residence	М	Yes	Yes	6.1	1.0	32.0	0	98.3
CHStP-AQMP2	499951, 193282	On the western boundary of the site	М	Yes	Yes	3.7	1.0	34.0	0	100.0
AMER-AQMP1	495367, 196722	On the north- eastern boundary of Amersham	М	Yes	Yes	6.2	1.0	39.0	0	100.0
CHStG-AQMP1	497170, 194752	On the southern boundary close to Hobbs Hole Cottage	М	Yes	Yes	6.0	1.0	33.0	0	100.0
CHStG-AQMP2	497320, 194770	On southern boundary next to carpark	М	Yes	Yes	6.6	1.0	47.0	0	98.1
LMS-AQMP1	493190, 198848	On the south-west of the site	М	Yes	Yes	7.9	2.0	38.0	0	98.5
LMS-AQMP2	493407, 198731	On the south-east of the site	М	Yes	Yes	6.4	1.0	38.0	0	98.1
CR-AQMP1	491291, 201143	On the Chesham Road Vent Shaft	М	Yes	Yes	7.0	1.0	43.0	0	99.6
ORC-AQMP	490503, 201786	Orchard Cottage South-eastern Site Boundary	М	Yes	Yes	6.2	1.0	30.0	0	99.9

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/m³)	Minimum 1-hour PM <sub>10</sub> concentration (μg/m³)	Maximum 1-hour PM <sub>10</sub> concentration (µg/m³)	Number of 1-hour periods exceeding trigger level of 190 µg/m³	Data capture (%)
NP-AQMP1	490069, 202008	North Portal Site Entrance	М	Yes	Yes	6.8	1.0	40.0	0	67.9
SH-AQMP1	490152, 202395	Park Farm	М	Yes	Yes	19.2	8.7	81.7	0	99.9
SH-AQMP2	489564, 202757	King's Lane	М	Yes	Yes	8.3	6.4	14.0	0	100.0
SH-AQMP3	489569, 203654	Leather Lane	М	Yes	Yes	23.2	8.5	107.2	0	100.0
School Hill (CAL- AQMP2) - Dust	469003, 224740	School Hill Compound	М	Yes	Yes	18.6	7.0	61.0	0	100.0
School End – Dust	463666, 230049	School End, Chetwode	М	Yes	Yes	35.2	10.0	84.0	0	75.5
Grimms Ditch – Dust	489135, 203468	Leather Lane, The Lee, South Heath	М	Yes	Yes	6.6	1.0	45.0	0	99.6
Chesham Lane - Dust	487974, 205794	Chesham Lane, The Lee, Wendover	М	Yes	Yes	6.6	1.0	40.0	0	99.9
Wendover Bus 55 - Dust	487574, 205787	Chesham Lane, The Lee, Wendover	М	Yes	Yes	6.8	1.0	42.0	0	100.0
Twyford - Dust	466544, 226883	Twyford, Buckinghamshire	М	Yes	Yes	7.4	1.0	74.0	0	100.0
Chetwode/Hermitage - Dust	463936, 229521	Hermitage, Chetwode	М	Yes	Yes	27.8	1.0	84.0	0	100.0
Turweston North - Dust	460439 , 237140	Turweston, Buckinghamshire	М	Yes	Yes	62.5	27.0	92.0	0	100.0
FCC - Dust	469042 , 224263	Adjacent Red Kite View, Calvert	М	Yes	Yes	18.1	8.0	56.0	0	100.0
Ellesborough Road - Dust	486458 , 207550	Ellesborough Road, Wendover	М	Yes	Yes	7.4	1.0	42.0	0	97.4
Nash Lee Road - Dust	484766 , 208782	Nash Lee Lane (west)	М	Yes	Yes	8.0	1.0	33.0	0	100.0

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 <sub>10</sub> concentration (μg/m³)	Minimum 1-hour PM <sub>10</sub> concentration (μg/m³)	Maximum 1-hour PM <sub>10</sub> 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	7.0	1.0	32.0	0	100.0
Bacombe Lane – Dust	486528 , 207217	Bacombe Lane, Wendover	М	Yes	Yes	6.3	1.0	41.0	0	100.0
SDVC – Dust	487522, 206043	Small Dean Viaduct, London Road	М	Yes	Yes	6.5	1.0	41.0	0	99.9
Station Road – Dust	474068, 219307	Station Road, Quainton	М	Yes	Yes	6.9	1.0	34.0	0	100.0
Wendover Town - Dust	486193, 207950	Wendover Bypass, Wendover	М	Yes	Yes	6.7	1.0	39.0	0	99.9
Woodlands - Dust	471603, 221315	Station Rd, Quainton, Woodlands Farmhouse	М	Yes	Yes	7.4	1.0	46.0	0	100.0
Grove Farm	486957, 206908	Grove Farm, London Road, Wendover	М	Yes	Yes	7.0	1.0	51.0	0	99.9

Figure 8: Continuous dust 1-hour mean indicative PM<sub>10</sub> concentration for all dust monitors

