

April 2025

# Air Quality and Dust Monitoring Monthly Report – April 2025 Buckinghamshire Council

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A report prepared by EWCs and MWCCs on behalf of HS<sub>2</sub> 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 Buckinghamshire Council (BC) during April 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="https://www.gov.uk/government/collections/monitoring-the-environmentaleffects-of-hs2">www.gov.uk/government/collections/monitoring-the-environmentaleffects-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
- Road utilisation: SAR utilisation and MHR utilisation.

## North Chilterns Area

## Grimms Ditch

- Reshaping the batters north and south
- Edging installation on north
- Drainage build-up, 6F5 and Type 1 installation
- Concrete finishing works north and south.

## Chesham Lane, Wendover Bus 55

- Rocky Lane Underbridge:
  - Striking temporary formwork
  - Concrete finishing works
  - Waterproofing the Abutment walls and Wing walls
  - East drainage installation
  - Lifting operations 220t crawler crane
  - Utility works ongoing.

## Ellesborough Road

• Earthworks – movement of materials from WGT excavations.

## Nash Lee Road, Nash Lee Lane

- Nash Lee Overbridge (NLOB) A0 (West) Backwall Pour (42.5m3). W2 Wingwall slab poured
- NLOB A3 (East) Reinforcement and shutters constructed for the backwall. Wingwall E2 Blinding Pour (26 m3), reinforcement and formwork constructed and E2 Wingwall Base poured (80 m3)
- NLOB P1 (West) Struck the shutters for the crosshead
- NLOB P2 (East) Poured the crosshead (110m3) & struck the shutters.
- Constructed the Eiffage Metal platform ready for installation of the Steel for the NLOB 11000m3 of material excavated and replaced.

## <u>Bacombe Lane</u>

- Tidy up area and move materials for WGT Cut
- Swap to new access due to WGT Cut
- Tunnelling continued from POI-002 POI-001.

## <u>Grove Farm</u>

- Commence Shaft POI-001
- Excavate for shaft collar
- Install first ring.
- Excavated Sheet piling platform area

## Grove Farm Underbridge

- Installed reinforcement, and shuttering
- Installed I&M
- Poured Top Deck.

## <u>Small Dean Viaduct</u>

- Deck works
- Bottom Deck
- Installation of bottom deck reinforcement
- Install and striking of bottom deck formwork
- Casting of bottom deck (11/13 pours completed)
- Installation of precast slabs
- Span 1 and Span 7 near completion
- Top Deck
- Preparation for top span pours, install of reinforcement, install of formwork, install of drainage.
- Completion of A7 cheek walls

- Installation of reinforcement
- Installation of formwork
- casting of walls
- Pier works
- Installation of precast ears at Pier 1,4,5,6
- Removal of access scaffolds to Pier 4 and 5.

#### <u>Wendover Town</u>

- Blinding Slab Construction:
  - Final installation of phase 1 blinding slab
  - Works complete for phase 1 by end of month
- Precast Installation:
  - Installation of PCC segments
  - Ring 314 to Ring 301 installed in month of april
- Compound Setup:
  - Final fit out of site office with furniture and equipment
  - Surfacing preparation for compound access road and car park
  - o Surface water management installation around compound
- 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.
  - o Water deliveries and movement of muck.
- Guide Wall Removal:
  - Guide wall removal works.
  - 145m of the guide wall has been removed so far.
  - Movement of the material.
- SAR Diversion Construction:
  - Poured the base slabs for the western LPW protection slabs.
  - Assembled cages for the slabs, ready to be lifted onto the base slabs.
  - Undertook vegetation clearance of the ditch on the interface with Welwick Farm.
- Wendover Batching Plant:
  - Undertook general batching plant maintenance.
- Farmers Gate at the Public Access Path:
  - Repair works were undertaken on the fencing as requested by the engagement team.

## **Calvert Area**

## <u>Quainton</u>

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

## <u>Woodlands</u>

- 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

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

## Twyford to Greatworth

#### Turweston North

- Turweston Green Overbridge- Reinforcement installation for deck and diaphragm. Structural backfill in front of the abutments. South wingwalls (East and West) foundations concreted. Deck pour. Steel installation and formwork for the wing walls.
- Completion of Lowering & bearing installation. Eiffage Metal Site demobilization. Instillation of L walls on the abutments to facilitate the surcharge.
- Earthworks- Excavate and replace, bulk excavation and class 4 landscape bund fill.

## <u>School End</u>

- School End Overbridge: Parapet Installation.
- Chetwode Cutting North: Landscape Bund East
- School End Road Realignment: Structural Fill to East Abutment
- Use of MHR: Mass Haul of Material to Calvert
- Use of SAR: General Use.

## <u>Twyford</u>

- Twyford Cutting: Track Drainage Installation
- Twyford Viaduct: South side A0 and P1 FRC works, North side: Sheet piling cofferdams installation.
- Twyford Embankment: CSS Stabilization works.
- Use of MHR: Mass Haul of Material to Calvert
- Use of SAR: General Use.

## <u>Hermitage</u>

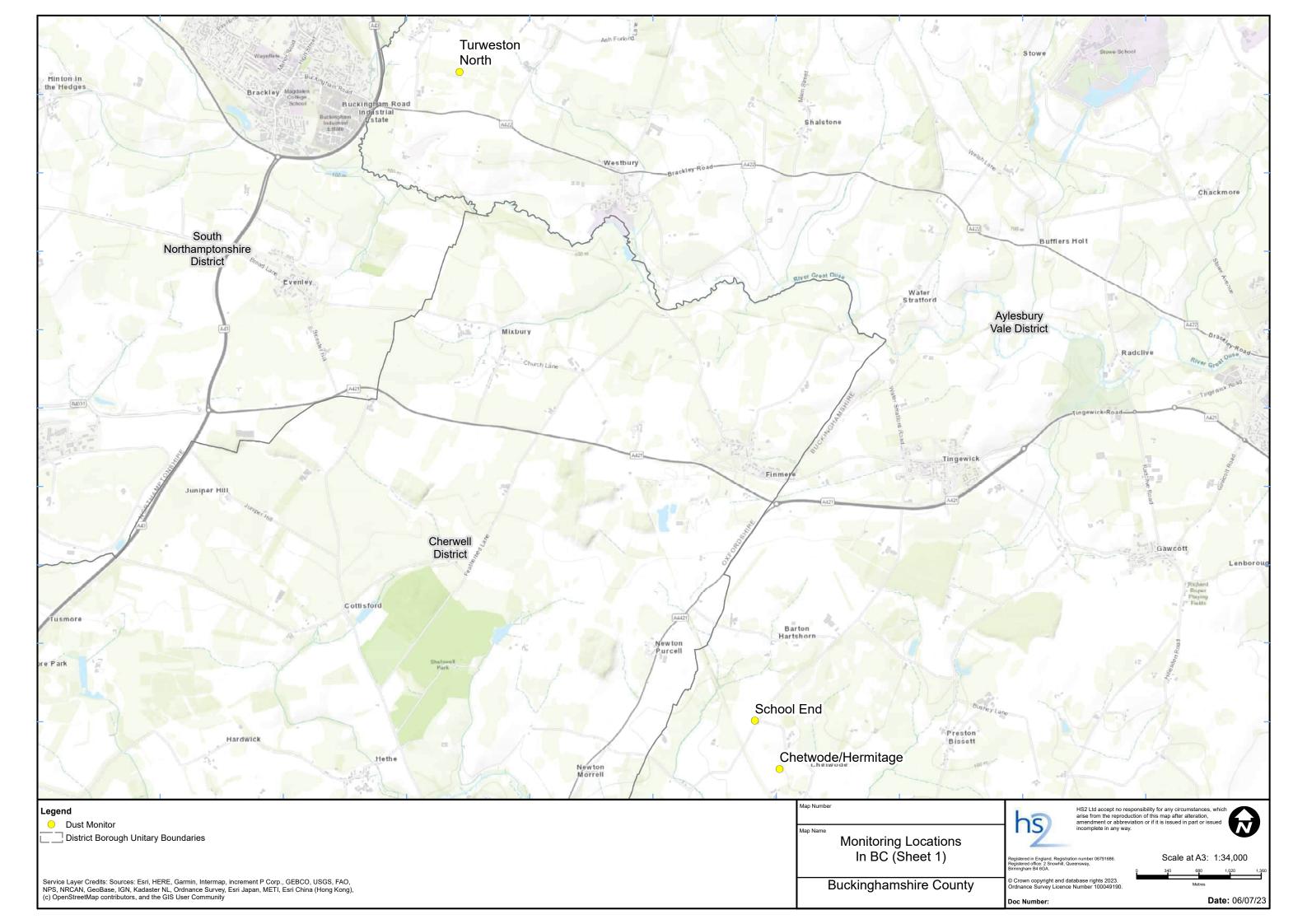
- CHW18 Overbridge: East and West Blinding for Parapets
- Chetwode Cutting: Bulk dig
- Chetwode Cutting Landscape Bund West: E&R
- Green Highway Realignment: east and West tie in works. Subbase and pavement
- installation. Permanent signage. White lining included
- Use of MHR: Mass Haul of Material to Calvert
- Use of SAR: General Use.
- 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

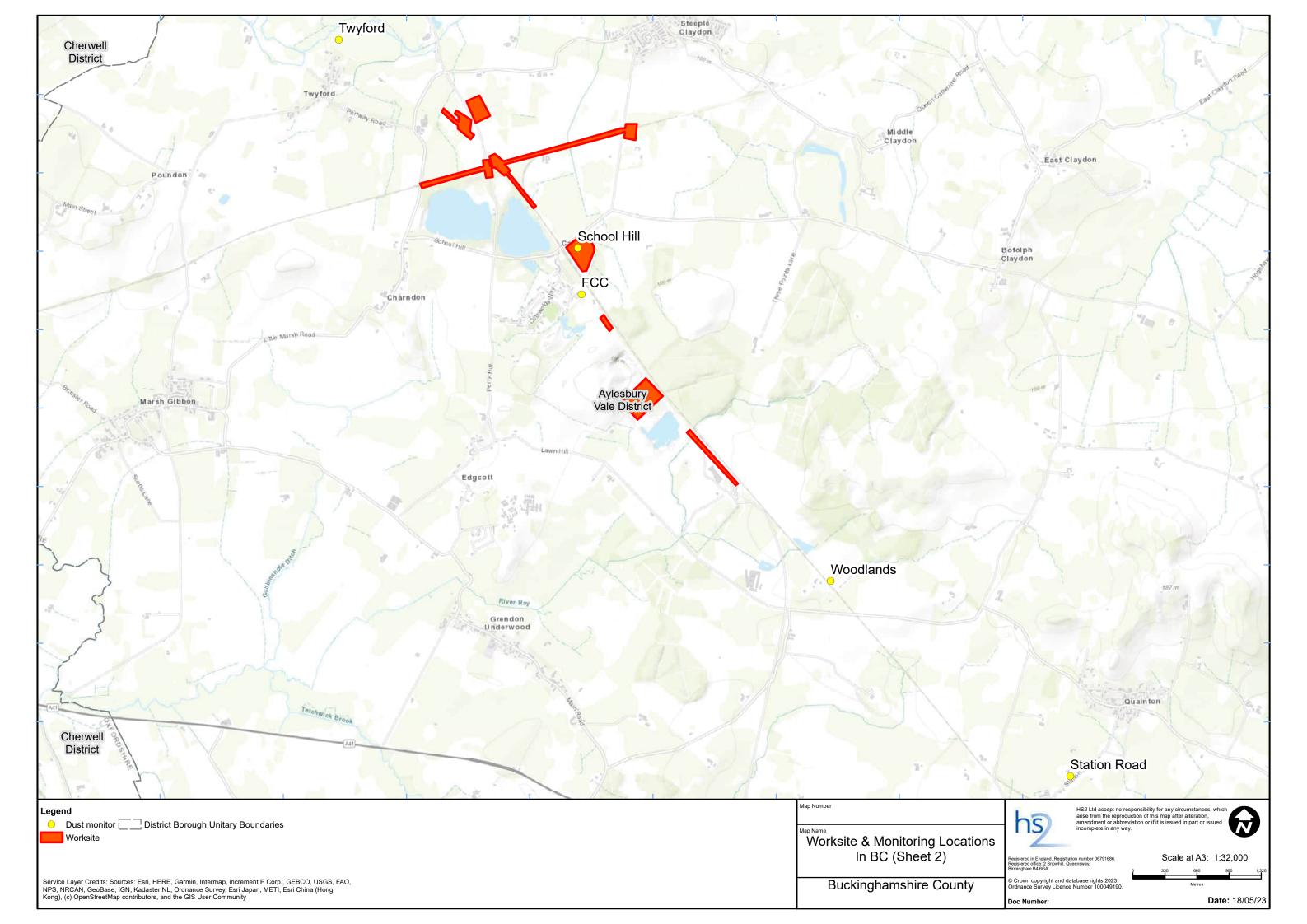
dust monitoring is undertaken using indicative monitors. Despite being Environment Agency (MCERTS) certified, indicative monitors carry a higher level of uncertainty than reference monitors, and therefore cannot be strictly compared with Air Quality Standards for human health and the environment. The purpose of the monitoring undertaken is to ensure the effectiveness of the on-site mitigation.

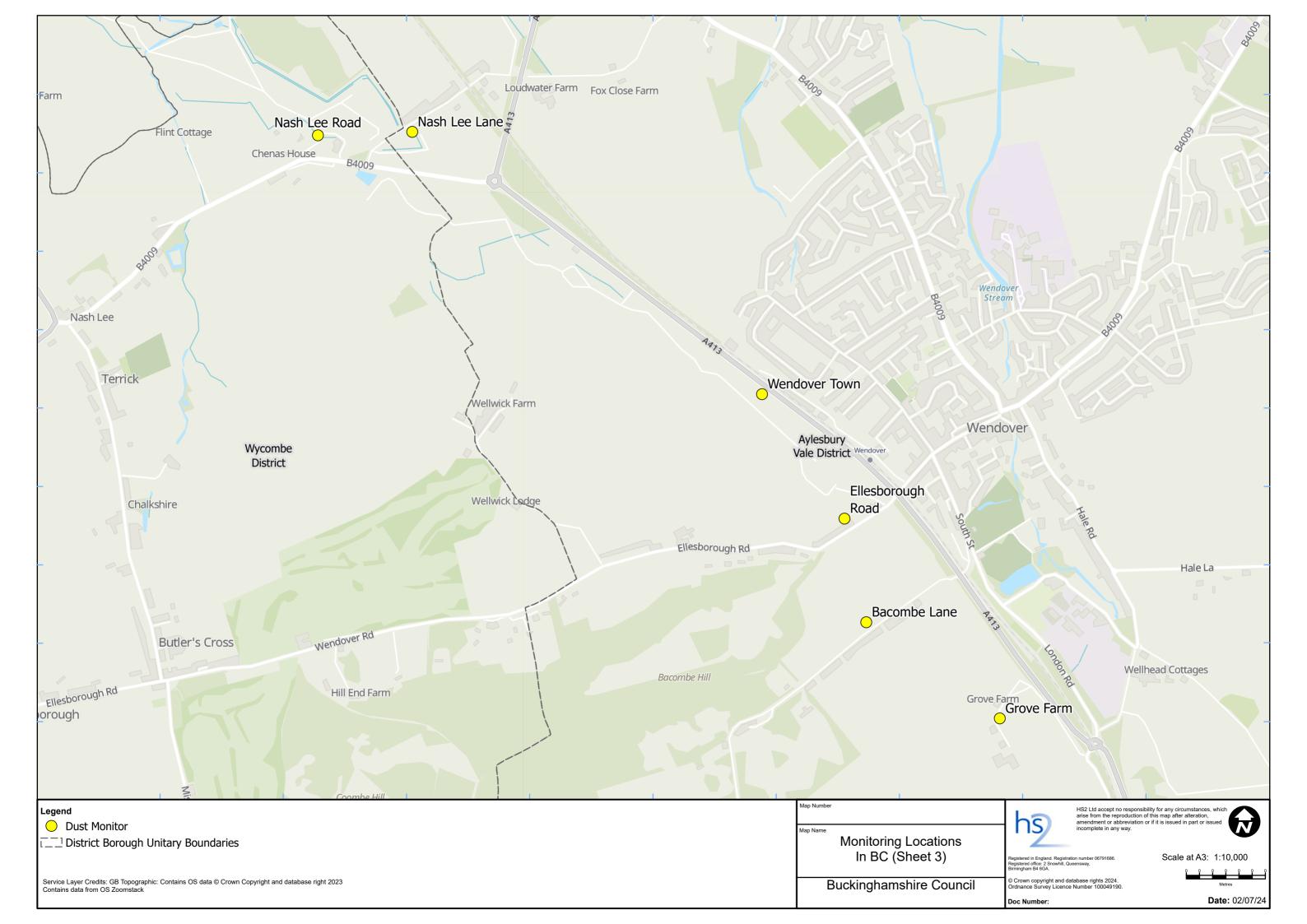
- 1.1.7 The trigger level for PM<sub>10</sub> concentrations of 190 μg/m<sup>3</sup>, measured as a 1-hour mean, in accordance with the updated guidance document '*Guidance on Monitoring in the Vicinity of Demolition and Construction Sites (December 2018)*' has been applied.
- 1.1.8 No (0) dust trigger alerts were recorded during the monitoring period (April 2025).
- 1.1.9 Data capture was below 90% for multiple monitors due to:
  - AMER-AQMP2 was removed from site on the 10<sup>th</sup> of April, this was replaced on the 16<sup>th</sup> April.
  - NP-AQMP1 suffered a power controller failure on the 3<sup>rd</sup> of April, however was fixed on the 16<sup>th</sup> April.
  - Woodlands dust monitor had no data capture from 17<sup>th</sup> to 22<sup>nd</sup> April 2025 due to a configuration issue with the monitor.
  - CHStG-AQMP2 Any sporadic loss of data can be attributed to technical issues and/or loss of power due to insufficient sunlight/wind for monitor using solar/wind power.
  - School End had no data capture from 9<sup>th</sup> to 30<sup>th</sup> April 2025 due to the noise monitor retrieved for calibration.
  - Chetwode Hermitage had no data capture from 4<sup>th</sup> to 9<sup>th</sup> April 2025 due to the dust monitor retrieved for calibration.
- 1.1.10 There were no (0) complaints received during the reporting period (April 2025).

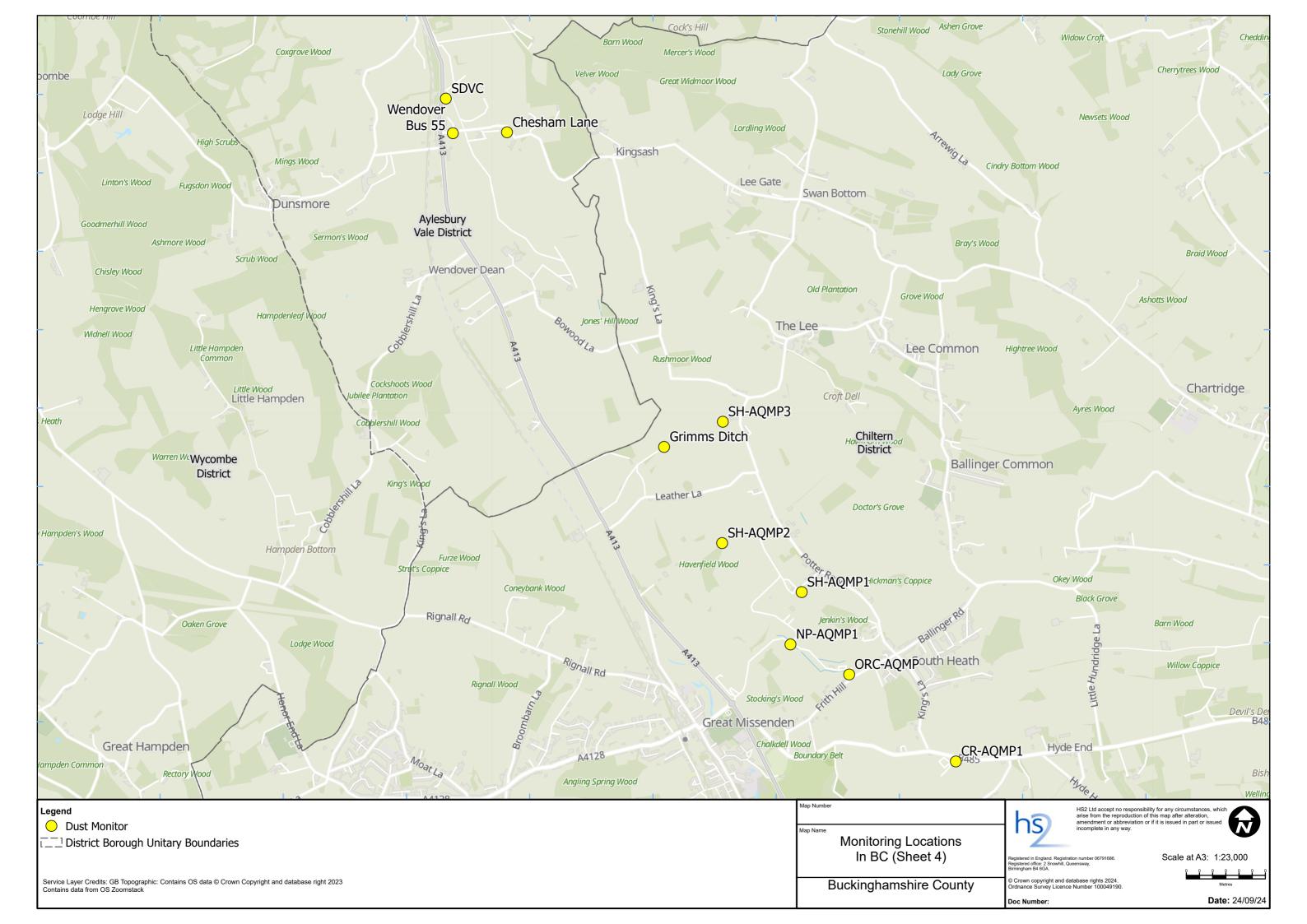
## **Appendix A – Worksite and Dust Monitoring Locations**

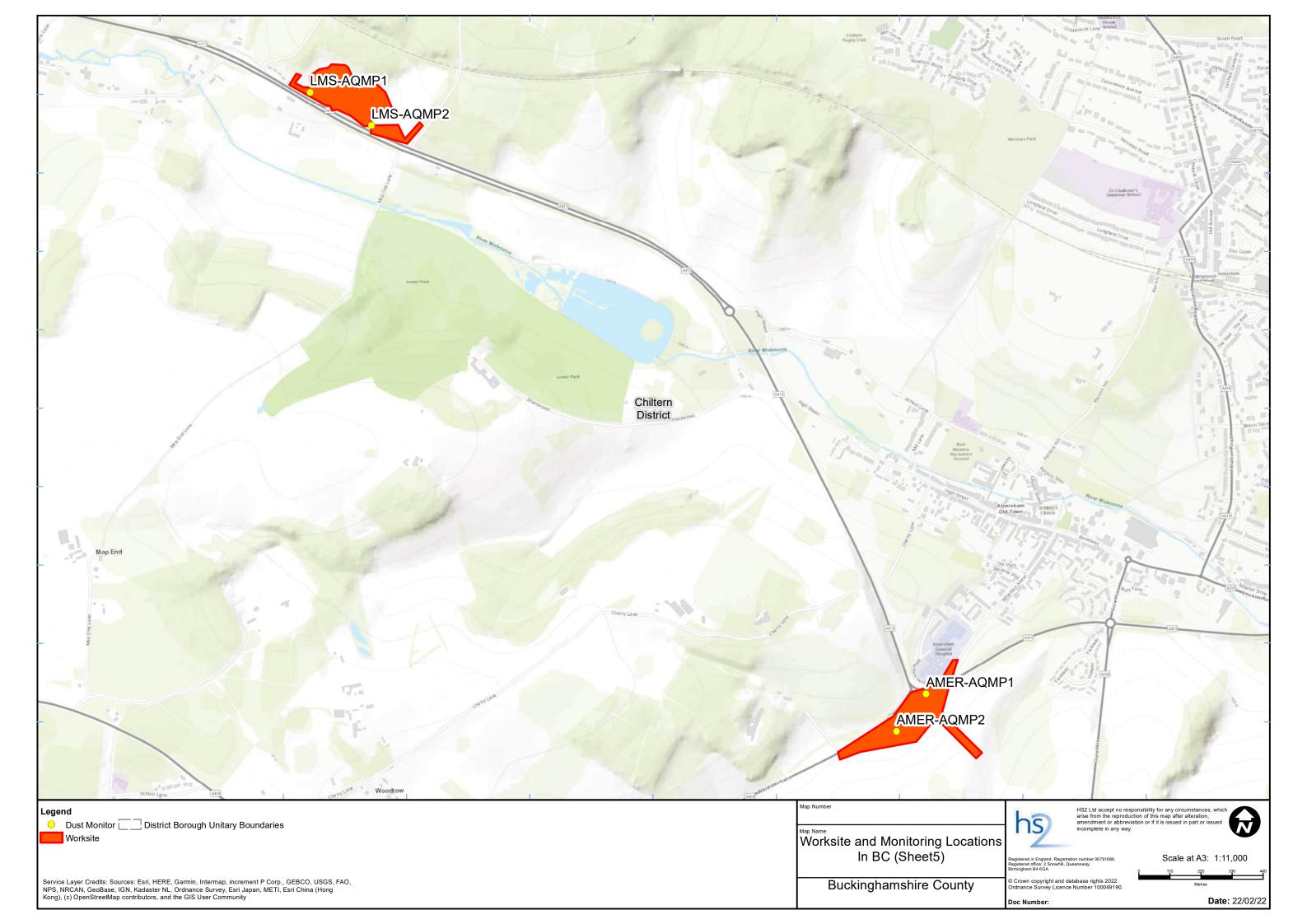
Figures 1-7: Worksite and Monitoring locations within BC

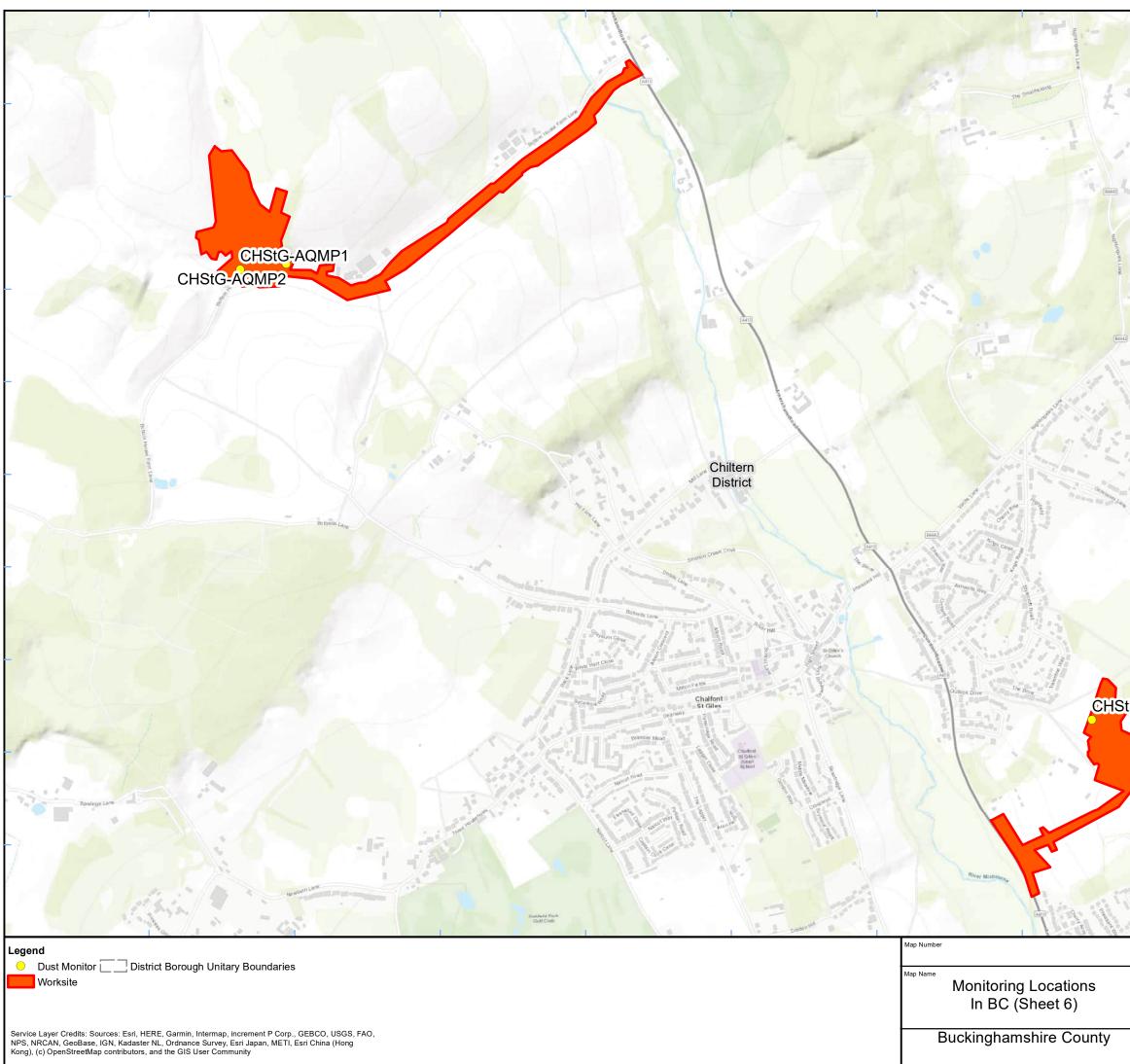




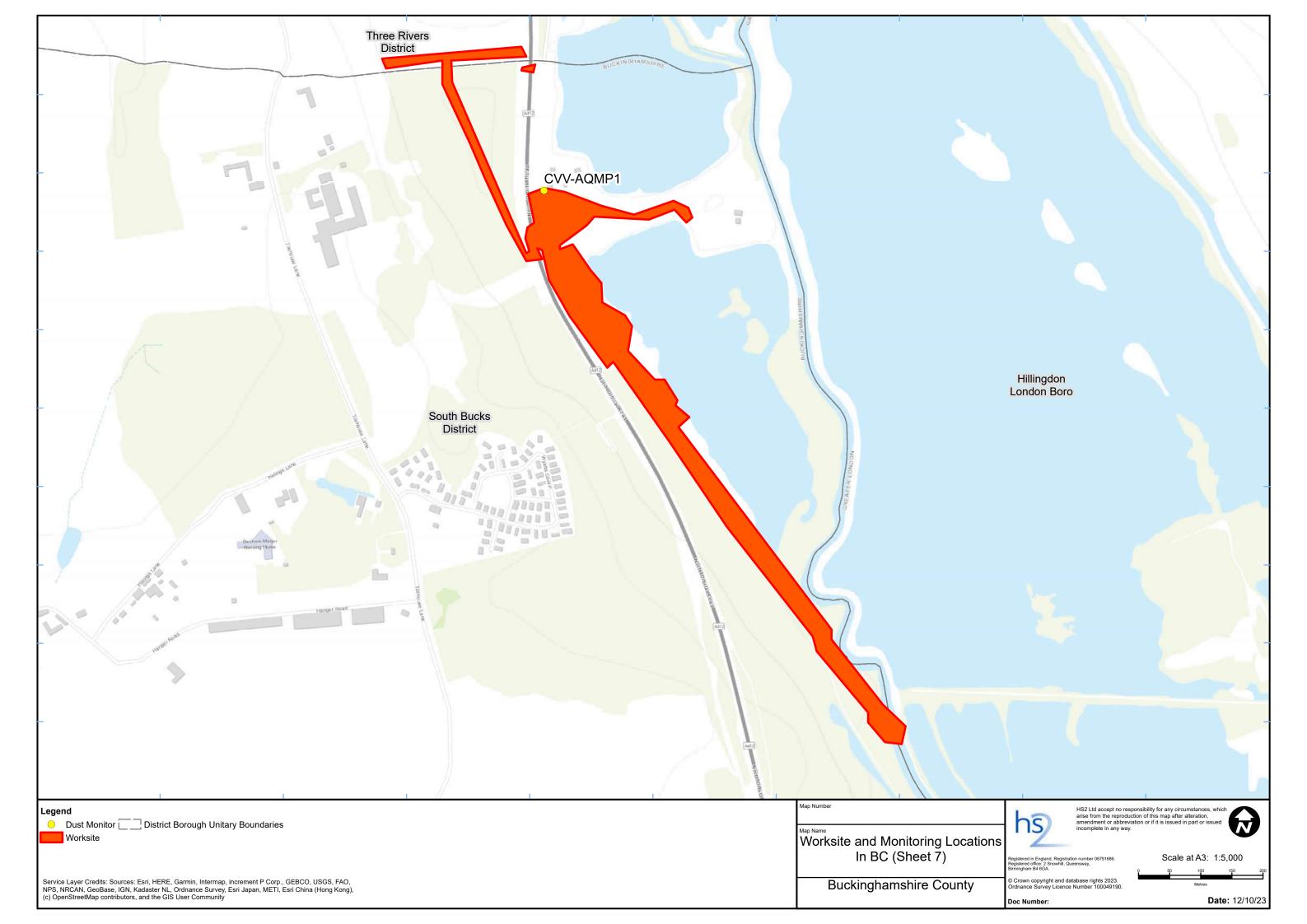








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## **Appendix B – Dust Monitoring Results**

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/m <sup>3</sup>	Data capture (%)
CVV-AQMP1	503612, 189846	On the north boundary of LTP1	М	Yes	No	8.6	1.0	60.0	0	100.0
CHStP-AQMP1a	500093, 192996	Relocated from CHStP-NMP1 to site-boundary outside residence	М	Yes	Yes	10.0	1.0	65.0	0	100.0
CHStP-AQMP2	499951, 193282	On the western boundary of the site	М	Yes	Yes	10.2	1.0	83.0	0	100.0
AMER-AQMP1	495367, 196722	On the north- eastern boundary of Amersham	М	Yes	Yes	10.1	1.0	62.0	0	93.2
AMER-AQMP2	495263, 196590	On the south- western boundary of Amersham	М	Yes	Yes	10.4	3.0	42.0	0	34.2
CHStG-AQMP1	497170, 194752	On the southern boundary close to Hobbs Hole Cottage	М	Yes	Yes	9.7	1.0	59.0	0	100.0
CHStG-AQMP2	497320, 194770	On southern boundary next to carpark	М	Yes	Yes	9.7	1.0	65.0	0	79.2
LMS-AQMP1	493190, 198848	On the south-west of the site	м	Yes	Yes	9.2	1.0	60.0	0	100.0
LMS-AQMP2	493407, 198731	On the south-east of the site	м	Yes	Yes	9.7	1.0	61.0	0	100.0
CR-AQMP1	491291, 201143	On the Chesham Road Vent Shaft	М	Yes	Yes	10.6	1.0	65.0	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/m <sup>3</sup> )	Number of 1-hour periods exceeding trigger level of 190 µg/m <sup>3</sup>	Data capture (%)
ORC-AQMP	490503, 201786	Orchard Cottage South-eastern Site Boundary	М	Yes	Yes	9.8	1.0	52.0	0	100.0
NP-AQMP1	490069, 202008	North Portal Site Entrance	М	Yes	Yes	7.7	0.0	58.0	0	50.6
SH-AQMP1	490152, 202395	Park Farm	М	Yes	Yes	26.1	8.3	71.8	0	100.0
SH-AQMP2	489564, 202757	King's Lane	М	Yes	Yes	12.0	6.3	62.7	0	100.0
SH-AQMP3	489569, 203654	Leather Lane	М	Yes	Yes	33.1	7.8	89.6	0	100.0
School Hill (CAL- AQMP2) - Dust	469003, 224740	School Hill Compound	М	Yes	Yes	18.6	3.0	90.0	0	99.9
School End – Dust	463666, 230049	School End, Chetwode	М	Yes	Yes	8.8	1.0	33.0	0	27.4
Grimms Ditch – Dust	489135, 203468	Leather Lane, The Lee, South Heath	М	Yes	Yes	9.5	1.0	62.0	0	99.6
Chesham Lane - Dust	487974, 205794	Chesham Lane, The Lee, Wendover	М	Yes	Yes	10.5	1.0	60.0	0	99.7
Wendover Bus 55 - Dust	487574, 205787	Chesham Lane, The Lee, Wendover	М	Yes	Yes	10.6	1.0	60.0	0	99.7
Twyford - Dust	466544, 226883	Twyford, Buckinghamshire	М	Yes	Yes	10.0	1.0	56.0	0	99.9
Chetwode/Hermitage – Dust	463936, 229521	Hermitage, Chetwode	М	Yes	Yes	9.8	1.0	155.0	0	78.8
Turweston North - Dust	460439 , 237140	Turweston, Buckinghamshire	М	Yes	Yes	66.2	34.0	111.0	0	99.9
FCC - Dust	469042 , 224263	Adjacent Red Kite View, Calvert	М	Yes	Yes	11.3	1.0	41.0	0	99.7
Ellesborough Road - Dust	486458 , 207550	Ellesborough Road, Wendover	М	Yes	Yes	10.8	1.0	52.0	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/m <sup>3</sup>	Data capture (%)
Nash Lee Road - Dust	484766 , 208782	Nash Lee Lane (west)	М	Yes	Yes	11.3	1.0	58.0	0	99.9
Nash Lee Lane - Dust	485069 , 208793	Nash Lee Lane (east)	м	Yes	Yes	11.1	1.0	55.0	0	99.9
Bacombe Lane – Dust	486528 , 207217	Bacombe Lane, Wendover	м	Yes	Yes	64.9	1.0	168.0	0	100.0
SDVC – Dust	487522, 206043	Small Dean Viaduct, London Road	м	Yes	Yes	10.5	1.0	61.0	0	99.9
Station Road – Dust	474068, 219307	Station Road, Quainton	м	Yes	Yes	11.1	1.0	58.0	0	99.9
Wendover Town - Dust	486193, 207950	Wendover Bypass, Wendover	м	Yes	Yes	10.7	1.0	57.0	0	99.7
Woodlands - Dust	471603, 221315	Station Rd, Quainton, Woodlands Farmhouse	м	Yes	Yes	10.9	1.0	51.0	0	84.0
Grove Farm	486957, 206908	Grove Farm, London Road, Wendover	М	Yes	Yes	10.7	1.0	60.0	0	99.9

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

