

February 2025

Air Quality and Dust Monitoring Monthly Report – February 2025 Buckinghamshire Council

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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 dust monitoring undertaken in the Buckinghamshire Council (BC) during February 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 www.gov.uk/government/collections/monitoring-the-environmentaleffects-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;
- Haul Road and Jetty Maintenance GUC to Harvil Road: haul road and jetty maintenance;
- ATFS: site preparation, installation of ducts and earthworks, bulk earthworks fill, permanent drainage, soiling and seeding, ATFS access road construction;
- Pumping Water Management: pumping water management;
- Satellite Welfares;
- Generator Farms;
- South Abutment: earthworks, South Abutment construction stage 2, South Abutment construction stage 2, South Abutment construction stage 2 earthworks, yard supporting activities, soiling and seeding works, embankment FRC works;
- Environmental Maintenance;
- Stockpiling Activity HOAC: a stockpile of material coming from other sites;
- 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 access at the top of the deck (HAKI stairs) and finishes support plan;
- Deck Finishes On-deck Construction: noise barrier installation, north abutment works, deck waterproofing and SFRC slab construction;
- Deck Finishes In-deck Construction: structural health monitoring;
- Landscaping: advanced works including removal of cofferdam, early earthworks including ground profiling and cut, initial ground drainage including manhole chamber,

early soil placement, hardstanding removal and tree removal & vegetation clearance; and

• Jetty Removal and associated earthworks: Earthworks excavation, backfill, and landscaping, jetty removal, cutting piles and steelworks.

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

<u>Grimms Ditch</u>

- Traditional formwork preparation and installation
- Concrete pour North capping beam
- Rebar fixing South capping beam
- Blinding for South capping beams
- Drainage installation South retaining wall.

Chesham Lane, Wendover Bus 55

- Concrete Finishing works Abutment walls
- Blinding for wing wall formwork fixings
- Rebar fixing for wing walls
- Utility diversions
- Installation of the Drainage manhole chambers and pipes

- Rocky lane realignment Excavation West
- Trial hole by Vac Ex west
- Trench excavation, backfilling and testing HV.

Ellesborough Road

- Completed installing both foul and water mains over the utilities bridge.
- Pipes were insulated and air tested.
- Manholes were benched.
- Services were diverted under Thames Water Supervision.
- Tarmac reinstated.
- Installation of traffic barges on Ellesborough Road.
- Fence and post fencing repair works at Ellesborough Road and Welwick Farm.
- Utilities diversion works.

Nash Lee Road, Nash Lee Lane

- NLOB A0 (West) Wingwall W1 blinding pour (36m3) constructed cage and shutters for W1 Wingwall Base.
- NLOB A3 (East) Excavated down to 500mm below wingwall formation and backfilled with 1A1.
- NLOB P1 (West) Cropped all piles to level, poured the blinding (50m3) and built formwork for the underside of the crosshead.
- NLOB P2 (East) Cropped all piles to level.
- AC8 Poured Inlet Headwall (4.5m3). Struck Outlet Headwall and carried out repairs. Applied blackjack to buried faces of the outlet.
- ELL/20 Poured the ELL20 West Impact Wall Blinding (52m3).
- UKPN Modus constructed the housing for the phase 3 substation.
- Working on the platforms for LPW works.

<u>Bacombe Lane</u>

- Topsoil Stockpile relocation at Bacombe Lane prepping for phase 2 site access route.
- Rearrangement of the tunnel segments in shaft 2.
- POI002, shaft 2, North and South headwalls were poured.
- Filling excavation with concrete to level for the OXO.
- Fences removal at Bacombe Lane prepping for the new access road.
- 2 Cut and cap excavations were taken place Bacombe Lane.

<u>Grove Farm</u>

- Installation of the capping beam Peri Shutters for the Grove Farm Underbridge
- Topsoil strip at Grove Farm
- Steel fixing rebars for the capping beams at Grove Farm underbridge
- Structural blinding for the underbridge
- Placing 6 new control points around Grove Farm Underbridge.

Small Dean Viaduct

- Launch of the Small Dean Viaduct
- Welding of blocking plates
- Removal of launch concrete pads
- Excavation and removal of stone from Small Dean South embankment
- Lowering of the viaduct
- Scaffold installation and changes
- Access road excavating and building
- Tarmac laying for new access road.

Wendover Town

- Installation of office cabins
- Continued installation of phase 1 cutting drainage
- Under-blinding waterproofing, circa 100m complete
- Structural blinding, circa 25m complete
- Continued LPW Installation works. A total of 386 panels, 1012 pre-treatment locations and 255m of wall installed.
- Hauling all the excavated material over to the stockpiling location.
- Water deliveries.
- Assembled and poured 4no. sets of LPW protection slabs.
- Installed 5no. sets of LPW protection slabs. 3no. for Haul Road and 2no. for SAR.
- SAR repair works.
- Completed Eastern platform extension construction works.
- Diverted Haul Road over the new slab crossing.
- Continued stabilisation of excavated material from the LPW works.

Calvert Area

<u>Quainton</u>

- Earthworks Ongoing
- Platform for storage Completed
- Carpark extension Ongoing.

<u>Woodlands</u>

- Adams Accommodation underbridge construction of steel reinforcement cages for wing walls.
- River Ray diversion temporary works.
- Aggregate deliveries along the SAR.

FCC / School Hill (Calvert)

- 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 completed. Excavation and technical backfill.
- 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.

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

- 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
- Woods drop inlet culvert
- 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

<u>Turweston North</u>

- Turweston Viaduct Launch and lowering of bearings
- Reinforcement instillation for deck and diaphragm (TGOB)
- Deck pour (TGOB)
- Structural backfill (TGOB)
- DUO Crusher
- 1A1 Backfill
- Class 7E material excavation
- Lime Stabilisation.

<u>School End</u>

- School End Overbridge: construction of the maintenance platform, wingwall waterproofing drainage, site prep for parapet deliveries.
- Prep for earthwork season (haul road maintenance, SAR maintenance).

<u>Twyford</u>

- Twyford Viaduct: Southern side rotary piling.
- Twyford East Culvert: watercourse diversion detail, placement of coco matting and 6C2 material.
- Removal of surcharge for northern leg of twyford viaduct and piling platform preparation.

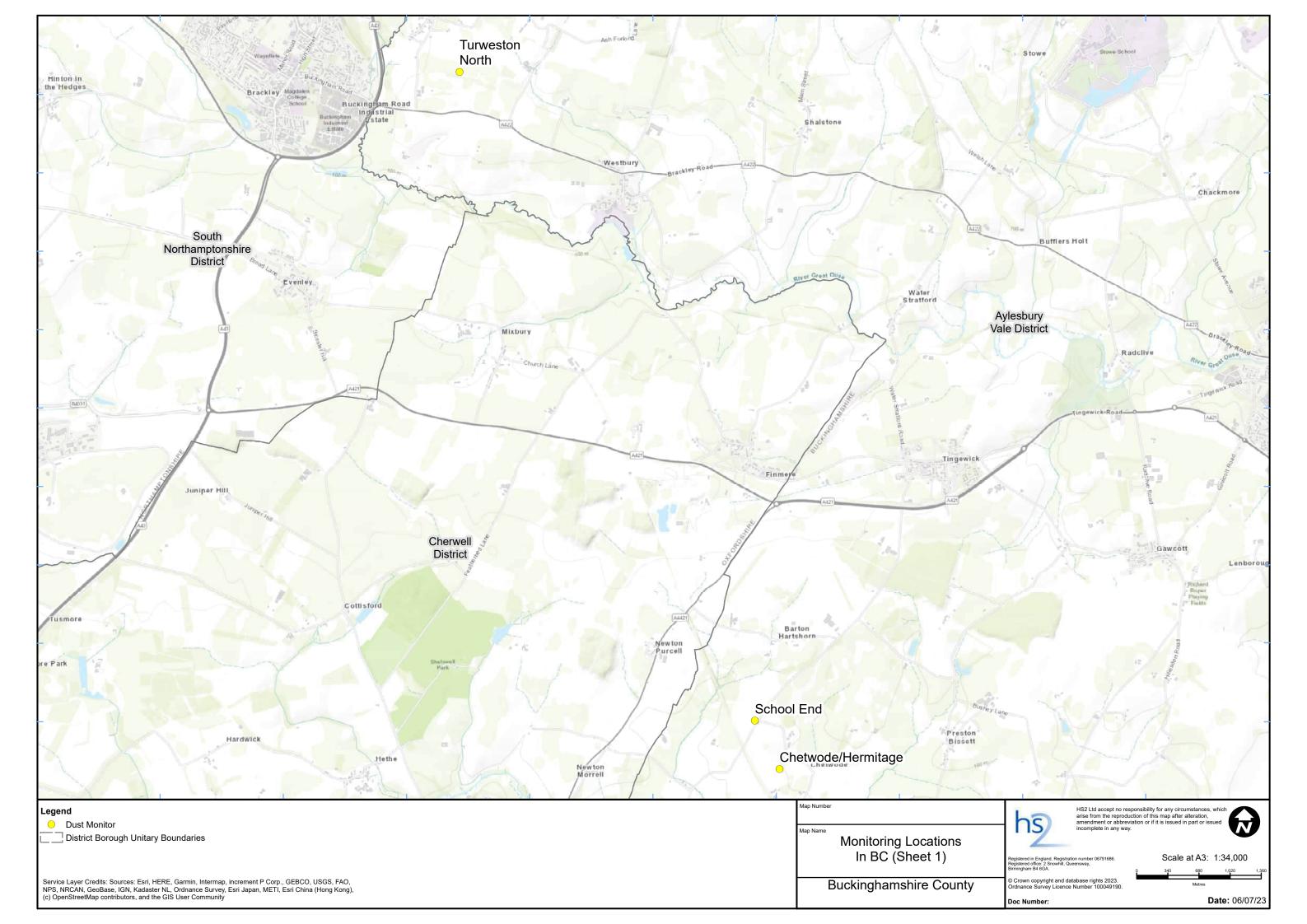
<u>Hermitage</u>

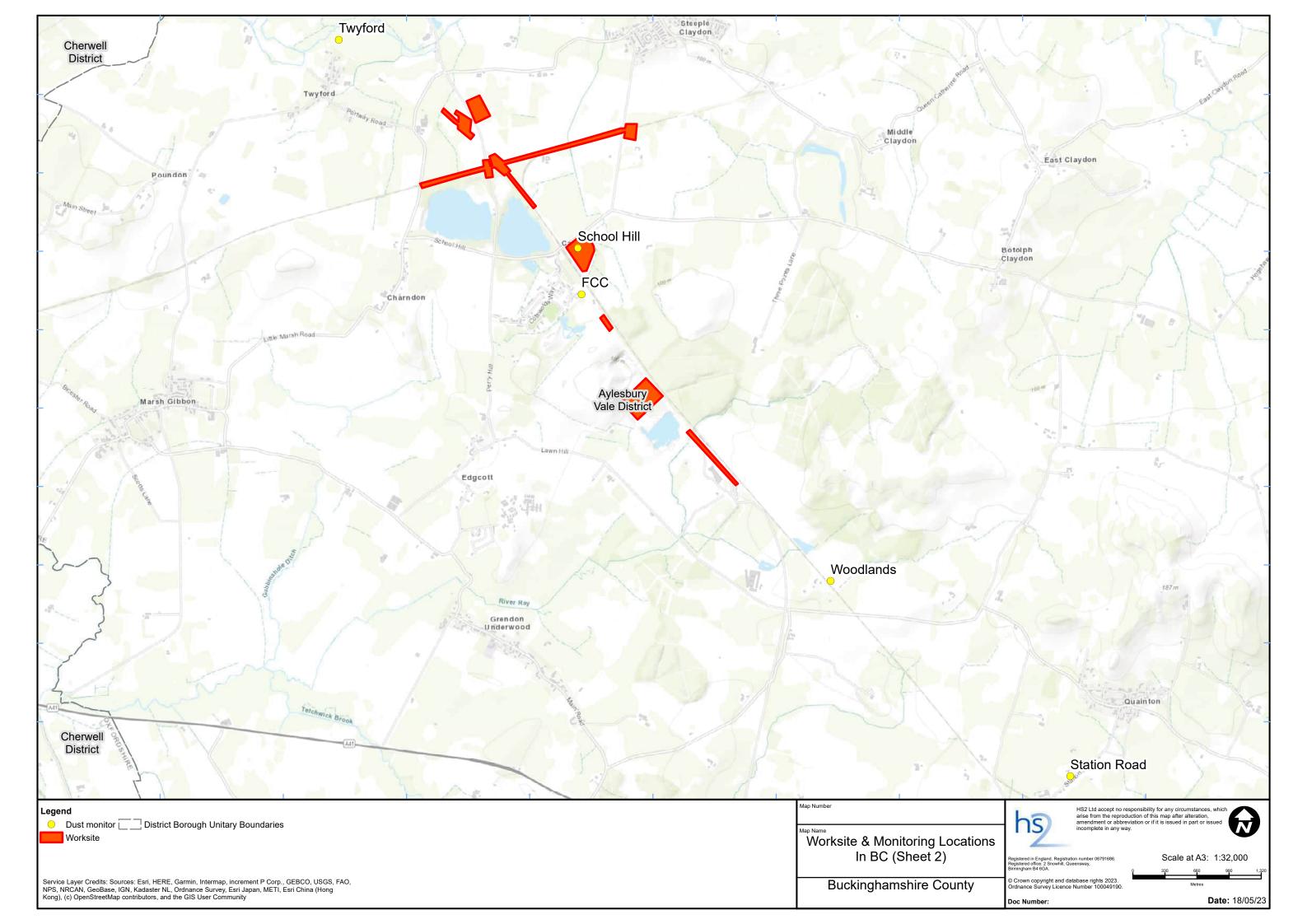
- CHW18 Overbridge: construction of the maintenance platform, site prep for parapet deliveries.
- School End and CHW18 Highway tie ins- construction of approach embankments and access slab.
- School End and CHW18 Green Highway Utilities.
- Haul Road and SAR maintenance.
- Earthwork prep for start of earthworks season.
- 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 PM₁₀ concentrations of 190 μg/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.

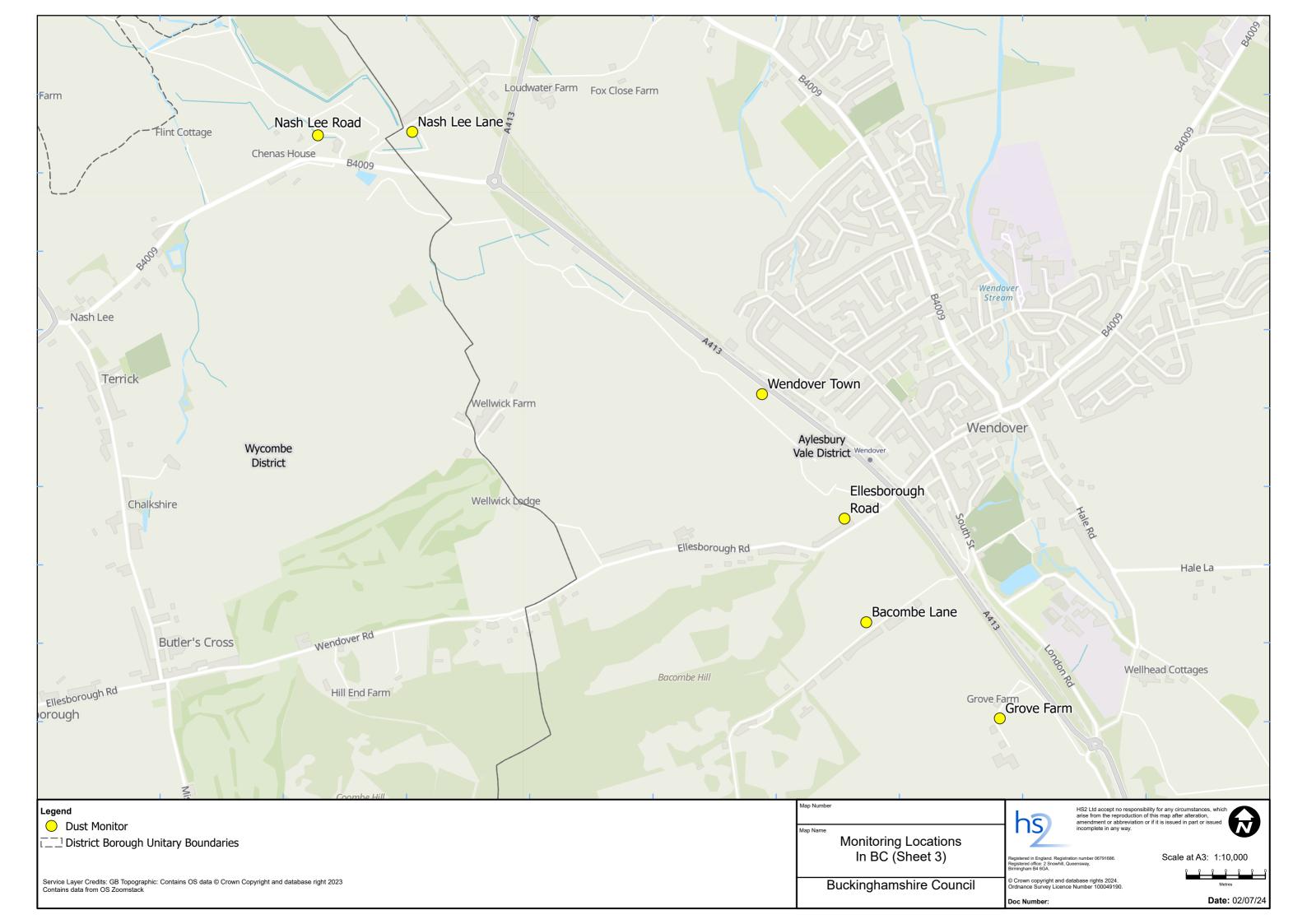
- 1.1.8 No (0) dust trigger alerts were recorded during the monitoring period (February 2025).
- 1.1.9 Data capture was below 90% for multiple monitors due to:
 - AMER-AQMP1 was due to water damage to the 110v connection, therefore the fuse tripped on the transformer and the cable was subsequently replaced.
 - Grimms Ditch was due to a battery fault throughout the month.
 - Chesham Lane had intermittent data capture from 10th to 13th February was due to a battery fault.
 - Wendover Bus 55 had no data capture from 9th to 13th February was due to a battery fault.
 - Ellesborough Road had intermittent data capture from 1st to 13th February was due to a battery fault.
 - Nash Lee Road had no data capture from 10th to 13th February was due to a battery fault.
 - Nash Lee Lane had no data capture from 9th to 13th February was due to a battery fault.
 - Bacombe Lane had no data capture from 10th to 14th February was due to a battery fault.
 - Small Dean Viaduct had intermittent data capture from 1st to 13th February due to a battery fault.
 - Wendover Town had no data capture from 9th to 13th February due to a battery fault.
 - Grove Farm had intermittent data capture was due to battery fault throughout the month.
 - FCC dust monitor due to battery fault. Access to location was difficult due to trench digging and heavy plant movement.
 - Station Road dust monitor had intermittent data capture from 8th to 14th February was due to a battery fault.
 - Woodlands dust monitor had intermittent data capture was due to a battery fault throughout the month.
 - School End had intermittent data capture was due to a battery fault throughout the month.
 - Twyford was due to a battery fault.
 - Chetwode Hermitage was due to a battery fault throughout the month.
 - Turweston North was due to a battery fault. Access to location was unsafe and difficult to replace batteries.
- 1.1.10 There were no (0) complaints received during the reporting period (February 2025).

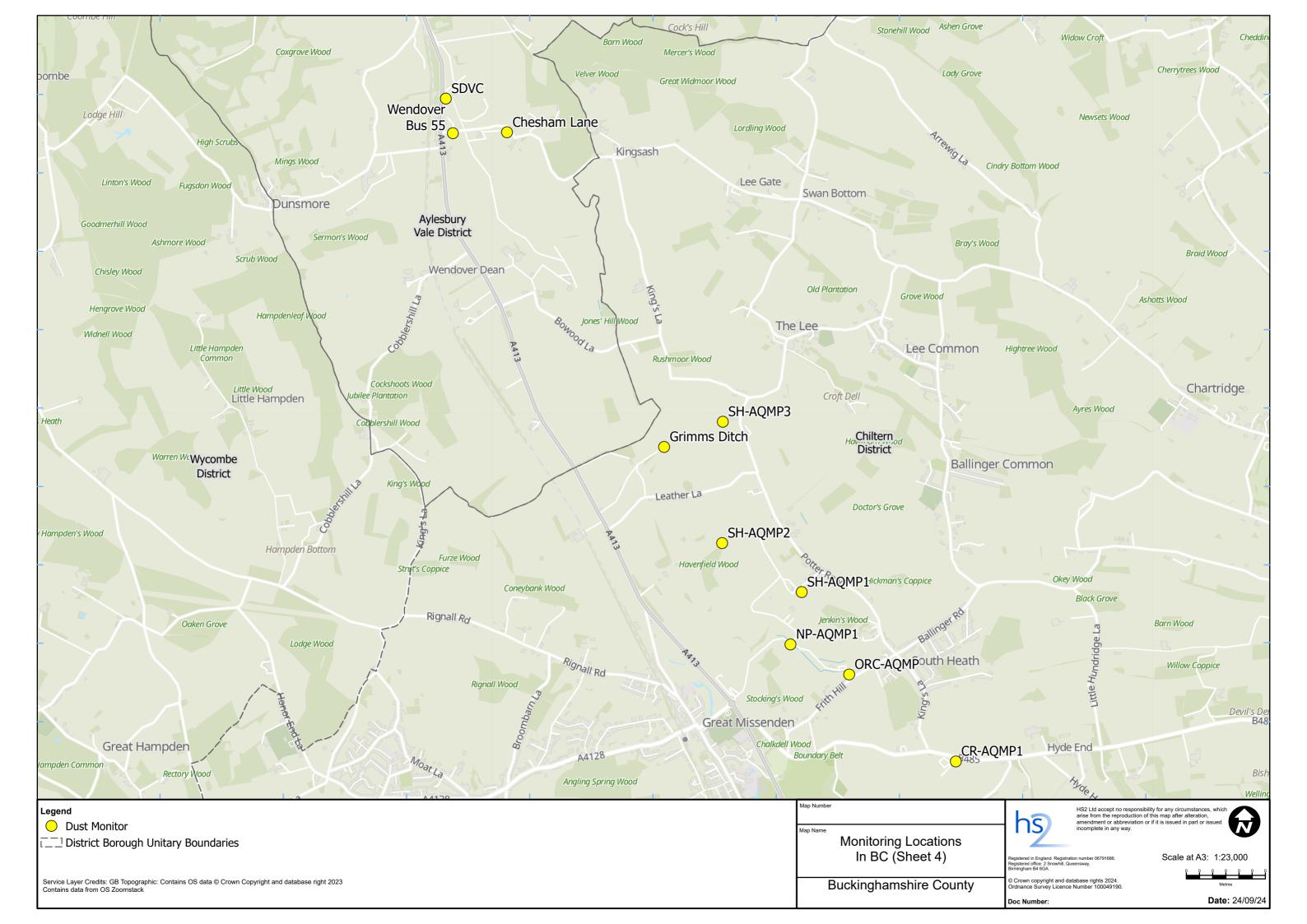
Appendix A – Worksite and Dust Monitoring Locations

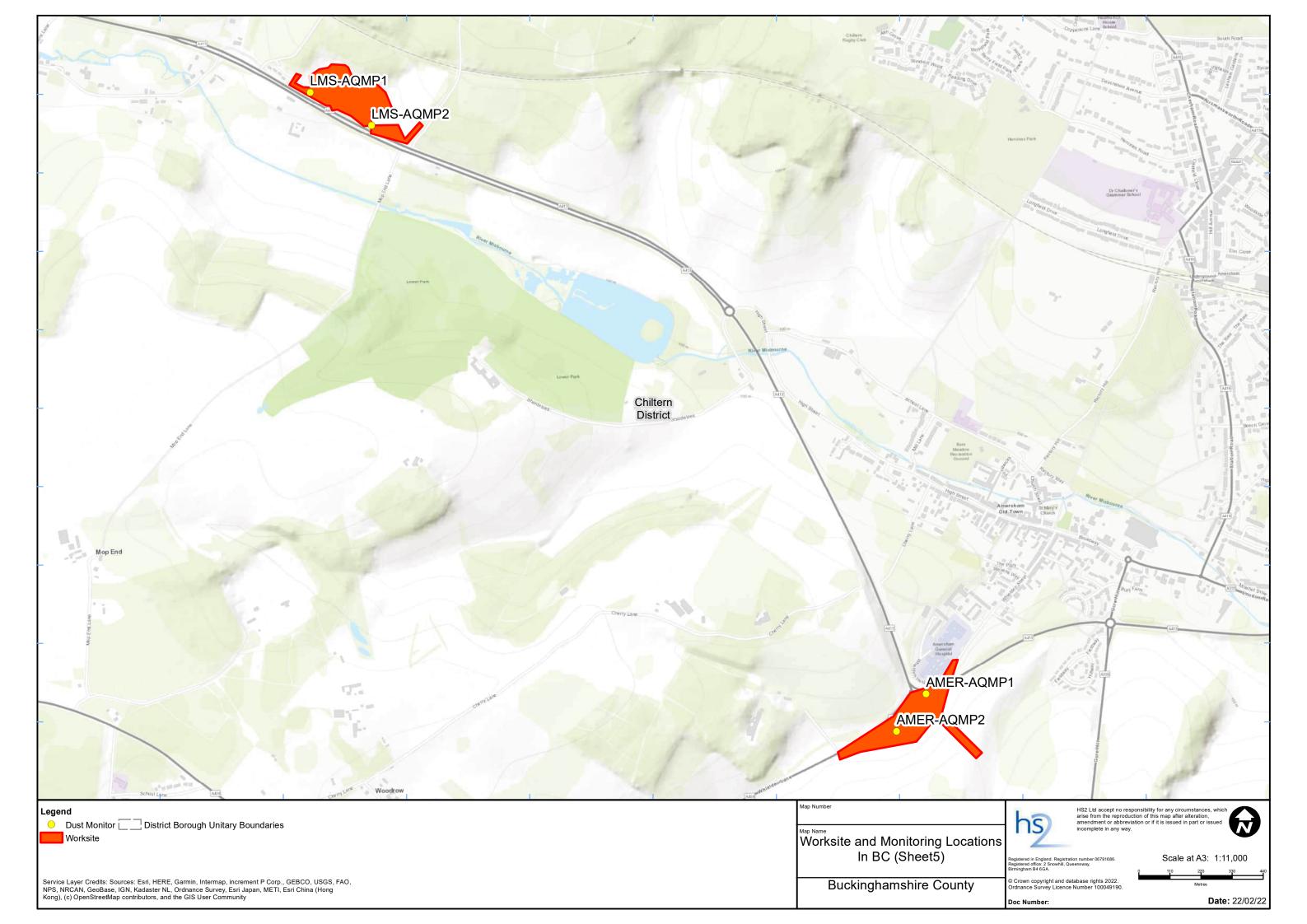
Figures 1-7: Worksite and Monitoring locations within BC

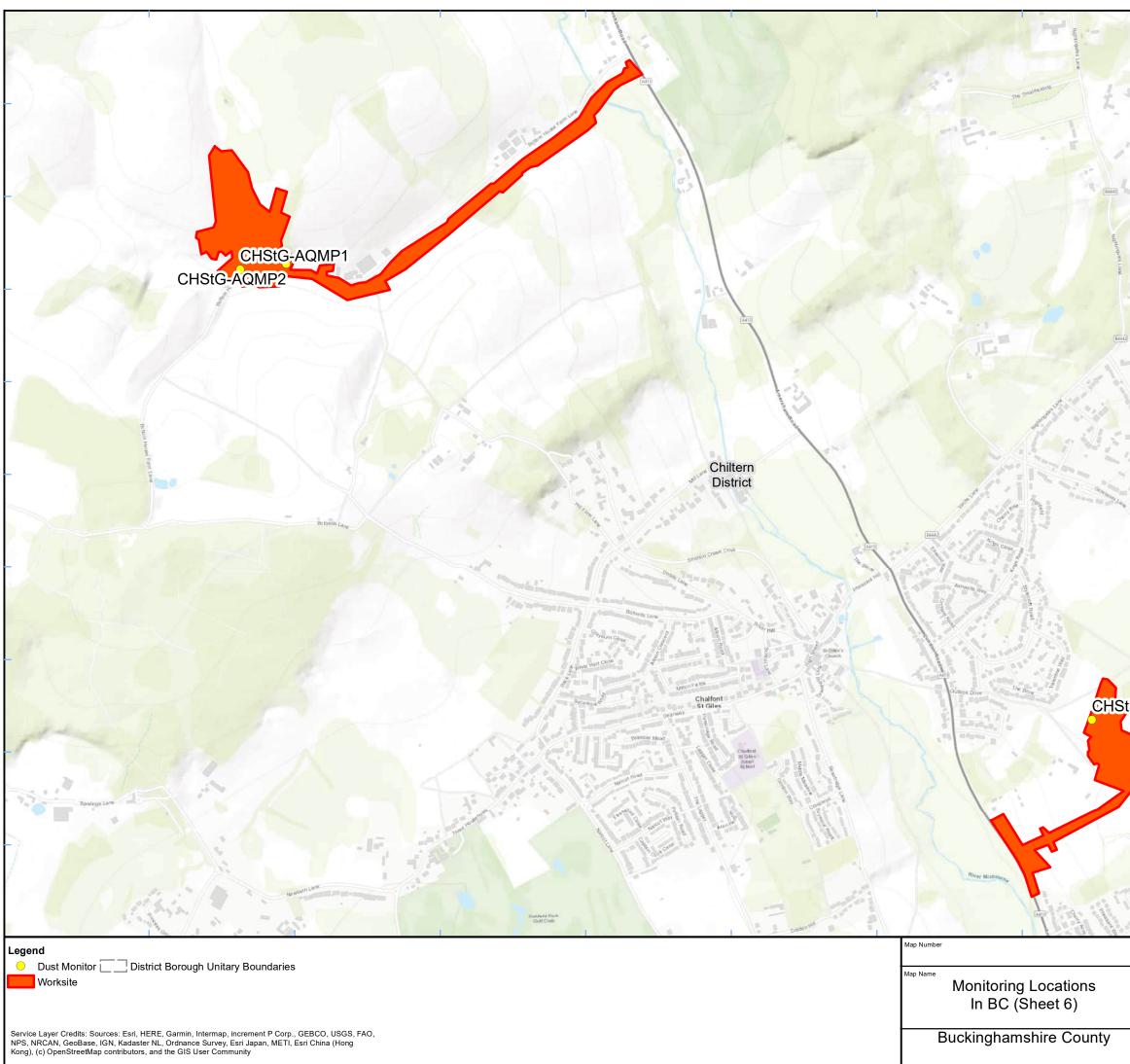




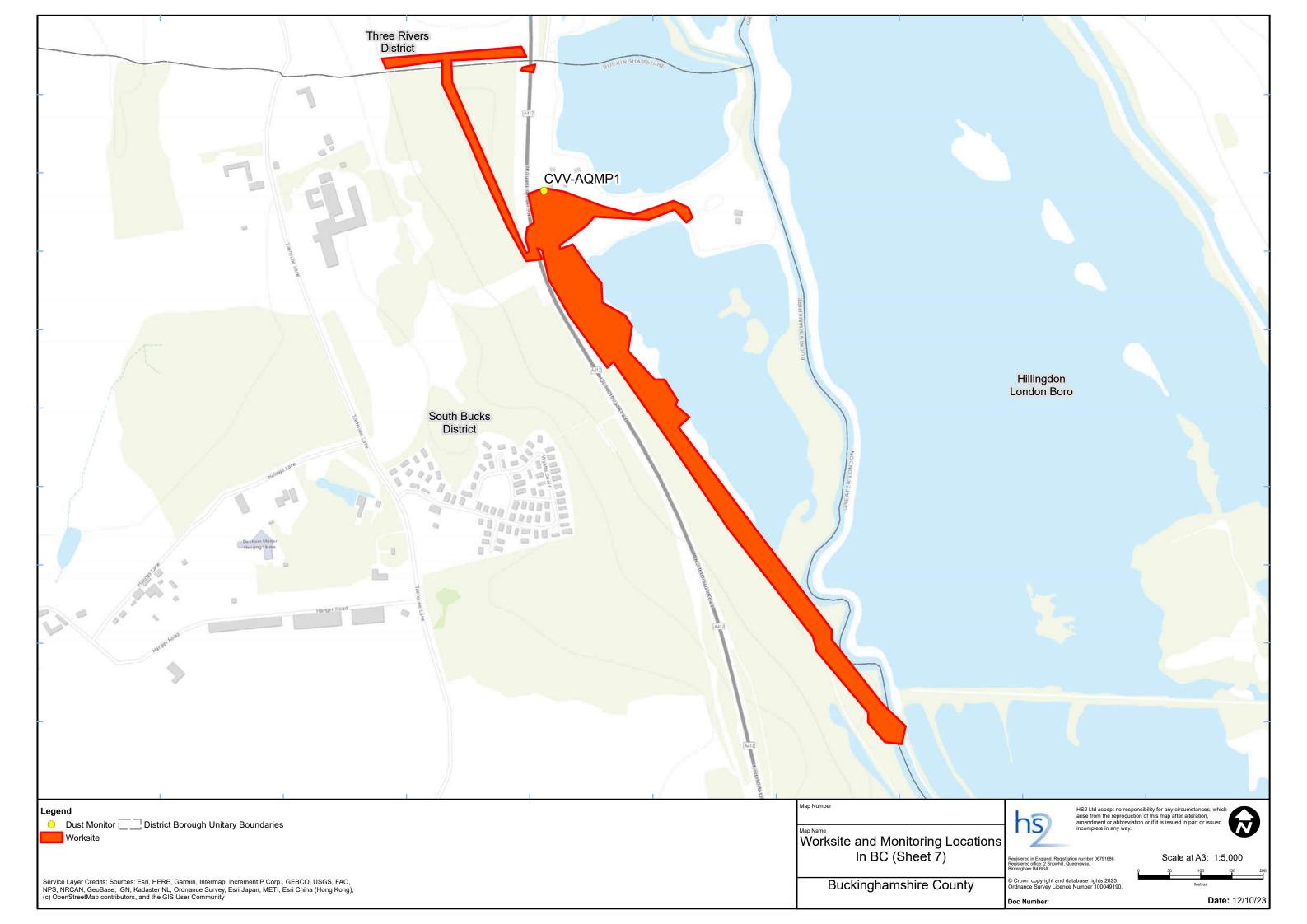








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Appendix B – Dust Monitoring Results

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 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/m ³	Data capture (%)
CVV-AQMP1	503612, 189846	On the north boundary of LTP1	м	Yes	No	14.5	1.0	60.0	0	100.0
CHStP-AQMP1a	500093, 192996	Relocated from CHStP-NMP1 to site-boundary outside residence	М	Yes	Yes	15.7	1.0	60.0	0	96%
CHStP-AQMP2	499951, 193282	On the western boundary of the site	М	Yes	Yes	14.9	1.0	59.0	0	98%
AMER-AQMP1	495367, 196722	On the north- eastern boundary of Amersham	М	Yes	Yes	16.2	1.0	50.0	0	72%
AMER-AQMP2	495263, 196590	On the south- western boundary of Amersham	М	Yes	Yes	14.7	1.0	57.0	0	98%
CHStG-AQMP1	497170, 194752	On the southern boundary close to Hobbs Hole Cottage	М	Yes	Yes	15.1	1.0	58.0	0	100%
CHStG-AQMP2	497320, 194770	On southern boundary next to carpark	М	Yes	Yes	14.6	0.0	56.0	0	98%
LMS-AQMP1	493190, 198848	On the south-west of the site	м	Yes	Yes	15.0	1.0	57.0	0	97%
LMS-AQMP2	493407, 198731	On the south-east of the site	м	Yes	Yes	14.4	1.0	54.0	0	100%
CR-AQMP1	491291, 201143	On the Chesham Road Vent Shaft	м	Yes	Yes	15.8	0.0	56.0	0	96%

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ORC-AQMP	490503, 201786	Orchard Cottage South-eastern Site Boundary	М	Yes	Yes	14.7	1.0	55.0	0	97%
NP-AQMP1	490069, 202008	North Portal Site Entrance	М	Yes	Yes	14.2	1.0	57.0	0	90%
SH-AQMP1	490152, 202395	Park Farm	М	Yes	Yes	15.3	7.8	51.7	0	100%
SH-AQMP2	489564, 202757	King's Lane	М	Yes	Yes	16.8	6.5	48.0	0	100%
SH-AQMP3	489569, 203654	Leather Lane	М	Yes	Yes	47.6	7.3	118.5	0	100%
School Hill (CAL- AQMP2) - Dust	469003, 224740	School Hill Compound	М	Yes	Yes	14.9	1.0	61.0	0	90.0
School End – Dust	463666, 230049	School End, Chetwode	М	Yes	Yes	13.5	1.0	63.0	0	81.4
Grimms Ditch – Dust	489135, 203468	Leather Lane, The Lee, South Heath	М	Yes	Yes	11.6	1.0	49.0	0	68.3
Chesham Lane - Dust	487974, 205794	Chesham Lane, The Lee, Wendover	М	Yes	Yes	13.3	1.0	111.0	0	86.5
Wendover Bus 55 - Dust	487574, 205787	Chesham Lane, The Lee, Wendover	М	Yes	Yes	5.4	1.0	20.0	0	77.7
Twyford - Dust	466544, 226883	Twyford, Buckinghamshire	М	Yes	Yes	11.7	1.0	59.0	0	71.3
Chetwode/Hermitage – Dust	463936, 229521	Hermitage, Chetwode	М	Yes	Yes	16.2	1.0	63.0	0	57.4
Turweston North - Dust	460439 , 237140	Turweston, Buckinghamshire	М	Yes	Yes	59.6	1.0	110.0	0	58.8
FCC - Dust	469042 , 224263	Adjacent Red Kite View, Calvert	М	Yes	Yes	15.5	1.0	58.0	0	69.3
Ellesborough Road - Dust	486458 , 207550	Ellesborough Road, Wendover	М	Yes	Yes	13.2	1.0	52.0	0	76.6

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/m ³)	Number of 1-hour periods exceeding trigger level of 190 µg/m ³	Data capture (%)
Nash Lee Road - Dust	484766 , 208782	Nash Lee Lane (west)	М	Yes	Yes	13.4	1.0	89.14	0	85.6
Nash Lee Lane - Dust	485069 , 208793	Nash Lee Lane (east)	м	Yes	Yes	13.8	1.0	54.0	0	84.8
Bacombe Lane – Dust	486528 , 207217	Bacombe Lane, Wendover	м	Yes	Yes	27.4	1.0	111.0	0	84.7
SDVC – Dust	487522, 206043	Small Dean Viaduct, London Road	М	Yes	Yes	13.7	1.0	56.0	0	76.9
Station Road – Dust	474068, 219307	Station Road, Quainton	М	Yes	Yes	14.5	1.0	66.0	0	84.1
Wendover Town - Dust	486193, 207950	Wendover Bypass, Wendover	М	Yes	Yes	12.9	1.0	48.0	0	82.9
Woodlands - Dust	471603, 221315	Station Rd, Quainton, Woodlands Farmhouse	М	Yes	Yes	14.0	1.0	50.0	0	88.2
Grove Farm	486957, 206908	Grove Farm, London Road, Wendover	М	Yes	Yes	12.7	1.0	49.0	0	76.6



