

Air Quality and Dust Monitoring Monthly Report – June 2024

Buckinghamshire Council



Department for Transport

High Speed Two (HS2) Limited has been tasked by the Department for Transport (DfT) with managing the delivery of a new national high speed rail network. It is a non-departmental public body wholly owned by the DfT.

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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 June 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;
- Ground Investigation works
- Pier Construction: Arch from deck for FRC works for pile cap and pier, standard piers FRC works for pile cap and pier, post-tensioning of AFD legs and tower crane mob / demob;
- ATFS: site preparation, bulk earthworks fill, permanent drainage, soiling and seeding, ATFS access road construction;
- Pumping Water Management: Pumping water management ch 25.900 to 29.500;
- Satellite Welfares;
- Generator Farms;
- South Abutment: Earthworks, CFA piling, pile trimming and pile hat installation, FRC early works on SE and drainage works, South Abutment construction stage 2, South Abutment construction stage 2, South Abutment construction stage 2 – earthworks, yard supporting activities, piling platform construction (Harvil Road) and load transfer platform construction (7-8), soiling and seeding works and embankment FRC works;
- Environmental Maintenance;
- Stockpiling Activity HOAC: Stockpile of material coming from other sites;
- River Colne Crossing: Emergency removal of obstruction to RC crossing;
- Launching Girder and Deck Works: span segmental erection with launching gantry, shoring steel structure erection and dismantling, external PT, internal PT stressing & grouting and crane assembly/disassembly;
- 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: Construction of robust kerbs, installation of parapets, construction of concrete stitch, filling of voids and top openings, verge deck waterproofing, trough installation and noise barrier installation;
- Deck Finishes – In-deck Construction: Diaphragm walls, concrete works within the deck, drainage works within the deck and steel works within the deck;
- 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;
- RC Footbridge installation; 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;
- Connection to Tunnels; and
- Building Trades: internal works including steel and zinc cladding.

Amersham Vent Shaft

- General Site Activities;
- Tunnel Connections;
- External Works Phases 1&2;
- Headhouse Superstructure Concrete Works;
- Precast Boundary Wall:
- Internal Works;
- Steel Works and Zinc Cladding; and
- MEP Works.

Chalfont St Giles Vent Shaft

- General Site Activities;
- Steel works and zinc cladding;
- Road Maintenance Works; and
- Building Trades: brickworks and internal works.

Little Missenden Vent Shaft

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

Chesham Intervention Shaft

- General site activity;
- Ground Level Works: Headhouse ATS concrete works and external works;
- Building Trades: External works; and
- Zinc and Cladding Works.

North Portal work site

- General Plant: Site Activities;
- Building Platform;
- Tracks Platform;
- Piling Platform Reinstatement: scraping/hardstanding/earthworks and dismantling piling platforms;
- Porous Portal Structure: Construct reinforced concrete frame and concrete works;
- TBM dismantling portal and compound works;
- North Portal Building; and
- Batching Plant installation & operation.

North Chilterns Area

Grimms Ditch

- HERDS works/survey.

Chesham Lane, Wendover Bus 55

- Earthworks (material haulage across site)
- Temporary Surface Water Management.

RLUB

- Concrete Pour RLUB abutments
- Steel fixing and formwork
- Concrete Blinding.

Ellesborough Road

- Construction of viewing platform towards the ER Road bridge and the Green Tunnel Cut.
- Installation of additional fencing over Ellesborough Road Bridge to prevent trespassing on site.

Nash Lee Road, Nash Lee Lane

- Temporary Surface Water Management
- Installation of UKPN Safety bund for 1207 Diversion
- Installation of East Piling Platform
- Piling for Nash Lee Overbridge

- Nash Lee Orchard Culvert: Erection of steel work on inlet and outlet
- Fixing up of DOKA shutters and Push Pull Props for Outlet Headwall
- 8m³ Concrete Pour of Outlet Headwall and Wingwall
- 12.5m³ concrete pour for top slab complete

Bacombe Lane

- Utility Corridor.
- De-vegetation around site
- Moving Stockpiles
- Link Road Works - Stoning, Kerb install
- Construction of haul road.

Grove Farm

- Probing and Rotary Drilling.
- Construction of Haul Road
- Utility Corridor
- Site Access Road Construction.

Small Dean Viaduct

- Pour of Hammerhead cores
- Installation of viaduct fins and welding
- construction of launch foundations for additional girders
- construction of FRC bearing plinths on hammerheads
- pile cropping at A7
- Stockpile movement.

Wendover Town

- Crane Commissioning
- 4x Deliveries of grouting rigs
- 90x Points pre-grouted using grouting rigs
- Set up and testing of slurry batching plant
- Construction of walkways for BKJV
- Installation of culverts for LPW platform works
- Stoning up parts of the LPW platform and ramps
- Installation of missing bunds within the LPW area
- Excavation around newly excavated pond for lining
- Maintenance of batching plant
- Removal of all material from the batching plant bins prior to Euro Dome installation works
- Concrete processing at the concrete bunker.

Calvert Area

Quainton

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

Woodlands

- 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. Piling ongoing.
- Calvert Green overbridge – piling works and Production of bentonite.
- Aggregate deliveries along the site access road (SAR).
- Calvert Cutting earthworks – drainage and general maintenance activities.

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
- Woods drop inlet culvert
- Doddershall Embankment earthworks
- Doddershall No. 6 and No. 7 Culvert
- Quainton cutting.

Twyford to Greatworth

Turweston North

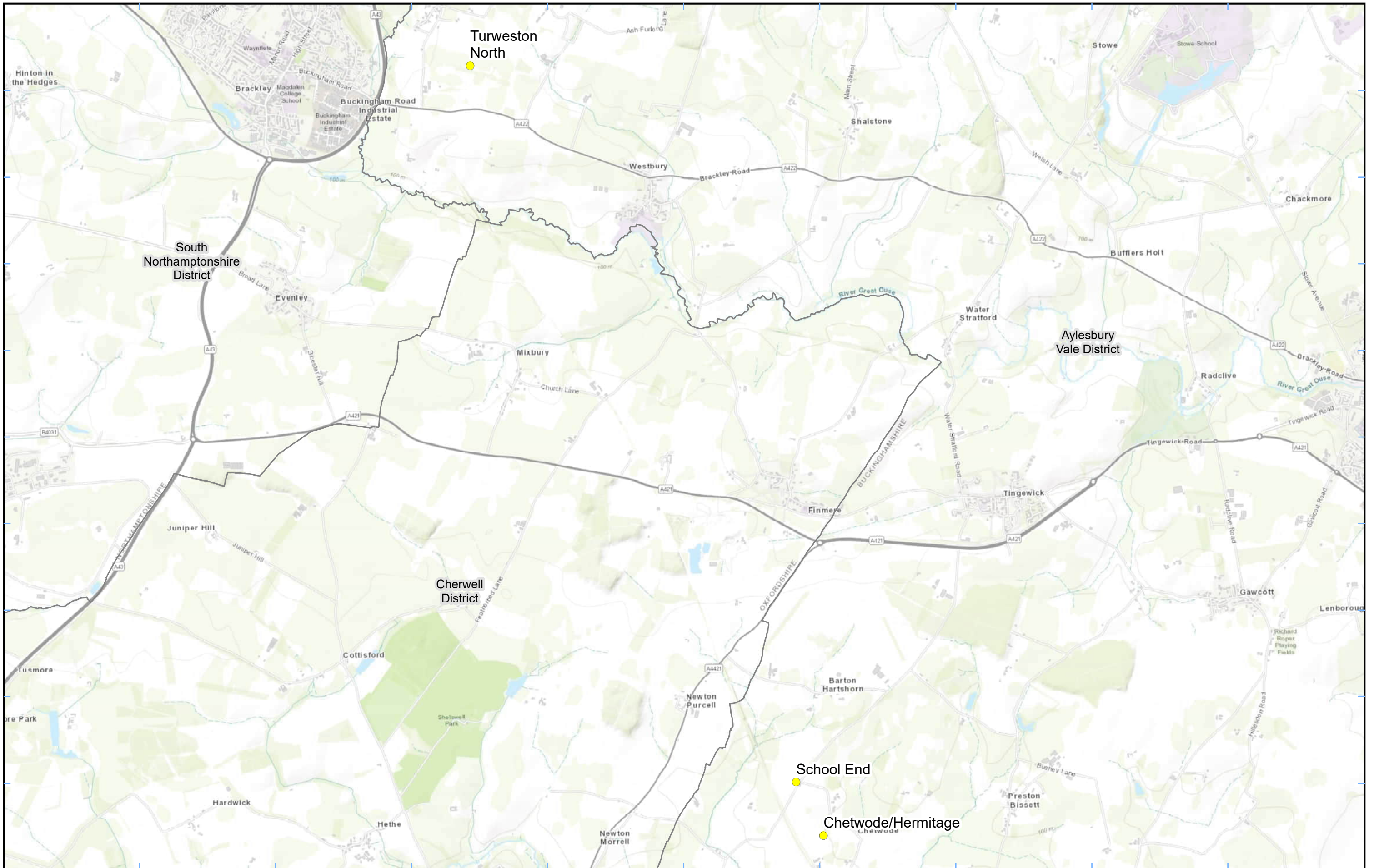
- Hauling
- Topsoil Stockpile Relocation
- Turweston Cutting Excavation
- Excavate and Replace
- I&M instillation
- Loading 1A1
- Crushing and Screening
- Turweston Green Overbridge Construction
- Turweston Viaduct Construction.

- 1.1.5 Thirty-one (31) 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 (June 2024).
- 1.1.9 Data capture was below 90% for multiple monitors due to technical issues and/or loss of power due to insufficient sunlight/wind for monitors using solar/wind power. No data captured at Glebe House for the month of June as location has been decommissioned due to the turbine, solar controller and battery being stolen on 25th May 2024.

- 1.1.10 The Potters Row monitor was decommissioned on 03/06/2024 in advance of the handover of Principal Contractor responsibilities for that area from EKFB to Align JV. A new monitor was then installed on 25th July 2024, which will be reported in full in the next month's report.
- 1.1.11 There were no (0) complaints received during the reporting period (June 2024).

Appendix A – Worksite and Dust Monitoring Locations


Figures 1-7: Worksite and Monitoring locations within BC




Legend
 ● Dust Monitor
 □ District Borough Unitary Boundaries

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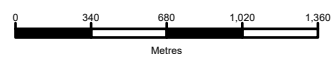
Map Number
 Map Name
**Monitoring Locations
 In BC (Sheet 1)**
 Buckinghamshire County


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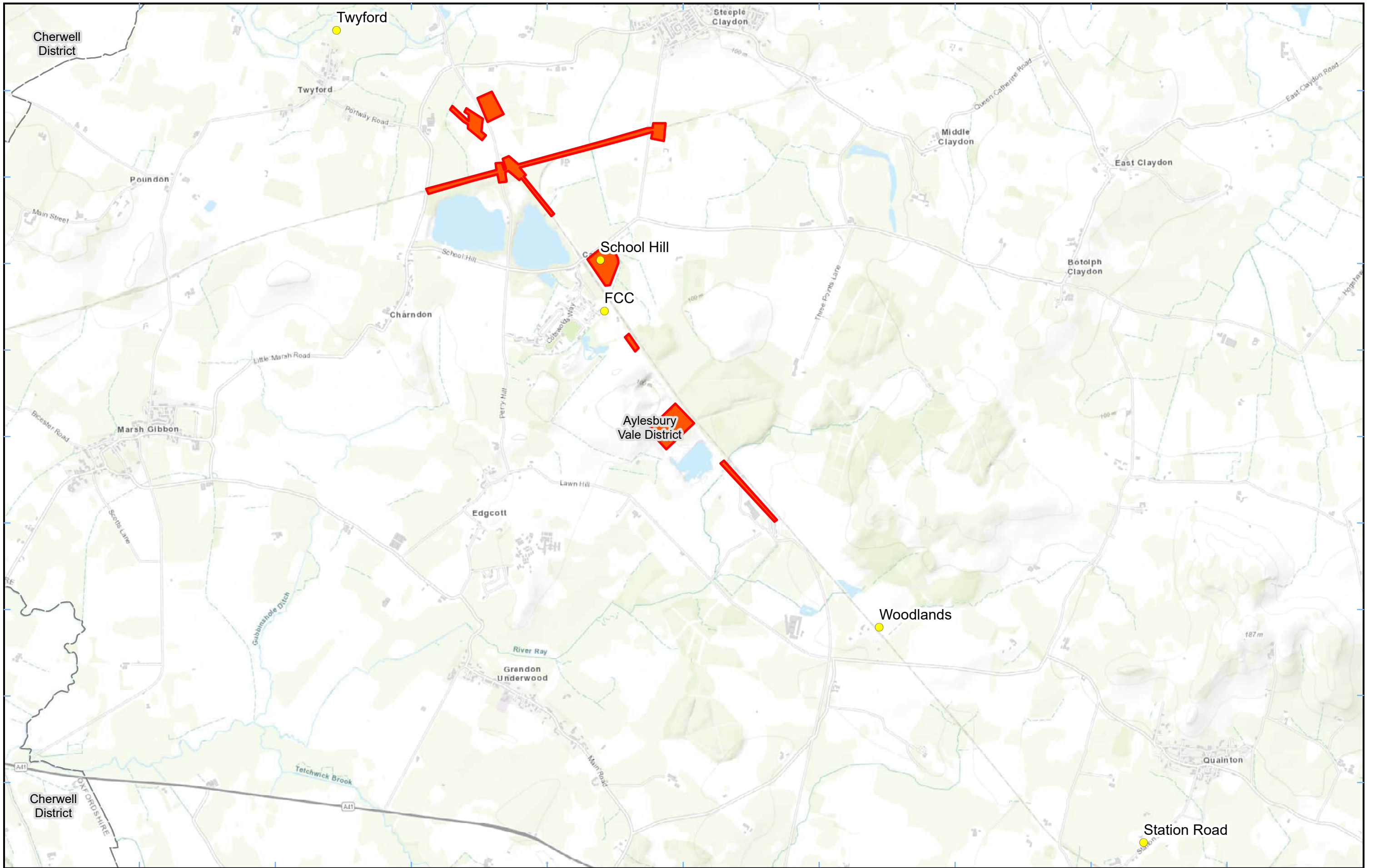


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Legend
 ● Dust monitor □ District Borough Unitary Boundaries
 ■ Worksite

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Map Number
 Map Name
**Worksite & Monitoring Locations
 In BC (Sheet 2)**
 Buckinghamshire County

Map Number
 Map Name
**Worksite & Monitoring Locations
 In BC (Sheet 2)**
 Buckinghamshire County

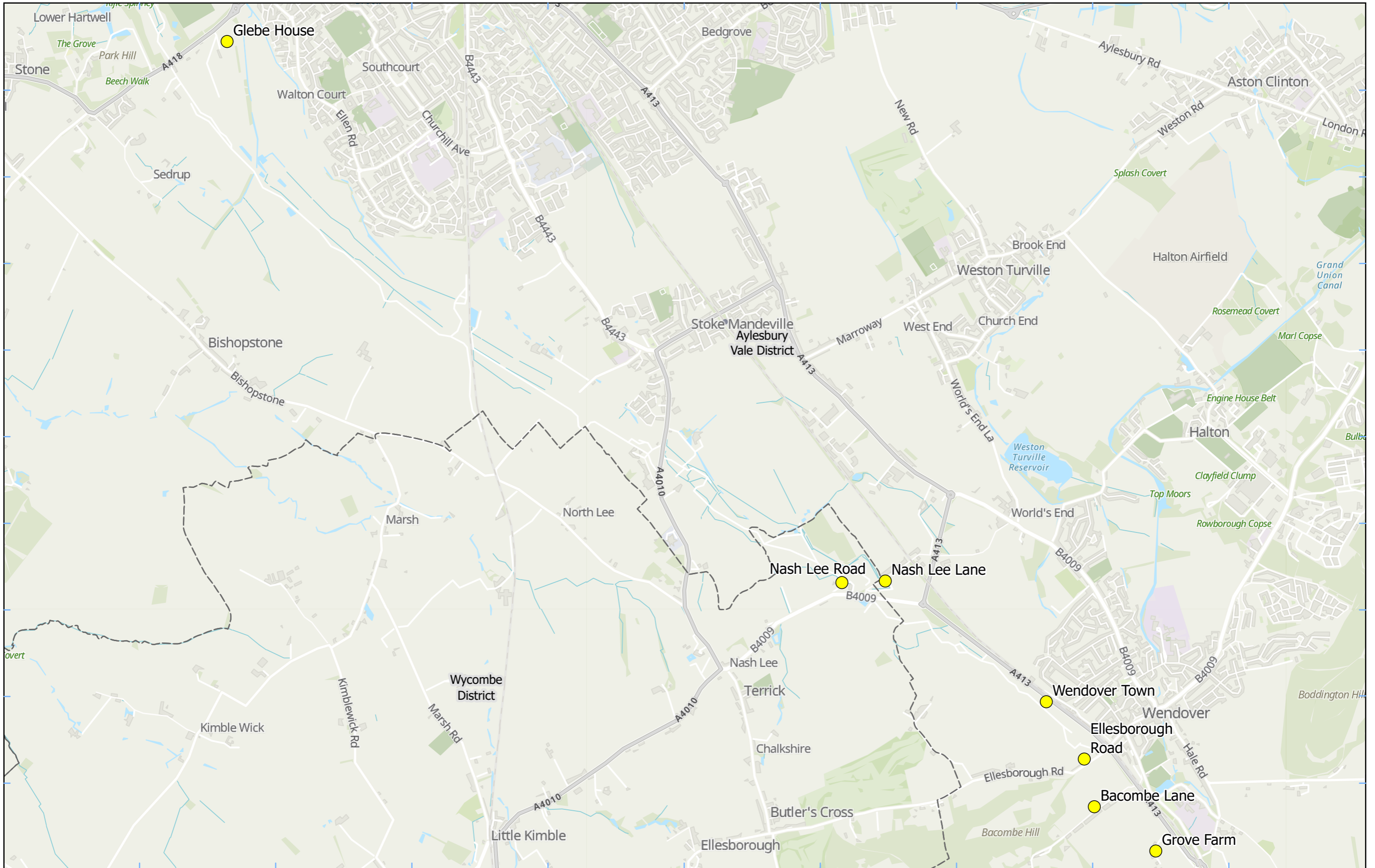

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Legend
 Dust Monitor
 District Borough Unitary Boundaries

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**Monitoring Locations
 In BC (Sheet 3)**
Buckinghamshire County

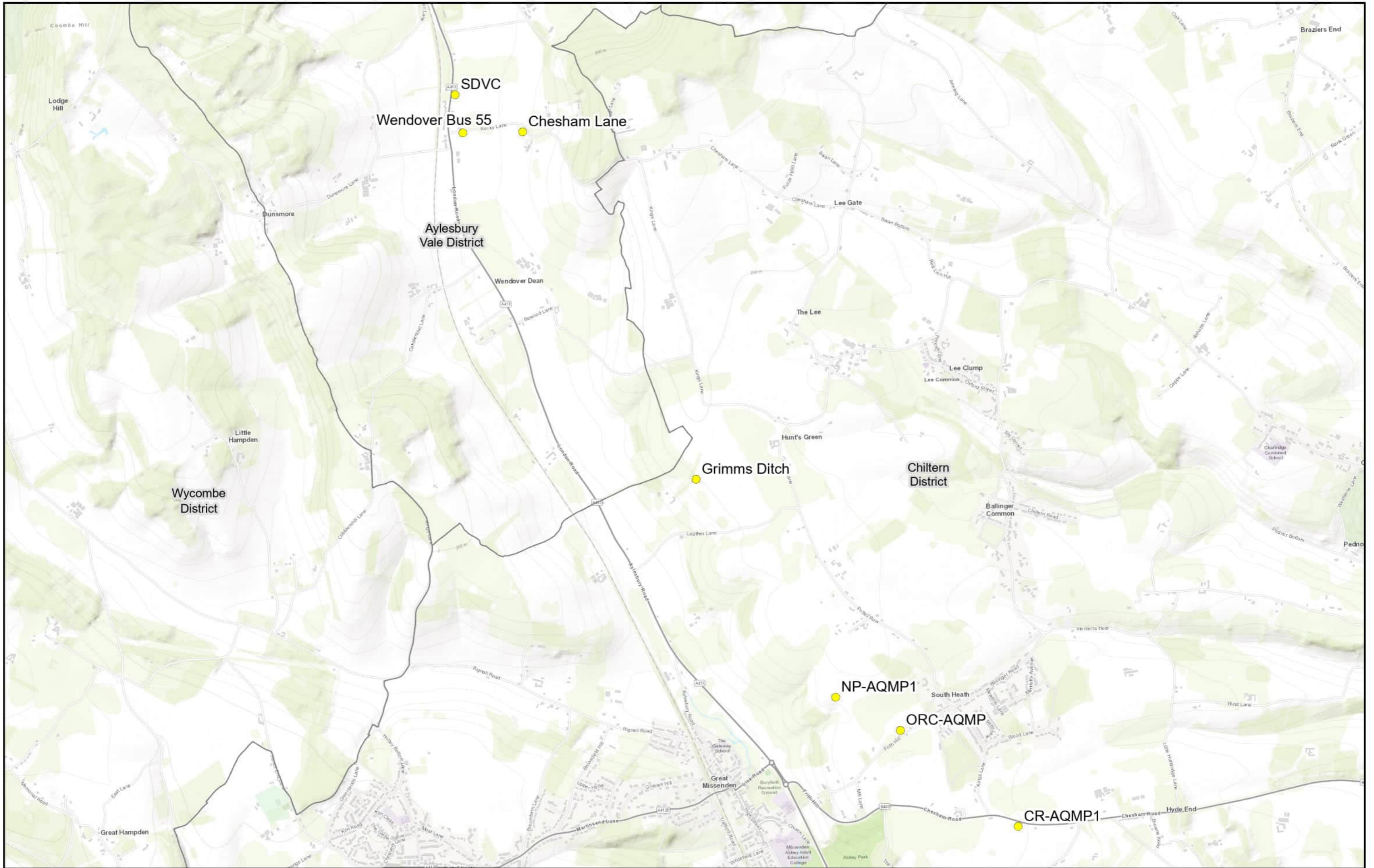
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Legend
 Dust Monitor
 District Borough Unitary Boundaries

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Map Number
 Map Name
**Monitoring Locations
 in BC (Sheet 4)**
 Buckinghamshire County

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Legend
 Dust Monitor
 Worksite
 District Borough Unitary Boundaries

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Map Number
 Map Name
**Worksite and Monitoring Locations
 In BC (Sheet5)**
 Buckinghamshire County

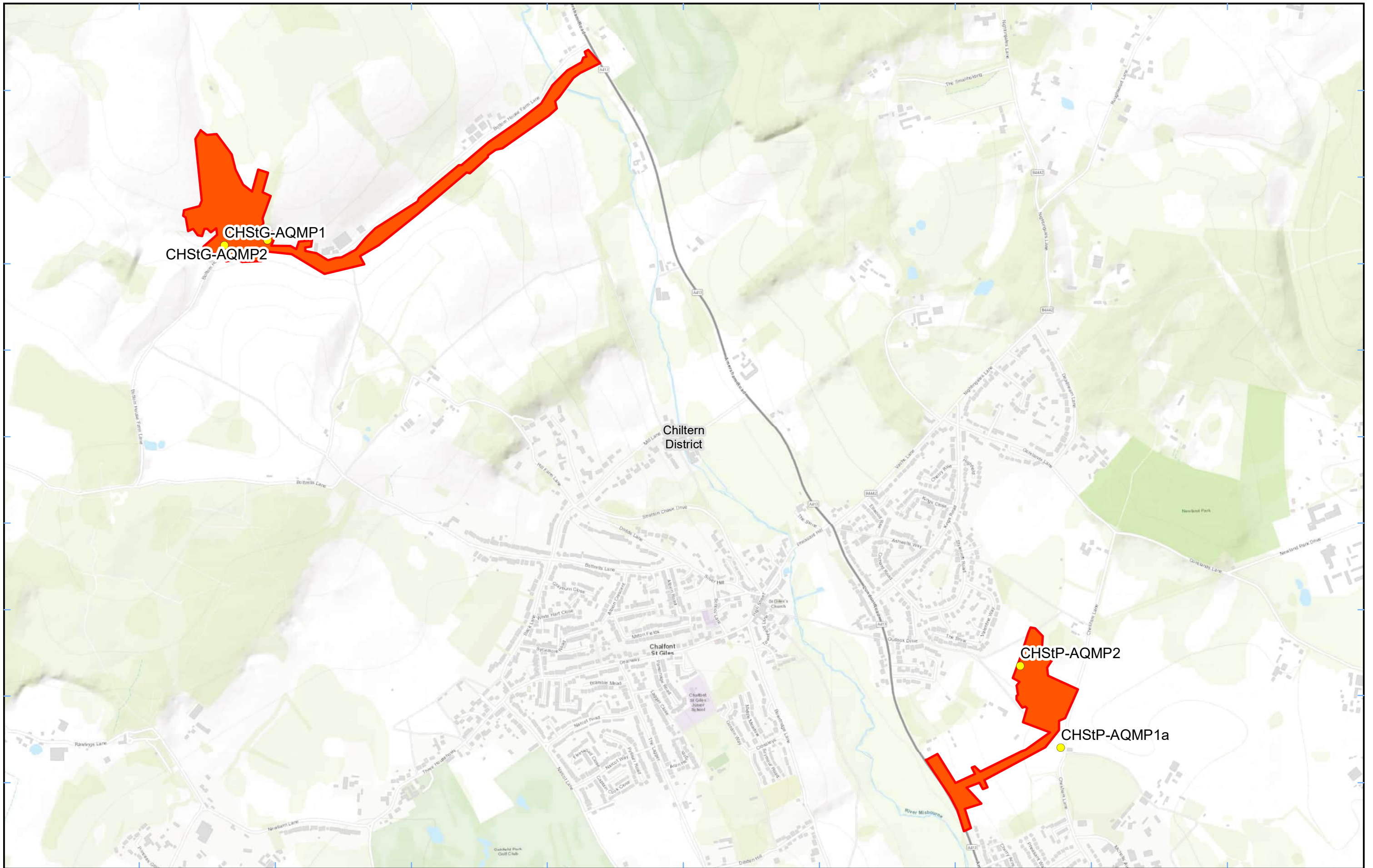
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Legend
 Dust Monitor
 Worksite
 District Borough Unitary Boundaries

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Map Number
 Map Name
**Monitoring Locations
 In BC (Sheet 6)**
 Buckinghamshire County

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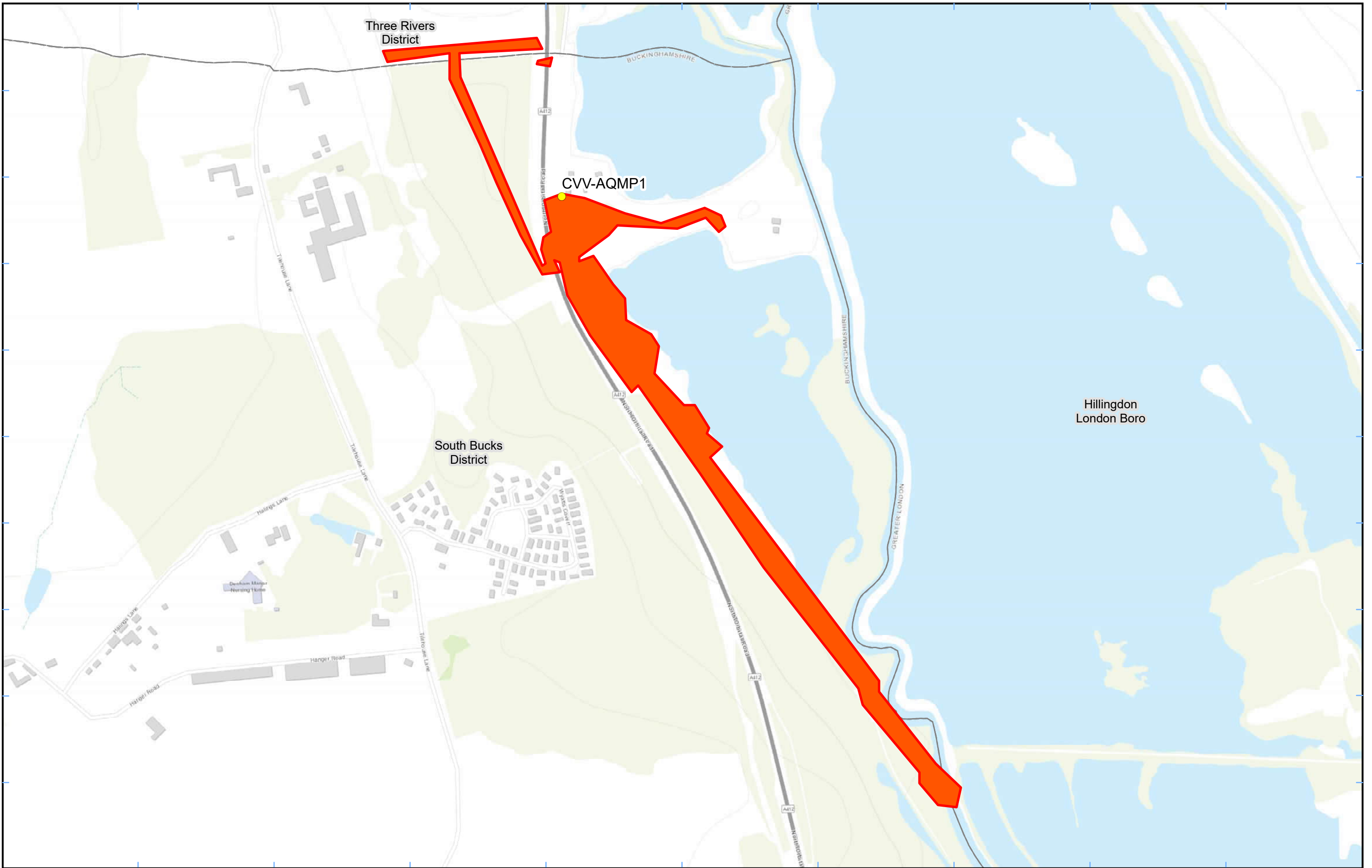
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Legend
 ● Dust Monitor
 □ District Borough Unitary Boundaries
 ■ Worksite

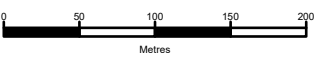
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Map Number
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**Worksite and Monitoring Locations
 In BC (Sheet 7)**
 Buckinghamshire County


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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/m ³)	Minimum 1-hour PM ₁₀ concentration (µg/m ³)	Maximum 1-hour PM ₁₀ concentration (µg/m ³)	Number of 1-hour periods exceeding trigger level of 190 µg/m ³	Data capture (%)
CVW-AQMP1	503612, 189846	On the north boundary of LTP1	M	Yes	No	3.7	1.0	55.0	0	100.0
CHStP-AQMP1a	500093, 192996	Relocated from CHStP-NMP1 to site-boundary outside residence	M	Yes	Yes	3.5	1.0	16.0	0	100.0
CHStP-AQMP2	499951, 193282	On the western boundary of the site	M	Yes	Yes	3.4	1.0	16.0	0	100.0
AMER-AQMP1	495367, 196722	On the north-eastern boundary of Amersham	M	Yes	Yes	4.9	1.0	23.0	0	100.0
AMER-AQMP2	495263, 196590	On the south-western boundary of Amersham	M	Yes	Yes	4.3	1.0	21.0	0	98.5
CHStG-AQMP1	497170, 194752	On the southern boundary close to Hobbs Hole Cottage	M	Yes	Yes	4.6	1.0	18.0	0	100.0
CHStG-AQMP2	497320, 194770	On southern boundary next to carpark	M	Yes	Yes	3.2	1.0	18.0	0	87.1
LMS-AQMP1	493190, 198848	On the south-west of the site	M	Yes	Yes	4.3	1.0	20.0	0	100.0
LMS-AQMP2	493407, 198731	On the south-east of the site	M	Yes	Yes	4.3	1.0	21.0	0	97.9
CR-AQMP1	491291, 201143	On the Chesham Road Vent Shaft	M	Yes	Yes	3.9	1.0	50.0	0	90.1

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/m ³)	Minimum 1-hour PM ₁₀ concentration (µg/m ³)	Maximum 1-hour PM ₁₀ concentration (µg/m ³)	Number of 1-hour periods exceeding trigger level of 190 µg/m ³	Data capture (%)
ORC-AQMP	490503, 201786	Orchard Cottage South-eastern Site Boundary	M	Yes	Yes	4.6	1.0	21.0	0	100.0
NP-AQMP1	490069, 202008	North Portal Site Entrance	M	Yes	Yes	4.7	1.0	22.0	0	98.6
School Hill (CAL-AQMP2) - Dust	469003, 224740	School Hill Compound	M	Yes	Yes	5.0	1.0	26.0	0	100.0
School End - Dust	463666, 230049	School End, Chetwode	M	Yes	Yes	6.4	1.0	44.0	0	100.0
Grimms Ditch - Dust	489135, 203468	Leather Lane, The Lee, South Heath	M	Yes	Yes	3.3	1.0	14.0	0	99.7
Chesham Lane - Dust	487974, 205794	Chesham Lane, The Lee, Wendover	M	Yes	Yes	4.8	1.0	18.0	0	99.9
Wendover Bus 55 - Dust	487574, 205787	Chesham Lane, The Lee, Wendover	M	Yes	Yes	1.8	1.0	9.0	0	95.6
Twyford - Dust	466544, 226883	Twyford, Buckinghamshire	M	Yes	Yes	4.8	1.0	33.0	0	100.0
Chetwode/Hermitage - Dust	463936, 229521	Hermitage, Chetwode	M	Yes	Yes	5.5	1.0	27.0	0	100.0
Glebe House - Dust	480475, 212560	A418 Aylesbury	M	No	-	-	-	-	-	-
Turweston North - Dust	460439 , 237140	Turweston, Buckinghamshire	M	Yes	Yes	5.1	1.0	27.0	0	100.0
FCC - Dust	469042 , 224263	Adjacent Red Kite View, Calvert	M	Yes	Yes	6.0	1.0	85.0	0	100.0
Ellesborough Road - Dust	486458 , 207550	Ellesborough Road, Wendover	M	Yes	Yes	4.7	1.0	19.0	0	99.7
Nash Lee Road - Dust	484766 , 208782	Nash Lee Lane (west)	M	Yes	Yes	5.1	1.0	29.0	0	94.2
Nash Lee Lane - Dust	485069 , 208793	Nash Lee Lane (east)	M	Yes	Yes	5.0	1.0	19.0	0	99.7

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/m ³)	Minimum 1-hour PM ₁₀ concentration (µg/m ³)	Maximum 1-hour PM ₁₀ concentration (µg/m ³)	Number of 1-hour periods exceeding trigger level of 190 µg/m ³	Data capture (%)
Bacombe Lane - Dust	486528 , 207217	Bacombe Lane, Wendover	M	Yes	Yes	5.7	1.0	19.0	0	100.0
SDVC - Dust	487522, 206043	Small Dean Viaduct, London Road	M	Yes	Yes	5.0	1.0	81.0	0	99.9
Station Road - Dust	474068, 219307	Station Road, Quainton	M	Yes	Yes	4.7	1.0	23.0	0	100.0
Wendover Town - Dust	486193, 207950	Wendover Bypass, Wendover	M	Yes	Yes	5.0	1.0	18.0	0	99.6
Woodlands - Dust	471603, 221315	Station Rd, Quainton, Woodlands Farmhouse	M	Yes	Yes	5.6	1.0	41.0	0	100.0
Grove Farm	486957, 206908	Grove Farm, London Road, Wendover	M	Yes	Yes	6.2	1.0	41.0	0	100.0

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

