January 2025

# HS2

Air Quality and Dust Monitoring Monthly Report - January 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 January 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 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;
- Tunnel Connections;
- External Works Phases 1&2;
- Highway Drainage Diversion;
- Precast Boundary Wall;
- Internal Works; and
- Steel Works and Zinc Cladding.

#### **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

- General Plant: Site Activities;
- General Earthworks and Drainage;
- Construction and Installation of Utilities;
- Construction of the Great Missenden Compound;
- Havenfield Wood Drop Inlet Culvert Excavation and Installation;
- GMI/2 and GMI/12 Overbridge excavation and construction;
- Ground Investigation Works; and
- Site Access Road and Mass Haul Route construction, utilisation, and maintenance.

#### **North Chilterns Area**

#### **Grimms Ditch**

- Installation of Land Drainage North
- Ground preparations for Blinding North

#### Chesham Lane, Wendover Bus 55

- Drainage Installation (West / East)
- Rebar fixing Deck, Wing Walls
- Preparation of Formwork Deck, Wing walls
- KIS Utility Diversion (East).

### Ellesborough Road

- Installed foul pipe over the utilities bridge.
- Excavated on both sides for the manholes using vac-ex.
- A redundant gas pipe was discovered and removed under the supervision of the utility's coordinator.
- Poured blinding and installed thrust blocks.

#### Nash Lee Road, Nash Lee Lane

- NLOB A0 (West) Abutment pour (110m3 approx.) Struck shutters.
- NLOB A3 (East) Excavated down to 500mm below wingwall formation and backfilled with 1A1

- NLOB P1 (West) completed 3 no. piles. EKFB Excavated to blinding level around the piles began cropping
- NLOB P2 (East) poured 1 no. pile
- AC8 Poured Outlet Headwall & Inlet Apron Slab and constructed the cage for the Inlet Headwall
- 1206 UKPN Diversion cable pulling completed and all areas backfilled. Joint bays excavated and cables jointed.
- UKPN Excavated trench and laid cable to the phase 3 compound 1207 Diversion, backfilled the cable. Constructed and poured the base for the substation.
- Completed E&R for the West Impact Wall, working on the E&R for AC9 culvert, main trace and East Impact Wall.
- Temporary surface water management across site.

#### Bacombe Lane

- Fixed the rebar for the two cages on the South side of the 9m Dia Shaft
- Installation of a Filter drainage and catchpits
- KIS installation of the OXO (6202T).

#### **Grove Farm**

- KIS started on the 1223 UKPN diversion
- Pile Cropping for the underbridge
- Installation of the Wheel Wash at new location
- Vegetation clearance works on the farmland.

#### **Small Dean Viaduct**

- Rebar installation
- Precast slabs installation
- Grouting of lifting points
- Generator installation
- Installation of launching equipment
- Launch embankment preparation
- Launching of the Small Dean Viaduct.

#### Wendover Town

- Continued assembling steel, installing shutters, and pouring protection slabs for LPW.
- Extended the platform towards the plant crossing for the BKJV LPW Long Reach.
- Lifted the poured protection slabs and stacked them for more efficient storage.
- Constructed the west side of the LPW platform extension and commenced works on the East.
- Long Reach commenced operations at the LPW extension.
- Pre-treatment rigs are operational.
- Hydraulic grabs are operational.
- Steel and shutters were installed for the concrete bunker, and concrete was poured.

- Setup of Temporary Compound:
- Installation of platform
- Delivery and installation of welfare cabins
- Setup of Permanent Compound:
- Installation of platform
- Construction of foundations
- GI Probing:
- Ongoing probing at cutting level
- Installation of Cutting Drainage:
- Excavation of drainage trench
- Installation of filter drain along cutting toe

#### **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. 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.

# 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
- QUA28 overbridge
- Station Road overbridge
- Station Road Network Rail overbridge.

#### **Twyford to Greatworth**

#### **Turweston North**

Turweston Green Overbridge construction:

- Steel fixing deck steel zone 3 (East and West)
- Hy-rib installation for construction joints surrounding zone 3
- Steel pre-fabrication
- Grouting of bearing pockets
- Platform and access road maintenance
- Cleaning deck (housekeeping)
- reinforcement installation, (deck and diaphragm)
- GRP permanent formwork installation
- Concrete pour
- Structural backfill behind the abutments

### **Turweston Viaduct:**

- Installation of planks
- Backfilling on A2

#### Earthworks:

Drainage

Air Quality and Dust Monitoring Summary Report, January 2025 Buckinghamshire Council

- Surcharge
- Re-constructing the batter
- Site maintenance
- has context menu

#### School End

#### School End O/B:

- Striking Paratops
- Works on Maintenance Platform
- Wingwall waterproofing drainage/ no-fine concreting

School End Highways and Utilities:

- KIS non contestable utilities works including Anglian Water connection point.
- Earthworks (fill) to West Abutment and Verge

### **Twyford**

#### **Twyford Viaduct:**

- Backfill against sheet piles south retaining wall
- Prep for Baur Keller mobilisation

#### Earthworks:

- General Housekeeping
- Pumping Management
- SAR and MHR Maintenance
- Stockpiling.

#### <u>Hermitage</u>

#### CHW18 O/B:

- Striking and dismantling of paratop
- Maintenance platform works

CHW18 Green Highway:

- KIS utility works.
- 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/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 (January 2025).
- 1.1.9 Data capture was below 90% for multiple monitors due to:
  - Data capture for Grimms Ditch was 81.32% for the month of January 2025. Intermittent data capture was due to a battery fault throughout the month.
  - Data capture for Chesham Lane was 70.16% for the month of January 2025. Intermittent data capture was due to a battery fault throughout the month.
  - Data capture for Wendover Bus 55 was 64.78% for the month of January 2025. Low data capture was due to a battery fault throughout the month.
  - Data capture for Ellesborough Road was 25.94% for the month of January 2025. Very low data capture was due to the SIM card port corrosion in the noise monitor and was retrieved for repair. Noise monitor was reinstalled on 14th January. Intermittent dust data from 14th to 31st January was due to a battery fault.
  - Data capture for Nash Lee Road was 65.46% for the month of January 2025. Low data capture was due to a battery fault throughout the month.
  - Data capture for Nash Lee Lane was 74.87% for the month of January 2025. Intermittent data capture was due to a battery fault throughout the month.
  - Data capture for Bacombe Lane was 54.57% for the month of January 2025. Low data capture was due to a battery fault throughout the month.
  - Data capture for Small Dean Viaduct was 74.06% for the month of January 2025. Intermittent data capture was due to a battery fault throughout the month.
  - Data capture for Wendover Town was 79.97% for the month of January 2025. Intermittent data capture was due to a battery fault throughout the month.
  - Data capture for Grove Farm was 53.63% for the month of January 2025. Low data capture was due to battery fault throughout the month.
  - Data capture at the School Hill dust monitor was 49.06% for the month of January 2025. Very low data capture was due to a battery fault throughout the month.
  - Data capture at the FCC dust monitor was 30.91% for the month of January 2025. No data capture from 1st to 10th January was due to vandalised communications cable of the monitor. A replacement was installed on 10th January. Very low data from 10th to 31st January was due to a battery fault.
  - Data captured at the Station Road dust monitor was 71.77% for the month of January 2025. Intermittent data capture was due to a battery fault throughout the month.
  - Data capture at the Woodlands dust monitor was 53.63% for the month of January 2025. Low data capture was due to a battery fault throughout the month.
  - Data capture at School End was 75.81% for the month of January 2025. Intermittent data capture was due to a battery fault throughout the month.
  - Data capture at Twyford was 40.46% for the month of January 2025. Very low data capture was due to the solar panel toppled over and a battery fault. Access to location was also unsafe and difficult to replace batteries.

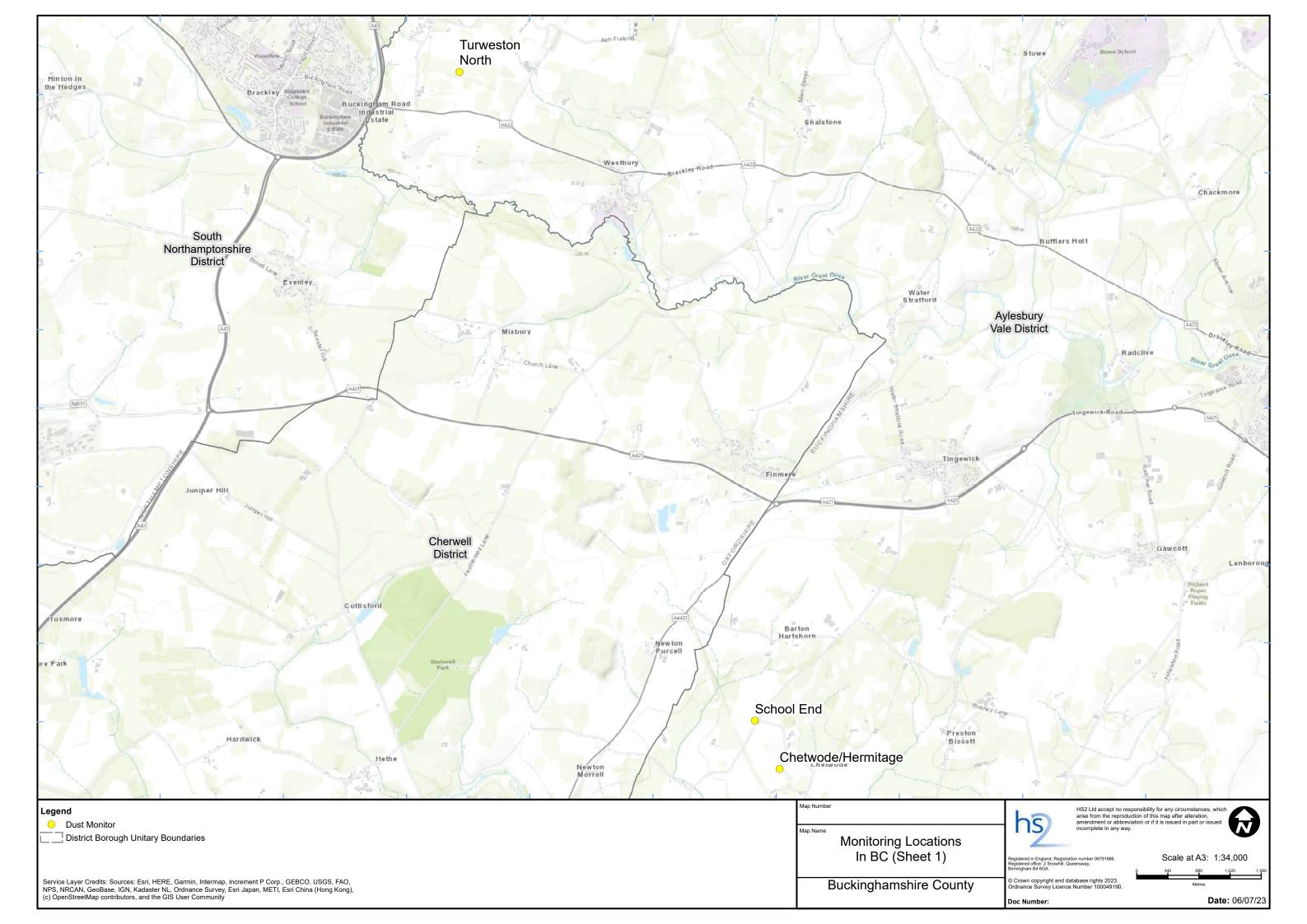
- Data capture for Chetwode Hermitage was 64.65% for the month of January 2025. Low data capture was due to a battery fault throughout the month.
- Data capture for Turweston North was 45.83% for the month of January 2025. Very low data capture was due to a battery fault. Access to location was unsafe and difficult to replace batteries.
- The data at AMER-AQMP1 was lower due to water damage to the power cable from the 21/01/25 which a replacement was found and fixed by Sixense on the 30/01/25.
- 1.1.10 Table 1 provides a summary of the complaint information relating to dust or air quality received during the reporting period, together with the findings of any related investigations.

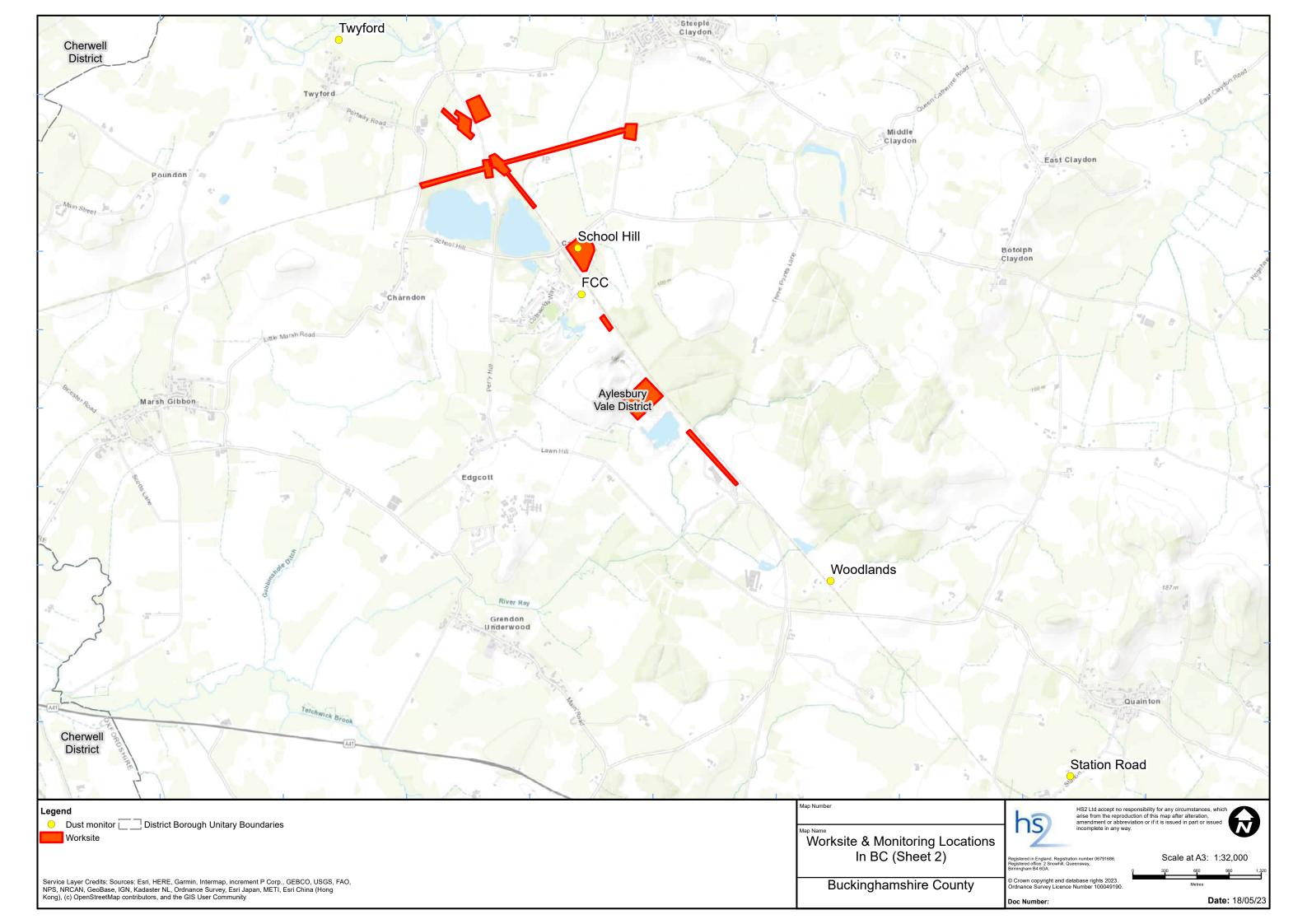
Table 1: Summary of complaints received during January 2025

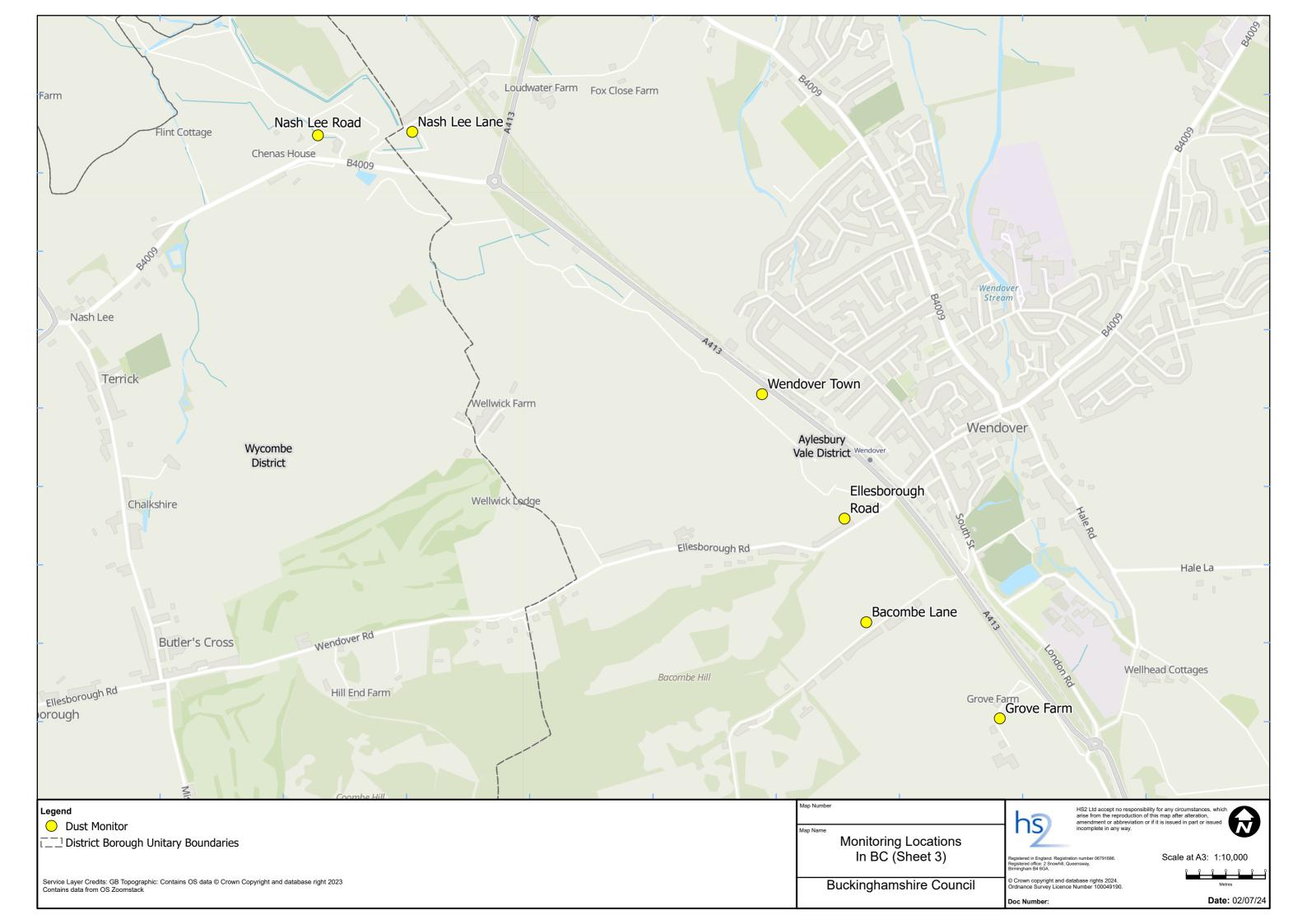
Complaint Reference No.	Worksite Reference	Description of complaint	Results of investigation
HS2-25-46065-C	N/A	Dust reported on property believed to be coming from HS2 site.	Resident lives a considerable distance from works, all nearby monitors have not recorded any exceedances, the levels are well within the permitted requirements in the area. Resident has been informed of our findings.

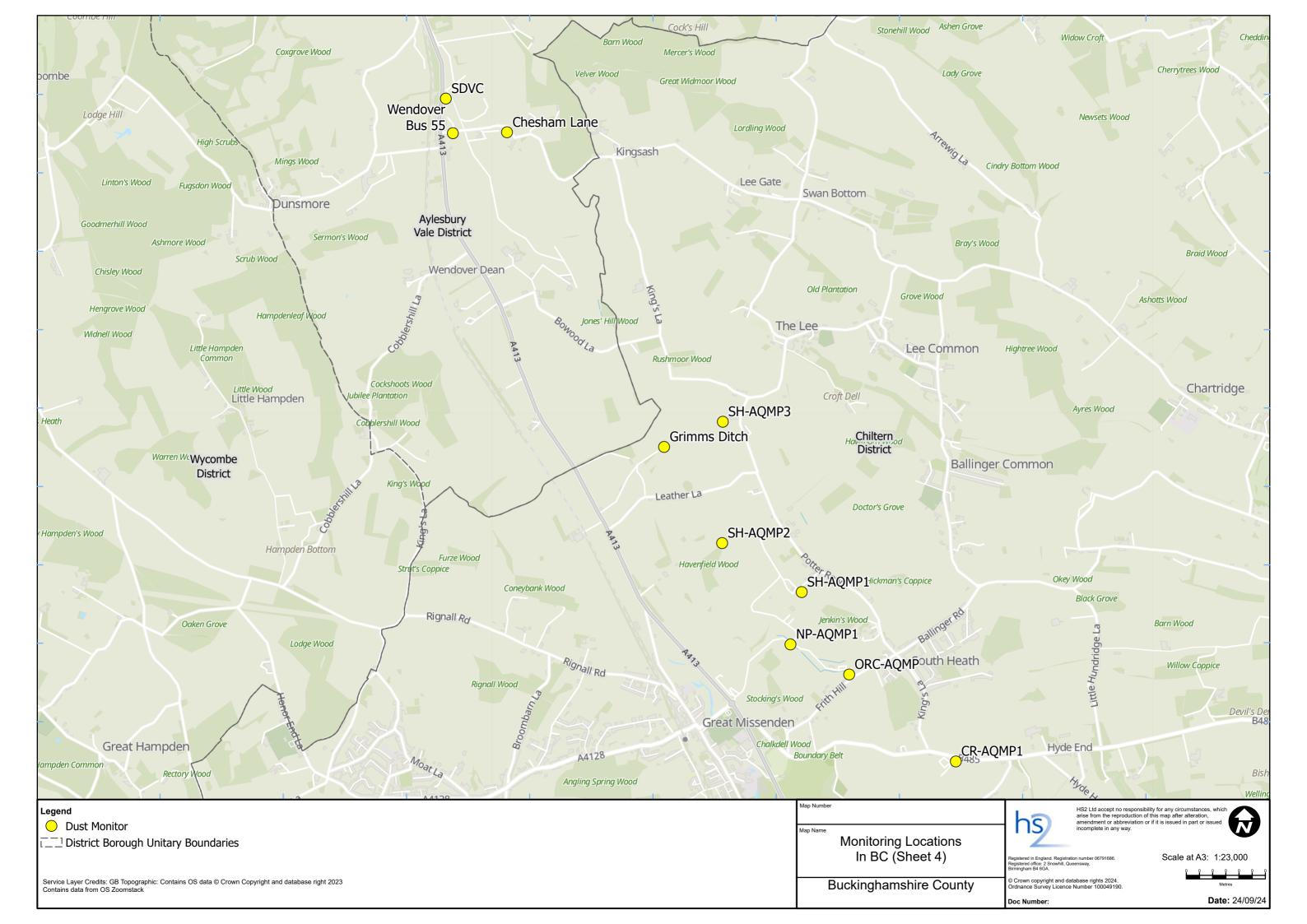
# **Appendix A - Worksite and Dust Monitoring Locations**

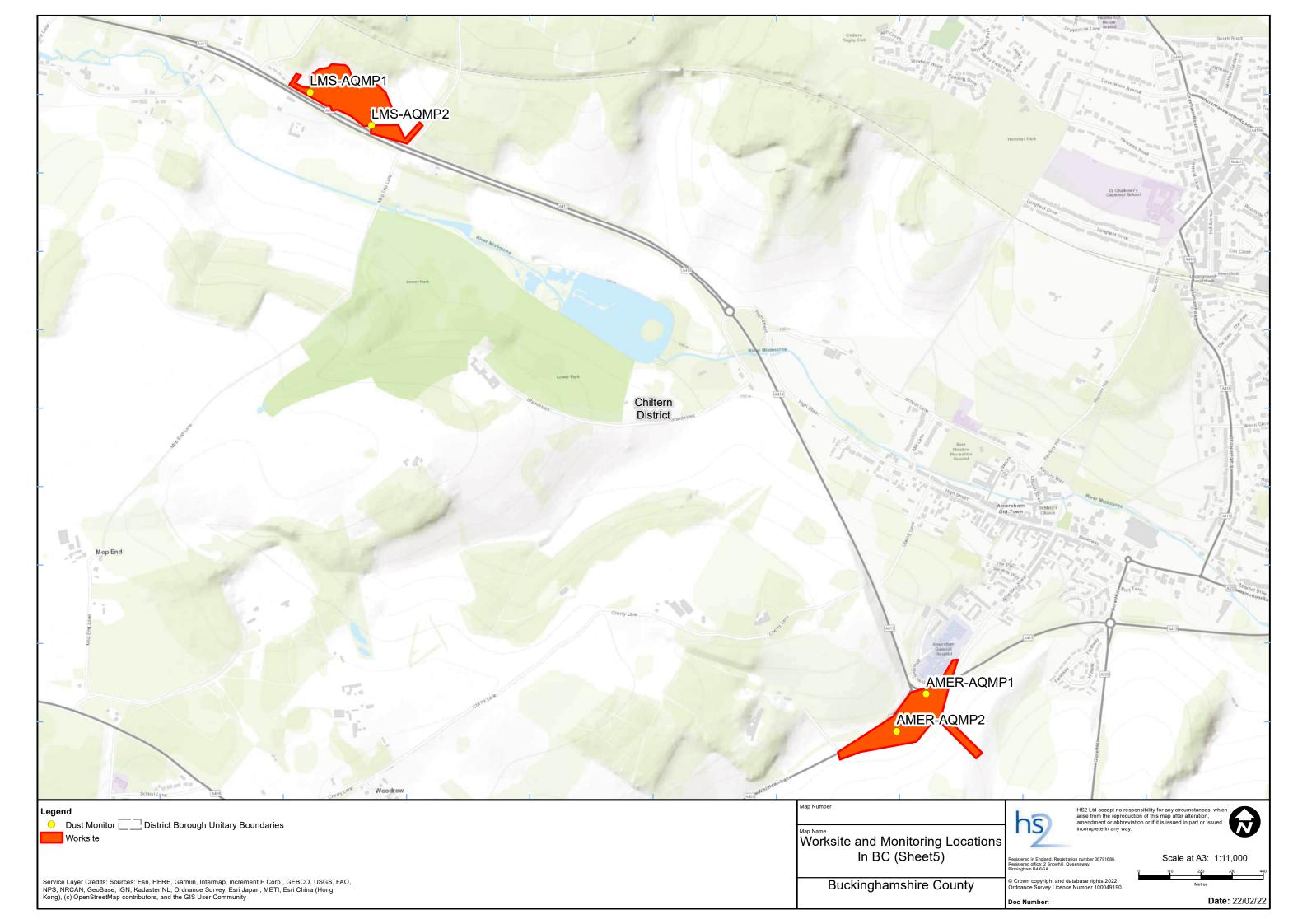
Figures 1-7: Worksite and Monitoring locations within BC

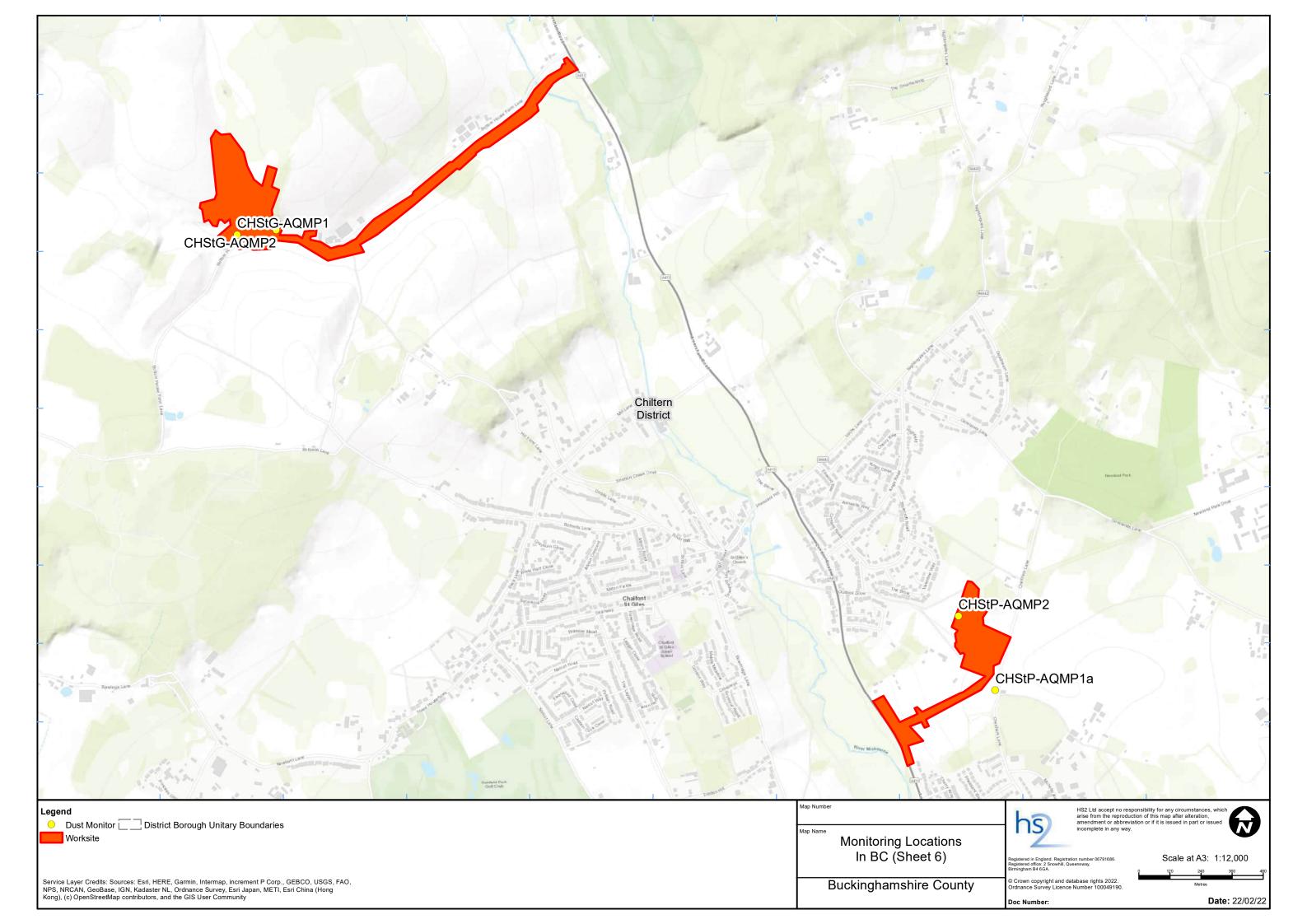


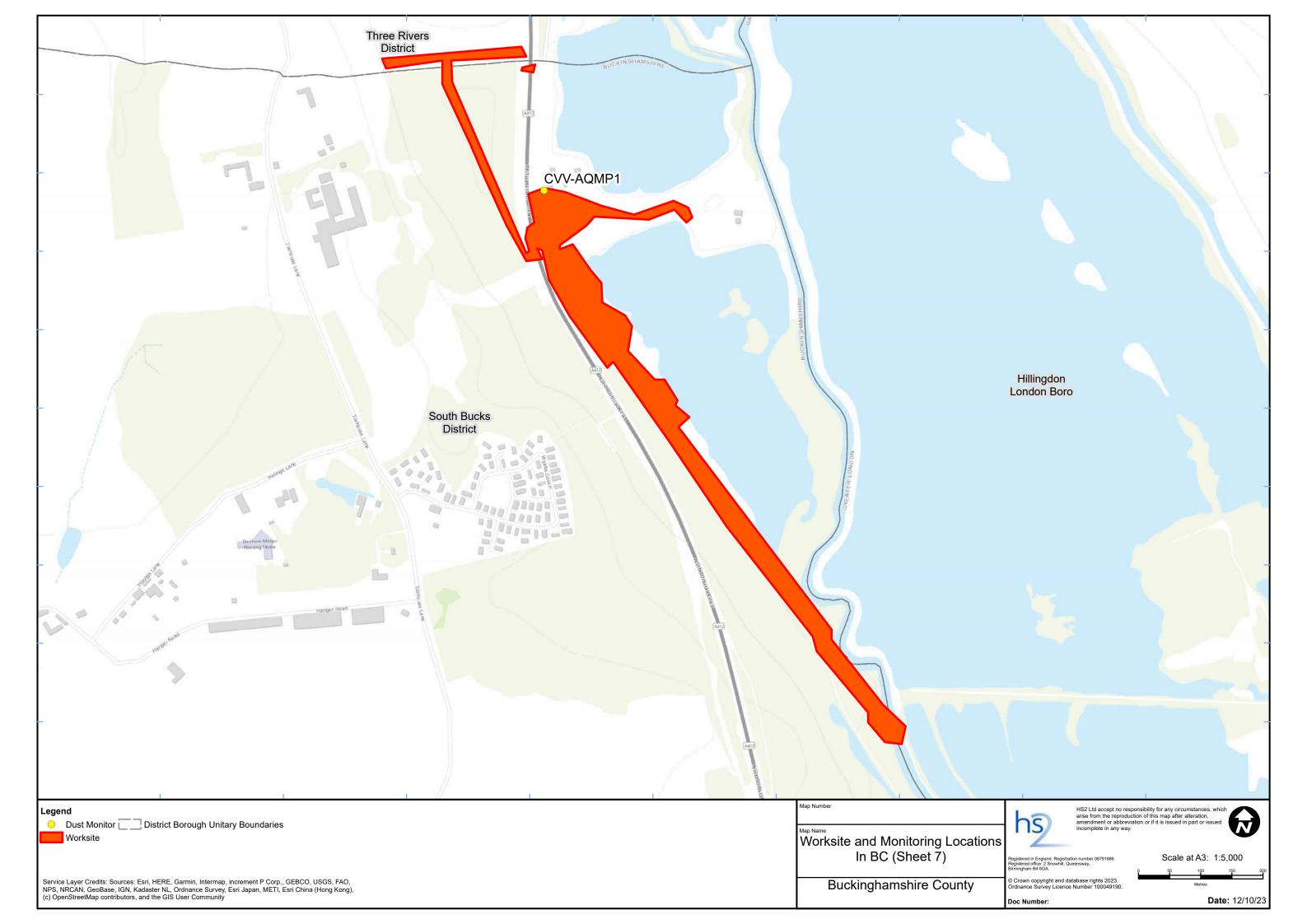












# **Appendix B - Dust Monitoring Results**

Table 2: 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	11.2	1.0	65.0	0	98.3
CHStP-AQMP1a	500093, 192996	Relocated from CHStP-NMP1 to site-boundary outside residence	М	Yes	Yes	11.9	1.0	72.0	0	99.7
CHStP-AQMP2	499951, 193282	On the western boundary of the site	М	Yes	Yes	9.7	1.0	67.0	0	98.9
AMER-AQMP1	495367, 196722	On the north- eastern boundary of Amersham	М	Yes	Yes	9.6	1.0	69.0	0	62.6
AMER-AQMP2	495263, 196590	On the south- western boundary of Amersham	М	Yes	Yes	10.3	1.0	66.0	0	98.4
CHStG-AQMP1	497170, 194752	On the southern boundary close to Hobbs Hole Cottage	М	Yes	Yes	11.0	1.0	76.0	0	100.0
CHStG-AQMP2	497320, 194770	On southern boundary next to carpark	М	Yes	Yes	10.7	1.0	70.0	0	95.6
LMS-AQMP1	493190, 198848	On the south-west of the site	М	Yes	Yes	11.6	1.0	72.0	0	97.0
LMS-AQMP2	493407, 198731	On the south-east of the site	М	Yes	Yes	11.5	1.0	76.0	0	91.5
CR-AQMP1	491291, 201143	On the Chesham Road Vent Shaft	М	Yes	Yes	10.9	1.0	68.0	0	97.3

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 (%)
ORC-AQMP	490503, 201786	Orchard Cottage South-eastern Site Boundary	М	Yes	Yes	9.8	1.0	64.0	0	96.8
NP-AQMP1	490069, 202008	North Portal Site Entrance	М	Yes	Yes	10.7	1.0	73.0	0	100.0
SH-AQMP1	490152, 202395	Park Farm	М	Yes	Yes	27.4	7.7	72.1	0	100.0
SH-AQMP2	489564, 202757	King's Lane	М	Yes	Yes	9.3	6.5	27.5	0	99.9
SH-AQMP3	489569, 203654	Leather Lane	М	Yes	Yes	35.8	7.6	98.9	0	100.0
School Hill (CAL- AQMP2) - Dust	469003, 224740	School Hill Compound	М	Yes	Yes	10.2	1.0	49.0	0	49.1
School End – Dust	463666, 230049	School End, Chetwode	М	Yes	Yes	9.2	1.0	43.0	0	75.8
Grimms Ditch – Dust	489135, 203468	Leather Lane, The Lee, South Heath	М	Yes	Yes	7.1	1.0	54.0	0	81.2
Chesham Lane - Dust	487974, 205794	Chesham Lane, The Lee, Wendover	М	Yes	Yes	7.5	1.0	49.0	0	70.2
Wendover Bus 55 - Dust	487574, 205787	Chesham Lane, The Lee, Wendover	М	Yes	Yes	3.8	1.0	18.0	0	64.8
Twyford - Dust	466544, 226883	Twyford, Buckinghamshire	М	Yes	Yes	10.9	1.0	51.0	0	40.5
Chetwode/Hermitage - Dust	463936, 229521	Hermitage, Chetwode	М	Yes	Yes	9.3	1.0	52.0	0	64.7
Turweston North - Dust	460439 , 237140	Turweston, Buckinghamshire	М	Yes	Yes	42.0	1.0	127.0	0	45.8
FCC - Dust	469042 , 224263	Adjacent Red Kite View, Calvert	М	Yes	Yes	11.7	1.0	45.0	0	30.9
Ellesborough Road - Dust	486458 , 207550	Ellesborough Road, Wendover	М	Yes	Yes	9.0	1.0	54.0	0	25.9

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 (%)
Nash Lee Road - Dust	484766 , 208782	Nash Lee Lane (west)	М	Yes	Yes	9.8	1.0	78.0	0	65.5
Nash Lee Lane - Dust	485069 , 208793	Nash Lee Lane (east)	М	Yes	Yes	11.7	1.0	87.0	0	74.9
Bacombe Lane – Dust	486528 , 207217	Bacombe Lane, Wendover	М	Yes	Yes	12.4	1.0	79.0	0	54.6
SDVC – Dust	487522, 206043	Small Dean Viaduct, London Road	М	Yes	Yes	9.3	1.0	58.0	0	74.1
Station Road – Dust	474068, 219307	Station Road, Quainton	М	Yes	Yes	11.4	1.0	54.0	0	71.8
Wendover Town - Dust	486193, 207950	Wendover Bypass, Wendover	М	Yes	Yes	8.7	1.0	66.0	0	80.0
Woodlands - Dust	471603, 221315	Station Rd, Quainton, Woodlands Farmhouse	М	Yes	Yes	8.9	1.0	41.0	0	53.6
Grove Farm	486957, 206908	Grove Farm, London Road, Wendover	М	Yes	Yes	10.2	1.0	65.0	0	53.6

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

