March 2024

HS2

Air Quality and Dust Monitoring Monthly Report - March 2024 **Buckinghamshire** Council

© HS2 Ltd. gov.uk/hs2



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.

High Speed Two (HS2) Limited, Two Snowhill Snow Hill Queensway Birmingham B4 6GA

Telephone: 08081 434 434

General email enquiries: HS2enquiries@hs2.org.uk

Website: www.gov.uk/hs2

A report prepared by EWCs and MWCCs on behalf of HS2 Ltd.

High Speed Two (HS2) Limited has actively considered the needs of blind and partially sighted people in accessing this document. The text will be made available in full on the HS2 website. The text may be freely downloaded and translated by individuals or organisations for conversion into other accessible formats. If you have other needs in this regard please contact High Speed Two (HS2) Limited.

© High Speed Two (HS2) Limited, 2024, except where otherwise stated.

Copyright in the typographical arrangement rests with High Speed Two (HS2) Limited.

This information is licensed under the Open Government Licence v2.0. To view this licence, visit www.nationalarchives.gov.uk/doc/open-governmentlicence/version/2 **OGL** or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or e-mail: psi@nationalarchives.gsi.gov.uk. Where we have identified any third-party copyright information you will need to obtain permission from the copyright holders concerned.



# **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 March 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 <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;
- ATFS: site preparation, bulk earthworks and permanent drainage;
- Water pumping management;
- Satellite welfare;
- Generator farms;
- North Abutment: transportation (yard supporting activities) and FRC works for ancillary items;
- A412 Gas Crossing Emergency Dismantling;
- Environmental Maintenance;
- River Colne Crossing: Emergency removal of obstruction to RC Crossing;
- 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 accesses top of the deck (HAKI stairs) and deck 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, noise barriers installation and north abutment works;
- Deck Finishes In-deck Construction: diaphragm walls and concrete works within the deck, drainage works within the deck and steel works within the deck;
- Landscaping: advanced works including removal of cofferdams, early earthworks including ground profiling and cut, Initial ground drainage including manhole

- chamber, early soil (subsoil and topsoil) placement, hardstanding removal and tree removal & vegetation removal; and
- Removal of the Grand Union Canal scaffold bridge in prep for the launching girder span in early March.

## **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 Phase 1; and
- Headhouse Superstructure Concrete 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;
- Headhouse Superstructure Concrete Works;
- Phase 1 of external works; and
- Both internal and external Building Trades.

## **Chesham Vent 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 support;
- Piling Platform Reinstatement: scraping/hardstanding/earthworks and dismantling piling platforms;
- TBM Arrival: TBM dismantling portal and compound works; and
- Batching Plant installation.

## **North Chilterns Area**

## Potters Row, Grimms Ditch

- Earthworks; and
- Use of SAR

## Chesham Lane, Wendover Bus 55

- Earthworks;
- · Construction of plant laydown area; and
- Pond maintenance, surface water management.

# Ellesborough Road

- Drainage works;
- Installation of edgings;
- Complete installation of substations; and
- White lining.

## Nash Lee Road, Nash Lee Lane

- Earthworks;
- Construction of Mill House North Calvert;
- Construction of new laydown area;
- Surface Water Management;
- SAR maintenance/ repairs;
- HDD for utilities diversion;
- · Road sign installation for Risborough Road overbridge; and
- Construction of Stoke Brook Diversion Phase 2B.

## **Bacombe Lane**

Installation of Drainage for Bacombe Lane Link Road.

## **Grove Farm**

- Removal of Concrete;
- Import of Chalk from Pier 4 excavation;
- Clancy Installed access chamber for stop tap; and
- Maintenance of Haul Road.

## **Small Dean Viaduct**

- Delivering, Loading/lifting of diaphragms and girders;
- Scaffold erected for P6 and P5 Hammerhead;
- Installation of working platform, P4;
- Installation of prefabricated pier stems for P5;
- Bored Piling at P3 and P4;

- Welding together of griders, diaphragms, and trestles attachments;
- Earthworks (Small Dean South Embankments); and
- Launch Platform Work.

## Wendover Town

- Water Utility installation (Foley Bridge);
- Construction of platform between Slurry Wall and Welfare;
- Surface Water Management; and
- Trial pit and borehole drilling.

#### **Calvert Area**

# Station Road (Quainton)

- Earthworks;
- Platform for storage; and
- Carpark extension.

## **Woodlands Farm (Woodlands)**

- Adams Accommodation underbridge construction of steel reinforcement cages for wingwalls;
- River Ray diversion temporary works; and
- 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); and
- 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; and
- Quainton cutting.

## Twyford to Greatworth

## **Turweston North**

- PRD and piling drilling;
- Loading 1A1 to the south of T2G;
- Turweston Green Overbridge construction;
- Steel fixing and concreting;
- Preping for 1A1 fill;
- Drainiage works mobilisation;
- CSSL Turweston Cutting Stabilisation;
- 1A1 fill to level drainage;
- Bladon trial pits;
- Borehole drilling; and
- Duo crushing and screening.

# **Twyford**

- Excavate and replace;
- Placement of class 2 and class 4 landscape bunds;
- Maintenance of SAR and MHR;
- Delivery of materials via SAR and MHR;
- Stockpile maintenance; and
- Backfilling of 6N at Twyford East Culvert.

## Chetwode

- Maintenance of SAR and MHR;
- Delivery of materials via SAR and MHR; and
- Utility works (diversion maintenance).

# **Aylesbury**

# Glebe House

- Stoke Mandeville Bypass Overbridge;
- Edge protection installation of deck level;
- Backfilling and back of wall drainage;
- Parapet Installation;
- Aylesbury South Cutting excavation; and
- Aylesbury South Cutting stockpiling.

## **School End**

# **Overbridge**

- RC work: Steel fixing and shuttering;
- RC work: concrete binding;
- Maintenance of stockpiles; and
- Drainage and pond maintenance.
- 1.1.5 Thirty-two (32) 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 (March 2024).
- 1.1.9 Data capture was below 90% for multiple monitors in March 2024. Low data capture at Potters Row was due to a lack of solar charge to the monitor. Low data capture at Grimms Ditch was due to an internal hardware fault with the monitor. Low data capture at Ellesborough Road was due to a communication cable fault that has since been resolved. Low data capture at Nash Lee Road and Nash Lee Lane was due to a lack of solar charge

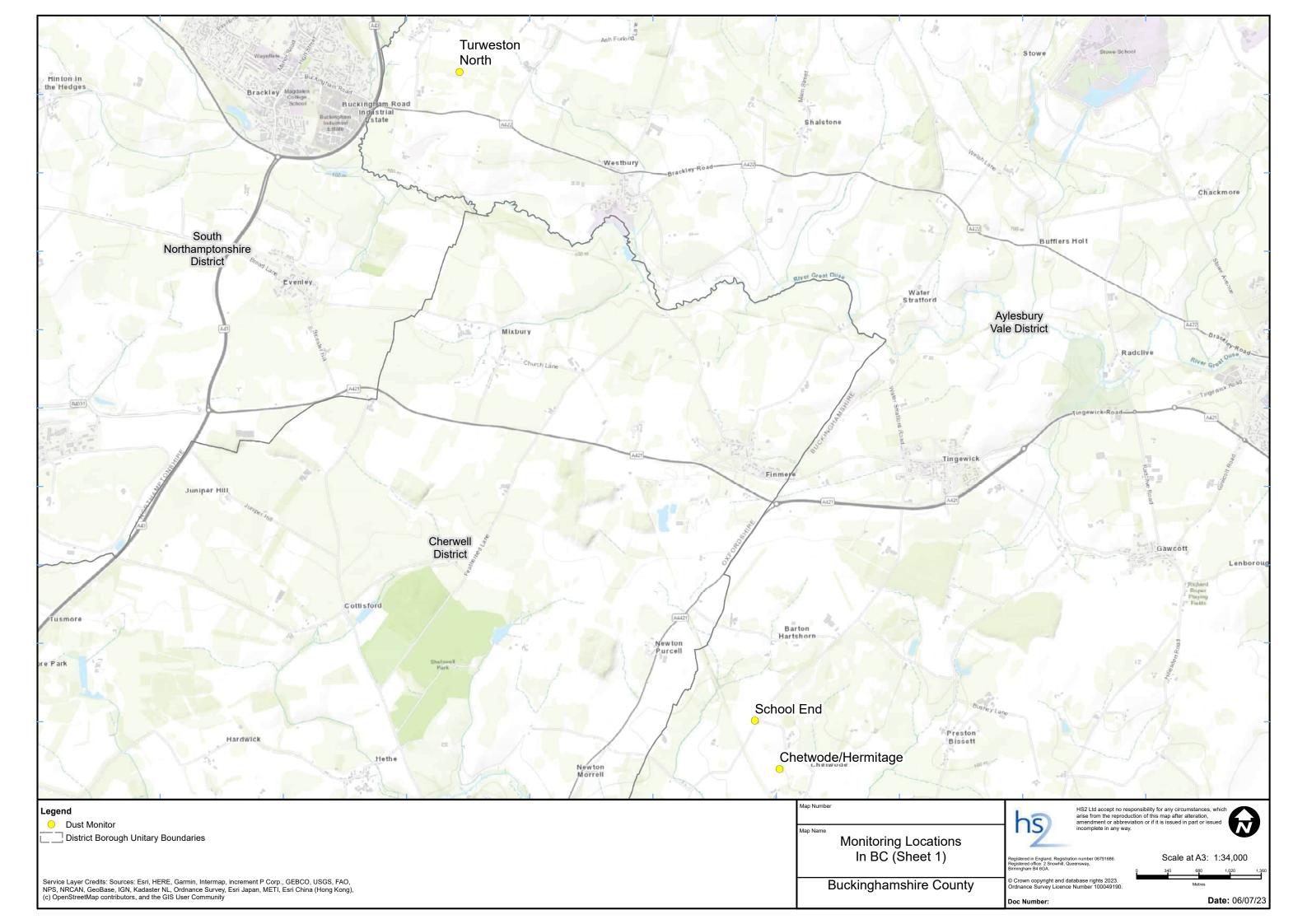
Air Quality and Dust Monitoring Summary Report, March 2024 Buckinghamshire Council

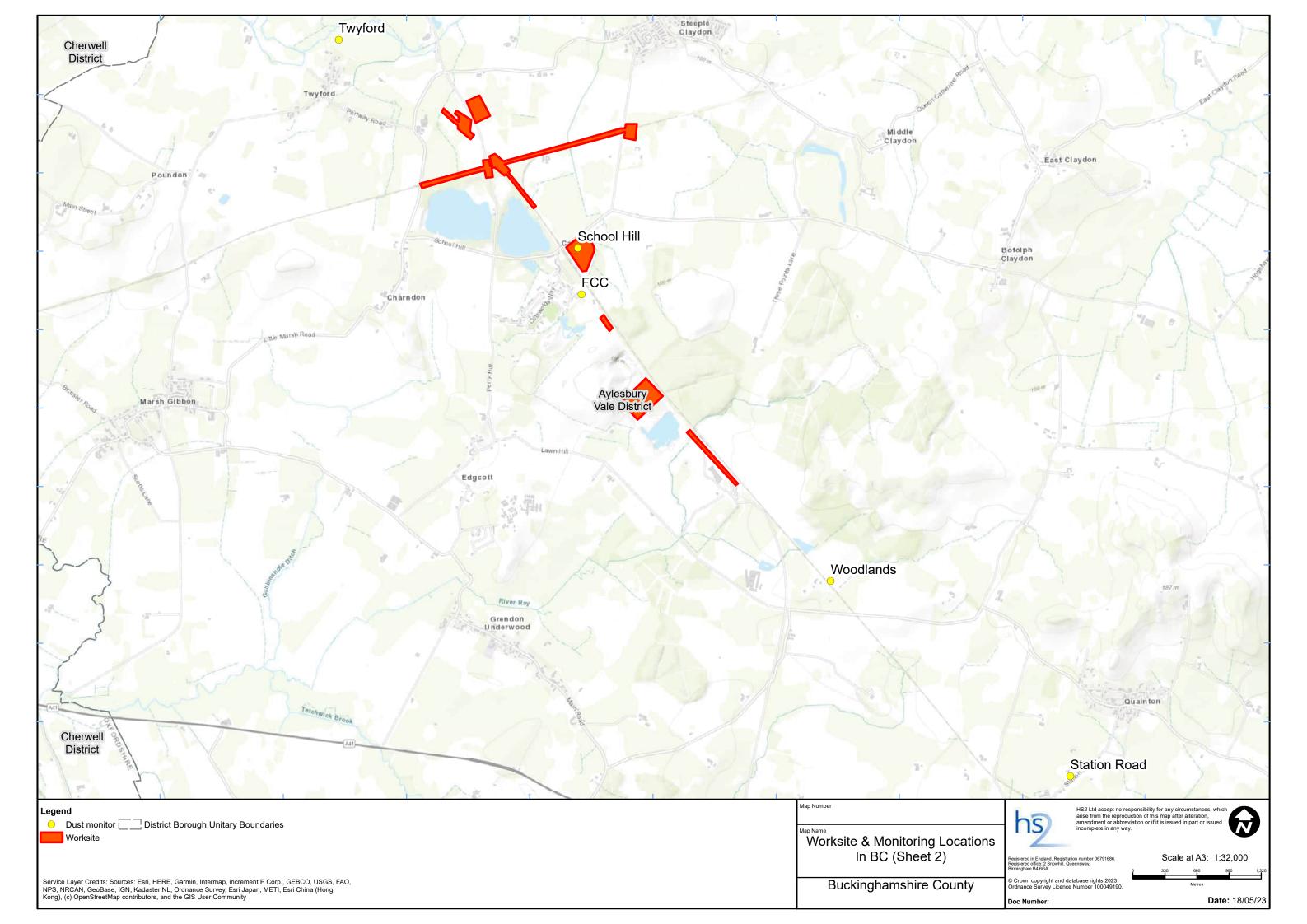
and battery fault. No data was captured at the Twyford and Turweston North monitors due to the monitors being retrieved for calibration.

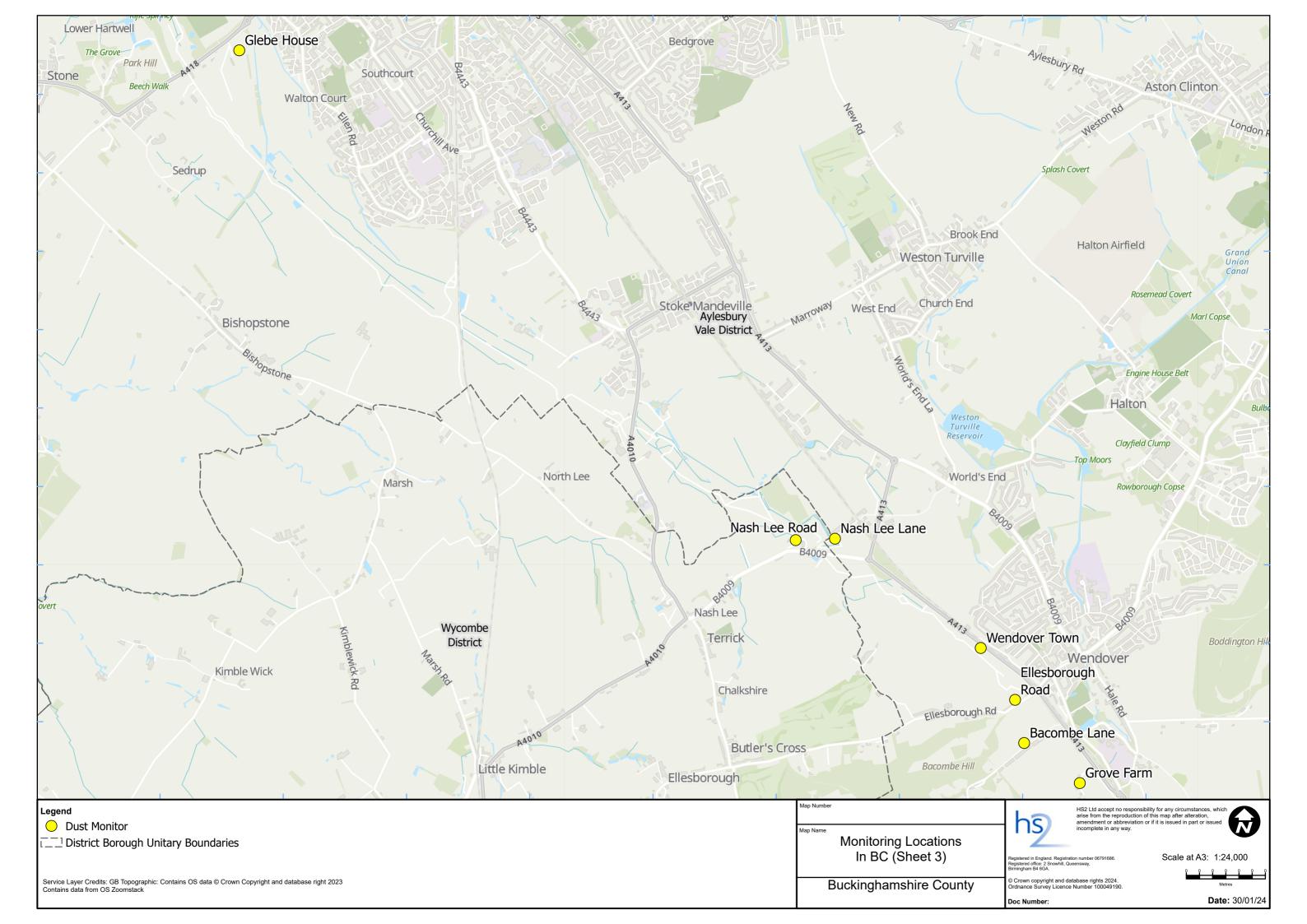
1.1.10 There were no (0) complaints received during the reporting period (March 2024).

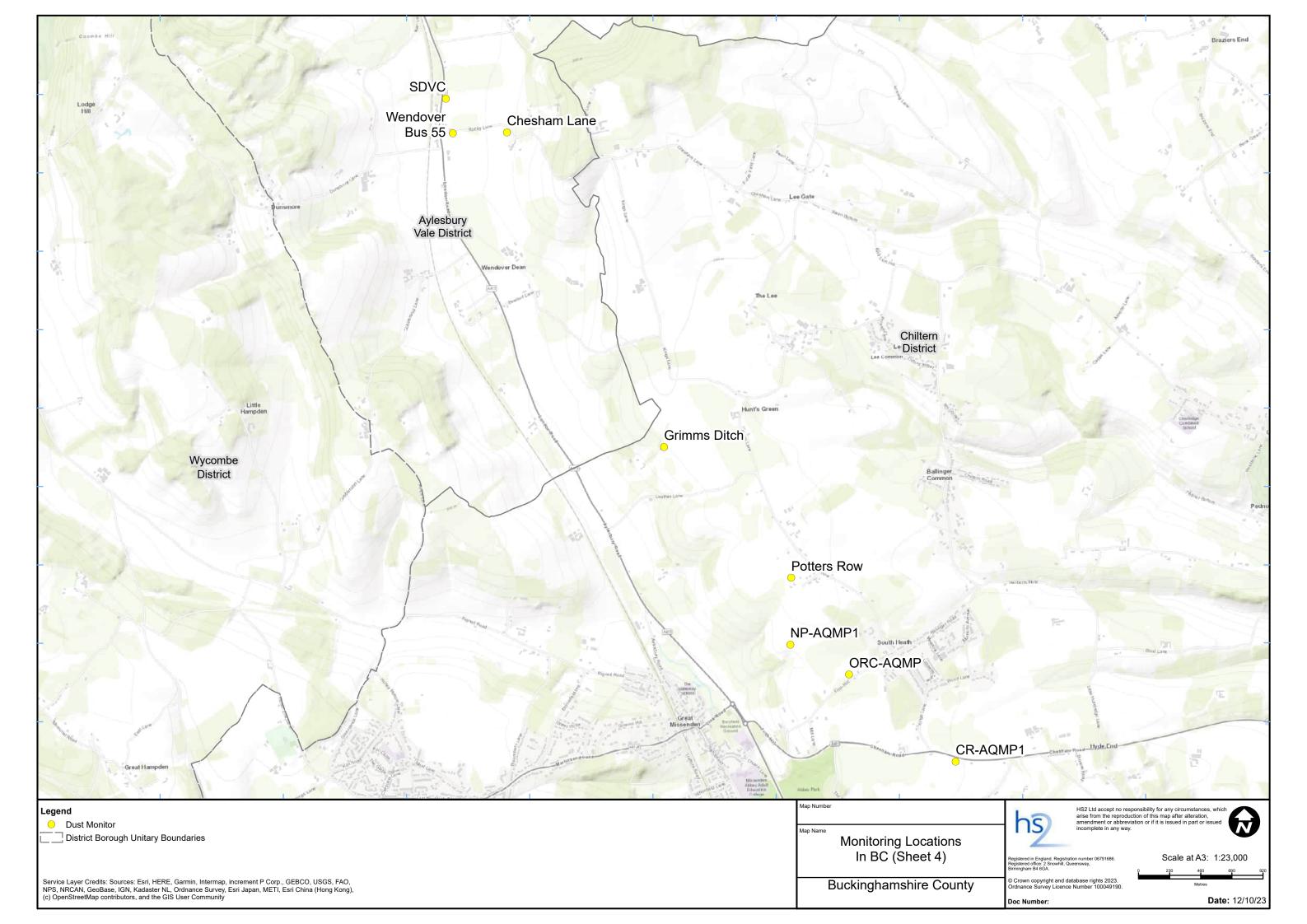
# **Appendix A - Worksite and Dust Monitoring Locations**

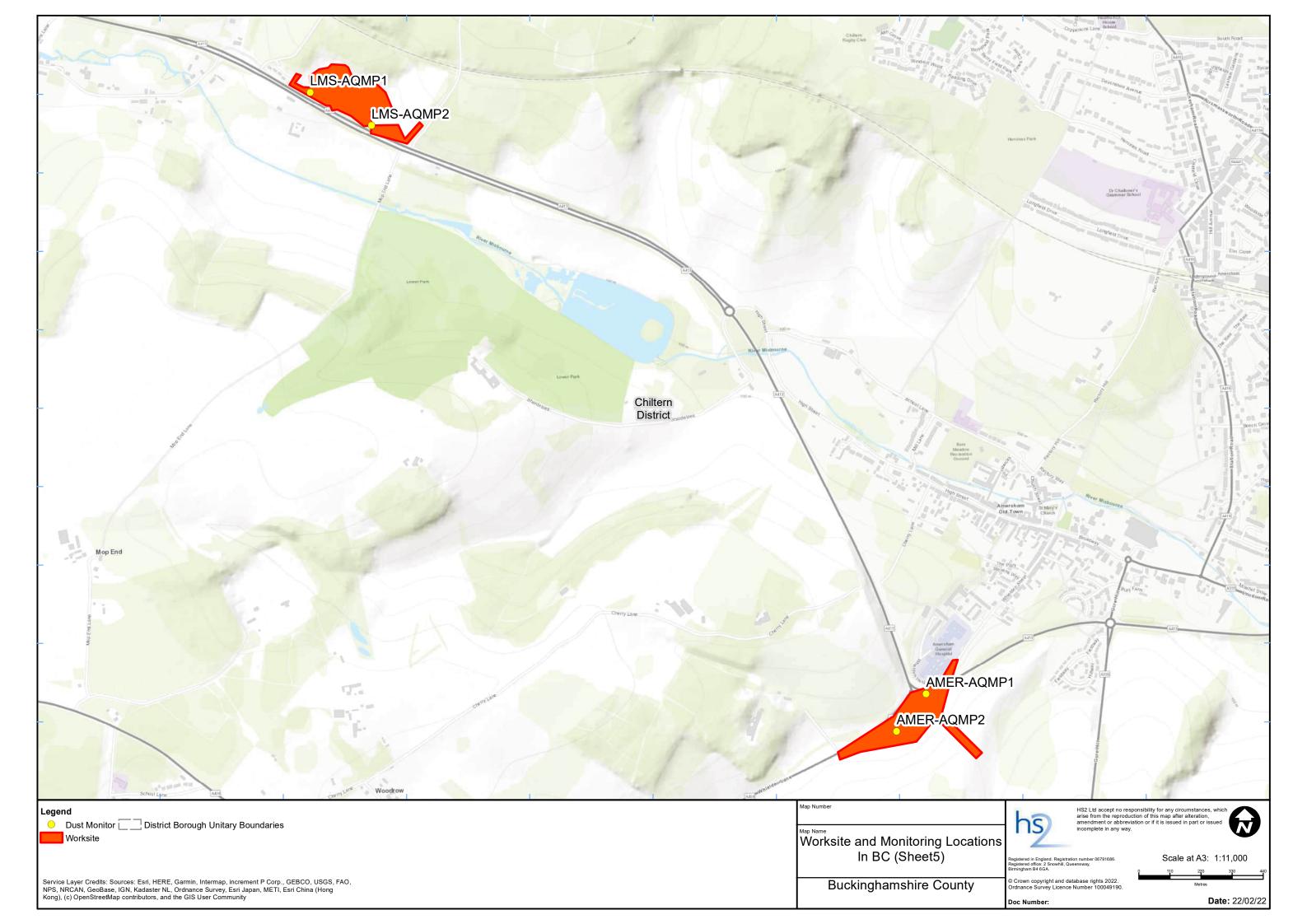
Figures 1-7: Worksite and Monitoring locations within BC

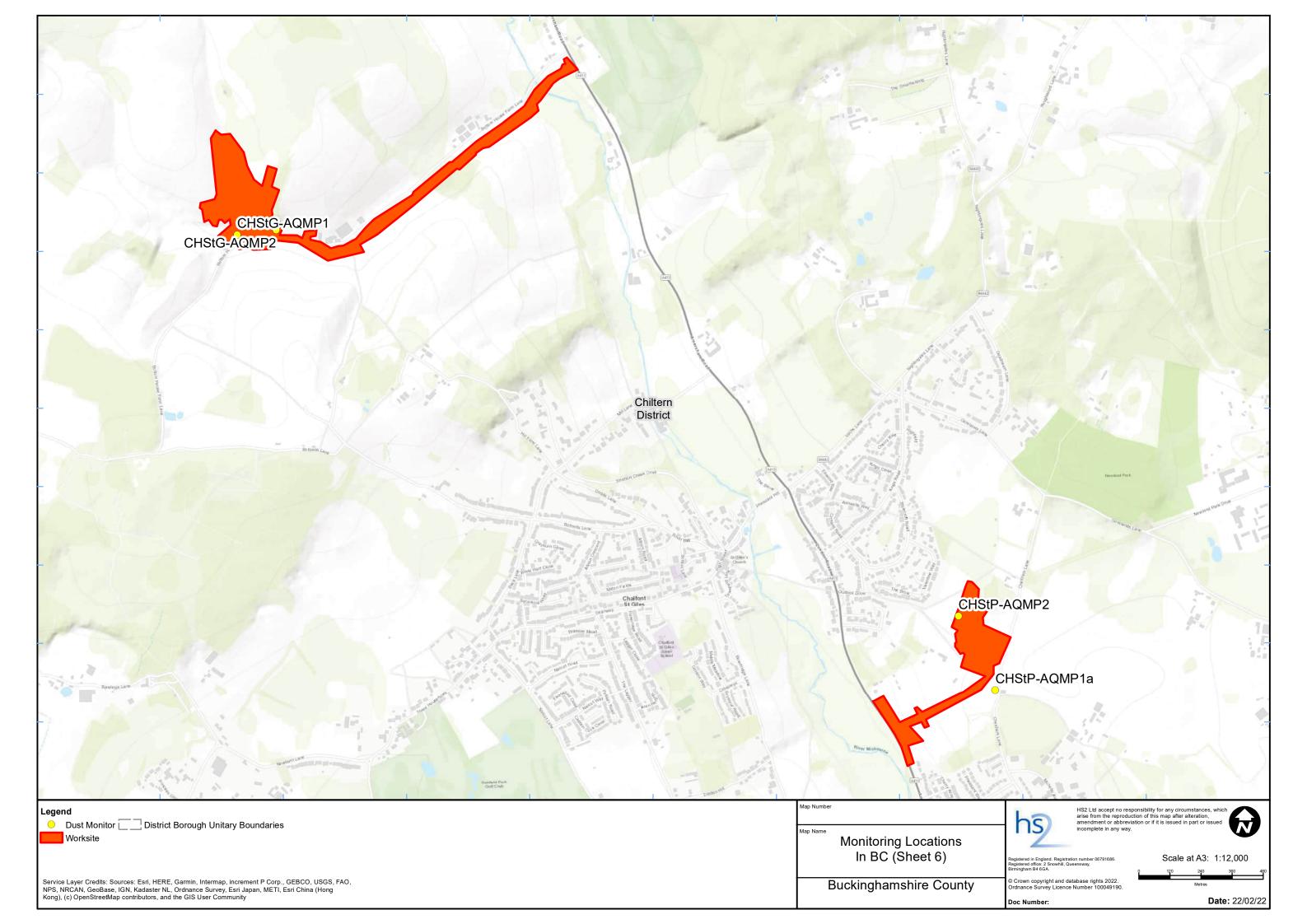


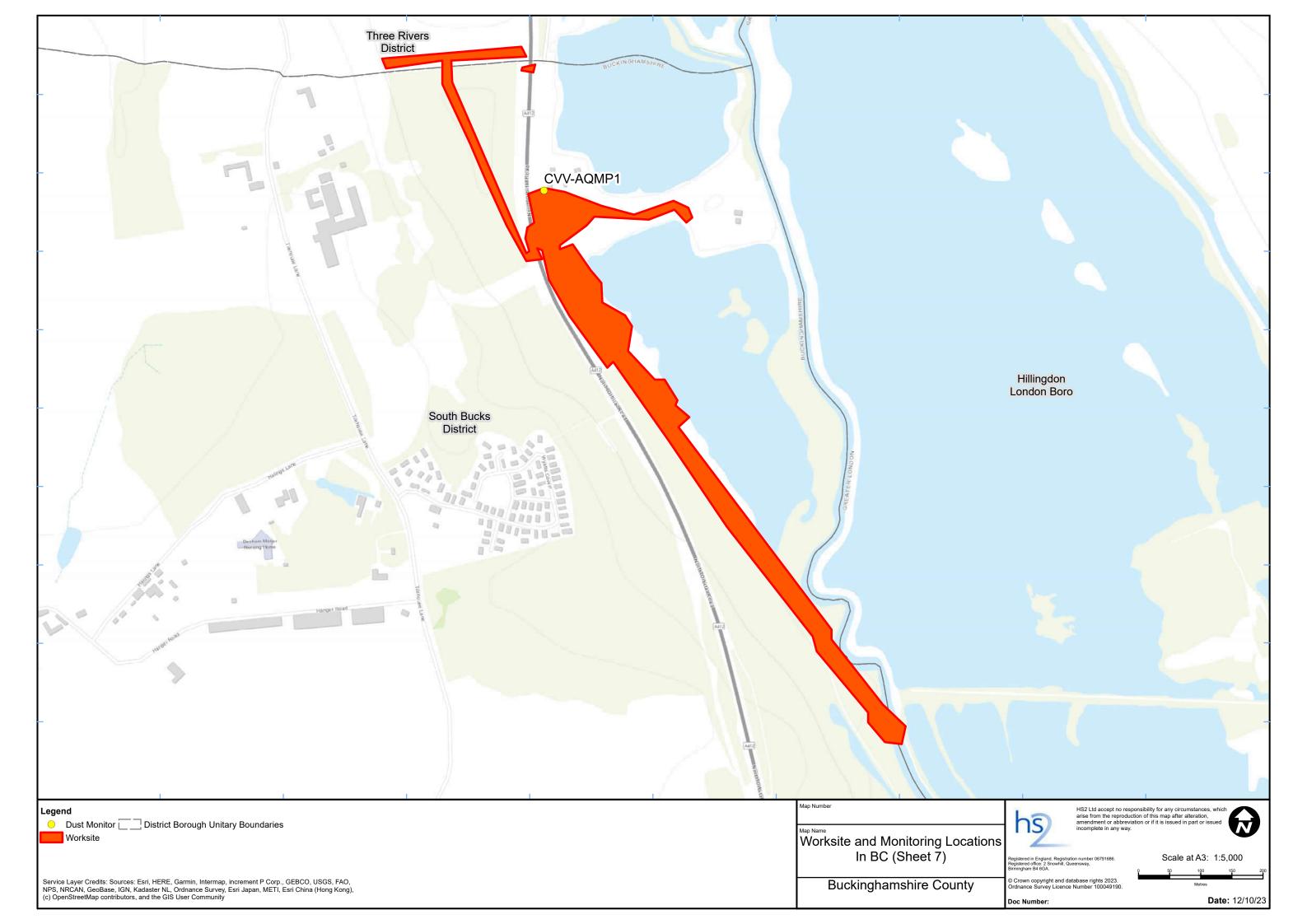












# **Appendix B - Dust Monitoring Results**

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	10.2	1.0	84.0	0	100.0
CHStP-AQMP1a	500093, 192996	Relocated from CHStP-NMP1 to site-boundary outside residence	М	Yes	Yes	8.9	1.0	62.0	0	100.0
CHStP-AQMP2	499951, 193282	On the western boundary of the site	М	Yes	Yes	8.4	1.0	60.0	0	89.0
AMER-AQMP1	495367, 196722	On the north- eastern boundary of Amersham	М	Yes	Yes	10.3	1.0	79.0	0	100.0
AMER-AQMP2	495263, 196590	On the south- western boundary of Amersham	М	Yes	Yes	9.0	1.0	66.0	0	96.0
CHStG-AQMP1	497170, 194752	On the southern boundary close to Hobbs Hole Cottage	М	Yes	Yes	10.0	0.0	70.0	0	93.0
CHStG-AQMP2	497320, 194770	On southern boundary next to carpark	М	Yes	Yes	10.1	1.0	70.0	0	99.0
LMS-AQMP1	493190, 198848	On the south-west of the site	М	Yes	Yes	9.5	1.0	64.0	0	100.0
LMS-AQMP2	493407, 198731	On the south-east of the site	М	Yes	Yes	9.9	1.0	75.0	0	99.0
CR-AQMP1	491291, 201143	On the Chesham Road Vent Shaft	М	Yes	Yes	9.9	0.0	82.0	0	99.0

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 (%)
ORC-AQMP	490503, 201786	Orchard Cottage South-eastern Site Boundary	М	Yes	Yes	9.5	1.0	65.0	0	100.0
NP-AQMP1	490069, 202008	North Portal Site Entrance	М	Yes	Yes	9.4	1.0	66.0	0	100.0
School Hill (CAL- AQMP2) - Dust	469003, 224740	School Hill Compound	М	Yes	Yes	9.9	1.0	73.0	0	99.73
School End – Dust	463666, 230049	School End, Chetwode	М	Yes	Yes	10.9	1.0	78.0	0	99.19
Potter Rows – Dust	490075, 202502	Potters Row, South Heath	М	Yes	Yes	8.2	1.0	218.0	0	61.42
Grimms Ditch – Dust	489135, 203468	Leather Lane, The Lee, South Heath	М	Yes	Yes	8.7	1.0	51.0	0	59.81
Chesham Lane - Dust	487974, 205794	Chesham Lane, The Lee, Wendover	М	Yes	Yes	9.6	1.0	81.0	0	98.66
Wendover Bus 55 - Dust	487574, 205787	Chesham Lane, The Lee, Wendover	М	Yes	Yes	8.8	1.0	83.0	0	93.41
Twyford - Dust	466544, 226883	Twyford, Buckinghamshire	М	No	No	-	-	-	-	-
Chetwode/Hermitage - Dust	463936, 229521	Hermitage, Chetwode	М	Yes	Yes	10.9	1.0	83.0	0	98.37
Glebe House - Dust	480475, 212560	A418 Aylesbury	М	Yes	Yes	6.5	1.0	21.0	0	85.06
Turweston North - Dust	460439 , 237140	Turweston, Buckinghamshire	М	No	No	-	-	-	-	-
FCC - Dust	469042 , 224263	Adjacent Red Kite View, Calvert	М	Yes	Yes	9.4	1.0	80.0	0	99.87
Ellesborough Road - Dust	486458 , 207550	Ellesborough Road, Wendover	М	Yes	Yes	1.0	5.8	19.0	0	9.27
Nash Lee Road - Dust	484766 , 208782	Nash Lee Lane (west)	М	Yes	Yes	10.2	1.0	92.0	0	49.46

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	9.8	1.0	95.0	0	22.58
Bacombe Lane – Dust	486528 , 207217	Bacombe Lane, Wendover	М	Yes	Yes	10.4	1.0	76.0	0	99.19
SDVC – Dust	487522, 206043	Small Dean Viaduct, London Road	М	Yes	Yes	5.2	1.0	23.0	0	80.17
Station Road – Dust	474068, 219307	Station Road, Quainton	М	Yes	Yes	10.3	1.0	83.0	0	100.0
Wendover Town - Dust	486193, 207950	Wendover Bypass, Wendover	М	Yes	Yes	9.8	1.0	76.0	0	93.82
Woodlands - Dust	471603, 221315	Station Rd, Quainton, Woodlands Farmhouse	М	Yes	Yes	8.8	1.0	73.0	0	99.06
Grove Farm	486957, 206908	Grove Farm, London Road, Wendover	М	Yes	Yes	9.9	1.0	69.0	0	92.07

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

