June 2023

# HS2

Air Quality and Dust Monitoring Monthly Report – June 2023 Buckinghamshire Council

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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

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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) area during June 2023.
- 1.1.2 Figure 1 to Figure 7 in Appendix A indicate the current worksites together with air quality and 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, Figure 1 to Figure 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: GI works;
- Pier Construction: arch form deck 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;
- · Water pumping management;
- Satellite welfare;
- Generator farms;
- · Core Drilling of Concrete;
- Pile Trimming;
- A412 Gas Crossing Emergency Dismantling;
- Fencing;
- Environmental Maintenance;
- Cofferdam Excavation: cofferdam excavation, dewatering, waling beams and concrete plugs;
- 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, internal post-tensioning (PT) and grouting and external PT;
- 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 foundation works in the north embankment, deck finishes support plan;
- Deck Finishes On-deck Construction: construction of robust kerbs, installation of parapets, construction of concrete stitch and filling of voids and top openings;
- Deck Finishes In-deck Construction: diaphragm walls and concrete works within the deck, drainage works within the deck and steel works within the deck; and
- Landscaping: advanced Works including removal of cofferdams, early earthworks including ground profiling and cut, Initial ground drainage including manhole chamber and early soil (subsoil and topsoil) placement.

# **Chalfront St Peter Vent Shaft**

- General Site Activities;
- Road Maintenance Works;
- Connection to Tunnels: concrete floors; and
- Basement Construction: headhouse concrete works.

#### Amersham Vent Shaft

- General Site Activities;
- Internal Structure: concrete walls and floors;
- Tunnel Connections: and
- Basement Construction: headhouse basement internals and demolition of D-wall.

### **Chalfont St Giles Vent Shaft**

- General Site Activities;
- Road Maintenance Works;
- Connections to Tunnels: concrete floors: and
- Basement Construction: excavate to formations and basement internals & headhouse concrete works.

#### Little Missenden Vent Shaft

- General site activity;
- Internal Structures; remaining walls and slabs; and
- Small basement construction; headhouse basement internals.

### **Chesham Intervention Shaft**

- General site activity: general compound;
- Internal Structure: walls, slabs and staircases; and
- Ground Level Works: headhouse ATS concrete works.

### **North Portal**

- Access Road: drainage and services, scrape formation, hardstanding and kerbing, asphalt and signage;
- Piling Platform Area 1: traffic management and temporary access from Firth Hill Road;
- North Portal Compound: general plant;
- North Portal Road: general plant;
- North-Portal Tracks Platform: scraping / hardstanding / surfacing / services / drainage;
- Piling Platform Removal: dismantling related to areas D.1,D.2 piling platforms;
- Headwall Capping-Beam and Excavation: excavation / RC works/ temporary propping;
- Portal Drainage: excavation / drainage installation / backfilling; and
- Porous Portal Structure: RC works and concrete pours.

#### **Calvert Area**

# Station Road

- Vegetation clearance works along Station Road; and
- Installation of perimeter fencing near to Station Road, Quainton.

# Woodlands Farm

- River Ray Culvert in-situ mammal ledges.
- Adams Accommodation Underbridge installation of pre-cast L units.
- Woodlands Culvert technical backfill
- Mass haulage of aggregate
- Edgcott Road Overbridge no works
- Finmere Retaining Wall construction of piling platform

### FCC / School Hill

- Secant Retaining Wall works paused
- Mass haulage of aggregate
- Shepherds Furze Culvert installation of pre-cast concrete units.
- School Hill Batching Plant production of concrete
- School Hill Culvert dig and replace (D&R) under structure
- Calvert cutting bulk excavation

### **North Chilterns Area**

#### Potters Row

• Construction of Haul Road.

### Hunts Green & Grimms Ditch

- Stockpile Movement (Earthworks); and
- Construction of Haul Road.

# Chesham Lane & Wendover Bus 55

- Construction of Eastern Landscape; and
- Construction of Haul Road.

# Elleseborough Road

- Placing kerbs, laying BT ducting and building up the road formation on the East and West sides of the Ellesborough Road Diversion; and
- Pour and backfilled behind L walls on the Ellesborough Road bridge.

# Nash Lee Lane & Nash Lee Road

- Nash Lee Lane Diversion opening and new Site Access Road construction;
- Continuation of work on the Risborough Road Bridge, Final drainage run installed between the Nash Lee Road and Nash Lee Lane Diversions;
- Constructing laydown area for BKJV plant and equipment in preparation for the Slurry Wall works;
- Relocation of wheel wash to access road diversion; and
- Constructing ramp between BKJV slab platform and welding area.

# Bacombe Lane

- FUGRO G.I works;
- Construction of Bacombe Lane temporary road diversion;
- Construction of bacombe Lane Plant crossing; and
- Movement of stockpiles.

# Grove Farm

• Construction of Grove Farm Plant crossing, Construction of new SAR entrance, Construction of Haul roads (Blackwells), Completion of Small Dean Plant crossing into Grove Farm.

#### Small Dean Viaduct

- Security fencing installation;
- Topsoil reinstatement;
- South Thrust block excavation for Thames water main diversion;
- Excavation around piles in preparation for pile cropping;

- Installation of DI400 pipes around and under the A413 road (includes breaking of tarmac next to the Thames water main and installation of steel sheets);
- Installation of A413 phase 1 diversion drainage; and
- Installation of gully pipe under the A413 (includes breaking of tarmac next to the Thames water main).

## Wendover Town

- Blackwells topsoil/subsoil strip to the Wendover Green Tunnel;
- Blackwells stockpile relocation within the Wendover Green Tunnel;
- Blackwells constructing 6F5 platform for BKJV welding area;
- Blackwells extending the haul road to allow class 1A1 to be hauled from WGT to Nash Lee; and
- BKJV pouring concrete slabs for slurry wall plant and equipment including steps and handrail installation.

# Other works

- EWR Culvert
- Charndon Lodge Pumping Station
- Charndon Lodge Underbridge
- East West Rail Overbridge
- IMD West Culvert
- IMD East Culvert
- Addison Road Overbridge
- Addison Road permanent highway diversion
- SCL/08 Overbridge
- West Street utility diversions
- SGN pipeline diversion
- Gawcott Road temporary highway diversion
- Perry Hill Overbridge
- Portway Culvert
- OXD / EWR Line Earthworks
- Calvert Cutting Earthworks
- IMD Earthworks
- Sheephouse Wood North Culvert
- CAG2 Underbridge / Greatmoor No. 4 culvert
- Greatmoor No. 3 culvert
- GUN28 Overbridge
- Doddershall No. 6 culvert
- Doddershall No. 7 culvert

# **Twyford to Greatworth**

## **Turweston North**

- Stockpile haulage for Grovehill Embankment
- MC slab reinforcement
- Temp bridge construction
- Road Diversion
- Haul road maintenance

# Chetwode

- Construction of Haul Road
- Bulk haulage
- Site access road tarmacking works
- Sheet piling works at SEOB
- Construction of Chetwode Compound
- Chetwode Cutting earthworks

#### Twyford

- · Construction of Haul Road
- Bulk haulage
- Site access road tarmacking works
- Stockpiling works at Twyford
- Twyford Box Culvert earthworks
- 1.1.5 Thirty-seven (37) dust monitors are installed around the worksites, where works are underway. These sites returned medium dusk risk rating.
- 1.1.6 Dust monitoring locations and results are presented in Appendix B, Table 2 together with line charts of monthly data from each dust monitor, 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, over a 1-hour period, in accordance with the updated guidance document 'Guidance on Monitoring in the Vicinity of Demolition and Construction Sites (October 2018)' has been applied.
- 1.1.8 No (0) dust trigger alerts were recorded during the monitoring period (June 2023).

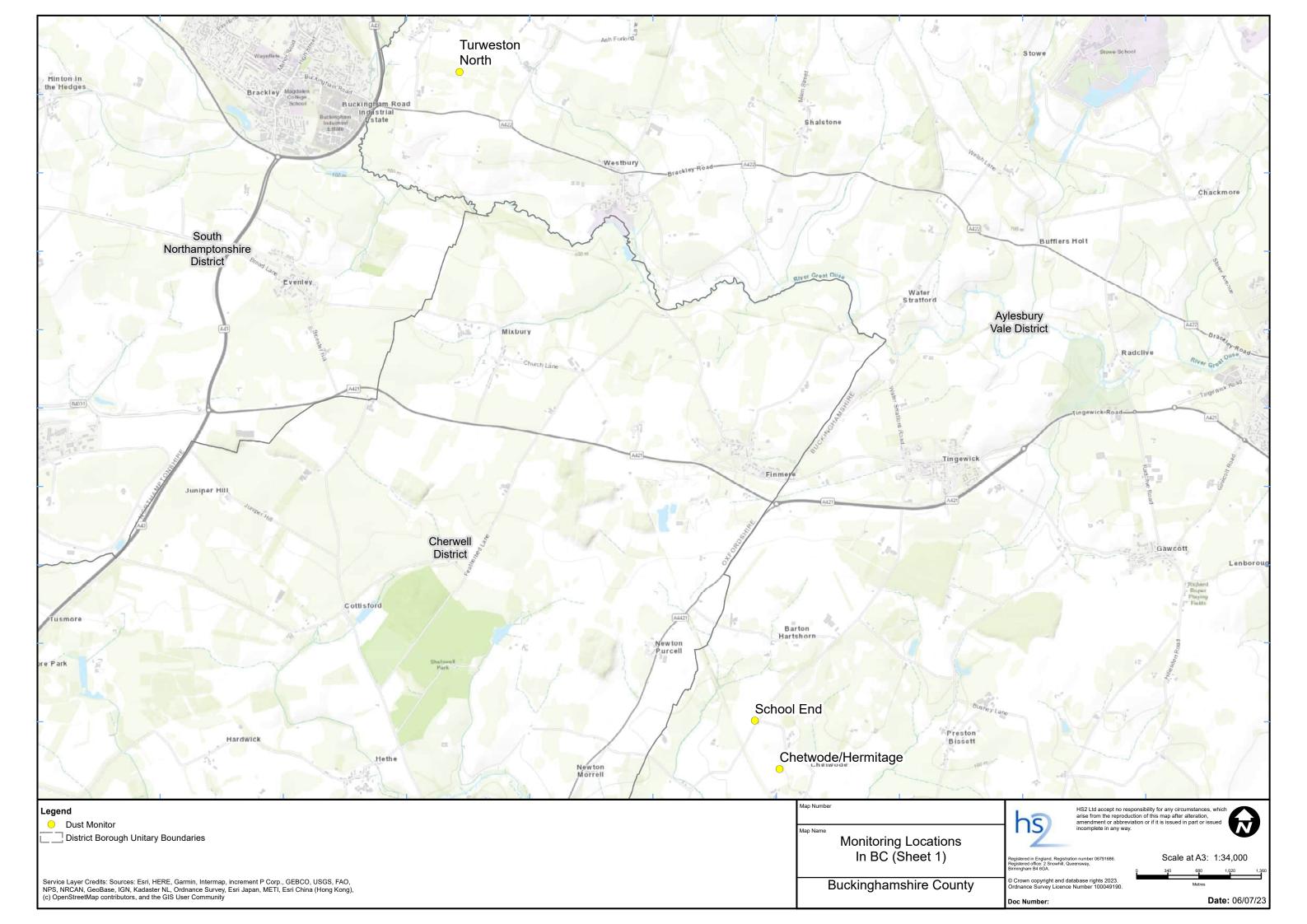
- 1.1.9 Data capture was below 90% for multiple monitors in June 2023. At monitors Oat Close and Station Road this was due to the monitors undergoing laboratory calibration and repairs.
- 1.1.10 The monitor at CVV-AQMP2 was decommissioned on 15/06/2023 as it was no longer needed due to works being largely reduced and the area already being covered by the monitor at CVV-AQMP1. The local authorities are aware and granted permission for the decommission.
- 1.1.11 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.

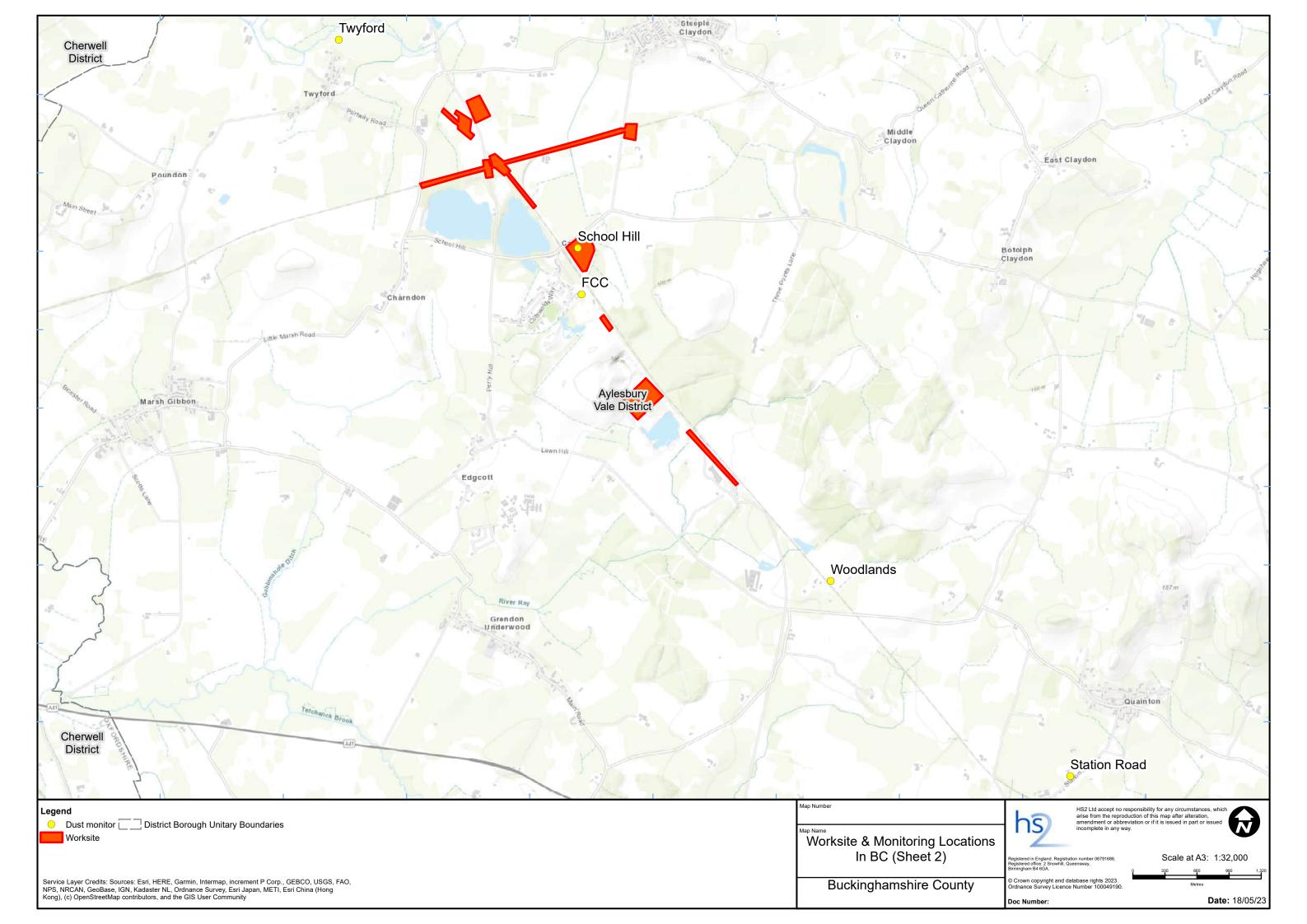
Table 1: Summary of complaints received during June 2023

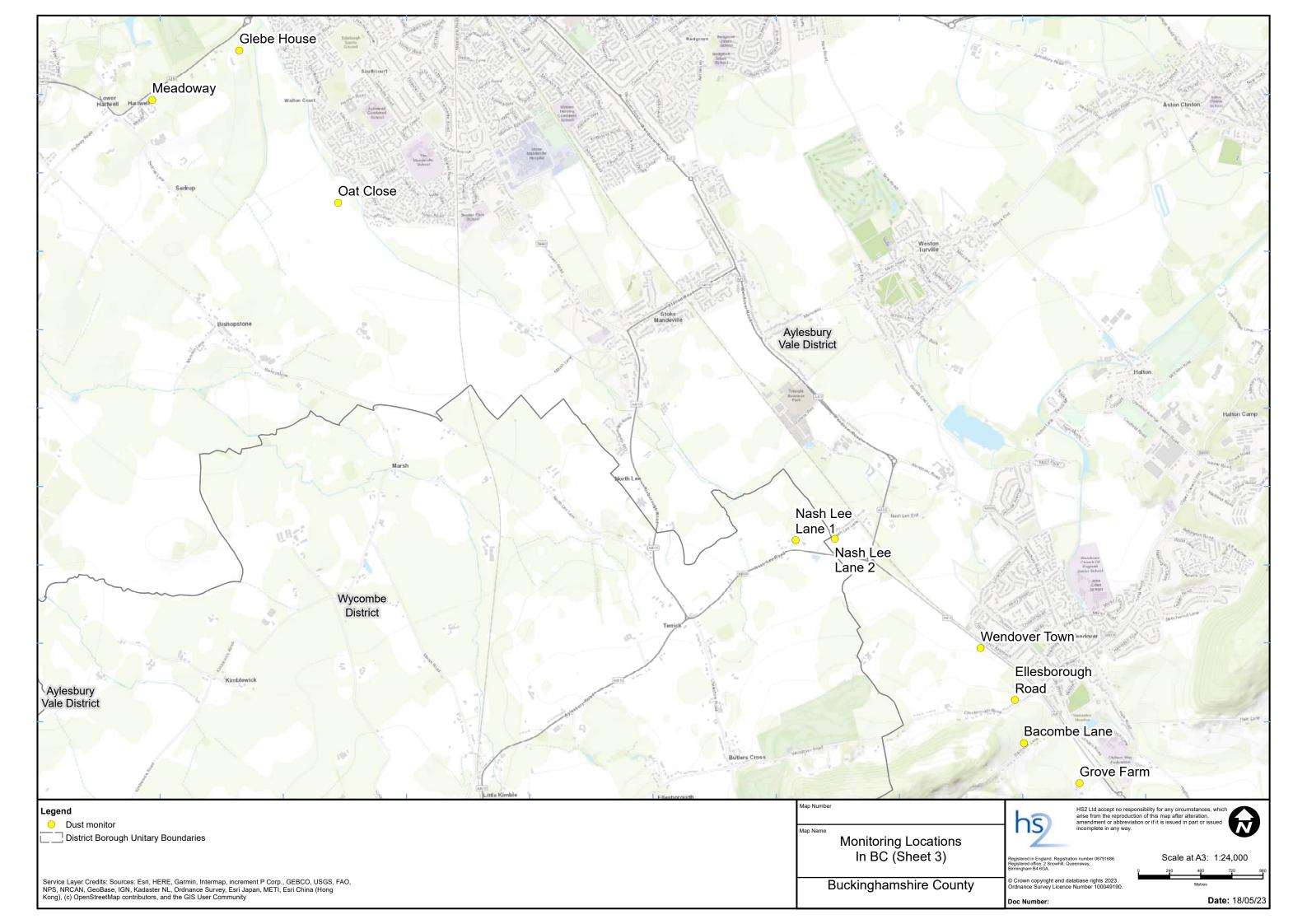
Complaint Reference No.	Worksite Reference	Description of complaint	Results of investigation
HS2-23-44702-C	n/a	Resident's car covered in fine sand.	Dust is unlikely to be a result from HS2 works and due to local roads in the dry weather.
HS2-23-44707-C	n/a	Dusty Roads.	Dust monitors checked; no exceedances were found. Explanation provided to resident of dust suppression measures used during dry weather.

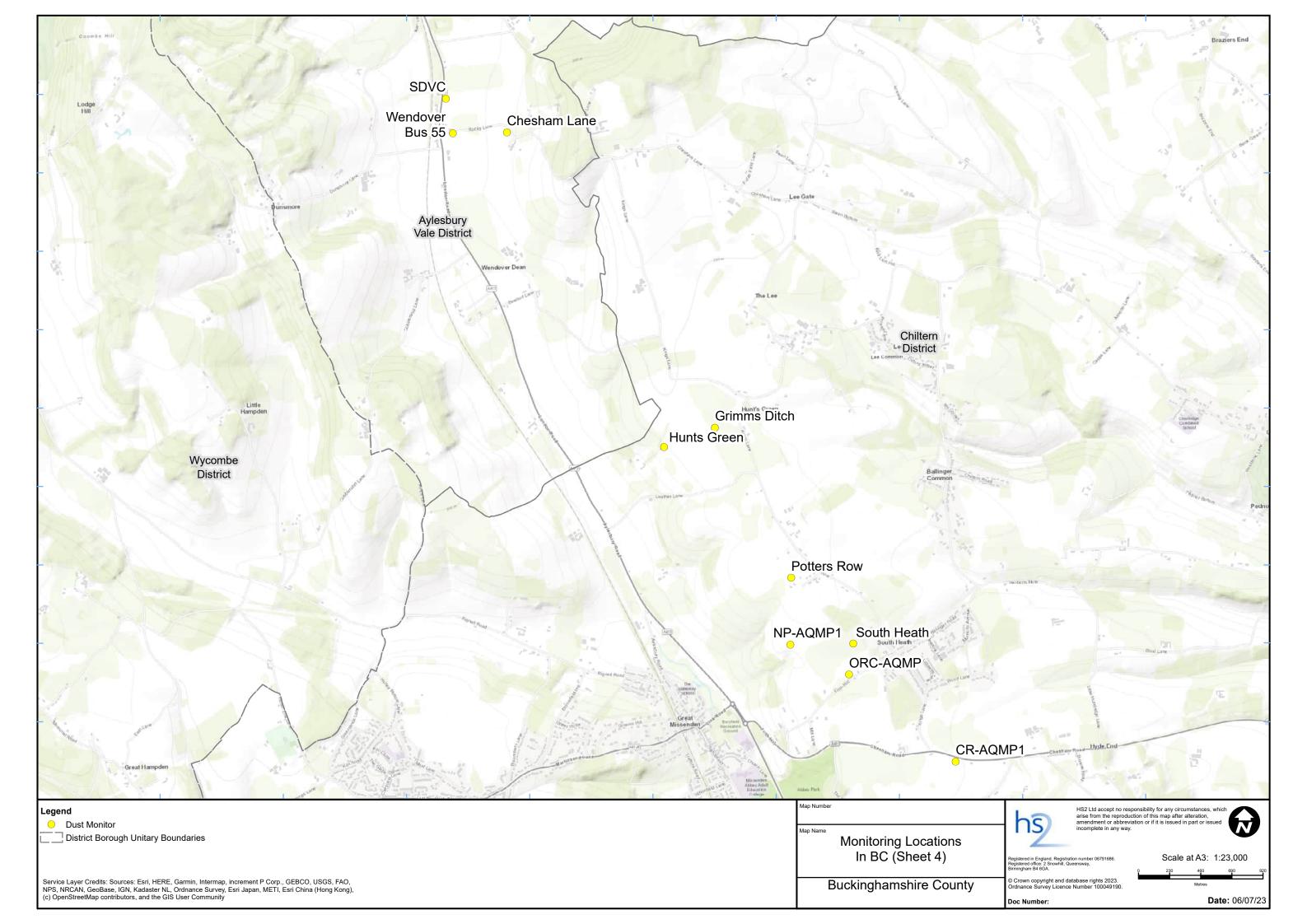
# **Appendix A - Worksites and Monitoring Locations**

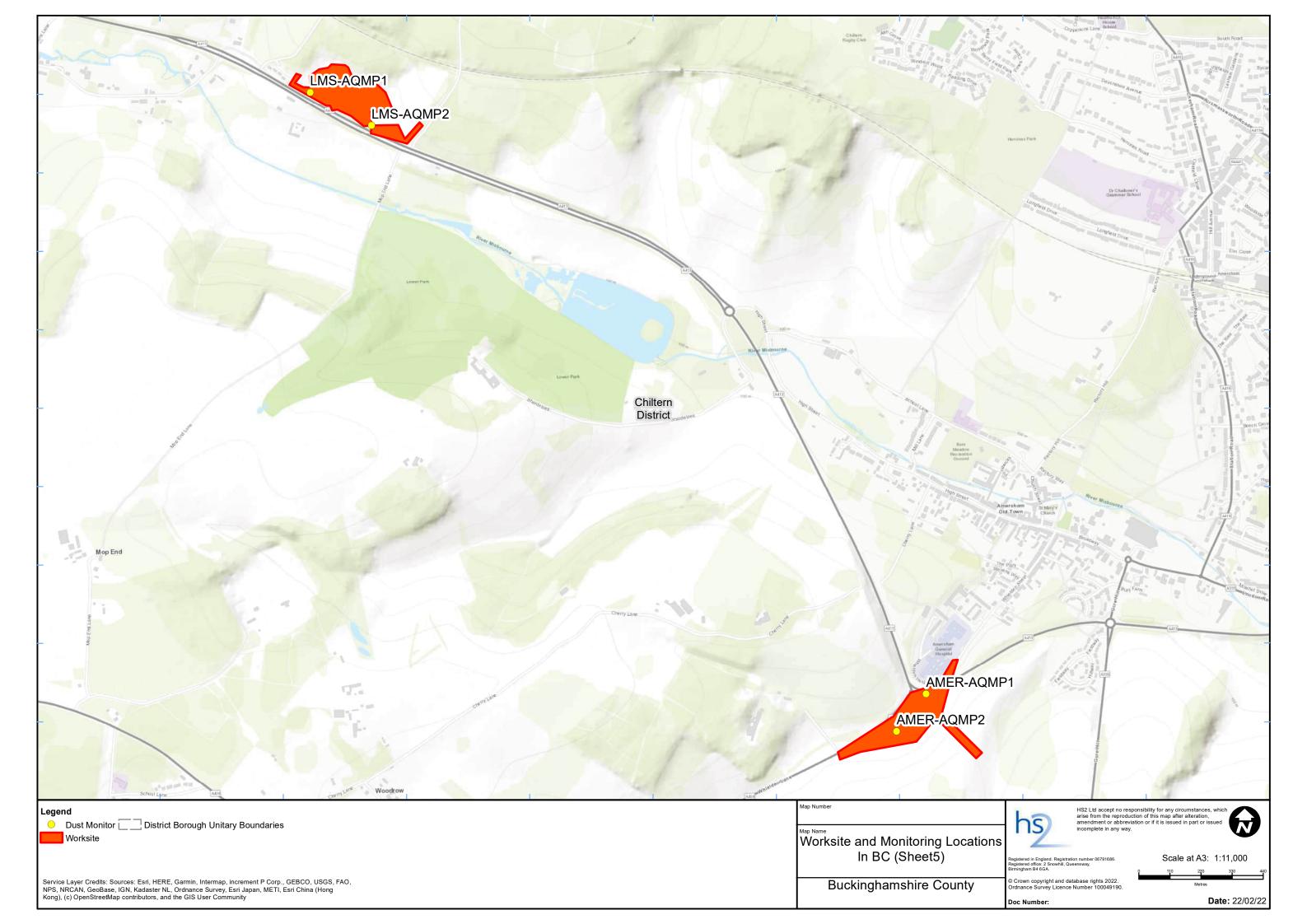
Figure 1 to Figure 7: Worksites and monitoring locations within BC

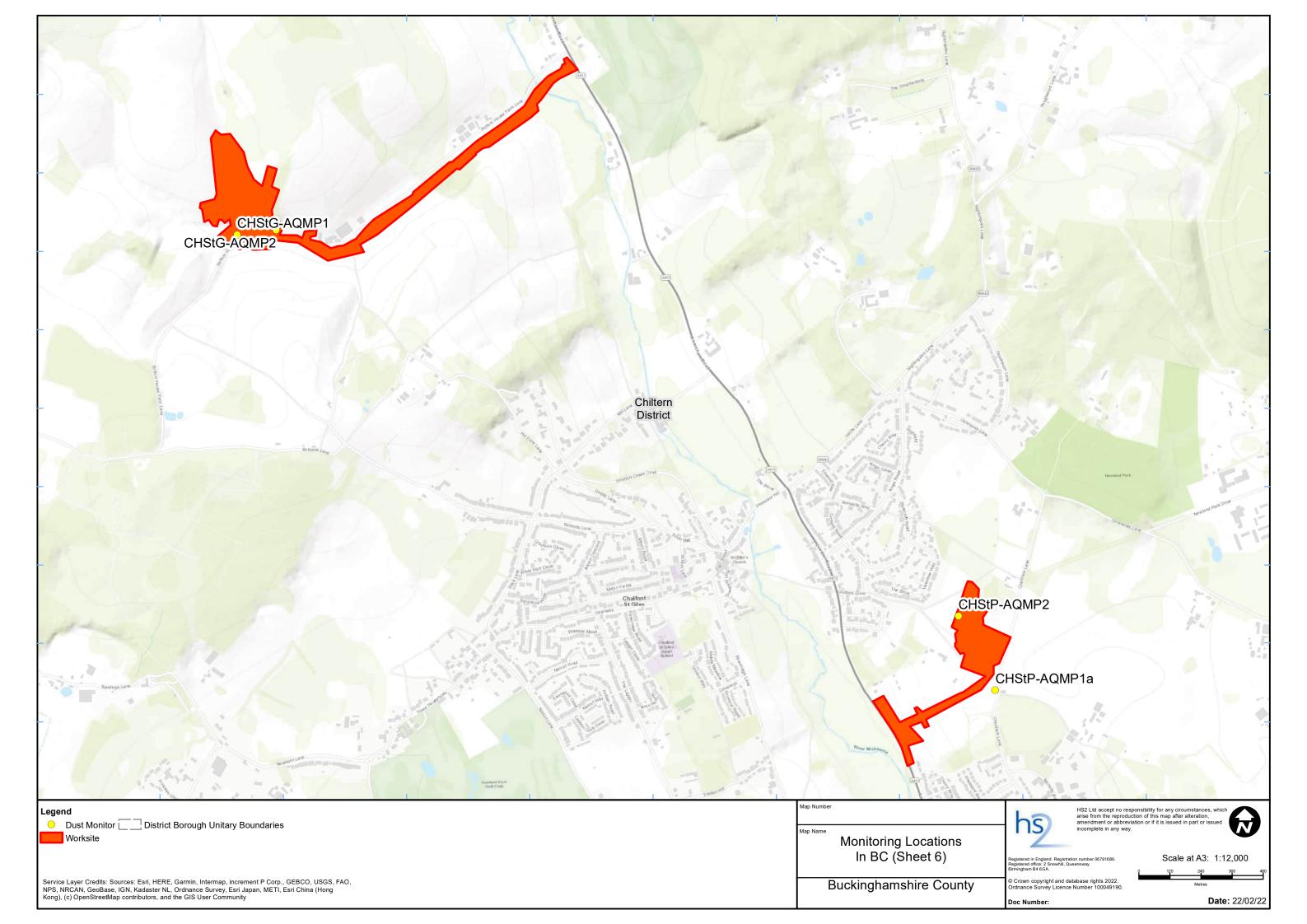


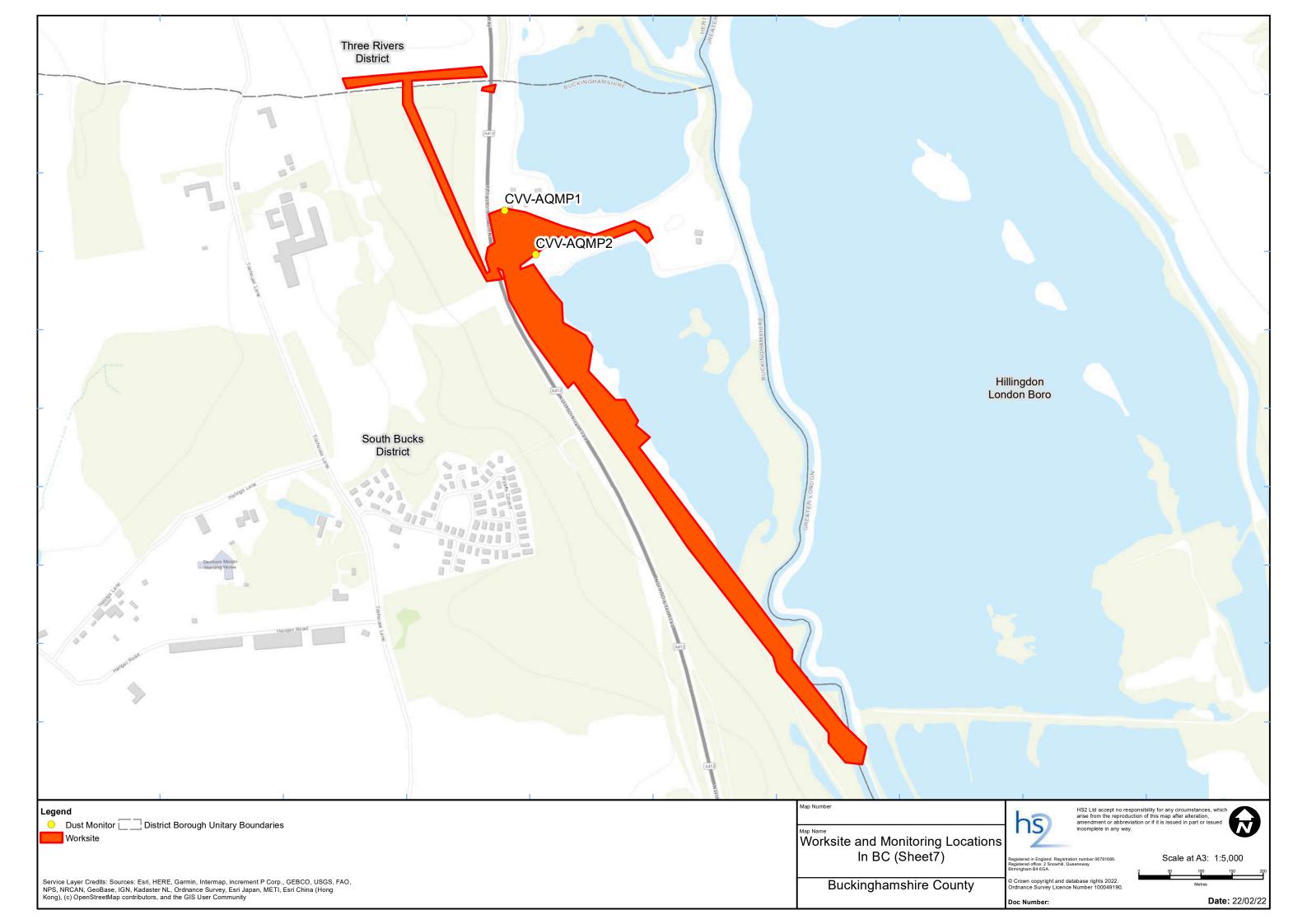












# **Appendix B - Dust Monitoring Results**

Table 2: Dust monitoring locations and June 2023 Results

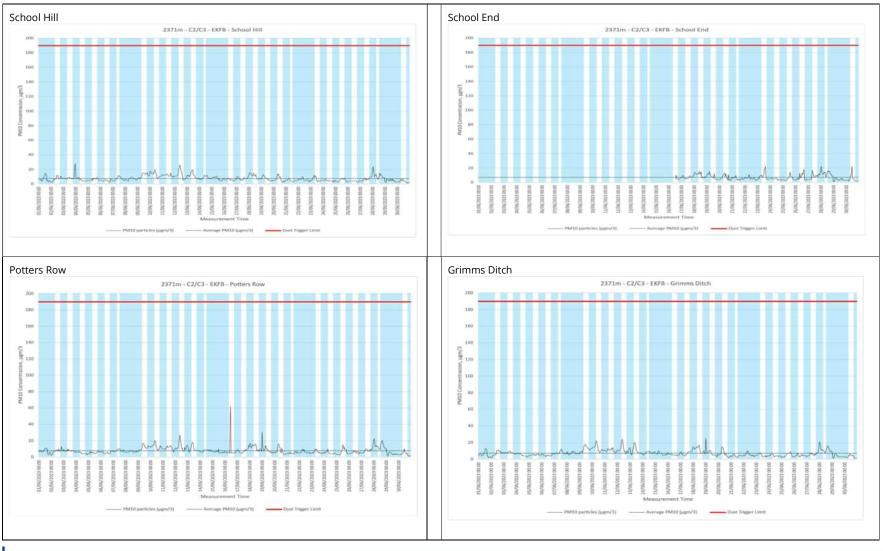
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM <sub>10</sub> concentration (μg/m³)	Minimum 1- hour PM <sub>10</sub> concentration (µg/m³)	Maximum 1- hour PM <sub>10</sub> concentration (μg/m³)	Number of 1- hour periods exceeding trigger level of 190 µg/m <sup>3</sup>	1-hour data capture (%)
School Hill (CAL- AQMP2)	469003, 224740	School Hill Compound	М	Yes	Υ	7.5	1.0	28.0	0	100.0
School End	463666, 230049	School End, Chetwode	М	Yes	Υ	7.1	1.0	22.0	0	48.2
Potter Rows	490075, 202502	Potters Row, South Heath	М	Yes	Y	7.8	1.0	62.0	0	100.0
Grimms Ditch	489135, 203468	Leather Lane, The Lee, South Heath	М	Yes	Υ	7.2	1.0	25.0	0	100.0
Hunts Green	489511, 203611	The Lee, South Heath	М	Yes	Υ	5.3	1.0	19.0	0	28.0
Chesham Lane	487974, 205794	Chesham Lane, The Lee, Wendover	М	Yes	Υ	7.2	1.0	32.0	0	100.0
Wendover Bus 55	487574, 205787	Chesham Lane, The Lee, Wendover	М	Yes	Υ	7.2	1.0	26.0	0	100.0
Meadoway	479803, 212178	Aylesbury, Buckinghamshire	М	Yes	Y	7.6	1.0	29.0	0	99.9
Oat Close	481237, 211384	Oat Close, Bishopstone, Aylesbury	М	Yes	Υ	-	-	-	-	-
Twyford	466544, 226883	Twyford, Buckinghamshire	М	Yes	Y	8.4	2.0	27.0	0	68.2
Chetwode/Hermitage	463936, 229521	Hermitage, Chetwode	М	Yes	Υ	7.5	1.0	55.0	0	99.9
Glebe House	480475, 212560	A418 Aylesbury	М	Yes	Υ	2.0	1.0	5.0	0	1.7
Turweston North	460439 , 237140	Turweston, Buckinghamshire	М	Yes	Υ	6.6	1.0	22.0	0	87.2

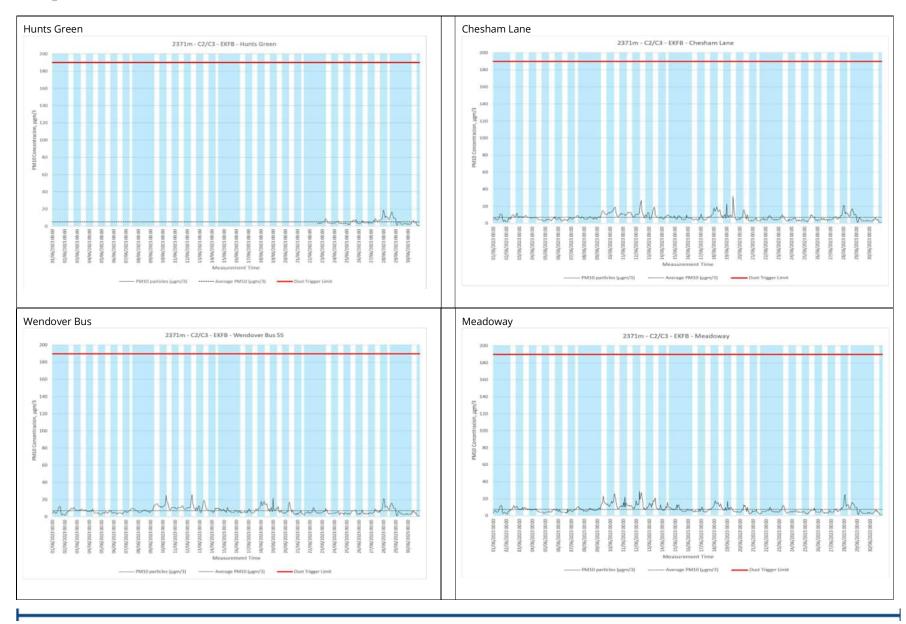
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FCC	469042 , 224263	Adjacent Red Kite View, Calvert	М	Yes	Υ	8.5	1.0	42.0	0	100.0
Ellesborough Road	486458 , 207550	Ellesborough Road, Wendover	М	Yes	Y	-	-	-	-	-
Nash Lee Road	484766 , 208782	Nash Lee Lane (west)	М	Yes	Y	7.6	1.0	26.0	0	100.00
Nash Lee Lane	485069 , 208793	Nash Lee Lane (east)	М	Yes	Y	7.4	1.0	25.0	0	94.2
Bacombe Lane	486528 , 207217	Bacombe Lane, Wendover	М	Yes	Υ	7.2	1.0	26.0	0	99.9
SDVC	487522, 206043	Small Dean Viaduct, London Road	М	Yes	Υ	8.1	1.0	27.0	0	97.8
Station Road	474068, 219307	Station Road, Quainton	М	Yes	Υ	-	-	-	-	-
Wendover Town	486193, 207950	Wendover Bypass, Wendover	М	Yes	Y	7.3	1.0	30.0	0	67.5
Woodlands	471603, 221315	Station Rd, Quainton, Woodlands Farmhouse	М	Yes	Y	8.2	1.0	41.0	0	100.0
Grove Farm	486957, 206908	Grove Farm, London Road, Wendover	М	Yes	Y	6.8	1.0	14.0	0	21.8
CVV-AQMP1	503612, 189846	On the north boundary of LTP1	М	Yes	N	7.3	2.0	36.0	0	100.0
CVV-AQMP2 (Removed 15/06/2023)	503662, 189775	On the south boundary of LTP1	М	Yes	N	8.3	2.0	43.0	0	100.0
CHStP-AQMP1a	500093, 192996	Relocated from CHStP-NMP1 to	M	Yes	N	5.7	1.0	27.0	0	100.0

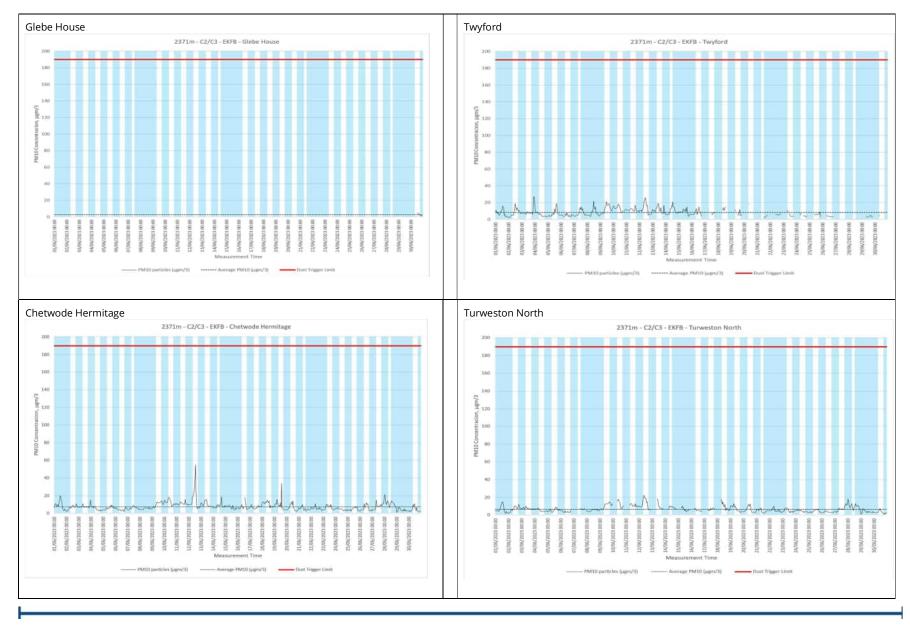
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		site-boundary outside residence								
CHStP-AQMP2	499951, 193282	On the western boundary of the site	М	Yes	N	7.3	1.0	32.0.	0	100.0
AMER-AQMP1	495367, 196722	On the north- eastern boundary of Amersham	М	Yes	N	7.2	2.0	34.0	0	100.0
AMER-AQMP2	495263, 196590	On the south- western boundary of Amersham	М	Yes	N	7.4	1.0	33.0	0	98.0
CHStG-AQMP1	497170, 194752	On the southern boundary close to Hobbs Hole Cottage	М	Yes	N	7.2	1.0	34.0	0	97.0
CHStG-AQMP2	497320, 194770	On southern boundary next to carpark	М	Yes	N	7.2	1.0	39.0	0	100.0
LMS-AQMP1	493190, 198848	On the south-west of the site	М	Yes	N	7.1	1.0	29.0	0	100.0
LMS-AQMP2	493407, 198731	On the south-east of the site	М	Yes	N	7.0	1.0	24.0	0	100.0
CR-AQMP1	491291, 201143	On the Chesham Road Vent Shaft	М	Yes	N	7.1	1.0	63.0	0	99.0
ORC-AQMP	490503, 201786	Orchard Cottage South-eastern Site Boundary	М	Yes	N	7.0	1.0	84.0	0	100.0

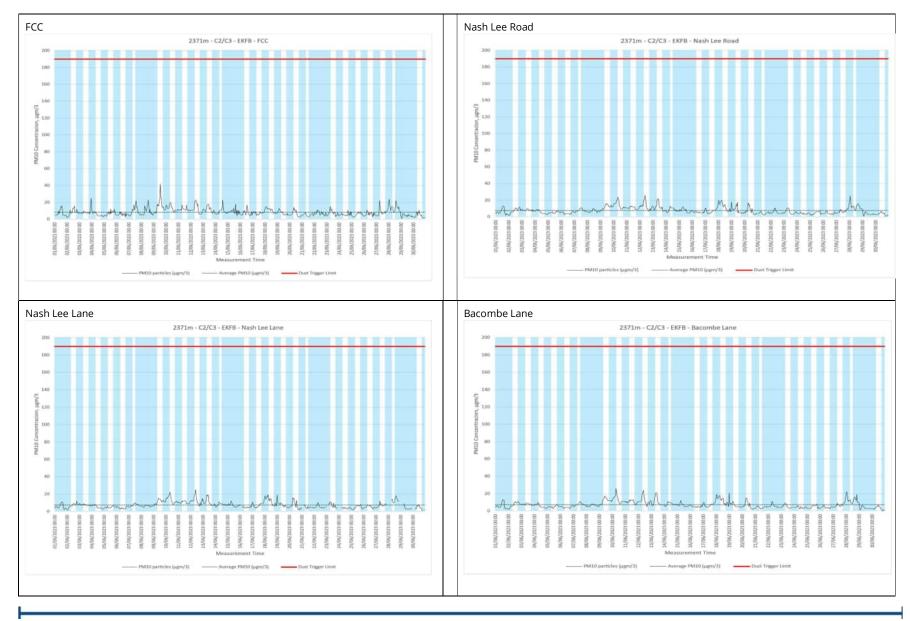
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NP-AQMP1	490069, 202008	North Portal Site Entrance	М	Yes	N	7.3	1.0	27.0	0	100.0

Figure 8: Continuous dust 1-hour mean indicative  $\mbox{PM}_{10}$  concentration for dust monitors

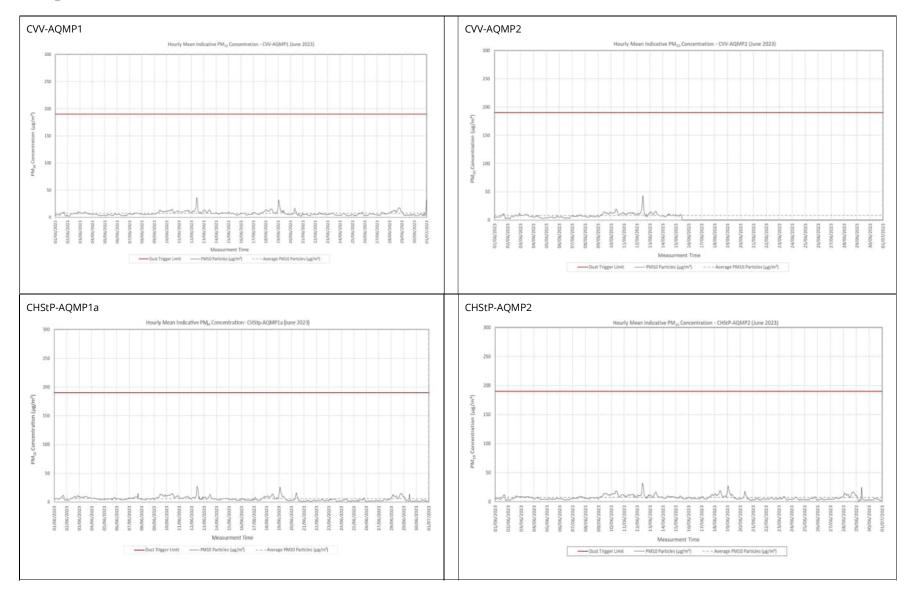


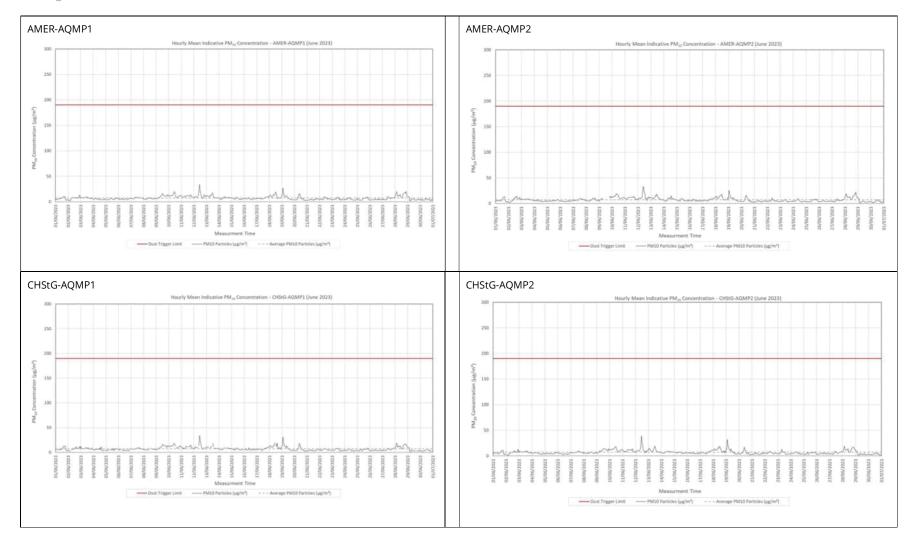


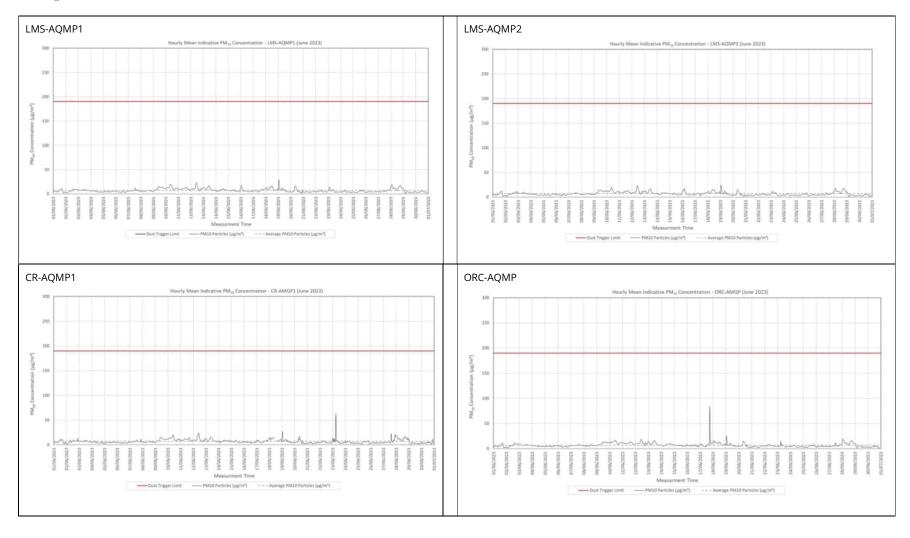












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