January 2024

HS2

Air Quality and Dust Monitoring Monthly Report - January 2024 **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 January 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: GI works;
- 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; and

 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.

Chalfont St Peter Vent Shaft

- General Site Activities;
- Road Maintenance Works;
- Ground Level Works: external works; and
- Building Trade: external and internal works.

Amersham Vent Shaft

- General Site Activities;
- Tunnel Connections;
- External Works Phase 1
- Basement Construction: headhouse basement internals; and
- Headhouse Superstructure Concrete Works.

Chalfont St Giles Vent Shaft

- General Site Activities;
- Road Maintenance Works; and
- Building Trades: external works and internal works.

Little Missenden Vent Shaft

- General site activity;
- Tunnel Connection;
- Small basement construction; headhouse basement internals;
- Headhouse Superstructure Concrete Works;
- ATS Building; and
- Internal structure wall construction and damp proofing.

Chesham Vent Shaft

- General site activity: general compound;
- Ground Level Works: headhouse ATS concrete works and external works; and
- Building Trades: internal and external works.

North Portal work site

- General Plant: site support;
- Piling Platform Reinstatement: scraping/hardstanding/earthworks and dismantling piling platforms;
- TBM Arrival: preparation for TBM break-through; and
- Construct North Portal Building: scraping/ hardstanding/surfacing/services/drainage.

North Chilterns Area

Potters Row, Grimms Ditch

- GD Minor Earthworks (movement of materials).
- PR No activity carried out in the area. Area to be handed over to another MWCC.

Chesham Lane, Wendover Bus 55

- Earthworks (movement of materials on Haul Road).
- Pond Maintenance, TSWM

Ellesborough Road

- Construction of pedestrian walkway/footpath on Ellesborough Road diversion.
- Temporary Surface Water Management.
- Installation of VRS slabs.
- Excavation and installation for electrical boxes on east and west embankment.
- Stoning up and shuttering for bench slab on west embankment.
- Construction of farmer's access.
- Batching plant water pipe installation over Folly Bridge.
- Excavation/construction of Platform for Utilities bridge.
- Construction of Utilities bridge.

Nash Lee Road, Nash Lee Lane

- Mill House North Culverts Lifting installation of box culverts & Waterproofing.
- Utilities: KIS completing UKPN 1207 Diversion, BT 3108 Diversion and TW 6204 Diversion.
- Earthworks shifting of stone from phase 1 into phase 3 and 4, preparing the ramp access and work area for Nash Lee Orchard in Phase 3 and shifting stockpiles

Bacombe Lane

- Construction and installation of Access / Haul Road
- Moving/relocation of Stockpiles
- Delivery of 6F5

Grove Farm

• Deliveries of materials and tidying of laydown area.

Small Dean Viaduct

- A413 Diversion
- P3 & P3 mobilisation including welfare set up
- Installation of P3 and P4 Sheet Piling Platform
- Installation of Launch and Assembly foundations
- General Site Maintenance

• installation of reinforcement at Pier 5.

Wendover Town

- Concrete and tarmac processing and stockpiling.
- Temporary Surface Water Management.
- Maintenance of SAR.

Calvert Area

Station Road (Quainton)

No works

Woodlands

- Adams Accommodation underbridge construction of concrete foundations for wingwalls, and construction of steel reinforcement cages for wingwalls.
- River Ray culvert technical backfill.
- Aggregate deliveries along the SAR.

FCC / School Hill (Calvert)

- School Hill batching plant production of concrete
- School Hill culvert no works.
- School Hill overbridge dig and replace (D&R) under structure and piling platform.
- Calvert Green overbridge piling works.
- 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)
- 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
- Quainton cutting

Twyford to Greatworth

T2G

- Piling works
- PRD drilling
- Excavate and replace of 1A1 material
- Loading 1A1 to the south of T2G
- Steel fixing
- BAM drilling (borehole)
- E&R works at Twyford/Cowley
- Twyford East Culvert assembly and headwall construction
- Lime stabilisation at Twyford
- Stockpiling
- Godington platform construction
- Crane platform construction at CHW18
- Manthorne Farm utilities diversion.

Aylesbury

Glebe House

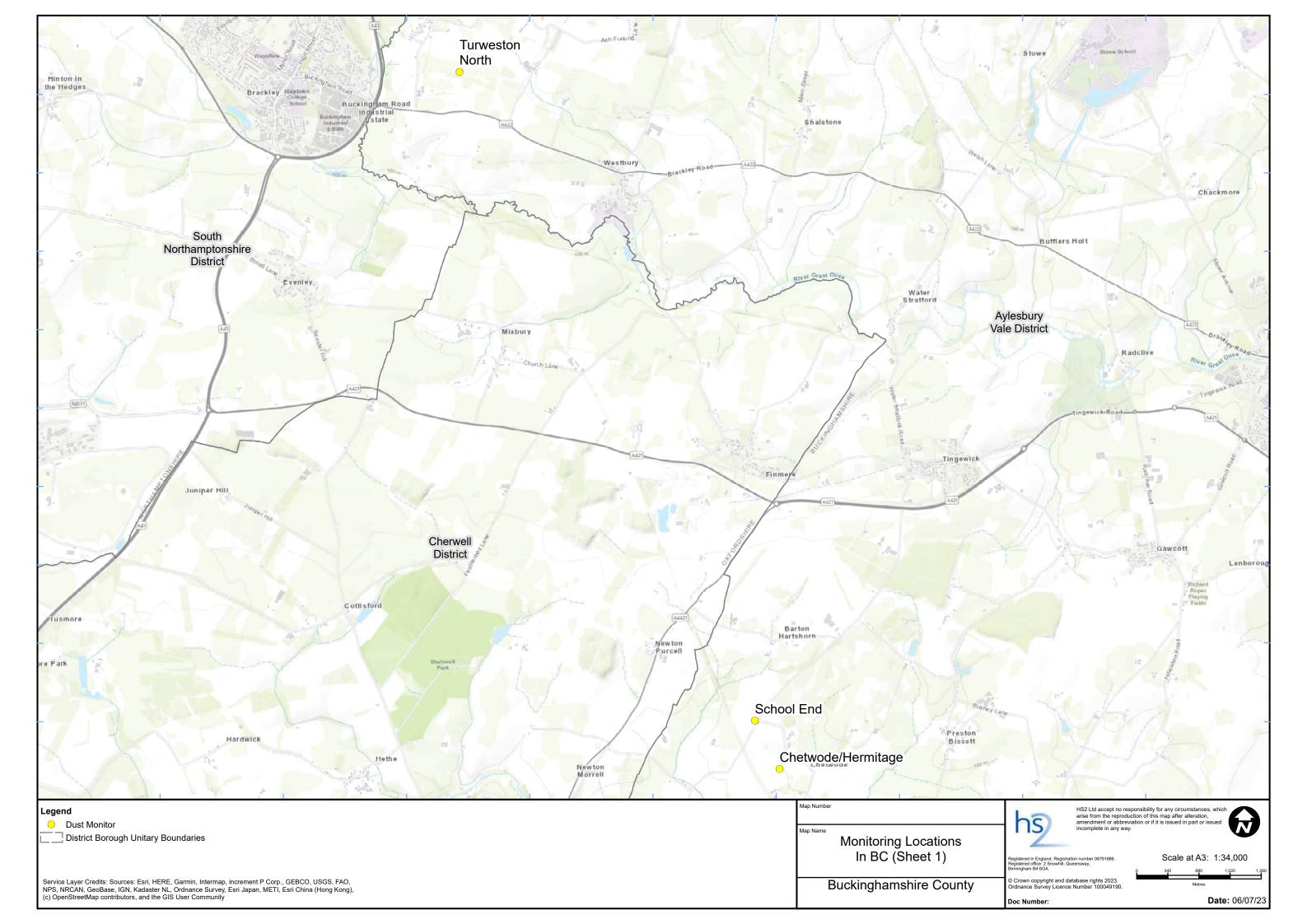
- Earthworks A418 Realignment east link
- Earthworks A418 Realignment west link
- A418 OB abutments, piers and FRC
- UKPN 1211 diversion
- Thames Water 6210 diversion
- Earthworks EFATS
- 1.1.5 Thirty-two (32) dust monitors are installed around these worksites, where works are underway. These sites returned 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

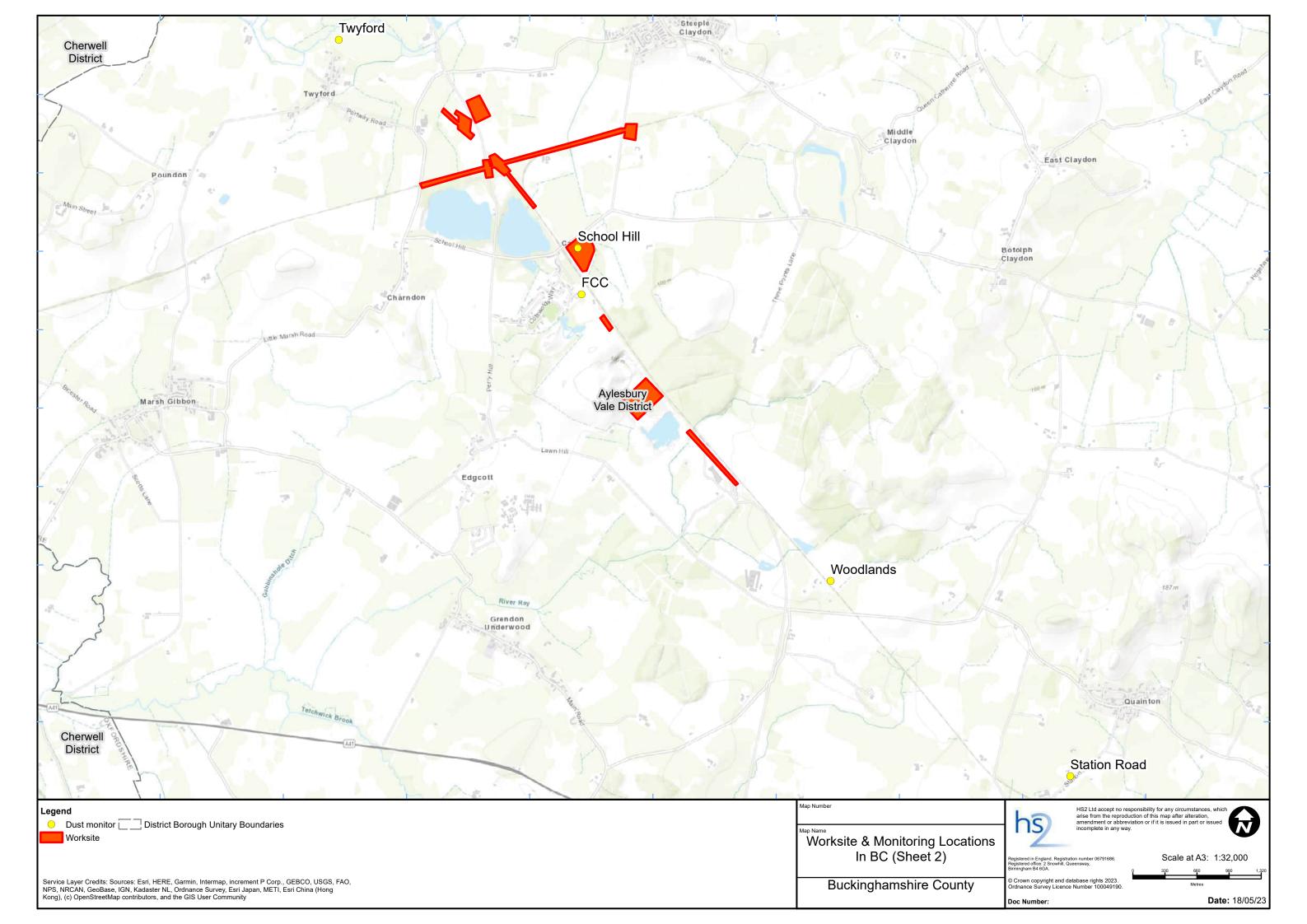
Agency (MCERTS) certified, indicative monitors carry a higher level of uncertainty than reference monitors, and therefore cannot be strictly compared with Air Quality Standards for human health and the environment. The purpose of the monitoring undertaken is to ensure the effectiveness of the on-site mitigation.

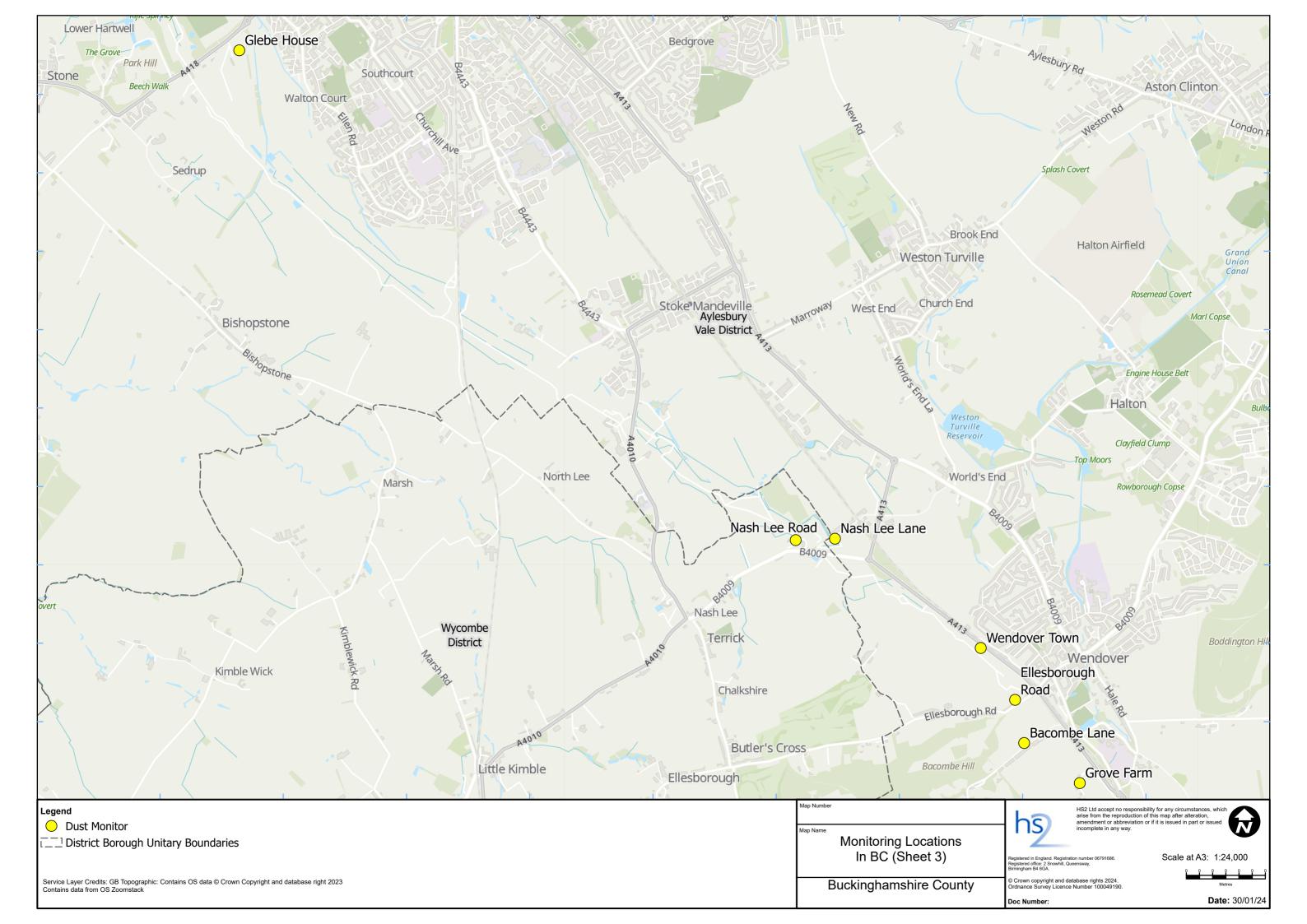
- 1.1.7 The trigger level for PM_{10} concentrations of 190 μ g/m³, measured as a 1-hour mean, in accordance with the updated guidance document 'Guidance on Monitoring in the Vicinity of Demolition and Construction Sites (December 2018)' has been applied.
- 1.1.8 Details of the trigger alert investigations and remediations are presented in Appendix B, Table 2.
- 1.1.9 Data capture was below 90% for multiple monitors due to lack of solar charge. No data was captured for Ellesborough Road for the month of January 2024. This was because of a lack of sunlight at the monitoring location due to a landscape bunds. Small Dean Viaduct had a lack of solar charge and a suspected power fault with the monitor. Twyford had a fault with the solar cable to the monitor. No data was captured for Turweston North for the month of January 2024. This was due to the monitor being retrieved on the 8th December 2023 because of a power fault.
- 1.1.10 There were no (0) complaints received during the reporting period (January 2024).

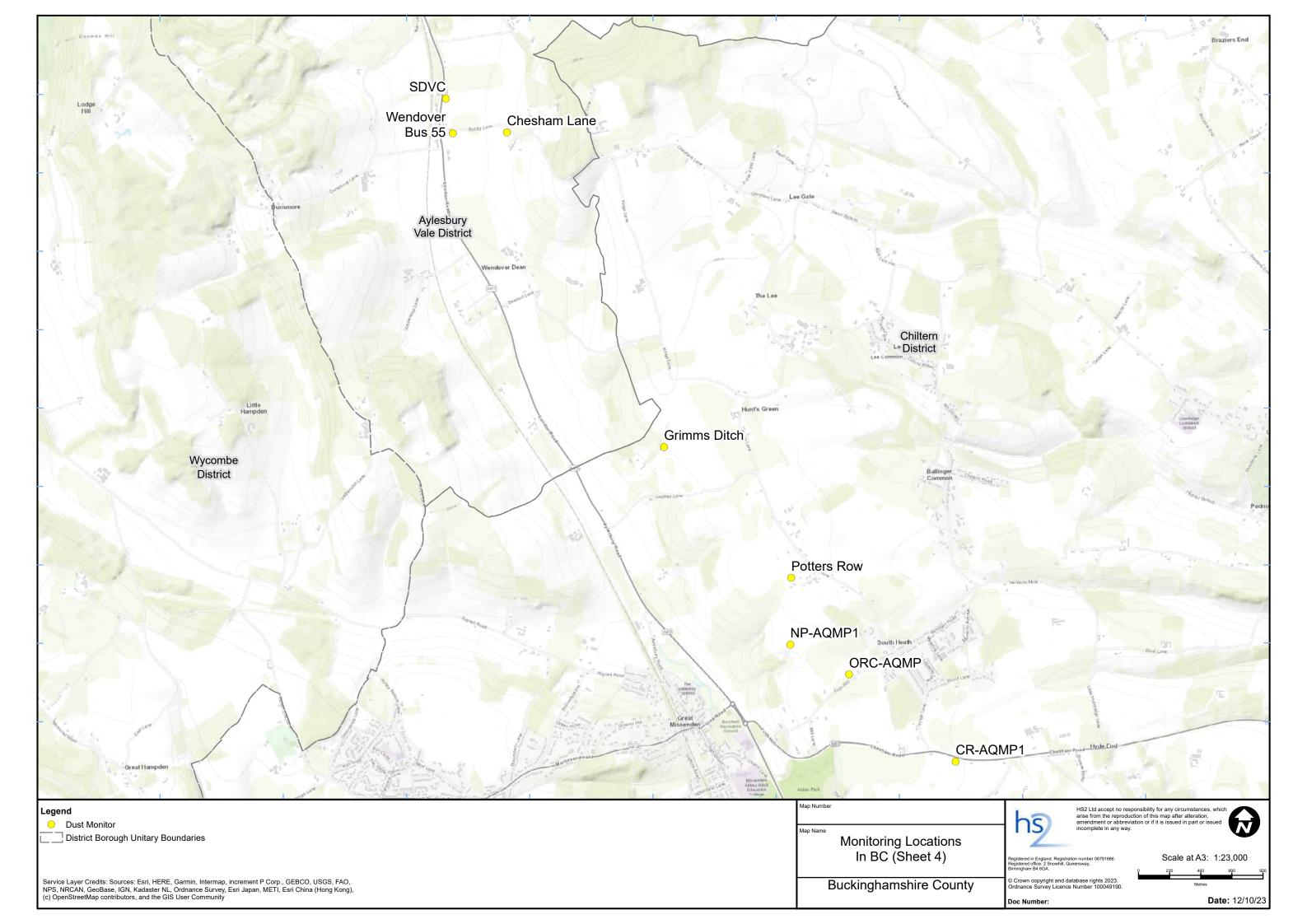
Appendix A - Worksite and Dust Monitoring Locations

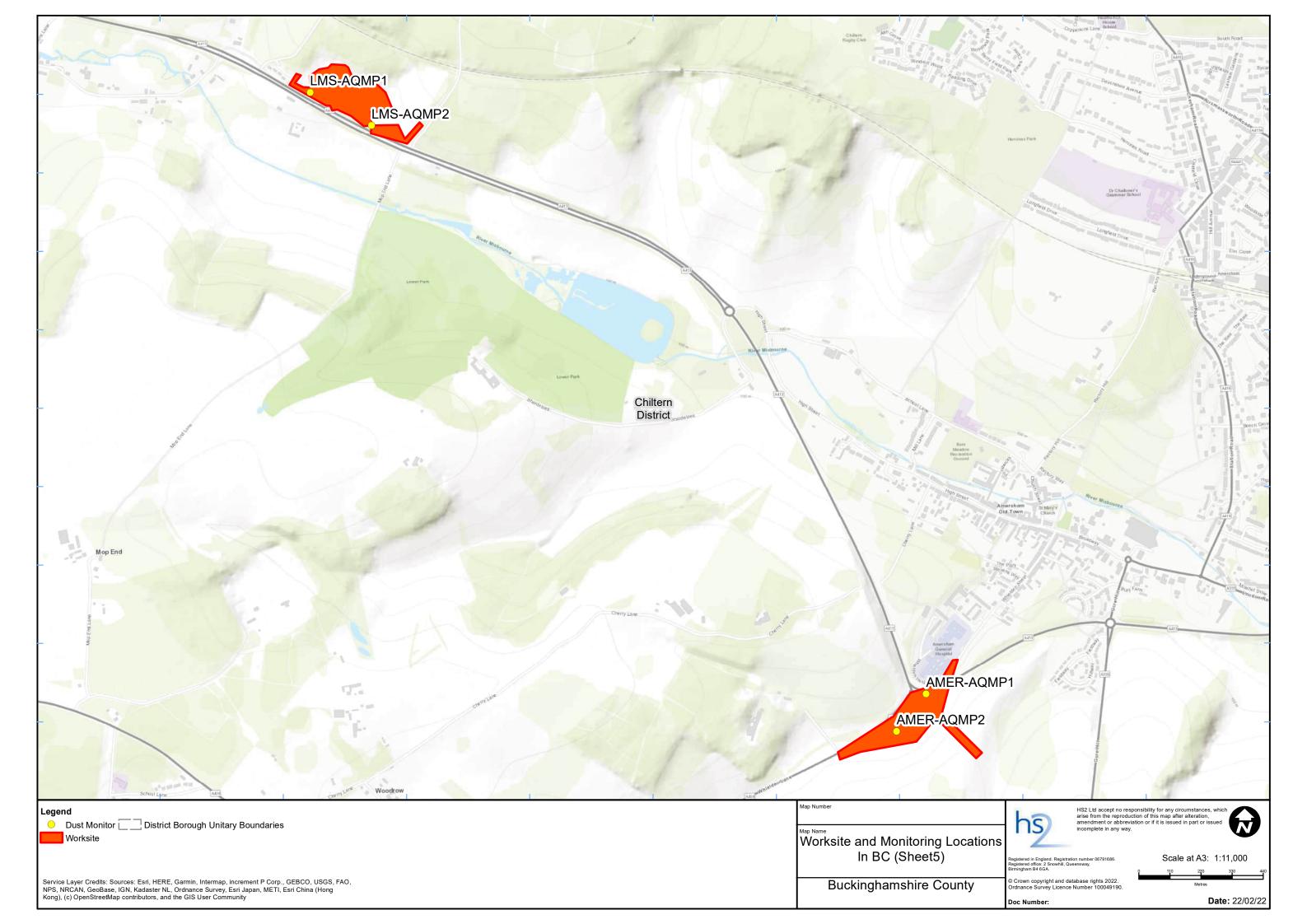
Figures 1-7: Worksite and Monitoring locations within BC

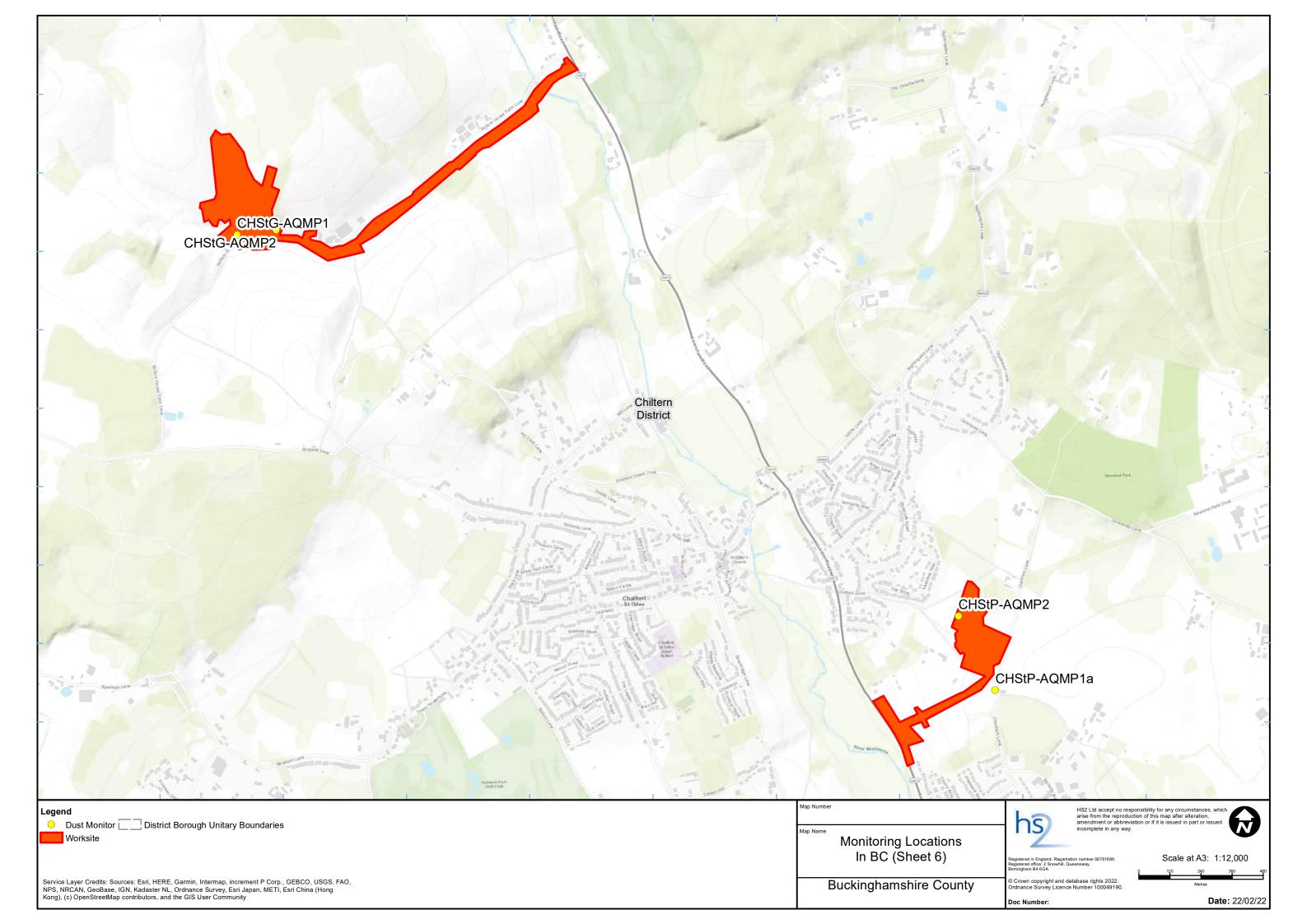


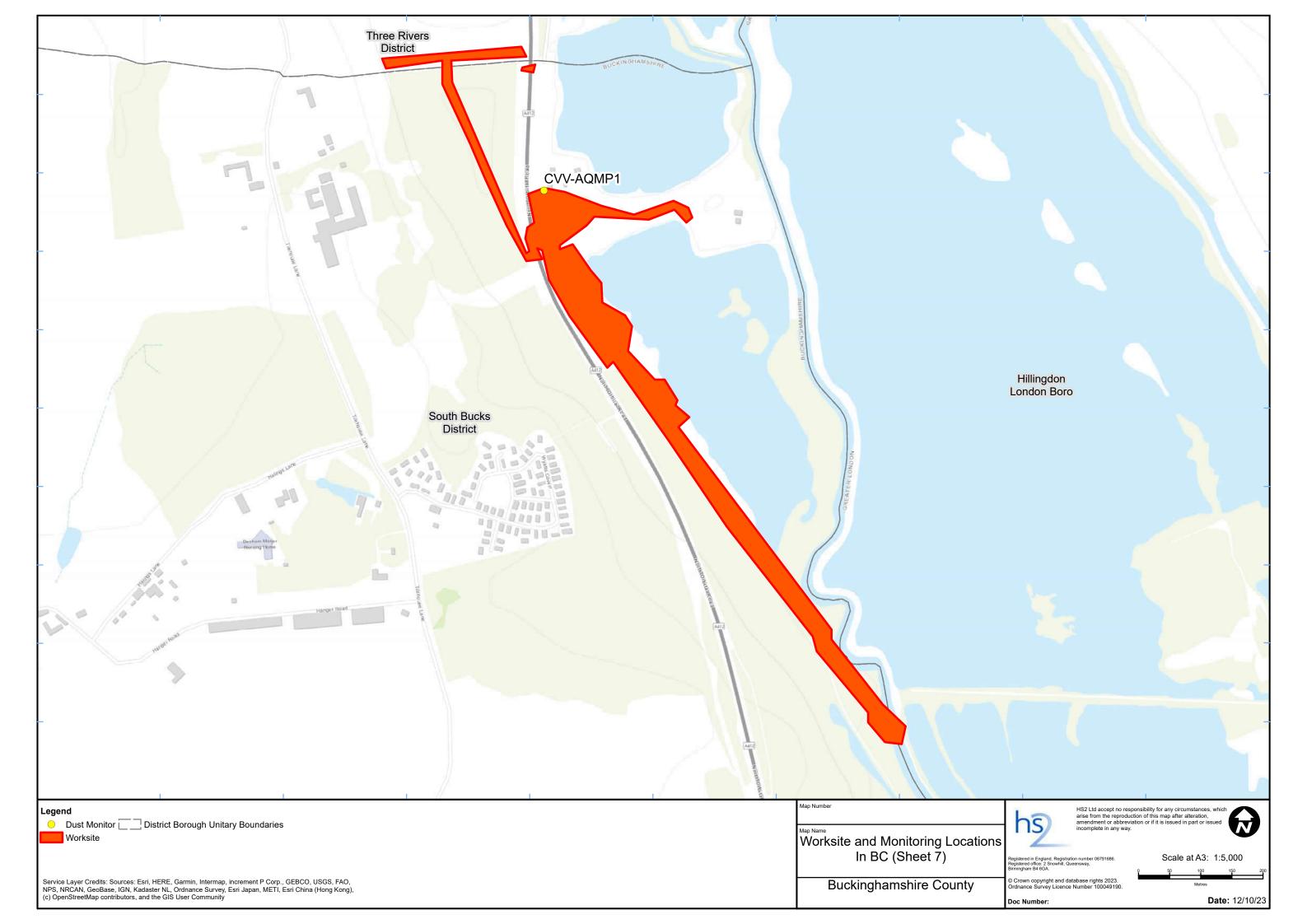












Appendix B - Dust Monitoring Results

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 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/m³	Data capture (%)
CVV-AQMP1	503612, 189846	On the north boundary of LTP1	М	Yes	No	7.5	1.0	27.0	0	100.0
CHStP-AQMP1a	500093, 192996	Relocated from CHStP-NMP1 to site-boundary outside residence	М	Yes	Yes	6.5	1.0	21.0	0	100.0
CHStP-AQMP2	499951, 193282	On the western boundary of the site	М	Yes	Yes	5.8	1.0	127.0	0	100.0
AMER-AQMP1	495367, 196722	On the north- eastern boundary of Amersham	М	Yes	Yes	7.8	1.0	31.0	0	100.0
AMER-AQMP2	495263, 196590	On the south- western boundary of Amersham	М	Yes	Yes	5.4	1.0	21.0	0	98.7
CHStG-AQMP1	497170, 194752	On the southern boundary close to Hobbs Hole Cottage	М	Yes	Yes	7.1	1.0	27.0	0	97.3
CHStG-AQMP2	497320, 194770	On southern boundary next to carpark	М	Yes	Yes	7.5	1.0	91.0	0	99.9
LMS-AQMP1	493190, 198848	On the south-west of the site	М	Yes	Yes	7.2	1.0	29.0	0	100.0
LMS-AQMP2	493407, 198731	On the south-east of the site	М	Yes	Yes	7.4	0.0	29.0	0	99.5
CR-AQMP1	491291, 201143	On the Chesham Road Vent Shaft	М	Yes	Yes	7.2	0.0	25.0	0	97.6

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/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	6.7	1.0	24.0	0	100.0
NP-AQMP1	490069, 202008	North Portal Site Entrance	М	Yes	Yes	6.6	1.0	29.0	0	97.7
School Hill (CAL- AQMP2) - Dust	469003, 224740	School Hill Compound	М	Yes	Yes	7.9	1.0	27.0	0	75.4
School End – Dust	463666, 230049	School End, Chetwode	М	Yes	Yes	7.4	1.0	28.0	0	77.3
Potter Rows – Dust	490075, 202502	Potters Row, South Heath	М	Yes	Yes	24.0	1.0	931.0	9	45.3
Grimms Ditch – Dust	489135, 203468	Leather Lane, The Lee, South Heath	М	Yes	Yes	4.2	1.0	17.0	0	73.3
Chesham Lane - Dust	487974, 205794	Chesham Lane, The Lee, Wendover	М	Yes	Yes	7.0	1.0	25.0	0	75.0
Wendover Bus 55 - Dust	487574, 205787	Chesham Lane, The Lee, Wendover	М	Yes	Yes	8.9	1.0	35.0	0	65.9
Twyford - Dust	466544, 226883	Twyford, Buckinghamshire	М	Yes	Yes	4.2	1.0	13.0	0	11.7
Chetwode/Hermitage - Dust	463936, 229521	Hermitage, Chetwode	М	Yes	Yes	7.5	1.0	23.0	0	73.7
Glebe House - Dust	480475, 212560	A418 Aylesbury	М	Yes	Yes	7.6	1.0	36.0	0	81.0
Turweston North - Dust	460439 , 237140	Turweston, Buckinghamshire	М	Yes	Yes	-	-	-	-	-
FCC - Dust	469042 , 224263	Adjacent Red Kite View, Calvert	М	Yes	Yes	7.8	1.0	25.0	0	52.8
Ellesborough Road - Dust	486458 , 207550	Ellesborough Road, Wendover	М	Yes	Yes	-	-	-	-	-
Nash Lee Road - Dust	484766 , 208782	Nash Lee Lane (west)	М	Yes	Yes	7.7	1.0	56.0	0	26.5

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/m³	Data capture (%)
Nash Lee Lane - Dust	485069 , 208793	Nash Lee Lane (east)	М	Yes	Yes	7.3	1.0	27.0	0	58.1
Bacombe Lane – Dust	486528 , 207217	Bacombe Lane, Wendover	М	Yes	Yes	8.7	1.0	30.0	0	52.6
SDVC – Dust	487522, 206043	Small Dean Viaduct, London Road	М	Yes	Yes	7.2	1.0	20.0	0	25.5
Station Road – Dust	474068, 219307	Station Road, Quainton	М	Yes	Yes	7.7	1.0	38.0	0	83.3
Wendover Town - Dust	486193, 207950	Wendover Bypass, Wendover	М	Yes	Yes	7.7	1.0	28.0	0	74.5
Woodlands - Dust	471603, 221315	Station Rd, Quainton, Woodlands Farmhouse	М	Yes	Yes	6.7	1.0	25.0	0	58.6
Grove Farm	486957, 206908	Grove Farm, London Road, Wendover	М	Yes	Yes	7.6	1.0	30.0	0	76.6

Table 2: Summary of exceedances during period (January 2024)

Monitoring Site ID	Period of trigger alert & Concentration recorded	Investigation	Outcomes / Resolution / Remedial measures implemented
Potter Rows	08/01/2024: 14:00 – 14:59; 204 μg/m ³ 09/01/2024: 15:00 – 15:59; 263 μg/m ³ 16:00 – 16:59; 299 μg/m ³ 10/01/2024: 14:00 – 14:59; 351 μg/m ³ 15:00 – 15:59; 931 μg/m ³ 16:00 – 16:59; 237 μg/m ³	Investigation revealed that farmer adjacent site was burning materials/having a bonfire.	This was the first day of recurring incident which lasted a couple of days. Incident was reported on Horace (INC17995). The incident occurred outside the LLAU; the relevant EHO was notified, and no further actions taken.
	09/01/2024: 17:00 – 17:59; 339 μg/m ³ 11/01/2024: 18:00 – 18:59; 329 μg/m ³ 19:00 – 19:59; 717 μg/m ³	Outside of working hours but related to listed incident.	N/A

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

