HS2

February 2019

# Air Quality and Dust Monitoring Monthly Report – February 2019

## London Borough of Ealing

COSTAIN SKANSKA

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Department for Transport

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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 air quality and dust monitoring undertaken in the London Borough of Ealing (LBE) during January 2019 and February 2019 respectively.

1.1.2 Figure 1 and Figure 2 in Appendix A indicate the current work sites 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 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 phase of works commenced within the LBE during April 2018, and are expected to be completed by July 2019. The current worksites, as presented in Appendix A, Figure 1 and Figure 2, include:

- Demolition of buildings on Victoria Road, worksite ref. S002-WS01.
- Soft strip and demolition of buildings on Atlas Road, worksite ref. S001-WS02.
- Demolition works at Willesden Euro Terminal, worksite ref. S001-WS03.
- Demolition and groundworks at Old Oak Common Depot (located in the London Borough of Hammersmith and Fulham), worksite ref. S004-WS01.
- Securing of site at Mandeville Road Pumping Station, worksite ref. S002-WS02.

1.1.5 Nine (9) dust monitors were installed around worksites, where works are underway. These sites returned a medium or high dust 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.

1.1.7 There was one (1) exceedance of the dust trigger level recorded during the month of February 2019. Exceedances are presented in Appendix B. All other results were in line with expected ranges.

1.1.8 Diffusion tube monitoring of Nitrogen Dioxide ($NO_2$) was undertaken at six (6) locations in January 2019, around highways within the LBE as part of the management of air quality where significant effects may occur as a result the scheme.

1.1.9 Diffusion tube monitoring results are provided from the laboratory analysis, and therefore still require various analysis and adjustments to be undertaken. Final corrected results will be

presented and described in the annual report. However, based on the results to date, no unexpected values were recorded during the monitoring period.

1.1.10 $NO_2$ monitoring locations and results are presented in Appendix C, Table 4, together with the 2019 running mean.

1.1.11 Table 1 provides a summary of the complaint information related 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 February 2019 in LBE

| Complaint Reference No. | Worksite Reference | Description of complaint | Results of investigation |
|---|---|---|---|
| CPA-000726 | S002-WS01 | Dust from the demolition works on School Road covering vehicles and making people feel ill. Report on monitored levels requested. (19/02/2019) | Data recorded by the continuous monitors AQ23 on School were provided to the complainant. The complainant was advised of the range of control measures being implemented, together with an explanation provided for the isolated trigger on the 18th February and the actions taken in response. |

# Appendix A – Worksites and Monitoring Locations

Figure 1 and 2: Worksites and monitoring locations within the LBE

HARROW LONDON BORO

WEMBLEY

BRENT LONDON BORO

AQ032

S002-WS02

NORTHOLT

EALING LONDON BORO

HS2-000020BP7

GREENFORD

HILLINGDON LONDON BORO

EALING

**Legend**

- District/Borough boundary
- Route in tunnel
- Route on surface
- HS2 Chainage Markers
- Diffusion tube monitoring location
- Mandeville Road Pumping Station
- Dust monitoring location

Figure Number

Figure Name

Worksites and Monitoring locations in LBE (sheet 1)

London Borough of Ealing

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Scale at A3: 20,000

0 200 400 600 800

Metres

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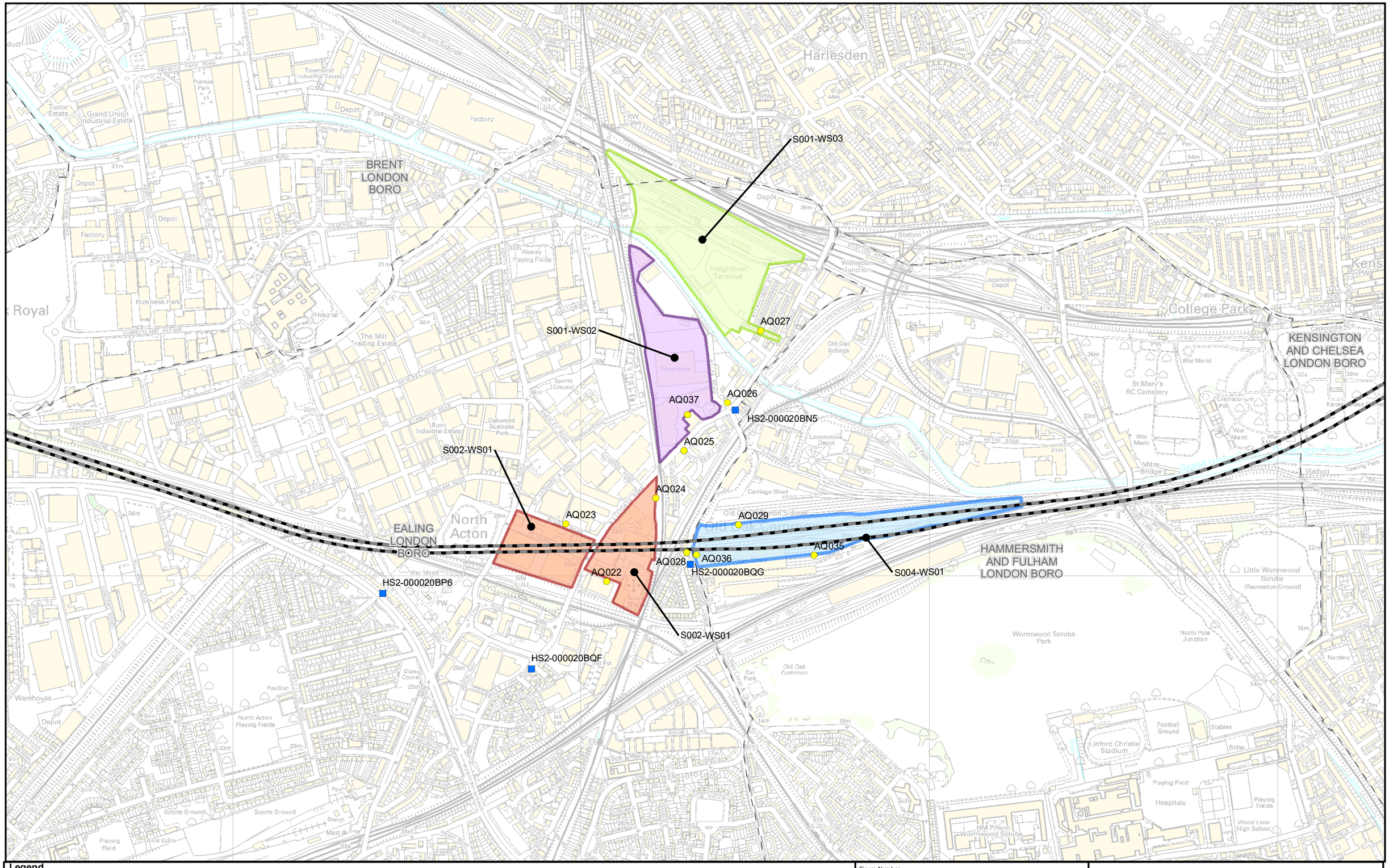
Map Number: 1EW02-CSJ-EV-REP-S000-000017_appAFig1.pdf **Date:** 16/07/18




**Legend**

- Route in tunnel
- Route on surface
- Diffusion tube monitoring location
- Dust monitoring location
- Willesden Euro worksite
- Victoria Road worksite
- Old Oak Common worksite
- Atlas Road worksite

Figure Number

Figure Name

Worksites and Monitoring locations in LBE (sheet 2)

London Borough of Ealing

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Scale at A3: 10,000

0 100 200 300 400 Metres

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Map Number: 1EW02-CSJ-EV-REP-S000-000017_appAFig1.pdf **Date:** 11/03/19

# Appendix B – Dust Monitoring Results

Table 2 Dust monitoring locations and February 2019 Results

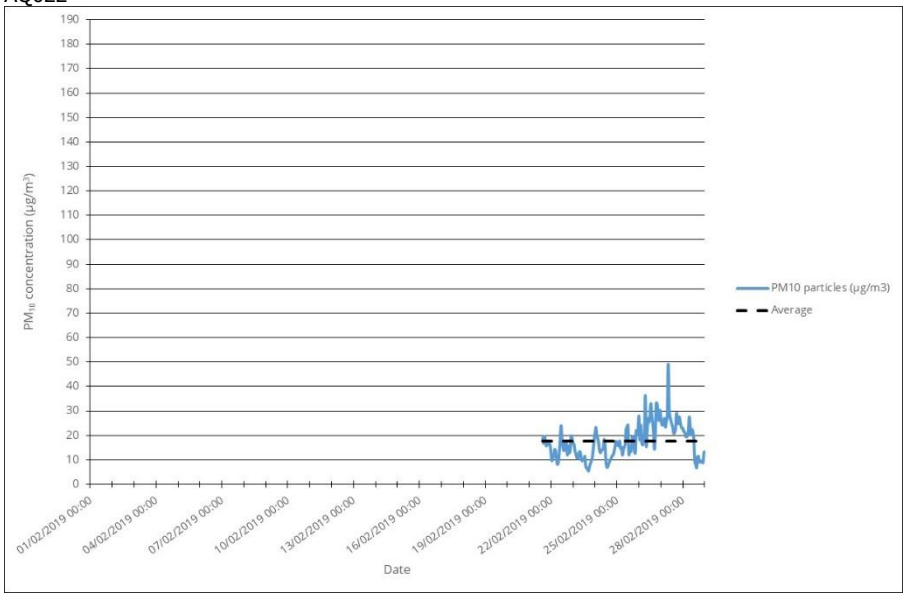
| Monitoring site ID | Coordinates (X,Y) | Location description | Dust risk rating for site | Monitoring site active during period | Change to site since previous period report | Mean 1-hour $PM_{10}$ concentration ($\mu g/m^3$) | Minimum 1-hour $PM_{10}$ concentration ($\mu g/m^3$) | Maximum 1-hour $PM_{10}$ concentration ($\mu g/m^3$) | Number of 1-hour periods exceeding trigger level of 190 $\mu g/m^3$ | 1-hour data capture (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| AQ022 | 521072, 181985 | Boden House | H | Yes | N | 17.6 | 5.5 | 49.1 | 0 | 26.5 |
| AQ023 | 520956, 182149 | School Road | H | Yes | N | 21.8 | 1.1 | 229.7 | 1 | 100.0 |
| AQ024 | 521214, 182223 | Braitrim House | H | Yes | N | 25.4 | 1.4 | 90.7 | 0 | 100.0 |
| AQ025 | 521295, 182360 | Victoria Road | H | Yes | Y | 13.6 | 0.7 | 50.7 | 0 | 100.0 |
| AQ026 | 521419, 182497 | Old Oak Lane | H | Yes | Y | 16.8 | 0.7 | 85.7 | 0 | 100.0 |
| AQ027 | 521515, 182706 | Stephenson Street | H | Yes | N | 18.2 | 0.8 | 93.2 | 0 | 100.0 |
| AQ028 | 521302, 182067 | Wells House Road | H | Yes | N | 24.5 | 1.2 | 148.2 | 0 | 100.0 |
| AQ032 | 513402, 184536 | Badminton Close | M | Yes | N | 12.9 | 0.9 | 67.9 | 0 | 100.0 |
| AQ037 | 521304, 182464 | Atlas Road | H | Yes | Y | 21.7 | 5.1 | 64.2 | 0 | 8.8 |

Table 3 Summary of exceedances of trigger level in February 2019

| Period exceeding trigger level | Worksite reference | Monitoring site ID | Complaint reference number (if applicable) | Reason | Resolution |
|---|---|---|---|---|---|
| 18/02/2019 14:01 -18/02/2019 15:00 | S002-WS01 | AQ023 | n/a | Striking of the scaffold surrounding the buildings were being demolished on School Road and the removal of the monoflex sheeting which had dust on it was the cause of the trigger. | The works were stopped and the monoflex sheeting was washed down before works continued. |

Figure 2: Construction dust 1-hour mean indicative $PM_{10}$ concentration for dust monitors

AQ022

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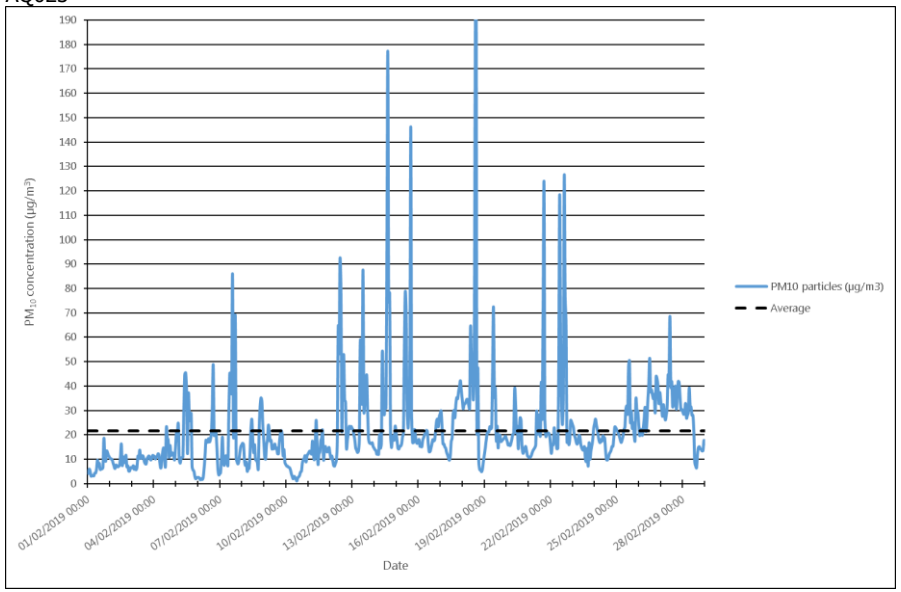

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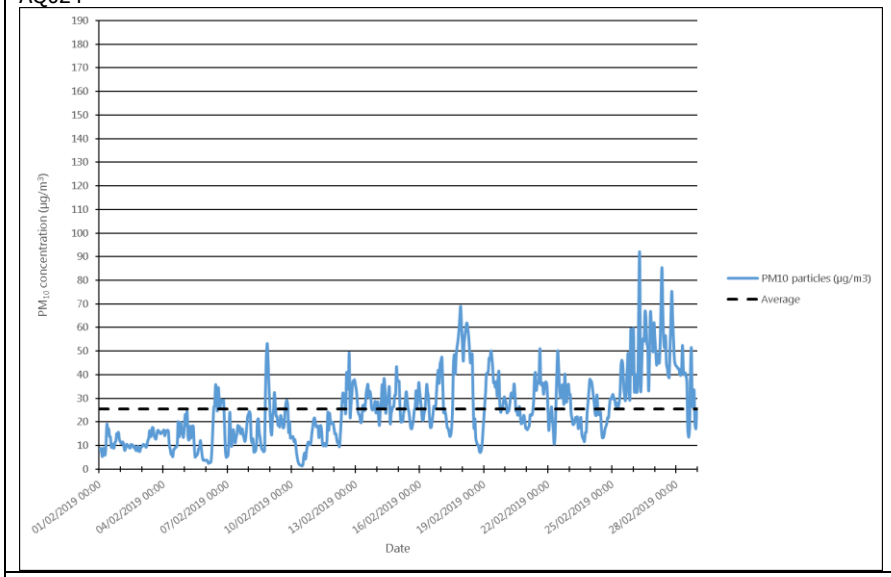


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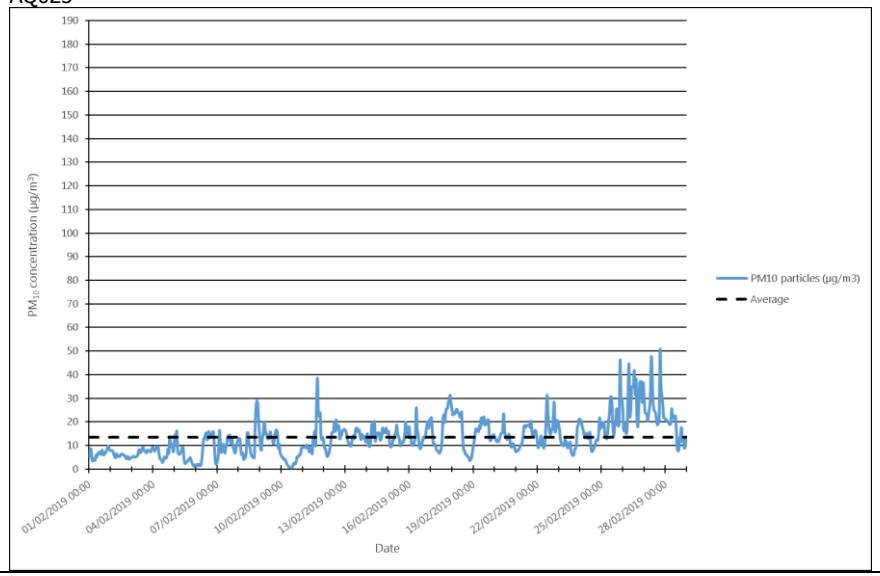


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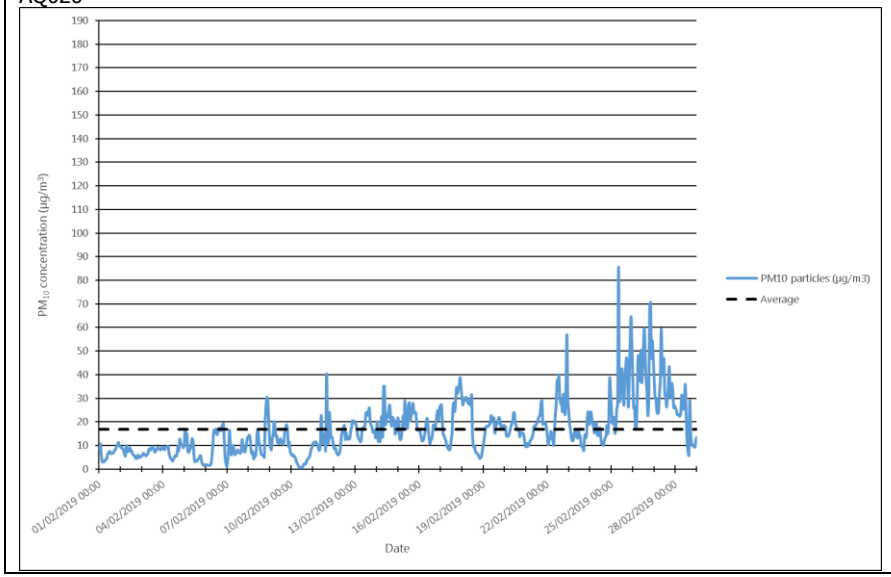


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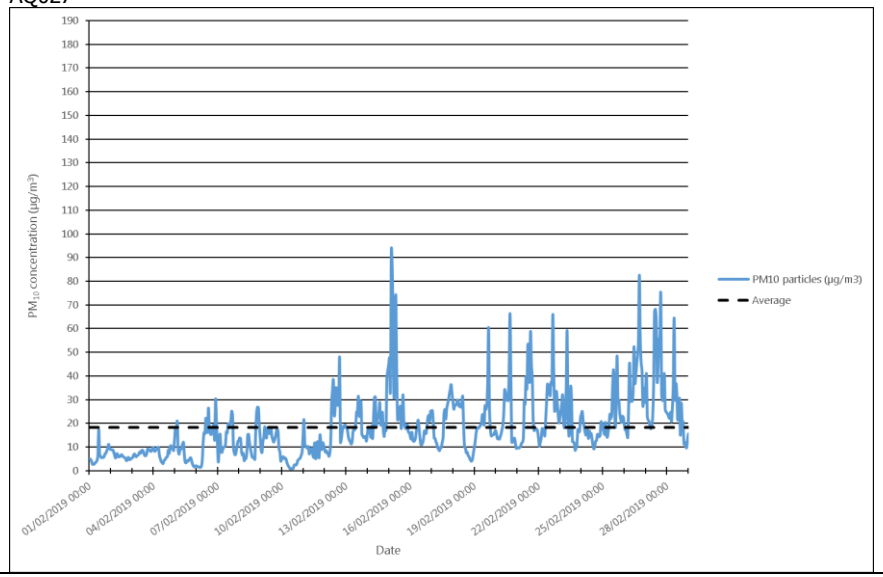

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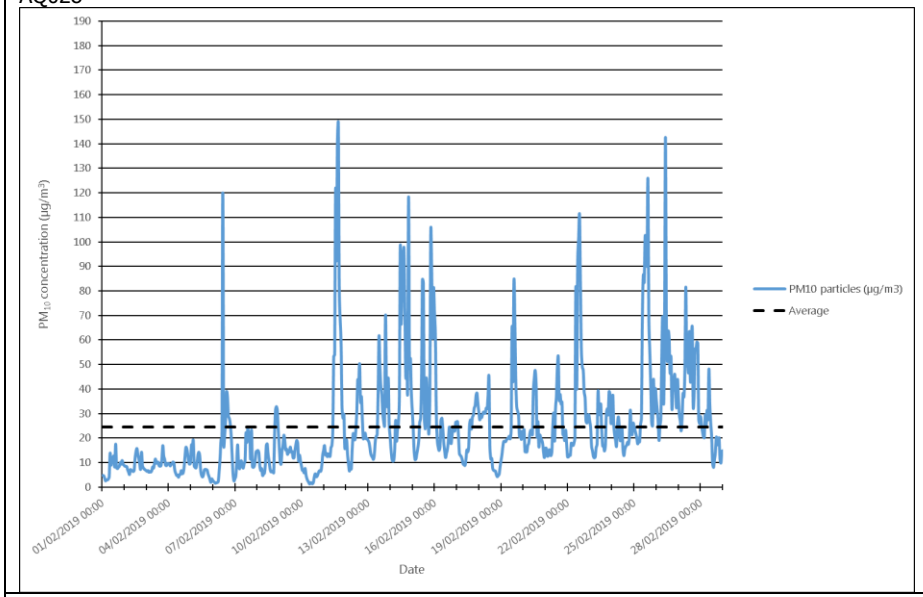


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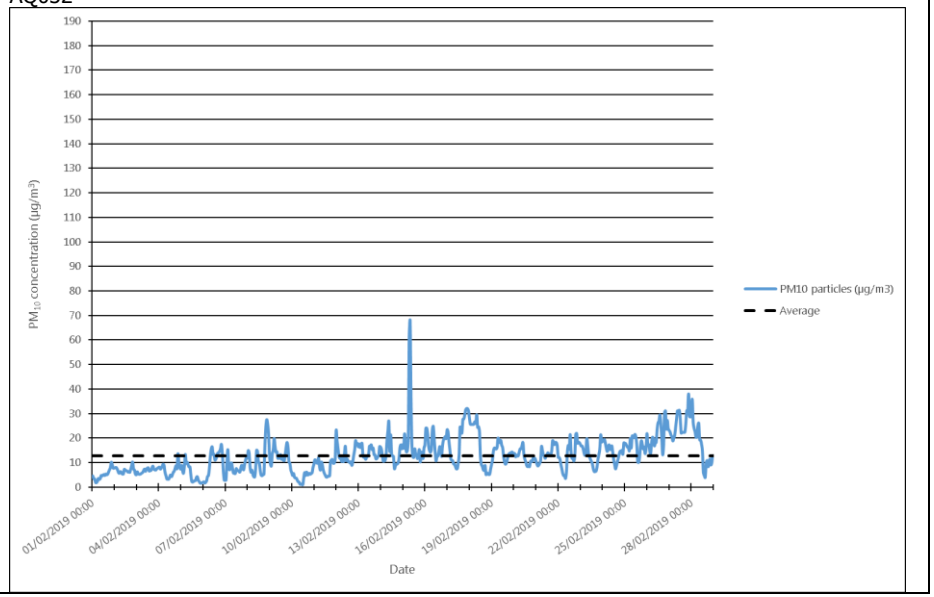


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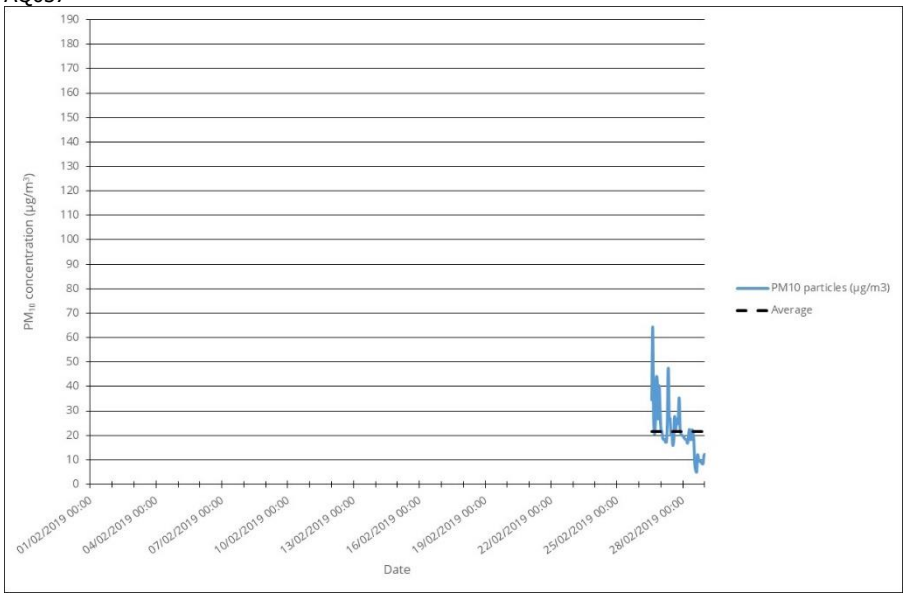

# Appendix C – Air Quality Monitoring Results

Table 4 NO2 monitoring locations around highways, NO2 concentrations and monthly monitoring results with running mean for 2019 (µg/m3)

| Monitoring Site ID | Location description | Coordinates (X, Y) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Mean[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HS2-000020BN5 | Sign post on Victoria Road | 521443, 182477 | 63 | | | | | | | | | | | | 63 |
| HS2-000020BN7 | The Approach street sign | 520959, 181102 | 75 | | | | | | | | | | | | 75 |
| HS2-000020BQF | Conway Drive sign post | 520856, 181733 | 69 | | | | | | | | | | | | 69 |
| HS2-000020BQG | Lamp post outside No 1. Wells House Road on Old Oak Common Lane | 521312, 182033 | 69 | | | | | | | | | | | | 69 |
| HS2-000020BP6 | Triplicate site next to the Ealing, Western Avenue Acton roadside automatic monitoring station | 520430, 181950 | 68 | | | | | | | | | | | | 68 |
| HS2-000020BP7 | Triplicate site next to the Ealing, Hangar Lane Gyratory roadside automatic monitoring station | 518537, 182708 | 83 | | | | | | | | | | | | 83 |

[1] *Note: to aid interpretation and conform with best practice, the monthly measurements in this table are reported rounded to the nearest whole number. The annual mean presented here is calculated based on laboratory data to 4 significant figures, rounded to a whole number, and therefore may differ slightly to a mean derived from averaging the rounded monthly measurements in the table.*