

Air Quality and Dust Monitoring Monthly Report – August 2021 **Stratford-on-Avon District** Council



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 Stratford-on-Avon District Council during August 2021.
- 1.1.2 Figures 1 and 2 in Appendix A present the current worksites together with the dust monitoring locations for August 2021.
- 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 work at Long Itchington Wood North Portal site, within Stratford-on-Avon District Council, Commenced in April 2020 and is expected to be completed by 2025. The Long Itchington Wood North Portal worksite as presented in Appendix A, Figure 1, includes: construction of the portal slab, assembly of the Tunnel Boring Machine (TBM), and assembly of the Ainscough Crane.
- 1.1.5 Figure 2 in Appendix A presents the current Southam worksite together with the dust monitoring location for August 2021.
- 1.1.6 The current phase of work at the Southam worksite commenced in July 2021 and is expected to be completed by 2025. Activities within August 2021 included:
- Further establishment of the temporary and main site compound
 - Installation of drainage and culverts
 - Topsoil stripping and material movement
 - Demolition works (Greenleaf Nursery) and associated crushing works
 - De-vegetation works
 - Establishment of the site access road
- 1.1.7 Two (2) dust monitors are installed on the sites. These sites returned a medium dust risk for activities currently on site.
- 1.1.8 Dust monitoring location and results for August 2021 are presented in Appendix B, Table 1, together with a line chart of monthly data from the dust monitor for each site presented in Figures 3 and 4 . 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 mitigations.

- 1.1.9 The trigger level for PM₁₀ concentrations of 190 µg/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.
- 1.1.10 There were multiple dust trigger alerts recorded at Harp Farm-AQMP1 during the August 2021 reporting period, however majority of alerts on investigation were not linked to site activities. Details of the trigger alert investigations and remediations are presented in Appendix B, Table 2. All other results were in line with expected ranges.
- 1.1.11 There were no (0) complaints, relating to dust or air quality, received during this reporting period (August 2021).

Appendix A – Worksites and Monitoring Locations

Figure 1: Worksites and Monitoring locations within Stratford-on-Avon District Council during August 2021

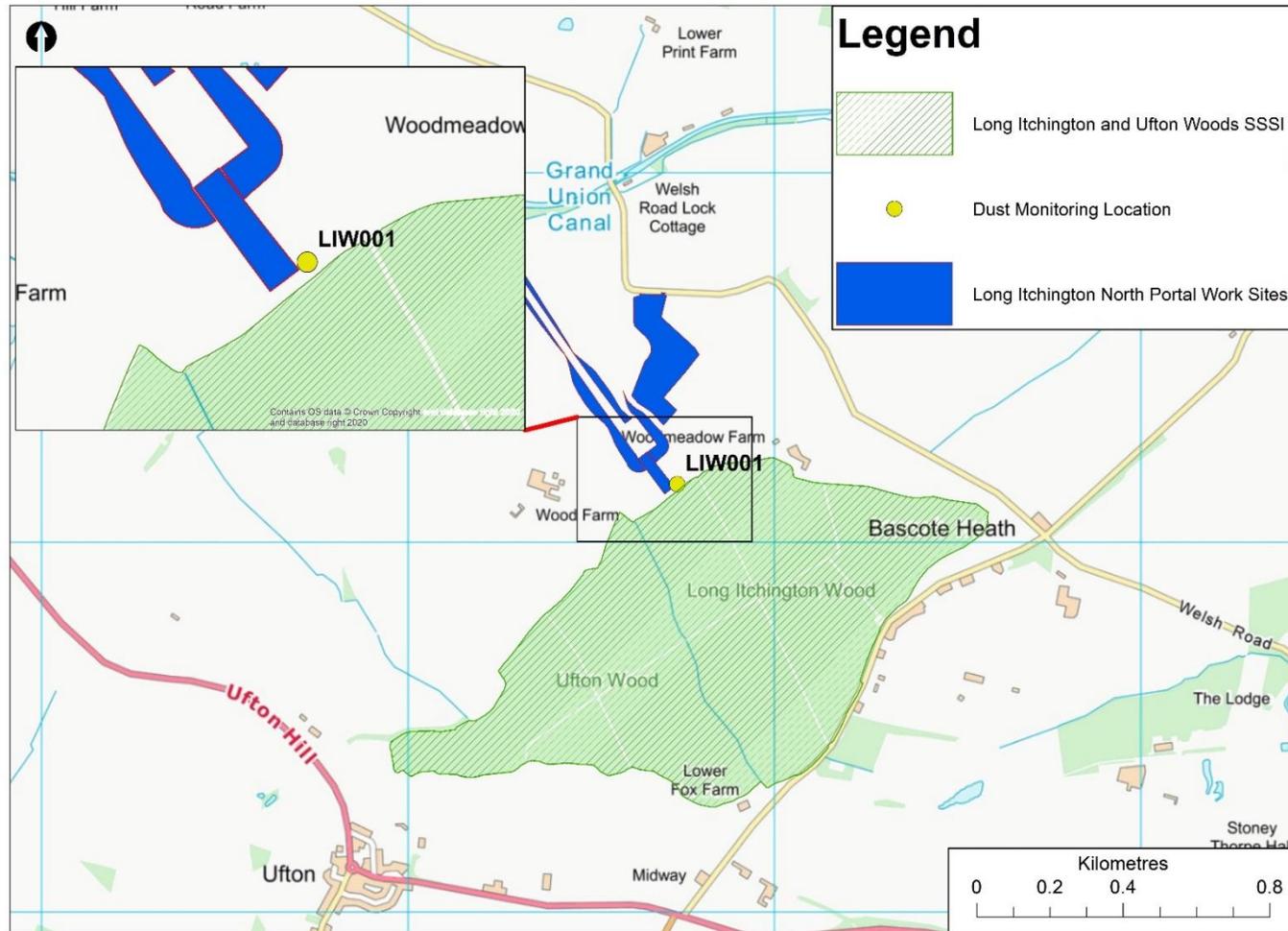


Figure 2: Worksite and Monitoring locations during August 2021 – Harp Farm-AQMP1



Appendix B – Dust Monitoring Results

Table 1: Dust monitoring locations and August 2021 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/m ³) | Minimum 1-hour PM ₁₀ concentration (µg/m ³) | Maximum 1-hour PM ₁₀ concentration (µg/m ³) | Number of 1-hour periods exceeding trigger level of 190 µg/m ³ | Data capture (%) |
|--------------------|-------------------|---|---------------------------|--------------------------------------|---|---|--|--|---|------------------|
| LIW001 | 438656, 263180 | Long Itchington Wood North Portal, at boundary with Long Itchington and Ufton Woods SSSI. | M | Yes | No | 1.9 | 0.1 | 11.4 | 0 | 99.7 |
| Harp Farm-AQMP1 | 52.23729, 1.39022 | Site boundary adjacent property on Harp Farm | M | Yes | Yes | 20.3 | 2.0 | 786.2 | 12 | 99.9 |

Table 2: Summary of exceedances during period (August 2021)

| Monitoring Site ID | Period of trigger alert & Concentration recorded | Investigation | Outcomes / Resolution / Remedial measures implemented |
|--------------------|--|---|--|
| Harp Farm-AQMP1 | 07/08/2021 13:01-14:00 631.4 µg/m ³ 14:01-15:00 223.9 µg/m ³ | Upon immediate investigation it was noted that the landowner was working in close proximity to the dust monitor and was not related to any EKFB works in the area. | Landowner was contacted and was assured they would try to work further away from the monitor. After the landowner tried to reduce works in close proximity, there was a reduction in the amount of dust being produced but it still caused this additional trigger. They shortly finished works and no more alerts were received. |
| | 11/08/2021 06:00-07:00 203.0 µg/m ³ | The alert occurred outside of EKFB working hours, however on investigation it was noted that landowner activities were being undertaken in close proximity to the monitor. | On-going dust mitigation on site, in line with the Code of Construction Practice. |
| | 12/08/2021 07:01-08:00 440.5 µg/m ³ | | |
| | 14/08/2021 13:00-14:00 216.8 µg/m ³ | | |
| | 15/08/2021 10:00-11:00 395.2 µg/m ³ | | |
| | 23/08/2021 09:00-10:00 371.0 µg/m ³ | On investigation it was noted that the demolition activities were being carried out, and while dust suppression was in place, the activities were within close proximity to the dust monitor. These activities comprised of breaking out and moving concrete rubble with an excavator and dumper. | The site team increased the dust suppression measures on site, including the use of additional dust cannons and ensuring the agreed methodologies to manage dust were implemented. Furthermore, the NRMM on site was relocated closer within the site boundary. Demolition activities continued in line with the above, and no further trigger alerts were received. |

| Monitoring Site ID | Period of trigger alert & Concentration recorded | Investigation | Outcomes / Resolution / Remedial measures implemented |
|--------------------|--|--|--|
| | 25/08/2021 14:00-15:00 414.8 µg/m ³ 15:00-16:00 566.0 µg/m ³ | EKFB's subcontractor were operating the crusher (as part of demolition works), while dust suppression was in place, on investigation it was noted that it was not functioning to its full capacity as a result of poor water pressure. | EKFB Environmental Advisor attended site and advised the Supervisor to reduce the crushing rate and alter the location of the plant. No complaints were received. Works were stopped until additional measures below could be implemented the following day: <ul style="list-style-type: none"> - Working area will be moved further away - Speed of the crusher will be reduced - The crusher's built-in the dust suppression unit has been connected to work correctly as intended. - The pressure of the existing dust suppression unit has been fixed to its correct standard. |
| | 26/08/2021 12:00-13:00 232.7 µg/m ³ | Upon testing the crusher and dust suppression system again, using additional measures mentioned above, the dust levels were closely monitored, on receipt of the alert the crusher was immediately stopped, and the suppression systems are being reviewed in detail. | Works stopped until all suppression systems were re-assessed, and a bigger dust suppression system was ordered to arrive the following day. No further alerts received. |
| | 27/08/2021 08:00-09:00 786.2 µg/m ³ | On investigation, it was found that no demolition works were taking place at this time as the works suspension notice was still in place from the previous day and the team were still awaiting the bigger dust suppression unit to arrive. Therefore, this activity is not considered to be caused from EKFB works. | The landowner was contacted and asked to reduce any activities in close proximity to the monitor that morning. It was also considered that high wind levels present that day also impacted the dust levels in the environment. |
| | 27/08/2021 11:00-12:00 252.8 µg/m ³ | Upon arrival of the new dust suppression unit the works were resumed and upon testing again the dust levels were closely monitored and raised to alert levels again. the crusher was immediately stopped, and the suppression systems were reviewed again in detail. | The crusher was immediately stopped, and the suppression systems were reviewed again in detail. Weather conditions were dry and high wind speeds were being experienced. Works were again stopped until more suitable conditions for the activity (i.e. reduced wind speeds / rainfall) |

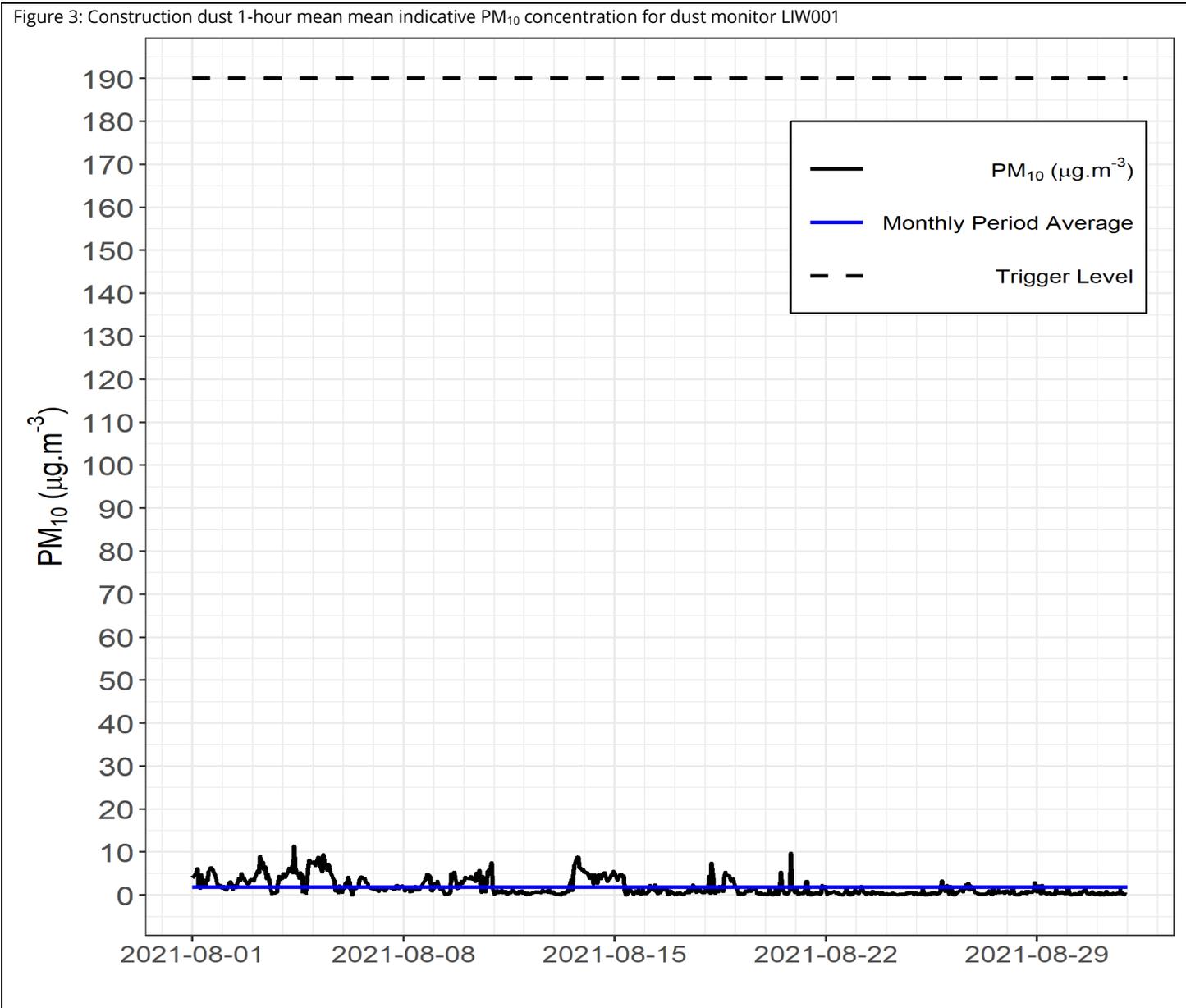


Figure 4: Continuous dust 1-hour mean indicative PM₁₀ concentration for Harp Farm-AQMP1 for August 2021

