

Huckfield, David

From: Waite, Oxana
Sent: 28 August 2024 19:39
To: Huckfield, David
Cc: Panza, Yacklin
Subject: [F/24/97934] Land adjacent to Pear Tree PH, Winchester Road, Southampton, SO32 2DH -- Air Quality Assessment

Hi David,

Thank you for consulting the Pollution Team regarding the application F/24/97934 for the erection of 6 dwellings with associated parking, landscaping, and the creation of a new access from Winchester Road at Land adjacent to Pear Tree PH, Winchester Road, Southampton, SO32 2DH. Please find my comments on the associated Air Quality Assessment below.

Air Quality Assessment Review:

The Air Quality Assessment provided for the development appears comprehensive and follows relevant guidelines. However, there are some key points and inconsistencies that should be noted.

Legislation and Guidelines Compliance:

- The assessment generally adheres to national and international legislation, including the UK National Air Quality Strategy 2019, the EU Ambient Air Quality and Cleaner Air for Europe Directive (2008/50/EC), and the National Planning Policy Framework (2023). WHO Air Quality Guidelines (2021) are also referenced.
- However, the Introduction (Section 1.1) incorrectly references an April 2021 review of TG22, which is inaccurate.

Model Input Data:

- **Meteorological Data:** Data from Southampton Airport for 2019 was used, with a 99% data capture, which is suitable for the site.
- **Baseline Concentrations:** The Baseline Assessment (Section 3.3) correctly references **2022** as the most recent data available and the future **2026** baseline site conditions, which represents the opening year of the proposed development. However, the input data throughout the report inconsistently relies on 2019 figures, particularly for Defra background maps, diffusion tubes monitoring and traffic data. However, in this section, you suggested that “a review of the most recent progress reports on air quality carried out by the local planning authority”.
- **Traffic Data:** Appendix 3.1 cites 2019 traffic flows from the Department for Transport database with growth factors applied to predict traffic flows for 2025. Given that the opening year of the development is 2026, this discrepancy should be clarified, as 2022 baseline data and future projections should have been used instead.

- **Road Widths:** The assessment discusses road widths but does not adequately confirm if they are appropriate beyond OS mapping references. Further clarification is recommended.

Traffic and Speed Data:

- The model input data references 2025, which should be reconsidered for alignment with the development's 2026 opening year identified in project Description section.
- The report references the most recent Emissions Factor Toolkit (EFT) v12.0 (November 2023), but it also mentions the previous EFT v11.0 in the same appendix, which should be clarified.
- It is unclear if the most recent Defra NOx calculator (v8.1) was used in the model, and the absence of a discussion on the bias adjustment factor further weakens the analysis.

Model Validation:

- The validation process resulted in an adjustment factor of 1.6306 applied to the model contribution of NOx, indicating significant underprediction. This value is relatively high and deviates from the ideal value of 1, raising concerns about modelled emission accuracy. The RMSE value indicates that only the higher predicted concentrations fall within the recommended range of 10µg/m³.
- A third verification location was excluded due to unavailable traffic data, which also limits the model's robustness.

Conclusion:

While the assessment provides a reasonable overview of the air quality impacts, its reliance on outdated data and the inconsistencies in model validation undermine the confidence in the predicted NO₂ concentrations. That said, the report appropriately identifies dust as a more significant concern during the construction phase and recommends mitigation measures accordingly.

Recommendations:

I recommend that the following conditions be attached to the planning consent:

- **Dust Management Plan (DMP):** A DMP should be submitted to and approved by the Local Planning Authority prior to the commencement of development. This should include detailed mitigation measures for dust control during construction, regular monitoring, and contingency measures.
- **Mitigation Monitoring:** The proposed dust mitigation measures should be conditioned to ensure effective implementation throughout the construction phase.
- **Public Transport and Active Travel:** Although not mentioned in the assessment, the site benefits from good public transport provision and existing pedestrian/cycle infrastructure. These should be promoted as part of the development to support sustainable travel options and long-term air quality improvements.

While the air quality assessment could benefit from improved data accuracy and more robust modelling, the mitigation measures, particularly during construction, should ensure that the development remains in compliance with long-term air quality standards.

Kind regards,

Oxana

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