Technical Memorandum

To: Environmental Health and Licensing **From:** SLR Consulting Limited

Company: Horsham District Council **SLR Consulting Limited**

cc: **Date:** 11 July 2025

Project No. 402.064813.00001

RE: Horsham District Council Consultation – Air Quality Response

Ref	Comment / Requirement	Response
1	How has exposure to $PM_{2.5}$ been considered when selecting the development site? • Proximity to vulnerable groups (schools, hospitals, care homes, deprived areas) • Proximity to pollution sources • Exposure/emissions during construction and operation	<u>Proximity to people, especially vulnerable groups:</u> The proposed development is located at National Grid Reference x516065, y124880. The site is not in immediate proximity to vulnerable receptors, such as schools, hospitals, care homes, or identified areas of deprivation. Existing residential receptors in the vicinity have been fully considered in both the construction and operational phase assessments. To minimise exposure, the development design incorporates a setback distance of approximately 35 meters from the nearest residential property. This buffer helps to mitigate the potential impact of $PM_{2.5}$ emissions during construction and future use. Informed by this context, appropriate mitigation measures have been proposed and integrated into the development strategy to ensure emissions and exposure are reduced as far as reasonably practicable. <u>Proximity to pollution sources:</u> The nearest proposed receptor is located approximately 35 metres from the A24 (Worthing Road) on the eastern extent of the site boundary. Whist the A24 is a recognised source of $PM_{2.5}$, the separation distance reduces direct exposure, particularly for sensitive receptors. The site is not adjacent to any high-intensity or persistent sources of $PM_{2.5}$ such as industrial operations or combustion-based facilities. According to Defra background mapping data, annual mean $PM_{2.5}$ concentrations in the local area are currently below the appropriate AQAL and the 2040 target of 10 µg/m^3 (the highest concentration at grid squares containing the site boundary has modelled 2024 $PM_{2.5}$ background of 6.4 µg/m^3). Based on this context, the exposure risk to future users of the development is considered low, and no site-specific exceedances are anticipated. <u>Construction and operational phase exposure:</u> For the construction phase, there is potential for the proposed development to generate dust and PM_{10} during construction works. A portion of PM_{10} from construction may exist as $PM_{2.5}$ (typically 10%). The air quality assessment included a construction dust assessment following industry prescribed guidance prepared by the Institute of Air Quality Management. The assessment outcomes identify proportionate mitigation measures to be implemented throughout the construction phase

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		with the aim of controlling dust emissions and minimising any potential impacts. These measures target dust and PM_{10} however would inherently capture potential $PM_{2.5}$ emissions generated during construction works. In addition, any increases in dust and PM_{10}/$PM_{2.5}$ as a result of the construction phase are temporary and short-term. In terms of the operational phase, the proposed development does not include any onsite combustion sources (i.e. central boilers / generators). As such, the proposed development, as a site, does not produce any $PM_{2.5}$ to what is currently included within the mapped background concentration. As such, the key source additional $PM_{2.5}$ will be from the additional vehicular movements on the local road network. The operational phase road traffic screening indicates that the "*operational effects on local air quality arising from road traffic emissions associated with the Proposed Development can be considered 'insignificant'.".* Furthermore, Miller Homes plan to implement several imbedded mitigation measures (see Section 7.2.2 of the AQA) at the site, including measures which target road vehicle emissions – a key contributor to $PM_{2.5}$ emissions. Implementation of these measures aims to reduce the site's contribution to road vehicle emissions, including $PM_{2.5}$. Measures include – EV charge point provision across the site, and provision of cycle storage to encourage active modes of travel.
2	What actions and/or mitigations have been considered to reduce $PM_{2.5}$ exposure for development users and nearby receptors (houses, hospitals, schools etc.) and to reduce emissions of $PM_{2.5}$ and its precursors? • Site layout • Development design • Technology used • Construction and operation for future use	A number of measures have been incorporated into the development to reduce $PM_{2.5}$ emissions and limit exposure for both future users and neighbouring receptors. The site layout has been carefully designed to maximise separation between buildings and nearby sources of pollution, specifically the A24 (Worthing Road). In terms of development design, the layout promotes active travel through the provision of secure cycle parking and enhanced pedestrian connectivity, thereby reducing reliance on private vehicle use. Regarding technology, the scheme includes electric vehicle (EV) charging infrastructure to support zero-emission transport. In addition, construction plant will comply with NRMM (Non-Road Mobile Machinery) emission standards, and electric machinery will be prioritised wherever feasible. Where additional mitigation has not been proposed, this is due to the fact that $PM_{2.5}$ concentrations in the area are already low, the development does not introduce new significant sources of emissions, and site constraints did not warrant further changes beyond the measures already embedded in the layout and design.
3	When completing the damage-cost calculation the price base year should be the year of appraisal (2024). Please could the applicant review their calculation of emissions and air quality appraisal.	The air quality assessment includes a damage-cost calculation based on a price base year that is representative of the development's anticipated opening year. This approach ensures that the appraisal reflects the expected conditions and emissions profile at the time the development becomes operational. However, we acknowledge the Local Authority's request to align the calculation with the 2024 appraisal year and will update the assessment accordingly to ensure consistency with the Sussex Air guidance.
4	The Mitigation measures for the proposed development should be in line with the Sussex Air	A number of embedded and site-specific measures have been outlined in the submission to reduce emissions and exposure. We acknowledge the request for an itemised costing of each

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	(2021) Air Quality and Emissions Mitigation Guidance for Sussex. The emission mitigation statement should contain itemised costing for each proposed mitigation option and total value of all proposed emissions' mitigation. This should be equal to the value from Emissions calculation and total calculated value of emissions' health damage cost. Sussex Air quality guidance aims to avoid the duplication of measures that would normally be required through other regimes.	mitigation measure and confirmation that the total value is equal to or exceeds the calculated health damage cost. Given that the detailed implementation of these measures can be refined at the discharge of conditions stage, we consider it appropriate that the itemised mitigation statement and associated costings be secured through a planning condition, to be submitted and agreed with the Local Planning Authority prior to commencement. This approach allows for flexibility while ensuring full compliance with the Sussex Air guidance and avoiding duplication with other regulatory requirements.