



Barns Green, Horsham

Air Quality Emissions Mitigation Statement

Miller Homes Limited and Miller Developments Limited

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Basis of Report

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1.0 Introduction

SLR Consulting Ltd (SLR) has been commissioned by Miller Homes Limited and Miller Developments Limited to prepare an air quality Emissions Mitigation Statement (EMS) to support the planning application for a proposed residential development comprising c.68 dwellings and associated infrastructure (the 'Proposed Development'), on land at Barns Green, Horsham (the 'Site').

1.1 Scope

The purpose of this air quality EMS is to:

- Review the previously calculated financial operational emission impact of the Proposed Development (damage cost) – as an appropriate benchmark to indicate proportionate mitigation requirements;
- Disclose the extent of mitigation measures to be implemented throughout the construction and operational phases of the Proposed Development to reduce transport related air pollution damages; and
- Compare the cost of the mitigation to the calculated damage cost to determine whether additional mitigation is required.

The statement has been prepared in accordance with the *Sussex-air Air Quality Partnership: Air quality and emissions mitigation guidance for Sussex (2021)*¹, utilising the air quality assessment prepared by SLR Consulting Ltd² to support the planning application submitted to Horsham District Council (HDC) (reference: DC/25/2057).

¹ Sussex-air: Air quality and emissions mitigation guidance for Sussex (2021). v1.1, April 2021.

² SLR Consulting Ltd, Barns Green, Horsham (reference: 433.000146.00001).



2.0 Emissions Mitigation Calculation

In line with the requirements *Sussex-air Air Quality Partnership: Air quality and emissions mitigation guidance for Sussex (2021)*, a calculation to estimate the likely financial operational emission impact of the Proposed Development (damage cost) was undertaken to support the planning application, as presented within the air quality assessment prepared by SLR Consulting². This considered the maximum vehicle trip rate associated with the Site and is replicated below.

Pollutant emissions costs associated with additional operational development trips over a 5-year period (from the first year of operation – i.e. 2027 to 2031) have been calculated to indicate potential mitigation requirements. The latest version of the EFT (presently v13.1³) was used to determine vehicle emission factors as input into the Damage Cost Calculation. The calculations have been completed in accordance with the December 2025 Defra *Air quality appraisal: damage cost guidance*⁴.

Reference should be made to Table 2-1 and Table 2-2 for a presentation of the calculation inputs and outputs, respectively.

Table 2-1: Damage Cost Calculation – Inputs

Input Parameter	Inputs
Total Trips (AADT)	341
% HDVs	1.2
Average trip length (km)	10
Speed (kph)	50
2025 Base Damage cost NO _x (£ per tonne) ^(A)	£5,944
2025 Base Damage cost PM _{2.5} (£ per tonne) ^(A)	£49,192
Note: ^(A) 'Damage Cost' is based upon 'Road Transport Rural' ⁵ .	

Table 2-2: Damage Cost Calculation – Outputs

Output Parameter	Year					5-Year Total
	2027	2028	2029	2030	2031	
Annual NO _x Emissions (tonnes/year)	0.2057	0.1790	0.1541	0.1313	0.1113	0.7813
Annual PM _{2.5} Emissions (tonnes/year)	0.0227	0.0223	0.0220	0.0217	0.0215	0.1103
NO _x contribution (£) (rounded up)	£1,222	£1,048	£889	£746	£623	£4,529
PM _{2.5} contribution (£) (rounded up)	£1,117	£1,082	£1,051	£1,022	£997	£5,268
Total contribution (£) (rounded up)						£9,798

³ <https://laqm.defra.gov.uk/air-quality/air-quality-assessment/emissions-factors-toolkit/>

⁴ <https://www.gov.uk/government/publications/assess-the-impact-of-air-quality/air-quality-appraisal-damage-cost-guidance>

⁵ In accordance with the Department for Transport, TAG Unit A5.4 Marginal External Costs (November 2025). As referenced in the Gov.UK: 'Air Quality Appraisal: Damage Cost Guidance (December 2025).



In summary, over a 5-year period, an emission cost was calculated at **£9,798**. This monetary value has been utilised as an appropriate benchmark to indicate proportionate mitigation requirements.



3.0 Mitigation Measures

This section considers transport related mitigation measures in relation to the calculated damage cost.

3.1 Construction Phase

A Construction Management Plan (CMP) will be prepared to support the construction phase of the Proposed Development. The construction phase dust mitigation measures contained within the air quality assessment prepared by SLR Consulting² will be carried through and secured in the CMP.

3.2 Operational Phase

In accordance with the Approved Document S of The Building Regulations⁶, each dwelling will be provided with an Electric Vehicle (EV) charging point. Charging routes will also be provided for EV charge points in the parking courts for the flats. As this is considered standard mitigation and is a requirement of Approved Document S of The Building Regulations, costs associated the EV charging have therefore not been considered.

Table 3-1 provides an extract of the transport related operational mitigation measures to be implemented. Associated costs have been included for each measure to enable comparison with the calculated damage cost.

Table 3-1: Operational Phase Mitigation Measures – Costing

Mitigation Measures	Costs (£)
Sustainable Travel Voucher to be provided upon initial occupation of each unit. This voucher will comprise: - A contribution toward the purchase of a new bicycle and/or equipment; or - A contribution towards cycle training.	£150 per voucher per unit. 68 units = £10,200
Total	£10,200

The monetary cost of confirmed mitigation totals **£10,200**. This is in excess of the damage cost figure (£9,798). Therefore, no further mitigation is required, as the stated measures are considered to go above and beyond the likely financial emissions impact of the Proposed Development. This meets the requirements of the *Sussex-air Air Quality Partnership: Air quality and emissions mitigation guidance for Sussex (2021)*⁷.

The provision of the £150 travel voucher per household is not required by the Highways Authority and therefore is a mitigation provided specifically to address the calculated emission cost arising from the development. Provision of the voucher will be secured via the Travel Plan associated with the development (prepared by i-Transport).

⁶ HM Government, The Building Regulations 2010, Approved Document S: Infrastructure for the charging of electric vehicles, 2021 edition – for use in England.

⁷ As per Table 2 of the Sussex-air guidance which provides examples of acceptable mitigation options: “Provide vouchers for alternatives to private car use”.





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