

Land West of Storrington Road, Thakeham

Emissions Mitigation Plan

Client: Bellway Strategic
Ref: TN01-23295-R3
Date: 9 April 2026
Note by: Hazel Swinfen, BSc (Hons), MIAQM, AMIEnvSc, Senior Air Quality Consultant
Quality Assurance: Paul Hayward, BSc (Hons) MSc MIAQM MIEnvSc, Technical Director - Air Quality

1. INTRODUCTION

1.1 Cass Allen has been instructed by Bellway Strategic to prepare an Emissions Mitigation Plan (EMP) for the proposed residential-led development at Land West of Storrington Road, Thakeham in West Sussex. An Air Quality Assessment (AQA) was undertaken for the development in April 2026 (Cass Allen; reference: RP02-23295) which concluded that no significant air quality effects are anticipated as a result of the development and that the site is suitable for the proposed end use.

1.2 This AQA report included an emissions cost calculation as required by the Sussex Air Quality Partnership (SAQP) 'Air Quality and Emissions Mitigation Guidance for Sussex' (2021). This estimated that emissions associated with the development would have a total cost to local air quality of £41,406. Previous comments on the original application (DC/24/0021) were received from the Air Quality Environmental Protection Officer (EPO) at Horsham District Council (HDC), stating:

...applicants are required to submit a mitigation plan detailing measures to mitigate and/or offset the impacts and setting out itemised costing for each proposed measure, with the total estimated value of all the measures being equal to the total damage costs.

1.3 Accordingly, this Air Quality EMP has been produced to provide the requested details of the air-quality-beneficial aspects of the development, in order to address the above EPO and SAQP guidance requirements and to demonstrate that offsetting payments would not be necessary.

2. EMISSIONS COST CALCULATION

- 2.1 The Emissions Cost Calculation undertaken within the AQA is repeated below for context. The inputs and outputs of the Defra emissions factors toolkit (EFT) v13.1 are shown in Table 1 and Table 2 below. *It is noted that the use of a 2031 price base year is more conservative than standard practice, as it yields a higher emissions cost compared with using the price base year applicable to the date the assessment was prepared (2026).*
- 2.2 Table 3 displays the total monetary value of air quality 'damage' caused by the development, and consequent cost of mitigation required. Using the annual link emissions in Table 2 and *Road Transport Urban Small* damage cost values, the Defra Air Quality Damage Cost Appraisal Toolkit (December 2025) estimated the below costs of NO_x and PM_{2.5}.

Table 1 EFT Inputs

Input	Value
Development trip rate	999 AADT (1.70% HDV) – obtained from Ardent
Average speed	50km/hr
Emissions year	From 2031 to 2035
Area / road type	England (not London) – Urban (not London)
Link Length	10km – from SAQP guidance

Table 2 EFT Outputs - Annual Link Emissions for First 5 Operational Years

Year of Operation	NO _x (tonnes/year)	PM _{2.5} (tonnes/year)
2031	0.307282716	0.062717982
2032	0.261672425	0.062137221
2033	0.223474351	0.061632083
2034	0.192697376	0.061192662
2035	0.168433062	0.060816233

Table 3 Defra Air Quality Damage Cost Appraisal Toolkit - Emissions Cost Calculation

Emissions Year	Calculated Cost by Pollutant (Discounted Central Benefit)	
	NO _x	PM _{2.5}
2031	£3,468	£6,010
2032	£2,910	£5,866
2033	£2,448	£5,733
2034	£2,080	£5,608
2035	£1,791	£5,491
Central Present Value	£12,698	£28,708
Total Cost	£41,406	

3. EMISSIONS MITIGATION STRATEGY

- 3.1 As shown in Table 3, the total emissions cost value for the development has been calculated as £41,406. Table 4 below details the committed measures that will have the potential to reduce overall emissions to air during its operation, along with their indicative costs, provided by the project's Transport Consultant (Arden Consulting Engineers) and Landscape Architect (fabrik).

Table 4 Proposed Air Quality Emissions Mitigation Measures

Description	Details	Cost	Status (Committed / Potential measure)
<i>Provide vouchers for alternatives to private car use</i>	The development Travel Plan sets out measures to support a 10% reduction in single occupancy vehicle trips. WSCC have subsequently requested provision of £150 sustainable travel vouchers to each household and further provision of vouchers / additional measures should the TP targets not be met.	247 vouchers @ £150 voucher per dwelling = £37,050	Committed
<i>Provide electric bikes</i>	The Mobility Hub will include the provision of electric bike hire for residents and the surrounding community.	Bus stop and bike hire circa £15,000	Committed
			Total Cost: £52,050

4. CONCLUSIONS

- 4.1 This Air Quality EMP has been produced to address the requirements of the SAQP guidance and comments made by the EPO at HDC regarding the emissions cost calculation for the residential-led development at Land West of Storrington Road, Thakeham in West Sussex. This plan details the committed measures to mitigate and offset the air quality impacts of the proposed scheme.
- 4.2 In conclusion, the development is expected to incorporate multiple measures that will benefit local air quality and the total anticipated spend is expected to be in excess of the £41,406 'damage' cost. Therefore, the mitigation measures outlined in Table 4 are expected to be sufficient to address this requirement without the need for further measures or an offsetting payment.