Homes England

The Housing and Regeneration Agency

West of Ifield, Crawley
Air Quality - Emissions Mitigation Statement

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Version 1 - Planning submission

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Air Quality - Emissions Mitigation Statement – West of Ifield

Introduction

This statement has been prepared to comply with the requirements for a Damage Cost calculation and Emissions Mitigation Statement contained in Sussex-air's Air quality and emissions mitigation guidance for Sussex (2021) (the "Guidance"). Proposals to minimise dust emissions are separately contained in Environmental Statement Chapter 7: Air Quality.

This statement presents the findings of the calculated air quality damage costs at West of Ifield (the "Site", as illustrated in Environmental Statement Chapter 1: Introduction). The statement was prepared in connection with the proposed development of the Site (the "Proposed Development" as outlined in Environmental Statement Chapter 1: Introduction).

Details for the rationale behind the traffic data is included in Environmental Statement Chapter 15: Transport.

This statement was prepared by Ramboll UK Limited ("Ramboll") following instruction from Turner and Townsend Project Management Ltd (the "Client") on behalf of Homes England (the "Applicant").

Methodology

To determine the exposure cost value associated with the completed development stage traffic emissions, the net trip generation of the Proposed Development has been input into the Defra Emissions Factors Toolkit (EFT) and the annual NO_x and $PM_{2.5}$ emissions calculated for a five-year period, 2026-2030, assuming a speed of 50 kph, a road type of urban (not London) and a distance travelled of 10 km (based on Sussex Air Guidance).

The project's transport consultants' Steer have estimated the completed development traffic generation to be 16,128 AADT as shown in the following table. The data has been applied to the assumed opening year of the development consistent with the approach taken to the transport modelling as outlined in Environmental Statement Chapter 15: Transport. In reality, the emissions will occur later in the life of the development as it is built out.

Table 1: Proposed Development Traffic Flows and Emission Factor Toolkit Input

Area	Road Type	Traffic Flow	% HDV	Speed (kph)	No. of Hours	Link Length (km)
England (not London)	Urban (not London)	16,218	0.3	64	24	10

The estimated annual emissions of NOx and PM2.5 are shown in the following table. The calculated annual emissions were input into Defra's Damage Cost Appraisal Toolkit[1] for 2029-2033 using a price base year of 2025 for Transport emissions.

Table 2: Emissions and Damage Cost

Pollutant	2029	2030	2031	2032	2033	Total
Emission (tonne/year)						
NO_x	6.539	5.937	5.782	5.638	5.502	
$PM_{2.5}$	1.026	1.024	1.022	1.021	1.019	
Damage Cost (£)						

[1] Defra, 2023. Damage Costs Appraisal Toolkit. Available at: https://www.gov.uk/government/publications/assess-the-impact-of-air-quality (accessed 12/05/2023).

NO_x	£79,092	£70,749	£67,884	£65,215	£62,701	**£345,640**
$PM_{2.5}$	£89,812	£88,313	£86,838	£85,471	£84,043	**£434,476**
Total						**£780,116**

Mitigation to be employed

The types of qualifying mitigation which could potentially be employed as part of the Proposed Development is shown in Table 3.

Table 3: Potential Proposed Development Traffic Mitigation Options and Estimated Costs
Mitigation Measure (per Guidance, Table 2)
Invest in EV charging infrastructure within the development over and above the current recommended parking standards
Provide vouchers for alternatives to private car use
Provide public transport subsidy for residents
Set up a car club within the development or contribute to the cost of a local car club
Set up or join an existing car sharing scheme for residents
Designate parking spaces for car club/car sharing vehicles
Designate parking spaces for low emission vehicles
Provide electric bikes
Improve cycle paths to link to the existing local cycle network
Provide secure cycle storage
Invest in additional evergreen infrastructure to reduce particulates and other pollutants
Contribute to local low or zero emission vehicle refuelling/recharging infrastructure
Contribute to low emission bus service provision or waste collection services
Contribute to local bike/e-bike hire schemes
Contribute to renewable fuel and energy generation projects
Fund incentives for the take-up of low emission technologies and fuels

A number of transport-related mitigation measures are set out in the Draft Heads of Terms which meet the above requirements. The specific mitigation options and costs will be captured in the Section 106 Agreement of this Hybrid Planning Application.

Given the scale of active travel mode measures proposed, it is anticipated that the total costs for transport-related measures will vastly exceed the emissions and damages costs.

If for any reason, under a mechanism outlined in the Section 106 agreement, the eligible mitigation measures did not exceed the calculated damage costs then the Applicant would be required to pay the balance of these costs.

The proposals to minimise dust emissions in accordance with Institute of Air Quality Management (IAQM) guidance are contained in Chapter 7 of the Environmental Statement.