APPENDIX 7.1: LEGISLATION, AND POLICY

APPENDIX 7.1: LEGISLATION, AND POLICY

International legislation and Agreements

European Union Ambient Air Quality and Clean Air for Europe, 2008

Part IV of the Environment Act 1995[1] requires the government to produce a national Air Quality Strategy which contains standards, objectives and measures for improving quality. The ambient air quality standards and objectives relevant to air quality assessment are given statutory backing in England through the Air Quality Regulations 2000[2] and the Air Quality (Amendment) Regulations 2002[3]. The Air Quality Standards Regulations 2010[4] came into force during 2011 and transposed the requirements of the European Union Directive 2008/50/EC[5] on ambient air quality and cleaner air for Europe. The Regulations define objectives for ambient air quality designed to avoid, prevent or reduce harmful effects on human health and the environment as a whole.

The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023[6] sets targets for reducing $PM_{2.5}$ concentrations; an interim target of 12 µg/m^3 to be met by January 2028, a target of 10 µg/m^3 to be met by 31st December 2040 and an exposure reduction target of 35% between 2018 and 2040. The exposure reduction target is a national target and not of itself related to individual developments.

Local Air Quality Management (LAQM)

Part IV of the Environment Act 1997, requires the UK Government to publish an Air Quality Strategy and local authorities to review, assess and manage air quality within their areas. This is known as Local Air Quality Management.

The 2007 Air Quality Strategy[8] establishes the policy for ambient air quality in the UK. It includes the National Air Quality Objectives (NAQOs) for the protection of human health and vegetation for 11 pollutants. Those NAQOs included as part of LAQM are prescribed in the Air Quality (England) Regulations 2000 and the Air Quality (Amendment) (England) Regulations 2002. Table A7.1.1 presents the NAQOs for NO_2 and PM_{10} the two pollutants of most concern in urban areas.

[1] Part iV of the Environment Act, 1995
[2] Statutory Instruments No. 928 (2000) Air Quality (England) Regulations. The Stationary Office Limited. London
[3] Statutory Instruments No. 3043 (2002) Air Quality (England) (Amendment) Regulations. The Stationary Office Limited. London
[4] Statutory Instruments No. 1001 (2010) Air Quality Standards Regulations. The Stationary Office Limited. London
[5] Council of European Communities (2008) Directive 2008/50/EC on Ambient Air Quality and Cleaner Air for Europe 2008/50/EC
[6] Statutory Instruments No. 96 (2023) The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023. The Stationary Office Limited. London
[7] Secretary of State, 1995. The Environment Act part IV Air Quality, HMSO.
[8] Department for Environment, Food and Rural Affairs, 2007. Air Quality Strategy for England, Scotland, Wales and Northern Ireland. HMSO.

Table A7.1.1: Objectives Included in Air Quality Regulations (England) 2000 for Purpose of LAQM			
Pollutant	**Air Quality Objective**		
	Concentration	**Measured As**	**Date to be Achieved By**
NO_2	200 micrograms per metre cubed (µg/m^3) not to be exceeded more than 18 times per year.	1 hour	31 December 2005
	40 µg/m^3	Annual mean	
PM_{10}	50 µg/m^3 not to be exceeded more than 35 times per year.	24 hour mean	31 December 2004
	40 µg/m^3	Annual mean	

Analysis of long-term monitoring data suggests that if the annual mean NO_2 concentration is less than 60 µg/m^3 then the one-hour mean NO_2 objective is unlikely to be exceeded where road transport is the main source of pollution. Similarly, a PM_{10} annual mean below 32 µg/m^3 is used to screen whether the 24-hour PM_{10} mean objective is likely to be achieved[9].

The 2007 Air Quality Strategy also introduced a new policy framework for tackling $PM_{2.5}$ which included an exposure reduction target and a 'backstop' annual mean NAQO. The exposure reduction target is focussed on reducing average concentrations across the most polluted urban areas and is therefore not applicable to individual schemes, whilst the annual mean NAQO can be considered a concentration cap to ensure environmental compliance. The UK NAQO for $PM_{2.5}$ are provided in Table A7.1.2.

Table A7.1.2: UK Objectives for $PM_{2.5}$		
Averaging Period	**Objective**	**Target Date**
Annual mean	20 µg/m^3	2020
3 year running annual mean	15 % reduction in concentrations measured at urban background sites	Between 2010 and 2020

The NAQOs apply to external air where there is relevant exposure to the public over the associated averaging periods within each NAQO. Guidance is provided within LAQM.TG(22)[10] issued by Defra for Local Authorities, on where the NAQOs apply, as detailed in Table A7.1.3. The NAQOs do not apply in workplace locations, to internal air or where people are unlikely to be regularly exposed (i.e. centre of roadways).

Table A7.1.3: Locations Where National Air Quality Objectives Apply		
Averaging Period	**Objectives should apply at**	**Objectives should generally not apply at**
Annual mean	All locations where members of the public might be regularly exposed. Building façades of residential properties, schools, hospitals, care homes etc.	Building façades of offices or other places of work where members of the public do not have regular access. Hotels, unless people live there as their permanent residence. Gardens of residential properties.

[9] 3 Defra, 2022. Local Air Quality Management Technical Guidance LAQM.TG(22). HMSO.

[10] Department for Environment, Food and Rural Affairs, 2022. Local Air Quality Management Technical Guidance LAQM.TG (22). HMSO.

Table A7.1.3: Locations Where National Air Quality Objectives Apply		
Averaging Period	**Objectives should apply at**	**Objectives should generally not apply at**
24 Hour Mean	All locations where the annual mean objective would apply, together with hotels. Gardens of residential properties.	Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term.
1 Hour Mean	All locations where the annual mean and: 24 and 8-hour mean objectives apply. Kerbside sites (for example, pavements of busy shopping streets). Those parts of car parks, bus stations and railway stations etc. which are not fully enclosed, where members of the public might reasonably be expected to spend one hour or more. Any outdoor locations where members of the public might reasonably expect to spend one hour or longer.	

It should be noted that the EU Limit Values are numerically the same as the NAQO values but differ in terms of compliance dates, locations where they apply and legal responsibility. The compliance date for the NO_2 Limit Values was 1 January 2010, which is five years later than the date for the NAQO.

The Limit Values are mandatory whereas the NAQOs are policy objectives. Local authorities are not required to achieve them but have to demonstrate effort of working towards their achievement. In addition, the Limit Values apply in all locations except:

- where members of the public do not have access and there is no fixed habitation;
- on factory premises or at industrial installations; and
- on the carriageway/central reservation of roads except where there is normally pedestrian access.

Where a local authority's review and assessment of its air quality identifies that air quality is likely to exceed the NAQOs, it must designate these areas as AQMAs and draw up an Air Quality Action Plan (AQAP) setting out measures to reduce pollutant concentrations with the aim of meeting the NAQOs.

Designated Nature Conservation Sites

To protect certain habitats and species, legislation is in place to reduce the impacts of development on sensitive ecosystems which are given legal designations. These include Special Areas of Conservation (SAC), Special Protection Areas (SPA) (for bird conservation), Ramsar Sites (wetland sites for bird conservation), and Sites of Special Scientific Interest (SSSI). Sites of Special Scientific Interest are notified under Section 28 of the Wildlife and Countryside Act 1981.

The current policy of the UK agencies associated with environmental protection (which in England include the Environment Agency and Natural England) is that developments should be assessed for their impact on critical levels at Designated Sites in all locations of the country.

The Air Quality Objective (critical level) for the protection of vegetation and ecosystems is detailed in Table A7.1.4.

To assess the risk of air pollution impacts to ecosystems critical loads (CL) and critical levels are used as benchmarks.

It is important to distinguish between critical loads and levels. The critical load relates to the quantity of pollutant deposited from air to the ground, whereas the critical level is the gaseous concentration of a pollutant in the air. The critical load varies depending on the sensitivity of a particular species or habitat and are defined as a range with an upper and lower threshold. These ranges reflect variation in ecosystem response across Europe.

Table A7.1.4: Environmental Standards Protected Conservation Areas

Pollutant	Air Quality Objective		
	Concentration	Measured As	Date to be Achieved By
Nitrogen Oxides (NO_x as NO_2)	30 µg/m^3	Annual Mean	19 July 2001

National Planning Policy and Legislation

The revised National Planning Policy Framework (NPPF)[11] sets out the Government's planning policies for England and how they are expected to be applied.

In relation to achieving sustainable development, paragraph 8 states that:

"*Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives):…*

c) an environmental objective – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."

At the heart of the Framework is a presumption in favour of sustainable development. Paragraph 11 states that plans and decisions should apply a presumption in favour of sustainable development, which for decision-taking means:

"… d) where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless: …

ii. any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole."

Paragraph 56 on planning conditions and obligations states:

"*Local planning authorities should consider whether otherwise unacceptable development could be made acceptable through the use of conditions or planning obligations. Planning obligations should only be used where it is not possible to address unacceptable impacts through a planning condition."*

Paragraph 109 on promoting sustainable transport states:

[11] Ministry of Housing, Communities and Local Government, 2024. National Planning Policy Framework. HMSO.

"*Transport issues should be considered from the earliest stages of plan-making and development proposals, so that: …*

f) identifying, assessing and taking into account the environmental impacts of traffic and transport infrastructure – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; …"

Paragraph 187 on conserving and enhancing the natural environment states:

"Planning policies and decisions should contribute to and enhance the natural and local environment by: …

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and…"

Paragraph 198 within ground conditions and pollution states:

"Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development."

Paragraph 199 states that:

"Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan."

Paragraph 200 states that:

"Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed."

Regional Policy

Air quality and emissions mitigation guidance for Sussex (2021)

The Air quality and emissions mitigation guidance for Sussex (2021)[12] provides guidance for developers on Local Plan policies and air quality assessments, detailing a consistent approach to address air quality impacts. The guidance provides a screening checklist to identify the type of assessment a proposed development requires. An air quality assessment as well as an emissions mitigation assessment, are required if the proposed development fulfils any of the following:

- The proposed development is defined as MAJOR, as per the Town and Country Planning (Development Management Procedure) Order (England) 201513
- The proposed development is within or within relevant proximity to an AQMA
- The proposed development is in an area close to exceeding the AQOs
- The proposed development is B8 storage and distribution use class with a floorspace of 500m^2 or more

The emissions mitigation statement must include the following:

- The development traffic input data used in the mitigation calculation and quote the source of the data.
- Emissions calculation and total calculated value of emissions' health damage cost.
- Itemised costing for each proposed mitigation option and total value of all proposed emissions' mitigation. This should be equal to the value from above.
- Statement of proposals to minimise dust emissions in accordance with the IAQM Guidance on the Assessment of Dust from Demolition and Construction.

Mitigation must be agreed with the local authority as form of a mitigation statement. The following mitigation is required for all major developments:

- Follow the West Sussex County Council Guidance on Parking at New Developments[14] on electric vehicle charging and travel plans
- Ensure all gas-fired boilers meet a minimum standard of <40mgNO_x/kWh. Consideration should be given to renewable sources of energy, e.g. air source heat pumps, as an alternative.
- Mitigate the impacts of demolition and construction in accordance with the Institute of Air Quality Management (IAQM) Guidance on the Assessment of Dust from Demolition and Construction.

Other mitigation measures include, but are not limited to:

- Invest in EV charging infrastructure within the development over and above the current recommended parking standards

[12] Sussex-Air, 2021. Air quality and emissions mitigation guidance for Sussex (2021).
[13] https://www.legislation.gov.uk/uksi/2015/595/article/2/made
[14] West Sussex County Council, 2020. West Sussex County Council Guidance on Parking at New Developments (September 2020).

- Provide vouchers for alternatives to private car use
- Set up a car club within the development or contribute to the cost of a local car club
- 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
- Set up differential parking charges to favour cleaner vehicles
- Provide public transport subsidy for employees
- Ensure all new commercial vehicles comply with the latest European Emission Standards
- Implement a fleet strategy that reduces emissions
- Use zero or ultra-low emission service vehicles
- Invest in local walking and cycling initiatives
- Contribute to the cost of on-street EV charging
- Contribute to unfunded measures identified in air quality action plans
- Implement a low emission strategy
- 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

Breathing Better: Air Quality Plan

The West Sussex Breathing Better: Air Quality Plan[15] provides information on air quality across West Sussex, outlining actions in place to reduce air pollution and highlighting the approach that will be taken forward.

Local policy

Horsham District Planning Framework

The Horsham District Planning Framework[16] was adopted in November 2015 and sets out the planning strategy of Horsham district outside the South Downs National Park up to 2031. The plan addresses six priority themes including:

- Economic Development: Plan for a successful local economy with high levels of employment;
- Efficiency and Taxation: Delivering excellent value and high performance;

[15] West Sussex County Council, 2020. Breathing Better: Air Quality Plan.
[16] Horsham District Council, 2015. Horsham District Planning Framework.

- Arts, Heritage and Leisure: Build an arts, leisure and culture reputation that also supports our economy;
- Living, Working Communities: Working together to support the life of local communities;
- Environment: A better environment for today and tomorrow; and
- Safer and Healthier: Improving health and well being.

Policies addressing air quality include:

- Policy 2: Strategic Development

  "*To maintain the district's unique rural character whilst ensuring that the needs of the community are met through sustainable growth and suitable access to services and local employment, the spatial strategy to 2031 is to:*

  12. Retain and enhance natural environmental resources, including landscapes and landscape character, biodiversity, and retaining and enhancing environmental quality including air, minimises energy and resource use and provides flood mitigation".

- Policy 24: Environmental Protection

  "*The high quality of the district's environment will be protected through the planning process and the provision of local guidance documents. Taking into account any relevant Planning Guidance Documents, developments will be expected to minimise exposure to and the emission of pollutants including noise, odour, air and light pollution and ensure that they:*

  4. Minimise the air pollution and greenhouse gas emissions in order to protect human health and the environment;

  5. Contribute to the implementation of local Air Quality Action Plans and do not conflict with its objectives;

  6. Maintain or reduce the number of people exposed to poor air quality including odour. Consideration should be given to development that will result in new public exposure, particularly where vulnerable people (e.g. the elderly, care homes or schools) would be exposed to the areas of poor air quality; and

  7. Ensure that the cumulative impact of all relevant committed developments is appropriately assessed.".

Additional Guidance

Planning Practice Guidance

The Planning Practice Guidance (PPG)[17] was launched as an online resource in March 2014, updated in November 2019 to support the NPPF and has separate guidance on air quality. Paragraph 001, Reference 32-001-20191101 06 of the PPG provides the following summary as to why air quality is a consideration for planning:

[17] Department for Levelling Up, Housing and Communities, 2019. Planning practice Guidance. Available at: https://www.gov.uk/government/collections/planning-practice-guidance (accessed on 16/05/2023).

"… It is important that the potential impact of new development on air quality is taken into account where the national assessment indicates that relevant limits have been exceeded or are near the limit, or where the need for emissions reductions has been identified.."

The PPG identifies when air quality could be relevant for a development management process, provides guidance on how detailed an assessment needs to be and provides guidance on how an impact on air quality can be mitigated.

Institute of Air Quality Management: Construction Dust Guidance, 2024

The IAQM produced guidance[18] to assist in the assessment of air quality impacts from demolition and construction activities. This guidance provides a consistent methodology for assessing the risks of dust impacts from demolition and construction activities and for identifying the correct level of mitigation which should be applied to avoid significant air quality effects.

Environmental Protection UK/Institute of Air Quality Management Guidance, Land-Use Planning Guidance, 2017

Environmental Protection UK (EPUK), together with the IAQM, produced updated guidance in 2017[19] on how air quality impacts should be assessed within the land-use planning and development control process. This guidance provides clear criteria to determine when a detailed air quality assessment is required and a methodology for assessing the significance of air quality effects.

Institute of Air Quality Management Guidance, A guide to the assessment of air quality impacts on designated nature conservation sites, 2020

The IAQM produced guidance[20] to assist in the assessment of air quality impacts from developments on designated nature conservation sites. This guidance provides a criteria and methodology to conduct an air quality assessment and determine the significance of air quality effects.

[18] Stoaling et al, 2024. IAQM Guidance on the assessment of dust from demolition and construction v2.2.

[19] Moorcroft and Barrowcliffe, 2017. Land-Use Planning & Development Control: Planning for Air Quality. Available at: http://www.iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf (accessed 16/05/2023).

[20] Holman et al., 2014. A guide to the assessment of air quality impacts on designated nature conservation sites.

APPENDIX 7.2: DUST RISK ASSESSMENT METHODOLOGY

APPENDIX 7.2: DUST RISK ASSESSMENT METHODOLOGY

Determining Dust Emission Magnitude

Table A7.2.1: Determining Dust Emission Magnitude

Large	Medium	Small
Demolition		
• Total building volume >75,000 m^3 • Potentially dusty construction material (e.g. concrete) • On-site crushing and screening • Demolition activities >12 m above ground level	• Total building volume 12,000-75,000 m^3 • Potentially dusty construction • Demolition activities 6-12 m above ground level	• Total building volume <12,000 m^3 • Construction material with low potential for dust release (e.g. metal cladding or timber) • Demolition activities <6 m above ground • During wetter months
Earthworks		
• Total site area >110,000 m^2 • Potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size) • >10 Heavy earth moving vehicles active at any one time • Formation of bunds >6 m in height	• Total site area 18,000-110,000 m^2 • Moderately dusty soil type (e.g. silt) • Five-10 heavy earth moving vehicles active at any one time • Formation of bunds 3-6 m in height	• Total site area <18,000 m^2 • Soil type with large grain size (e.g. sand) • <Five heavy earth moving vehicles active at any one time • Formation of bunds <3 m in height
Construction		
• Total building volume >75,000 m^3 • Piling • On-site concrete batching • Sandblasting	• Total building volume 12,000-75,000 m^3 • Potentially dusty construction material (e.g. concrete) • Piling • On-site concrete batching	• Total building volume <12,000 m^3 • Construction material with low potential for dust release (e.g. metal cladding or timber)
Trackout		
• >50 HDV (>3.5 t) movements in any one day • Potentially dusty surface material (e.g. high clay content) • Unpaved road length >100 m	• 20-50 HDV (>3.5 t) movements in any one day • Moderately dusty surface material (e.g. high clay content) • Unpaved road length 50–100 m	• <20 HDV (>3.5 t) movements in any one day • Surface material with low potential for dust release • Unpaved road length <50 m

Determining Receptor Sensitivity

Table A7.2.2: Determining Receptor Sensitivity

High	Medium	Low
Sensitivities of People to Dust Soiling Effects		
• Users can reasonably expect an enjoyment of a high level of amenity; or • The appearance, aesthetics or value of their property would be diminished by soiling; and the people or property would reasonably be expected a to be present continuously, or at least regularly for extended periods, as part of the normal pattern of use of the land. • Indicative examples include dwellings, museums and other culturally important collections, medium- and long-term car parks and car showrooms.	• Users would expect to enjoy a reasonable level of amenity, but would not reasonably expect to enjoy the same level of amenity as in their home; or • The appearance, aesthetics or value of their property could be diminished by soiling; or • The people or property wouldn't reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land. • Indicative examples include parks and places of work.	• the enjoyment of amenity would not reasonably be expected; or • Property would not reasonably be expected to be • Diminished in appearance, aesthetics or value by soiling; or • There is transient exposure, where the people or property would reasonably be expected to be present only for limited periods of time as part of the normal pattern of use of the land. • Indicative examples include playing fields, farmland • (unless commercially-sensitive horticultural), footpaths, short-term car parks and roads.
Sensitivities of People to the Health Effects of PM_{10}		
• Locations where members of the public are exposed over a time period relevant to the air quality objective for PM_{10} (in the case of the 24-hour objectives, a relevant location would be one where individuals may be exposed for eight hours or more in a day). • Indicative examples include residential properties, Hospitals, schools and residential care homes should also be considered as having equal sensitivity to residential areas for the purposes of this assessment.	• Locations where the people exposed are workers, and • Exposure is over a time period relevant to the air quality • Objective for PM_{10} (in the case of the 24-hour objectives, • A relevant location would be one where individuals may be exposed for eight hours or more in a day). • Indicative examples include office and shop workers, but will generally not include workers occupationally exposed to PM10, as protection is covered by Health and Safety at Work legislation.	• Locations where human exposure is transient. • Indicative examples include public footpaths, playing fields, parks and shopping streets.
Sensitivities of Receptors to Ecological Effects		
• Locations with an international or national designation and the designated features may be affected by dust soiling; or • Locations where there is a community of a particularly dust sensitive species such as vascular species included in the Red Data List For Great Britain.	• Locations where there is a particularly important plant species, where its dust sensitivity is uncertain or unknown; or • Locations with a national designation where the features may be affected by dust deposition.	• Locations with a local designation where the features may be affected by dust deposition. • Indicative example is a local Nature Reserve with dust sensitive features.

Table A7.2.2: Determining Receptor Sensitivity		
High	**Medium**	**Low**
• Indicative examples include a Special Area of Conservation (SAC) designated for acid heathlands or a local site designated for lichens adjacent to the demolition of a large site containing concrete (alkali) buildings.	• Indicative example is a Site of Special Scientific Interest (SSSI) with dust sensitive features.	

Determining Sensitivity of the Area

Table A7.2.3: Dust Soiling Impact on People and Property					
Receptor Sensitivity	**Number of Receptors**	**Distance from the Source (m)**			
		<20	**<50**	**<100**	**<250**
High	>100	High	High	Medium	Low
	10-100	High	Medium	Low	Low
	1-10	Medium	Low	Low	Low
Medium	>1	Medium	Low	Low	Low
Low	>1	Low	Low	Low	Low

Table A7.2.4: Human Health Impacts						
Receptor Sensitivity	**Annual Mean PM_{10} Concentration**	**Number of Receptors**	**Distance from the Source (m)**			
			<20	**<50**	**<100**	**<250**
High	>32 µg/m^3	>100	High	High	High	Medium Low
		10-100	High	High	Medium	Low
		1-10	High	Medium	Low	Low
	>28-32 µg/m^3	>100	High	High	Medium	Low Low
		10-100	High	Medium	Low	Low
		1-10	High	Medium	Low	Low
	>24-28 µg/m^3	>100	High	Medium	Low	Low
		10-100	High	Medium	Low	Low
		1-10	Medium	Low	Low	Low
	<24 µg/m^3	>100	Medium	Low	Low	Low
		10-100	Low	Low	Low	Low
		1-10	Low	Low	Low	Low
Medium		>1	High	Medium	Low	Low
Low		>1	Medium	Low	Low	Low

Table A7.2.5: Ecological Impacts		
Receptor Sensitivity	**Distance from the Source (m)**	
	<20	**<50**
High	High	Medium
Medium	Medium	Low
Low	Low	Low

Determining Risk of Dust Impacts

Table A7.2.6: Demolition			
Sensitivity of Area	**Dust Emission Magnitude**		
	Large	**Medium**	**Small**
High	High Risk	Medium Risk	Medium Risk
Medium	High Risk	Medium Risk	Low Risk
Low	Medium Risk	Low Risk	Negligible

Table A7.2.7: Earthworks			
Sensitivity of Area	**Dust Emission Magnitude**		
	Large	**Medium**	**Small**
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

Table A7.2.8: Construction			
Sensitivity of Area	**Dust Emission Magnitude**		
	Large	**Medium**	**Small**
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

Table A7.2.9: Trackout			
Sensitivity of Area	**Dust Emission Magnitude**		
	Large	**Medium**	**Small**
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Low Risk	Negligible
Low	Low Risk	Low Risk	Negligible

APPENDIX 7.3: RECEPTORS, TRAFFIC DATA AND ROAD NETWORK

APPENDIX 7.3: RECEPTORS, TRAFFIC DATA AND ROAD NETWORK

Sensitive Receptors

Human Health

Table A7.3.1: Human Health Receptors

Receptor ID	Description	X	Y	Height (m)
R1	Rusper Road	524198.1	136803.6	1.5
R2	1 Drughorn Way	524248.2	136836.3	1.5
R3	Brynestyn, Rusper Road	524243.7	136757.4	1.5
R4	Whitehall Drive	524238.1	136692.5	1.5
R5	102 London Road	526952.8	137821.9	1.5
R6	Tushmore Gyratory	526990.7	137733.4	1.5
R7	63 Five Acres	527044.3	137744.3	1.5
R8	41 Redwood Close	527153.9	137833.9	1.5
R9	Firle Close	527185.8	137791.4	1.5
R10	Glenview Close	527636.9	137890.9	1.5
R11	Dalewood Gardens West	527715.6	137893.6	1.5
R12	Dalewood Gardens East	528124.6	137891.2	1.5
R13	Langley Court	528178.5	137850.4	1.5
R14	Woodfield Road	528145.1	137828.4	1.5
R15	7 Grange Close	528064.2	137630.4	1.5
R16	41 Cloverlands	527946.4	137578.8	1.5
R17	Hazelwick Mill Lane	528305	137811.2	1.5
R18	Woodend Close	528284.5	137752.9	1.5
R19	1 Tinsley Lane	528249.7	138022.6	1.5
R20	Tinlsey Close	528443.5	138083.5	1.5
R21	275 Balcombe Road	529387.8	141757	1.5
R22	257 Balcombe Road	529359.4	141873.1	1.5
R23	180 Balcombe Road	529313	141878.6	1.5
R24	237 Balcombe Road	529319.1	141987	1.5
R25	8 Meadowcroft Close	529278.6	141983.3	1.5
R26	Daisy Cottage	525116.2	138570	1.5
R27	91 Stafford Road	525374.1	138331.9	1.5

Table A7.3.1: Human Health Receptors

Receptor ID	Description	X	Y	Height (m)
R28	Ifield Green	525141	138448.2	1.5
R29	Ifield Avenue	525174.8	138432.8	1.5
R30	Vulcan Close	526575.1	134670.1	1.5
R31	Summer Barn Place	526407.4	133219.2	1.5
R32	Bensons Hill Road	526339.9	133109.7	1.5
R33	Caterpillars Pre School	526581.2	135566.7	1.5
R34	Cabot House	526701.3	135790.6	1.5
R35	Cedar Lodge	526656	135821.4	1.5
R36	Clayton House	526689.9	135902.3	1.5
R37	Gales Drive	527516.5	136952.8	1.5
R38	Bridgefield House	527389.3	136838	1.5
R39	Holmcroft	527300.7	136126.4	1.5
R40	St Francis School Playground	527321.7	136029.4	1.5
R41	St Francis School	527328.1	135956.7	1.5
R42	Southgate Drive	527338.5	135843.6	1.5
R43	50 London Rd	526919.8	137654.6	1.5
R44	Sullivan Drive	524114.6	134695.7	1.5
R45	Chetwood Road	523926.5	134649.5	1.5
R46	Millpond Lane	523206.7	134620.3	1.5
R47	Park Road	522025.7	134182.1	1.5
R48	Crawley Road	522084.7	134174.7	1.5
R49	The Cherry Tree	521200.3	133666.8	1.5
R50	Lark Rise	526078.7	137508.7	1.5
R51	Nightingale Drive	525939.6	137646.1	1.5
R52	Binstead Close	525834.7	137718	1.5
R53	Fitchet Close	525687.4	137885.6	1.5
R54	Langley Lane	525547.6	138023	1.5
R55	Stafford Road	525523.5	138112.1	1.5
R56	Thomas Bennett College	526695.8	134893.2	1.5
R57	Horsham Road	525945.9	133074.9	1.5
R58	Forest Road	519630.9	131985.8	1.5
R59	A23	527119.6	139533.2	1.5
R60	London Road	527845.5	142243.5	1.5
R61	London Road	527790.1	139983.3	1.5
R62	Furzefield	526069.1	137327.4	1.5
R63	Wye Close	526223.7	133547.0	1.5
R64	Crawley Road	519594.8	131962.3	1.5
R65	Crawley Road	519419.8	131946.7	1.5
R66	Forest Road	520089.9	132071.7	1.5

Table A7.3.1: Human Health Receptors				
Receptor ID	**Description**	**X**	**Y**	**Height (m)**
R67	Roffey Football Club	519498.3	133219.9	1.5
R68	Horsham Road	526147.8	129746.0	1.5
R69	Pegler Way	526656.5	136587.2	1.5
R70	Athelstan Close	530434.0	136558.8	1.5
R71	West Green Drive	526600.1	136624.9	1.5
R72	Orchard Street	526637.6	136673.4	1.5
R73	Turnpike Place	526927.6	137879.8	1.5

Ecological

Table 7.3.2: Ecological Receptors				
Receptor ID	**Description**	**X**	**Y**	**Distance to Road (m)**
ECO_AW_Faygate_1	Faygate Forest	521789.9	133959.2	13
ECO_AW_Faygate_2		521796	133951.3	23
ECO_AW_Faygate_3		521802.2	133943.4	33
ECO_AW_Faygate_4		521808.3	133935.5	43
ECO_AW_Faygate_5		521814.4	133927.6	53
ECO_AW_Faygate_6		521820.6	133919.7	63
ECO_AW_Faygate_7		521826.7	133911.8	73
ECO_AW_Faygate_8		521832.9	133903.9	83
ECO_AW_Faygate_9		521839	133896	93
ECO_AW_Faygate_10		521845.2	133888.1	113
ECO_AW_Faygate_11		521851.3	133880.3	123
ECO_AW_Faygate_12		521857.4	133872.4	133
ECO_AW_Faygate_13		521863.6	133864.5	143
ECO_AW_Faygate_14		521869.7	133856.6	153
ECO_AW_Faygate_15		521875.9	133848.7	163
ECO_AW_Faygate_16		521882	133840.8	173
ECO_AW_Faygate_17		521888.2	133832.9	183
ECO_AW_Faygate_18		521894.3	133825	193
ECO_AW_Faygate_19		521900.5	133817.1	203
ECO_AW_Faygate_20		521904.7	133811.7	210
ECO_AW_Hill_1	Buchan Hill	523925	134606	5
ECO_AW_Hill_2		523924	134596	15
ECO_AW_Hill_3		523924	134586	25
ECO_AW_Hill_4		523923	134576	35
ECO_AW_Hill_5		523923	134566	45
ECO_AW_Hill_6		523922	134556	55
ECO_AW_Hill_7		523922	134546	65
ECO_AW_Hill_8		523921	134537	75

Table 7.3.2: Ecological Receptors

Receptor ID	Description	X	Y	Distance to Road (m)
ECO_AW_Hill_9		523921	134527	85
ECO_AW_Hill_10		523920	134517	95
ECO_AW_Hill_11		523920	134507	105
ECO_AW_Hill_12		523919	134497	115
ECO_AW_Hill_13		523919	134487	125
ECO_AW_Hill_14		523918	134477	135
ECO_AW_Hill_15		523917	134467	145
ECO_AW_Hill_16		523917	134457	155
ECO_AW_Hill_17		523916	134447	165
ECO_AW_Punch_1	Punch Copse	528049.7	137650	0
ECO_AW_Punch_2		528041.5	137655.7	10
ECO_AW_Punch_3		528033.3	137661.4	20
ECO_AW_Punch_4		528025	137667	30
ECO_AW_Punch_5		528016.8	137672.7	40
ECO_AW_Punch_6		528014.5	137674.3	43
ECO_AW_Rookfield_1	Rookfield Hill	521689.8	133840.3	70
ECO_AW_Rookfield_2		521691.3	133830.4	80
ECO_AW_Rookfield_3		521692.7	133820.5	90
ECO_AW_Rookfield_4		521694.1	133810.6	100
ECO_AW_Rookfield_5		521695.6	133800.7	110
ECO_AW_Rookfield_6		521697	133790.8	120
ECO_AW_Rookfield_7		521698.4	133780.9	130
ECO_AW_Rookfield_8		521699.9	133771	140
ECO_AW_Rookfield_9		521701.3	133761.1	150
ECO_AW_Rookfield_10		521702.7	133751.3	160
ECO_AW_Rookfield_11		521704.2	133741.4	170
ECO_AW_Rookfield_12		521705.6	133731.5	180
ECO_AW_Rookfield_13		521707	133721.6	190
ECO_AW_Rookfield_14		521708	133714.8	196
ECO_AW_Tilgate_1	Tilgate Forest	526593.9	134554.3	5
ECO_AW_Tilgate_2		526603.8	134552.6	15
ECO_AW_Tilgate_3		526613.6	134550.9	25
ECO_AW_Tilgate_4		526623.5	134549.2	35
ECO_AW_Tilgate_5		526633.4	134547.6	45
ECO_AW_Tilgate_6		526643.2	134545.9	55
ECO_AW_Tilgate_7		526653.1	134544.2	65
ECO_AW_Tilgate_8		526662.9	134542.5	75
ECO_AW_Tilgate_9		526672.8	134540.8	85

Table 7.3.2: Ecological Receptors

Receptor ID	Description	X	Y	Distance to Road (m)
ECO_AW_Tilgate_10		526682.6	134539.1	95
ECO_AW_Tilgate_11		526692.5	134537.4	105
ECO_AW_Tilgate_12		526702.4	134535.7	115
ECO_AW_Tilgate_13		526712.2	134534.1	125
ECO_AW_Tilgate_14		526722.1	134532.4	135
ECO_AW_Tilgate_15		526731.9	134530.7	145
ECO_AW_Tilgate_16		526741.8	134529	155
ECO_AW_Tilgate_17		526751.6	134527.3	165
ECO_AW_Tilgate_18		526761.5	134525.6	175
ECO_AW_Tilgate_19		526771.3	134523.9	185
ECO_AW_Tilgate_20		526781.2	134522.3	195
ECO_AW_Tilgate_21		526786.4	134521.4	200
ECO_LNR_Broadfield_1	Broadfield Forest	526450.5	134217.9	1
ECO_LNR_Broadfield_2		526442	134223	11
ECO_LNR_Broadfield_3		526433.4	134228.2	21
ECO_LNR_Broadfield_4		526424.8	134233.3	31
ECO_LNR_Broadfield_5		526416.2	134238.5	41
ECO_LNR_Broadfield_6		526407.7	134243.6	51
ECO_LNR_Broadfield_7		526399.1	134248.8	61
ECO_LNR_Broadfield_8		526390.5	134253.9	71
ECO_LNR_Broadfield_9		526381.9	134259	81
ECO_LNR_Broadfield_10		526373.4	134264.2	91
ECO_LNR_Broadfield_11		526364.8	134269.3	101
ECO_LNR_Broadfield_12		526356.2	134274.5	111
ECO_LNR_Broadfield_13		526347.6	134279.6	121
ECO_LNR_Broadfield_14		526339	134284.7	131
ECO_LNR_Broadfield_15		526330.5	134289.9	141
ECO_LNR_Broadfield_16		526321.9	134295	151
ECO_LNR_Broadfield_17		526313.3	134300.2	161
ECO_LNR_Broadfield_18		526304.7	134305.3	171
ECO_LNR_Broadfield_19		526296.2	134310.5	181
ECO_LNR_Broadfield_20		526287.6	134315.6	191
ECO_LNR_Broadfield_21		526280.2	134320.1	200
ECO_LNR_WILL_1	Willoughby Field	525233.8	138419.3	4
ECO_LNR_WILL_2		525239.9	138427.3	14
ECO_LNR_WILL_3		525246	138435.2	24
ECO_LNR_WILL_4		525252.1	138443.1	34
ECO_LNR_WILL_5		525258.2	138451.1	44

Table 7.3.2: Ecological Receptors

Receptor ID	Description	X	Y	Distance to Road (m)
ECO_LNR_WILL_6		525264.2	138459	54
ECO_LNR_WILL_7		525270.3	138466.9	64
ECO_LNR_WILL_8		525276.4	138474.8	74
ECO_LNR_WILL_9		525282.5	138482.8	84
ECO_LNR_WILL_10		525288.6	138490.7	94
ECO_LNR_WILL_11		525294.7	138498.6	104
ECO_LNR_WILL_12		525300.8	138506.6	114
ECO_LNR_WILL_13		525306.9	138514.5	124
ECO_LNR_WILL_14		525313	138522.4	134
ECO_LNR_WILL_15		525319.1	138530.4	144
ECO_LNR_WILL_16		525325.2	138538.3	154
ECO_LNR_WILL_17		525331.3	138546.2	164
ECO_LNR_WILL_18		525337.4	138554.1	174
ECO_LNR_WILL_19		525343.4	138562.1	184
ECO_LNR_WILL_20		525349.5	138570	194
ECO_LNR_WILL_21		525353.2	138574.7	200
ECO_LWS_Buchan_1	Buchan Country Park	524300	134695	14
ECO_LWS_Buchan_2		524302	134685	24
ECO_LWS_Buchan_3		524305	134676	34
ECO_LWS_Buchan_4		524308	134666	44
ECO_LWS_Buchan_5		524311	134656	54
ECO_LWS_Buchan_6		524314	134647	64
ECO_LWS_Buchan_7		524316	134637	74
ECO_LWS_Buchan_8		524319	134628	84
ECO_LWS_Buchan_9		524322	134618	94
ECO_LWS_Buchan_10		524325	134608	104
ECO_LWS_Buchan_11		524328	134599	114
ECO_LWS_Buchan_12		524330	134589	124
ECO_LWS_Buchan_13		524333	134580	134
ECO_LWS_Buchan_14		524336	134570	144
ECO_LWS_Buchan_15		524339	134560	154
ECO_LWS_Ewhurst_0	Ewhurst Wood	526148	137433	2
ECO_LWS_Ewhurst_1		526153	137442	12
ECO_LWS_Ewhurst_2		526157	137451	22
ECO_LWS_Ewhurst_3		526162	137460	32
ECO_LWS_Ewhurst_4		526166	137469	42
ECO_LWS_Ewhurst_5		526171	137478	52
ECO_LWS_Ewhurst_6		526175	137487	62

Table 7.3.2: Ecological Receptors

Receptor ID	Description	X	Y	Distance to Road (m)
ECO_LWS_Ewhurst_7		526180	137496	72
ECO_LWS_Ewhurst_8		526184	137505	82
ECO_LWS_Ewhurst_9		526189	137514	92
ECO_LWS_Ewhurst_10		526193	137523	102
ECO_LWS_Ewhurst_11		526198	137532	112
ECO_LWS_Ewhurst_12		526202	137541	122
ECO_LWS_Ewhurst_13		526207	137550	132
ECO_LWS_Ewhurst_14		526211	137559	142
ECO_LWS_Ewhurst_15		526216	137567	152
ECO_LWS_Ewhurst_16		526220	137576	162
ECO_LWS_Ewhurst_17		526225	137585	172
ECO_LWS_Ewhurst_18		526229	137594	182
ECO_LWS_Ewhurst_19		526234	137603	192
ECO_LWS_Ewhurst_20		526238	137612	202
ECO_SSSI_Buchan_1	Buchan Hill Ponds	524499	134758	12
ECO_SSSI_Buchan_2		524502	134748	22
ECO_SSSI_Buchan_3		524504	134739	32
ECO_SSSI_Buchan_4		524507	134729	42
ECO_SSSI_Buchan_5		524510	134720	52
ECO_SSSI_Buchan_6		524513	134710	62
ECO_SSSI_Buchan_7		524515	134700	72
ECO_SSSI_Buchan_8		524518	134691	82
ECO_SSSI_Buchan_9		524521	134681	92
ECO_SSSI_Buchan_10		524524	134672	102
ECO_SSSI_Buchan_11		524526	134662	112
ECO_SSSI_Buchan_12		524529	134652	122
ECO_SSSI_Buchan_13		524532	134643	132
ECO_SSSI_Buchan_14		524535	134633	142
ECO_SSSI_Buchan_15		524537	134623	152
ECO_SSSI_Buchan_16		524540	134614	162
ECO_SSSI_Buchan_17		524543	134604	172
ECO_SSSI_Buchan_18		524546	134595	192
ECO_SSSI_Buchan_19		524548	134585	202
HorshamCorn_01	Horsham Corner	525328	132877	0
HorshamCorn_02		525328	132887	10
HorshamCorn_03		525328	132897	20
HorshamCorn_04		525328	132907	30
HorshamCorn_05		525327	132917	40

Table 7.3.2: Ecological Receptors

Receptor ID	Description	X	Y	Distance to Road (m)
HorshamCorn_06		525327	132927	50
HorshamCorn_07		525327	132937	60
HorshamCorn_08		525327	132947	70
HorshamCorn_09		525327	132957	80
HorshamCorn_10		525326	132967	90
HorshamCorn_11		525326	132977	100
HorshamCorn_12		525326	132987	110
HorshamCorn_13		525326	132997	120
HorshamCorn_14		525325	133007	130
HorshamCorn_15		525325	133017	140
HorshamCorn_16		525325	133027	150
HorshamCorn_17		525325	133037	160
HorshamCorn_18		525325	133047	170
HorshamCorn_19		525324	133057	180
HorshamCorn_20		525324	133067	190
HorshamCorn_21		525324	133077	200

Traffic Build Up

The build-up of construction and operational traffic as provided by the transport consultants, Steer is shown in Figure A7.3-1.

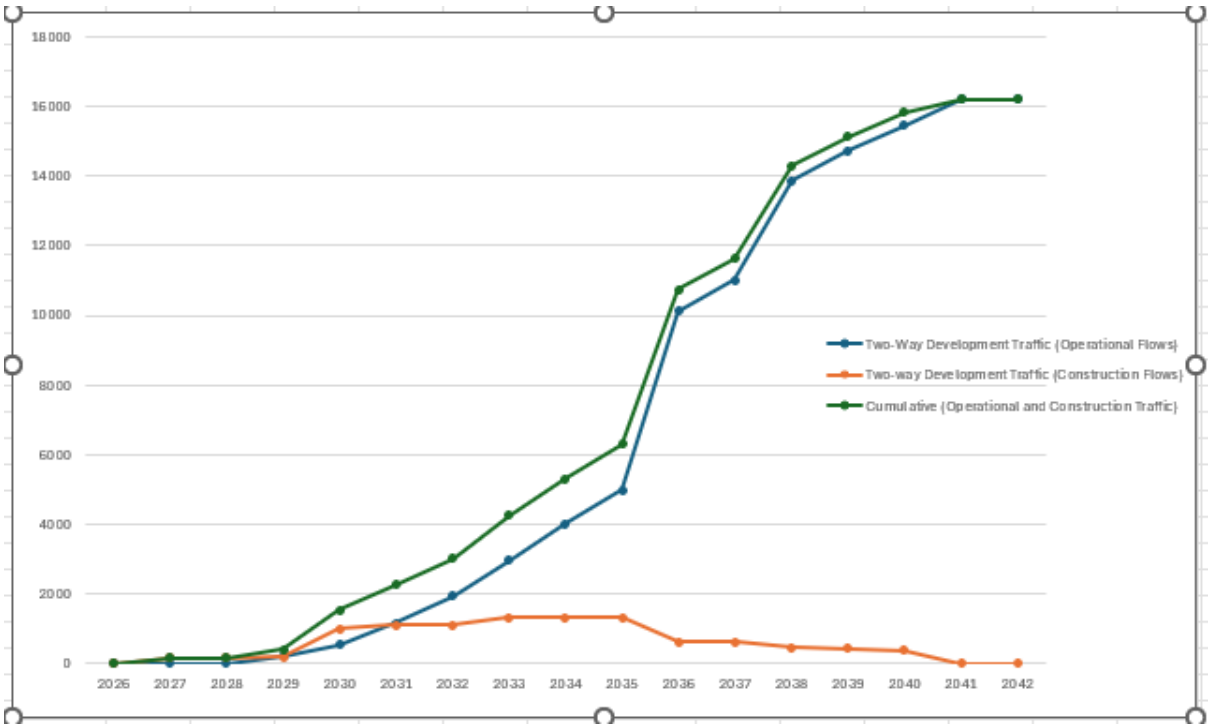

Figure A7.3-1: Predicted Traffic Build Up

Two-way construction traffic builds up from 2026 and peaks between 2033 and 2035 at 1,295 AADT. The maximum combined construction and operational traffic flows are 6,282 AADT in 2035. The maximum operating traffic flows occur when the development is built out at 16,218 AADT.

Modelled Road Network

AADT and HDV flows used in the model are presented in Table A7.3.3. The traffic data is based on flows obtained from the transport consultants, Steer.

Table 7.3.3: Road Links Used in the Model

Location	2023 Baseline		2029 Do Minimum		2029 Do Something		2041 Do Minimum		2041 Do Something	
	AADT	HDV	AADT	HDV	AADT	HDV	AADT	HDV	AADT	HDV
Ifield Ave, Warren Dr to Ifield Green	10280	193	7483	122	9021	82	10066	196	15256	110
Ified Ave, Stagelands to Warren Dr	18723	357	17434	169	18599	117	20552	278	23276	124
Ified Ave, Ifield Dr to Stagelands	18024	291	14309	183	14335	147	15835	235	18660	154
Ifield Ave, Ifield Dr to Crawley Ave	27735	276	27106	280	25775	249	29157	336	29620	288
A23 Crawley Ave, Gossops Dr to Ifield Ave	39654	1341	36562	1003	37712	963	38813	1003	39962	975
Ifield Ave, A23 Crawley Ave to Ewhurst Rd	30028	227	25318	243	26053	201	28466	301	28593	231
Crawley Avenue	33863	1273	30916	983	31692	958	31997	977	32961	1001
Crawley Avenue	33863	1273	30916	983	31692	958	31997	977	32961	1001

Table 7.3.3: Road Links Used in the Model

Location	2023 Baseline		2029 Do Minimum		2029 Do Something		2041 Do Minimum		2041 Do Something	
	AADT	HDV	AADT	HDV	AADT	HDV	AADT	HDV	AADT	HDV
A2219 London Road, Barnfield Rd to Tushmore Gyratory	21440	360	26120	319	26585	346	28571	237	29627	278
London Rd, s of Tushmore Gyratory	20832	394	25126	324	25630	350	27613	243	28677	286
London Rd sb, s of Manor Royal	19223	900	19314	727	19438	697	22784	701	24126	673
A23 London Rd, nb from Tushmore Gyratory	19184	442	19379	429	20428	468	21536	416	22602	435
A2011 Crawley Ave, eb from Tushmore Gyratory to Hazelwick Rbt	11856	420	14644	391	15328	390	17732	485	19173	442
A2011 Crawley Ave, wb from Hazelwick Rbt to Tushmore Gyratory	10463	251	9216	135	9480	131	9450	144	9897	151
A2011, w of London Road (Dalewood Gardens	22319	671	23860	527	24808	521	27182	629	29071	593
A2004 Northgate Ave, s of Hazelwick Roundabout	22947	385	24284	893	24540	923	24467	1041	27327	1102
A2044 Northgate Ave, n of Woodfield Rd	22947	385	24284	893	24540	923	24467	1041	27327	1102
A2044 Northgate Ave, n of Giles Dr	13418	218	11049	188	11466	191	10937	224	13021	270
A2044 Northgate Ave, s of Woodfield Rd	17809	283	18293	427	18607	430	18468	499	20707	532
Hazelwick Rbt, north-south through	16665	129	23228	245	23389	246	26600	272	27222	277
Hazelwick Ave, Bycroft Way to Hazelwick Rbt slip roads	31647	309	33771	369	33654	370	36379	407	37336	415
Hazelwick Ave, nb slip road to Hazelwick Rbt	6832	68	5047	22	4847	21	4496	23	4489	23
Hazelwick Ave, nb slip road to Hazelwick Rbt	6832	68	5047	22	4847	21	4496	23	4489	23
Hazelwick Avenue, s of Hazelwick Roundabout	31647	309	33771	369	33654	370	36379	407	37336	415
Gatwick Rd, nb slip off Hazelwick Rbt	19990	1168	17306	859	17421	864	18626	993	18961	989
Gatwick Rd, s of Napier Way	50711	2154	53043	1712	53337	1714	60799	2131	62240	2164
Gatwick Rd, n of Napier Way	50051	2023	52576	1606	52870	1607	60307	2014	61672	2049
A2011 Crawley Ave, Hazelwick Rbt to Balacombe Rd	49613	1775	43424	1909	44226	1939	45600	2246	46219	2270
A23 Brighton Rd, Tilgate Dr to A2004 Southgate Ave	37704	801	35098	725	36277	792	36448	847	39646	839
A23 Brighton Road, Pease Pottage Hill	35999	826	33377	728	34592	795	34651	851	37868	843
A2004 Northgate Ave, College Rd to Gales Dr	24316	274	15536	257	15772	259	16157	283	17667	324
A2004 Northgate Ave, Northgate Ave Rbt to Woodfield Rd	17855	245	10254	217	10380	220	10565	241	11854	282
Gales Dr, A2004 Northgate Ave to Mitchells Road	12058	69	19090	84	19330	84	19638	91	20323	81
Woodfield Rd, s of Kilnmead	6727	87	5755	54	5816	55	6057	58	6526	59

Table 7.3.3: Road Links Used in the Model

Location	2023 Baseline		2029 Do Minimum		2029 Do Something		2041 Do Minimum		2041 Do Something	
	AADT	HDV	AADT	HDV	AADT	HDV	AADT	HDV	AADT	HDV
College Rd, Haslett Ave E to Northgate Ave Rbt	25936	295	20153	273	19899	269	21643	288	21846	282
Tushmore Gyratory, circulatory - passing Langley Drive	26794	639	28243	553	29489	595	30980	545	32084	574
Tushmore Gyratory, circulatory - London Rd N to A2011 E	18869	790	19033	591	19315	547	20635	506	21490	536
Tushmore Gyratory, circulatory - A2011 E to London Rd S	29331	1041	28249	727	28794	679	30085	650	31389	687
Tushmore Gyratory, circulatory - London Rd S to A2011 W	13790	171	16914	180	17684	220	19283	185	20566	212
Hazelwick Rbt, circulatory - A2011 to Gatwick Rd	39962	1615	37521	1707	38207	1712	41187	2000	42930	1984
Hazelwick Rbt, circulatory - passing Gatwick Rd	19972	448	20214	848	20786	848	22561	1007	23965	995
Hazelwick Rbt, circulatory - Gatwick Rd to A2011	24735	587	24609	895	25283	894	27011	1085	28325	1068
Hazelwick Rbt, circulatory - A2011 to Hazelwick Ave	40910	1505	31447	1132	31486	1160	32083	1343	34244	1376
Hazelwick Rbt, circulatory - passing Hazelwick Ave	32761	1393	25951	1030	26066	1058	26800	1231	28622	1262
Hazelwick Rbt, circulatory - Hazelwick Ave to Northgate Ave	39154	1450	30469	1048	30403	1076	30632	1250	32600	1150
Hazelwick Rbt, circulatory - Northgate Ave to A2011	38570	1446	32092	1451	32360	1453	32904	1659	33630	1693
A2004 Southgate Ave NB, s of Station Way	11141	209	13381	195	13705	188	14318	204	15099	202
Southgate Ave, Hawth Ave to Southgate Dr	23293	432	23461	367	23661	360	24514	384	25542	383
Southgate Ave, s of Hawth Ave	11472	212	10719	208	10834	208	11374	211	11853	214
A2004 Southgate Ave NB, s of Station Way	11141	209	13381	195	13705	188	14318	204	15099	202
A2004 Southgate Ave NB, s of Station Way	11141	209	13381	195	13705	188	14318	204	15099	202
M23 Spur wb, e of Airport Way rbt	30929	1424	34354	1861	34617	1850	57187	2359	57655	2351
Balcombe Rd, Victoria Rd to M23 Spur	18208	345	21089	409	21689	433	24807	775	25304	791
Breezehurst Dr, n of Horsham Rd	5336	0	6374	1	6682	1	6841	0	8135	95
Sullivan Dr, n of Horsham Rd	8906	208	11209	302	12559	302	12486	316	14656	280
A264, Horsham Rd to Tollgate Hill	32850	1512	27784	1397	27172	1364	28769	1483	30140	1439
A264 Horsham Rd, w of Sullivan Dr	59517	2903	61007	2744	61333	2691	63137	2818	64628	2778
A264, Kilnwood Vale	59517	2903	56769	2744	57104	2691	58716	2818	60205	2778
A264, e of Faygate Lane	59517	2903	49553	2696	50054	2643	50720	2768	52618	2727

Table 7.3.3: Road Links Used in the Model

Location	2023 Baseline		2029 Do Minimum		2029 Do Something		2041 Do Minimum		2041 Do Something	
	AADT	HDV	AADT	HDV	AADT	HDV	AADT	HDV	AADT	HDV
Tower Rd, A264 to Forest Rd	508	37	7095	140	7737	139	7727	163	8106	153
Link Road, South Access	0	0	0	0	3135	27	0	0	8924	47
B2114 Brighton Rd, n of Horsham Rd	8007	416	27206	971	28532	990	28691	896	30624	867
Horsham Rd, w of B2114 Brighton Rd (under M23)	5266	453	22886	926	24226	944	24139	849	26257	820
Brighton Rd, s of M23 J11	8007	416	39083	1008	40084	1025	40848	975	42972	947
M23 J11 circulatory (1-way) - sb off-slip to Brighton Rd S	42001	1610	17516	296	18248	295	17553	256	19184	247
Brighton Rd, s of M23 J11	8007	416	39083	1008	40084	1025	40848	975	42972	947
M23 J11 circulatory (1-way) - nb on-slip to sb off-slip	23075	670	19039	372	19719	372	19282	405	20902	394
M23 J11 circulatory - passing Brighton rd	38002	1462	24892	998	24877	997	27201	1068	27743	1048
M23 northbound, J11 to J10a	46728	2671	51551	3075	51663	3141	55795	3351	56667	3382
M23 northbound off slip, J11 (1-way)	13805	381	20574	846	20540	846	21391	882	21916	833
M23 J11 roundabout from Brighton Rd	38002	1462	13328	271	14257	338	13445	370	15099	360
Brighton Rd, Downland Dr to Southgate Dr	13186	182	18207	231	18435	232	19078	244	20295	245
Brighton Rd, s of Goffs Park Rd	6352	137	9397	151	9700	151	9972	159	10987	155
Brighton Rd, n of Goffs Park Rd	5629	137	8755	151	8966	151	9330	159	10382	155
Southgate Dr, Brighton Rd to Wakehurst Dr	9650	44	12503	80	12724	81	12986	85	13598	90
Southgate Dr, Brighton Rd to Wakehurst Dr	9650	44	12503	80	12724	81	12986	85	13598	90
Rusper Road	10801	78	12231	2	8272	0	14430	24	8875	0
Link Road, s of Charlwood Road	0	0	0	0	3135	27	0	0	13127	64
Entrance to Gatwick Airport off Aiport Way	18239	739	24371	847	24348	845	31604	1188	32025	1189
High Street, Station Way to Pegler Way	7550	130	10829	149	11253	152	11431	156	13044	156
High Street, Station Way to Pegler Way	7550	130	10829	149	11253	152	11431	156	13044	156
A264, Tollgate Hill to M23 J11	25072	962	20758	481	20665	461	22684	567	24227	566
A264, w of Faygate Lane	34971	1954	39910	2090	40351	2039	40666	2199	43292	2196
B2110 Handcross Rd, w of A23	27310	1361	24003	1290	24173	1291	24346	1355	25006	1355
B2110 Handcross Rd, w of A23	27310	1361	24003	1290	24173	1291	24346	1355	25006	1355
B2110 Handcross Rd, w of A23	27310	1361	24003	1290	24173	1291	24346	1355	25006	1355
B2110 Handcross Rd, w of A23	27310	1361	24003	1290	24173	1291	24346	1355	25006	1355
B2110 Handcross Rd, w of A23	27310	1361	24003	1290	24173	1291	24346	1355	25006	1355
B2195 Crawley Rd, A264 to Forest Rd	22521	757	16509	583	16675	582	18608	689	19563	692
B2195 Crawley Rd, A264 to Forest Rd	22521	757	16509	583	16675	582	18608	689	19563	692

Table 7.3.3: Road Links Used in the Model

Location	2023 Baseline		2029 Do Minimum		2029 Do Something		2041 Do Minimum		2041 Do Something	
	AADT	HDV	AADT	HDV	AADT	HDV	AADT	HDV	AADT	HDV
B2195 Crawley Rd, A264 to Forest Rd	22521	757	16509	583	16675	582	18608	689	19563	692
B2195 Crawley Rd, A264 to Forest Rd	22521	757	16509	583	16675	582	18608	689	19563	692
B2195 Crawley Rd, A264 to Forest Rd	22521	757	16509	583	16675	582	18608	689	19563	692
B2195 Crawley Rd, A264 to Forest Rd	22521	757	16509	583	16675	582	18608	689	19563	692
Brighton Rd, north of M23 J11	36514	811	33895	700	35109	767	35195	822	38427	813
Brighton Road, Springfield Road to Station Way	9546	165	11930	227	12303	229	12462	242	13722	240
Brighton Road, Springfield Road to Station Way	9546	165	11930	227	12303	229	12462	242	13722	240
Forest Rd, e of Tower Rd	5266	453	22886	926	24226	944	24139	849	26257	820
Forest Rd, e of Tower Rd	5266	453	22886	926	24226	944	24139	849	26257	820
Forest Rd, e of Tower Rd	5266	453	22886	926	24226	944	24139	849	26257	820
Forest Rd, e of Tower Rd	5266	453	22886	926	24226	944	24139	849	26257	820
Forest Rd, e of Tower Rd	5266	453	22886	926	24226	944	24139	849	26257	820
Forest Rd, e of Tower Rd	5266	453	22886	926	24226	944	24139	849	26257	820
Forest Rd, e of Tower Rd	5266	453	22886	926	24226	944	24139	849	26257	820
Harwood Rd, s of Forest Rd	20013	966	24272	1208	25155	1226	26757	1220	29309	1210
Harwood Rd, s of Forest Rd	20013	966	24272	1208	25155	1226	26757	1220	29309	1210
Ifield Rd, w of Ifield Rbt	11860	83	14351	128	14702	145	15163	142	16130	168
Ifield Rd, w of Ifield Rbt	11860	83	14351	128	14702	145	15163	142	16130	168
Ifield Rd, w of Ifield Rbt	11860	83	14351	128	14702	145	15163	142	16130	168
Ifield Rd, w of Ifield Rbt	11860	83	14351	128	14702	145	15163	142	16130	168
Ifield Rd, w of Ifield Rbt	11860	83	14351	128	14702	145	15163	142	16130	168
London Rd, Fleming Way to Lowfield Heath Rbt	35042	1386	36449	1251	39112	1306	39712	1145	45247	1175
London Rd, Fleming Way to Lowfield Heath Rbt	35042	1386	36449	1251	39112	1306	39712	1145	45247	1175
London Rd, Fleming Way to Lowfield Heath Rbt	35042	1386	36449	1251	39112	1306	39712	1145	45247	1175
M23 J11 circulatory - passing Brighton rd	38002	1462	24892	998	24877	997	27201	1068	27743	1048
M23 J11 circulatory - passing Brighton rd	38002	1462	24892	998	24877	997	27201	1068	27743	1048
M23 J11 circulatory (1-way) - nb on-slip to sb off-slip	23075	670	19039	372	19719	372	19282	405	20902	394
M23 J11 roundabout from Brighton Rd	38002	1462	13328	271	14257	338	13445	370	15099	360
M23 J11 roundabout from Brighton Rd	38002	1462	13328	271	14257	338	13445	370	15099	360

Table 7.3.3: Road Links Used in the Model

Location	2023 Baseline		2029 Do Minimum		2029 Do Something		2041 Do Minimum		2041 Do Something	
	AADT	HDV	AADT	HDV	AADT	HDV	AADT	HDV	AADT	HDV
M23 J11 roundabout to Brighton Rd	43551	1602	20566	429	20852	429	21750	451	23328	454
M23 J11 roundabout to Brighton Rd	43551	1602	20566	429	20852	429	21750	451	23328	454
M23 northbound on slip, J11 (1-way)	15286	792	19181	897	19415	963	21365	1033	21941	1014
M23 northbound, s of J11	49024	2699	52944	3024	52788	3024	55821	3201	56702	3201
Pegler Way, Ifield Rd to High Street	12612	180	16373	151	16996	148	17391	156	19336	155
Pegler Way, Ifield Rd to High Street	12612	180	16373	151	16996	148	17391	156	19336	155
Pegler Way, Ifield Rd to High Street	12612	180	16373	151	16996	148	17391	156	19336	155
Pegler Way, Ifield Rd to High Street	12612	180	16373	151	16996	148	17391	156	19336	155
Pegler Way, Ifield Rd to High Street	12612	180	16373	151	16996	148	17391	156	19336	155
Pegler Way, n of Ifield Rbt	13442	158	18152	211	19012	254	19276	229	21832	273
Pegler Way, n of Ifield Rbt	13442	158	18152	211	19012	254	19276	229	21832	273
Pegler Way, n of Ifield Rbt	13442	158	18152	211	19012	254	19276	229	21832	273
Pegler Way, n of Ifield Rbt (1-way)	8957	109	11692	180	12358	233	12725	196	14301	246
Pegler Way, n of Ifield Rbt (1-way)	8957	109	11692	180	12358	233	12725	196	14301	246
Pegler Way, s of Ifield Rbt	15212	181	18858	152	19474	149	20076	157	21972	156
Pegler Way, s of Ifield Rbt	15212	181	18858	152	19474	149	20076	157	21972	156
Southgate Ave, s of Hawth Ave	11472	212	10719	208	10834	208	11374	211	11853	214
Station Way, Station Road to Brighton Road (1-way)	6107	58	7427	118	7835	118	7974	123	9143	121
Station Way, Station Road to Brighton Road (1-way)	6107	58	7427	118	7835	118	7974	123	9143	121
Station Way, Station Road to Brighton Road (1-way)	6107	58	7427	118	7835	118	7974	123	9143	121
West Green Dr, n of Ifield Rbt	9289	42	9190	73	9453	96	10189	80	10341	113
West Green Dr, n of Ifield Rbt	9289	42	9190	73	9453	96	10189	80	10341	113
West Green Dr, n of Ifield Rbt	9289	42	9190	73	9453	96	10189	80	10341	113
London Rd wb, Airport Way to Longbridge Rbt	20444	880	20377	894	20662	927	23857	1280	24884	1273
London Rd wb, Airport Way to Longbridge Rbt	20444	880	20377	894	20662	927	23857	1280	24884	1273
Pegler Way, n of Ifield Rbt (1-way)	8957	109	11692	180	12358	233	12725	196	14301	246
London Rd eb, Longbridge Rbt to Airport Way	30258	1276	34243	977	33552	959	30793	529	32421	560
A2219 High Street, s of The Boulevard (1-way)	7375	92	9638	34	9813	42	9950	36	11294	49
A2219, High Street to Pegler Way (1-way)	17383	200	22560	121	22898	138	23483	128	26122	154

Table 7.3.3: Road Links Used in the Model

Location	2023 Baseline		2029 Do Minimum		2029 Do Something		2041 Do Minimum		2041 Do Something	
	AADT	HDV	AADT	HDV	AADT	HDV	AADT	HDV	AADT	HDV
A2219, High Street to Pegler Way (1-way)	17383	200	22560	121	22898	138	23483	128	26122	154
A2219, High Street to Pegler Way (1-way)	17383	200	22560	121	22898	138	23483	128	26122	154
A2219, High Street to Pegler Way (1-way)	17383	200	22560	121	22898	138	23483	128	26122	154
A264, Tollgate Hill to M23 J11	25072	962	20758	481	20665	461	22684	567	24227	566
A264, Tollgate Hill to M23 J11	25072	962	20758	481	20665	461	22684	567	24227	566
A264, Tollgate Hill to M23 J11	25072	962	20758	481	20665	461	22684	567	24227	566
London Road, w of Gatwick Roundabout	38712	1565	37232	1417	36714	1425	37478	1234	39477	1219
M23 J10-J10A (Saxon Road)	113650	6776	124384	7406	124293	7461	130436	7822	131540	7865
IfieldRdRbt_01	12079	123	14448	141	14917	154	15452	150	16661	170
IfieldRdRbt_02	12202	119	14976	164	15529	193	16003	177	17476	213
IfieldRdRbt_03	12875	137	15752	152	16307	171	16834	163	18343	187
IfieldRdRbt_04	12645	125	15326	142	15832	157	16370	152	17713	174
Crawley RB_arm1	32714	865	30304	675	30459	655	32552	705	33148	661
Crawley RB_arm2	33781	908	31112	721	31527	691	33357	755	33995	708
Crawley RB_arm3	32037	773	29587	654	29727	645	31795	725	32269	654
Crawley RB_arm4	32761	822	30644	686	30760	673	32706	767	33268	687
Crawley RB_arm5	32761	822	30644	686	30760	673	32706	767	33268	687
Horsham RB 1 arm1	39235	2522	39050	2398	39297	2343	54499	2615	55657	2568
Horsham RB 1 arm2	42119	2517	42300	2367	42621	2310	55762	2620	55762	2620
Horsham RB 1 arm3	38276	2416	38203	2313	38578	2257	52608	2640	52608	2640
Horsham RB 1 arm4	41160	2419	41453	2288	41901	2230	53236	2611	53236	2611
Horsham RB 2 arm1	29758	1451	28385	1372	28552	1346	29358	1409	30103	1389
Horsham RB 2 arm2	29758	1451	28385	1372	28552	1346	29358	1409	30103	1389
Horsham RB 2 arm3	29760	2903	25221	2648	25545	2590	27291	2584	28335	2543
Horsham RB 3 arm1	29885	2891	26550	2525	26961	2464	28712	2466	29821	2427
Horsham RB 3 arm2	30010	2879	27880	2413	28378	2350	25870	2713	26850	2673

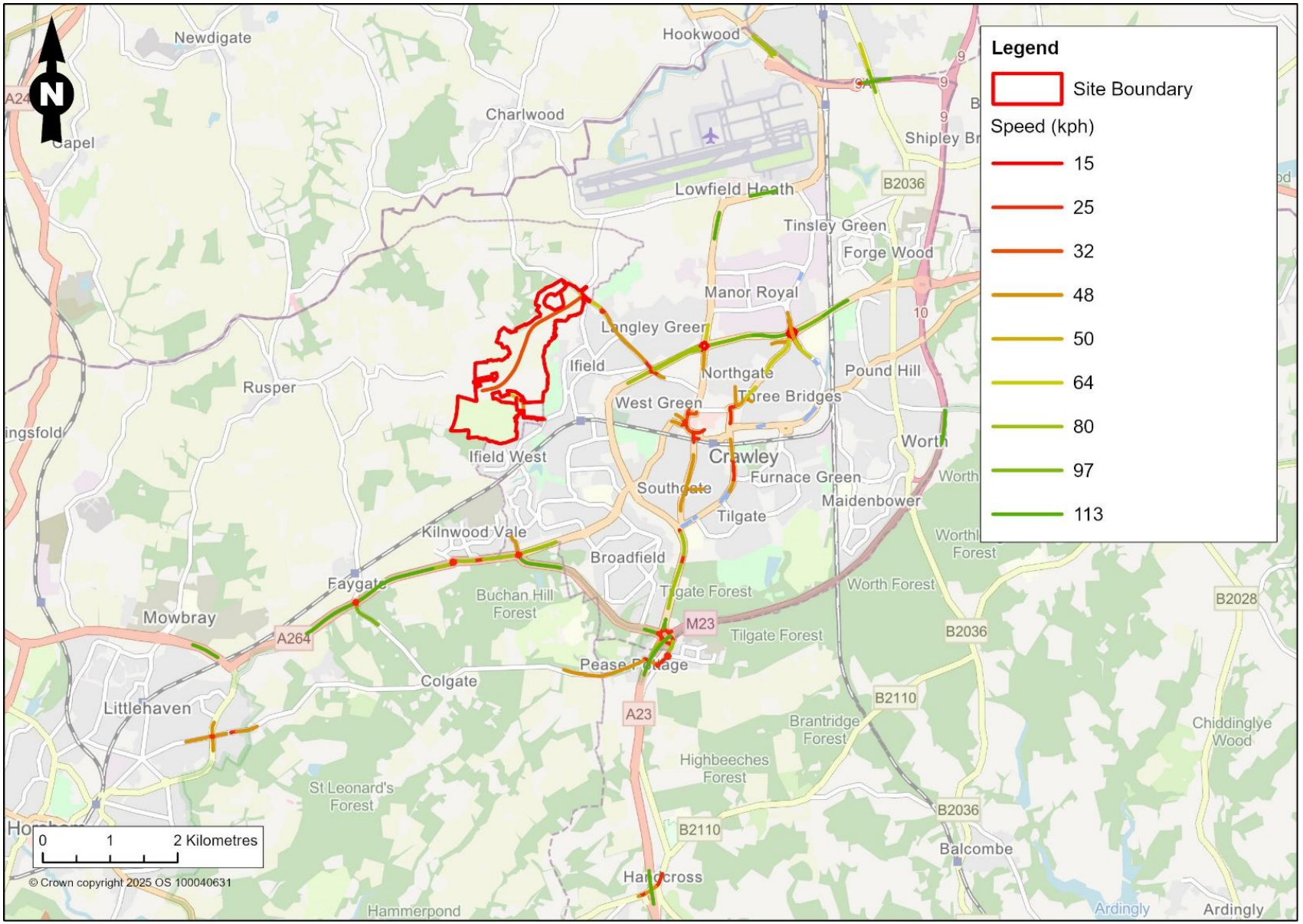

Figure A7.3-2: Modelled Road Speed

APPENDIX 7.4: ROAD TRAFFIC ASSESSMENT METHODOLOGY

APPENDIX 7.4: ROAD TRAFFIC ASSESSMENT METHODOLOGY

Dispersion Model Setup

Impact Predictions

A detailed dispersion modelling assessment was undertaken using the ADMS-Roads v5 dispersion model. The model requires the user to provide various input data, including AADT flows, the proportion of HDVs, road characteristics (including road width), and the vehicle speed. Model input data used for this assessment are provided in Table A7.4.1.

Table A7.4.1: Model Input and Results Processing Data

Data	Description
ADMS-Roads	Version 5.0.1.3
Meteorological Data	2023 hourly meteorological data from Gatwick station has been used in the model.
Time Varying Emission Factors	Based on Department for Transport statistics. Table TRA0307. Motor vehicle traffic distribution by time of day and day of the week on all roads, Great Britain: 2023.
Latitude	51.1°
Surface Roughness	A value of 0.5 for Parkland/Open Suburbia was used to represent the modelled area and meteorological station site.
Minimum Monin-Obukhov length	A value of 30 for Cities and Large Towns was used to represent the modelled area. A value of 30 for Mixed Urban/Industrial was used to represent the meteorological station site.
Street Canyon	N/A
Emission Factor Toolkit (EFT)	v13, March 2025. Road type: England (urban).
NO_x to NO_2 Conversion	v9.1, August 2024. Traffic mix: All UK traffic.
Background Maps	2021 reference year background maps.
Traffic data	Provided in Appendix 7.3 Traffic Data and Road Network.

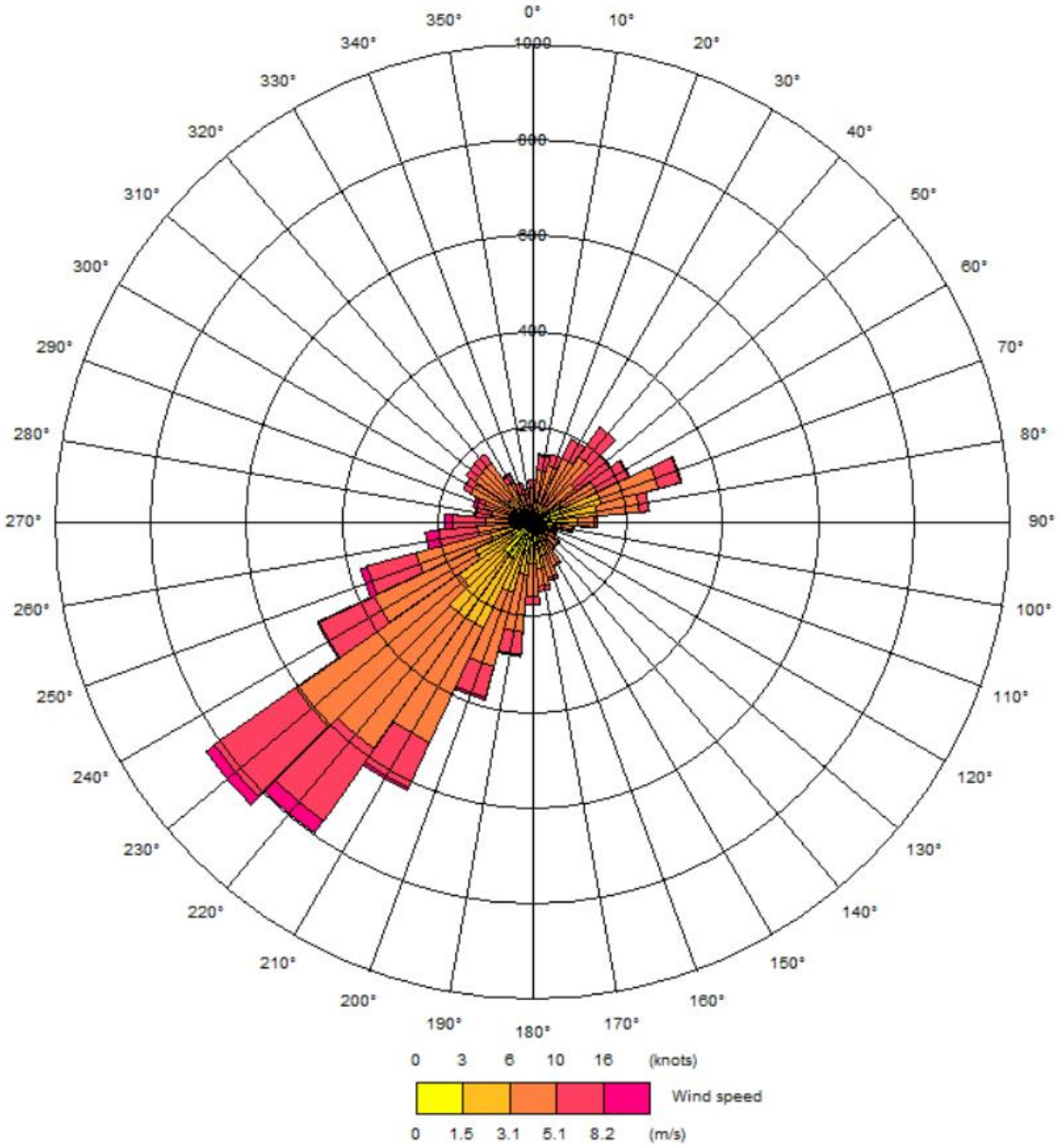

Figure A7.4.1: 2023 Gatwick Windrose

Background Concentrations

Defra publish details of estimated background concentrations of pollutants for each 1 km grid square across the country. The Defra mapped background concentrations for the study area have not been compared and calibrated against measured concentrations as AQC[1] found the average calibration factor for NO_2 outside of London in the UK is 1.1237, showing a small under-prediction of Defra background NO_2 concentrations of 11 %.

[1] Air Quality Consultants, 2025 Calibrating Defra's 2021-based Background NOx and NO_2 maps against 2022, 2023 and 2024 Measurements. https://www.aqconsultants.co.uk/CMSPages/GetFile.aspx?guid=455aaf29-c803-435e-af64-a2266dab7890

Model Verification

Nitrogen Dioxide

Most nitrogen dioxide is produced in the atmosphere by the reaction of nitrogen oxide (NO) with ozone (O_3). It is therefore most appropriate to verify the model in terms of primary pollutant emission of nitrogen oxides (NO_x = NO + NO_2). The model has been run to predict the 2023 annual mean road-NO_x contribution at four CBC monitoring locations (diffusion tubes CR64, CR76, CR102 and CR105).

The model output of road-NO_x has been compared with the 'measured' road-NO_x for the baseline year (2023), which was calculated from the measured NO_2 concentrations and the Defra background NO_2 concentrations within the NO_x from NO_2 calculator[2].

The derivation of model verification factor is presented in Table A7.4.2. The ratio of measured NO_x to modelled road-NO_x indicates the model was underpredicting the road-NO_x contribution at all four diffusion tubes. This is a common experience with this and most other models.

Table A7.4.2: Initial Derivation of Model Verification Factor

Diffusion Tube ID	Measured NO_2 (µg/m³)	Measured road-NO_x (µg/m³)	Modelled road-NO_x (µg/m³)	Ratio Measured NO_x/Modelled road NO_x	Note
CR64	26.0	18.9	7.7	2.459	
CR76	24.0	14.0	8.6	1.639	
CR102	23.0	27.0	8.5	3.174	Excluded from verification due to large underprediction of concentrations. Likely due to the DT being positioned in a layby where emissions from idling vehicles cannot be accounted for.
CR105	32.0	47.9	19.7	2.430	

The primary adjustment factor was determined as the slope of the best fit line between the 'measured' road contribution and the model derived road contribution, forced through zero (Figure A7.4.2). This factor was then applied to the modelled road-NO_x concentration for each monitoring site to provide adjusted modelled road-NO_x concentrations. The total NO_2 concentrations were then determined by combining the adjusted modelled road-NO_x concentrations with the predicted background NO_2 concentration within the NO_x from NO_2 calculator.

A secondary adjustment factor was calculated as the slope of the best fit line applied to the adjusted data and forced through zero (Figure A7.4.3). The final NO_2 adjustment is minor.

[2] Defra, 2020. NO_x to NO_2 calculator v8.1.

The primary and secondary adjustment factors outlined in Table A7.4.3 have been applied to all modelled NO_2 data to provide adjusted modelled road-NO_x concentrations (Table A7.4.4 and Figure A7.4.4). The total NO_2 concentrations were then determined by combining the adjusted modelled road-NO_x concentrations with the predicted background NO_2 concentration within the NO_x from NO_2 calculator.

Table A7.4.3: Verification factors	
Primary Adjustment Factor	2.3222
Secondary Adjustment Factor	0.9896

Table A7.4.4: Comparison of Measured and Modelled Road NO_2

Diffusion Tube ID	Measured NO_2 (µg/m^3)	Total NO_2 after secondary adjustment	% Difference in NO_2 after adjustment
CR64	26.0	25.3	-2.7
CR76	24.0	26.1	8.8
CR015	32.0	30.8	-3.8

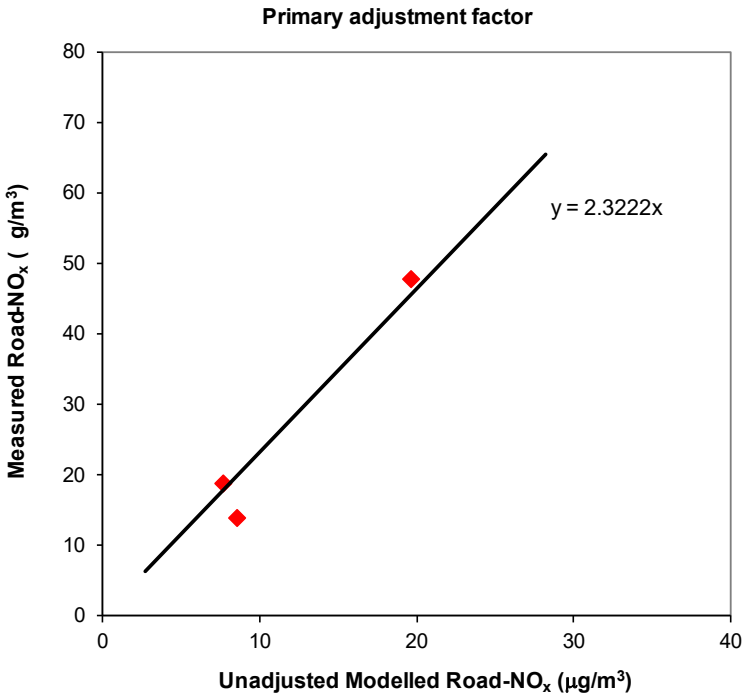

Figure A7.4.2: Comparison of Measured Road-NOx with Unadjusted Modelled Road-NOx Concentrations

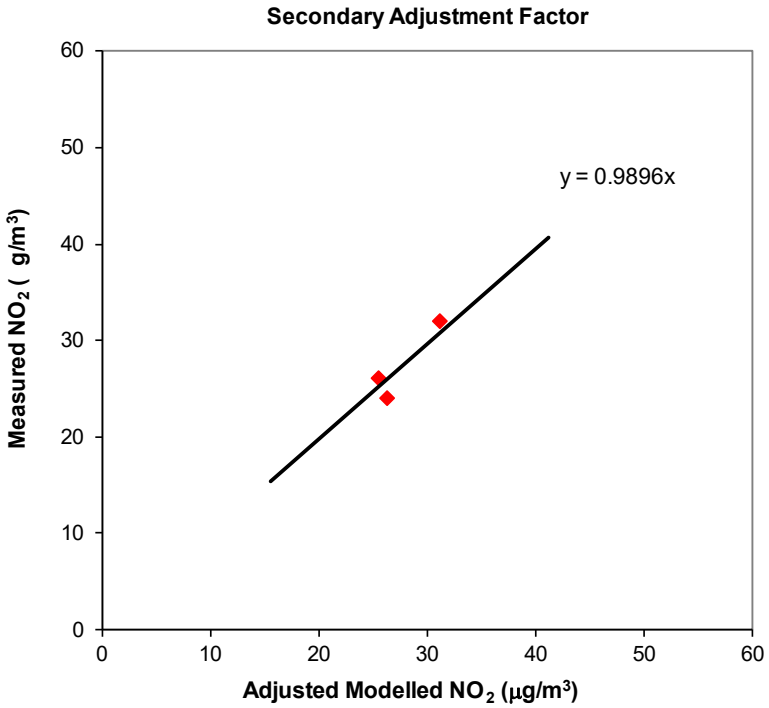

Figure A7.4.3: Comparison of Measured NO_2 with Primary Adjusted Modelled NO_2 Concentrations

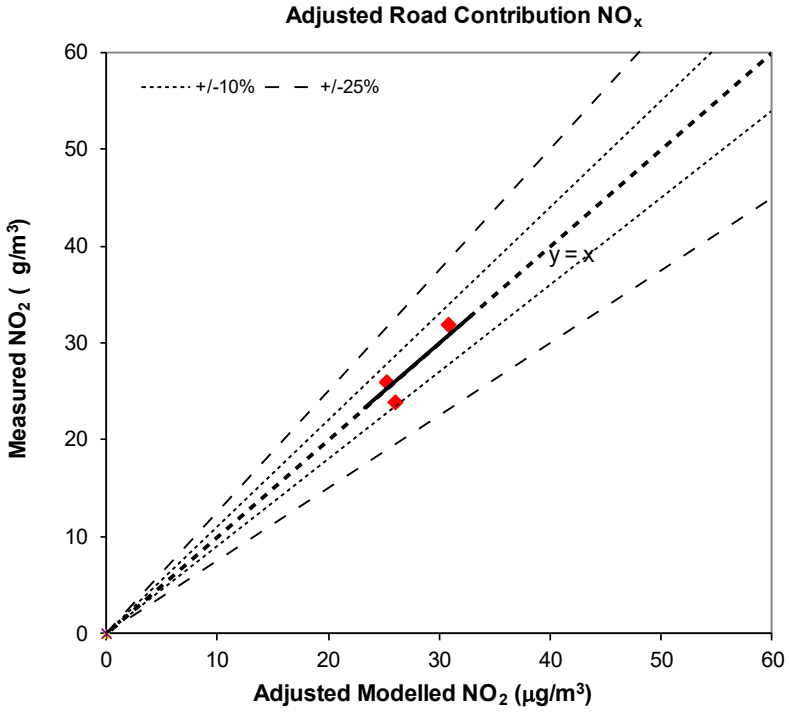

Figure A7.4.4: Comparison of Measured NO_2 with Fully Adjusted Modelled NO_2 Concentrations

Figure A7.4.4 compares final adjusted modelled total NO_2 at each of the monitoring sites, to measured total NO_2, and shows the 1:1 relationship, as well as ±10% and ±25% of the 1:1 line.

Particulates (PM_{10} & $PM_{2.5}$)

The adjustment factor calculated for NO_2 concentrations has been applied to the results as described above as there was not a suitable automatic site available that monitored PM for the verification process.

Model Performance

An evaluation of model performance was undertaken to establish confidence in model results. LAQM.TG(22) identifies a number of statistical procedures that are appropriate to evaluate model performance and assess uncertainty. The statistical parameters used in this assessment are:

- root mean square error (RMSE) - 1.43 µg/m3, compared to ideal value < 10 µg/m3
- Fractional bias – 0.00, compared to an ideal value of 0, and
- Correlation co-efficient – 0.93, compared to an ideal value of 1.0.

The model statistical parameters indicate that the model is performing very well.

Calculations were carried out prior to, and after adjustment and provide information on the improvement of the model predictions as a result of the application of the verification adjustment factors.

APPENDIX 7.5: ASSESSMENT OF EFFECTS

APPENDIX 7.5: ASSESSMENT OF EFFECTS

Baseline, 2023

Human Health

Table A7.5.1: Baseline Annual Mean Concentrations at Human Health Receptors (µg/m^3)

Receptor	No_2	PM_{10}	$PM_{2.5}$
R1	10.7	11.1	7.0
R2	12.7	11.7	7.4
R3	13.4	11.9	7.5
R4	11.0	11.2	7.1
R5	25.6	14.4	8.8
R6	19.2	12.8	7.9
R7	17.7	12.2	7.7
R8	18.9	12.3	7.8
R9	17.3	12.0	7.6
R10	16.8	11.9	7.5
R11	17.0	11.9	7.5
R12	23.8	13.6	8.5
R13	27.6	15.0	9.3
R14	24.9	14.2	8.8
R15	21.5	13.3	8.3
R16	18.0	12.6	7.9
R17	25.2	14.5	9.0
R18	21.4	13.3	8.3
R19	30.3	15.4	9.2
R20	28.9	14.1	8.7
R21	22.1	12.8	7.7
R22	18.9	12.5	7.5
R23	17.3	12.2	7.3
R24	18.9	12.7	7.6
R25	17.1	12.1	7.3
R26	11.6	10.8	6.7
R27	14.8	11.7	7.2
R28	11.5	10.8	6.7
R29	12.0	10.9	6.8
R30	14.8	12.0	7.5

Table A7.5.1: Baseline Annual Mean Concentrations at Human Health Receptors (µg/m^3)			
Receptor	NO_2	PM_{10}	$PM_{2.5}$
R31	16.2	13.3	7.4
R32	14.7	12.9	7.2
R33	12.8	11.7	7.3
R34	13.1	11.8	7.4
R35	12.3	11.5	7.2
R36	12.6	11.6	7.3
R37	18.4	13.2	8.1
R38	16.2	12.3	7.6
R39	14.8	11.9	7.4
R40	16.1	12.3	7.6
R41	14.9	12.2	7.7
R42	16.4	12.7	7.9
R43	22.7	14.4	8.8
R44	20.6	13.8	8.3
R45	23.5	14.5	8.6
R46	18.0	13.2	7.8
R47	23.1	13.6	7.9
R48	23.0	13.6	7.9
R49	19.1	12.5	7.4
R50	19.3	13.2	8.1
R51	17.6	13.0	8.1
R52	14.7	12.1	7.5
R53	17.3	13.0	8.0
R54	12.0	11.0	6.8
R55	14.9	11.9	7.3
R56	13.2	11.6	7.3
R57	13.4	11.7	7.1
R58	25.8	15.7	9.6
R59	22.3	12.4	7.5
R60	18.2	12.2	7.6
R61	18.1	11.8	7.1
R62	17.7	12.5	7.8
R63	21.2	14.5	8.0
R64	15.8	12.6	7.9
R65	16.2	13.1	8.2
R66	11.4	11.7	7.0
R67	11.9	12.6	7.2
R68	25.2	14.2	8.2
R69	19.3	13.2	8.2

Table A7.5.1: Baseline Annual Mean Concentrations at Human Health Receptors (µg/m^3)			
Receptor	No_2	PM_{10}	$PM_{2.5}$
R70	22.1	13.3	7.9
R71	17.3	12.7	7.9
R72	18.1	12.9	8.0
R73	24.4	14.5	8.9
Objective	**40**	**40**	**20**

First Operational Year, 2026

Human Health

Table A7.5.2: First Operational Year Annual Mean NO_2 at Human Health Receptors (µg/m^3)					
Receptor	Scenario 2 2026 Do Minimum	Scenario 3 2026 Do Something	Development Traffic Contribution	% Change in Concentration Relative NAQO	Impact Descriptor
R1	9.8	9.6	-0.19	-0.47	Negligible
R2	11.4	10.7	-0.70	-1.76	Negligible
R3	12.0	11.1	-0.89	-2.23	Negligible
R4	10.1	9.8	-0.29	-0.72	Negligible
R5	21.2	21.4	0.21	0.52	Negligible
R6	16.6	16.7	0.09	0.22	Negligible
R7	15.9	16.0	0.08	0.20	Negligible
R8	17.0	17.1	0.13	0.32	Negligible
R9	15.7	15.8	0.09	0.22	Negligible
R10	15.4	15.5	0.09	0.22	Negligible
R11	15.6	15.7	0.09	0.22	Negligible
R12	21.4	21.5	0.07	0.17	Negligible
R13	24.7	24.7	0.08	0.20	Negligible
R14	22.7	22.7	0.05	0.12	Negligible
R15	20.0	20.0	0.04	0.10	Negligible
R16	16.3	16.3	0.05	0.12	Negligible
R17	22.6	22.6	0.01	0.02	Negligible
R18	19.7	19.7	0.00	0.00	Negligible
R19	25.9	26.1	0.15	0.37	Negligible
R20	24.1	24.2	0.15	0.37	Negligible
R21	20.8	20.9	0.13	0.32	Negligible
R22	18.0	18.1	0.09	0.22	Negligible
R23	16.7	16.7	0.05	0.12	Negligible
R24	18.0	18.1	0.08	0.20	Negligible
R25	16.5	16.5	0.05	0.12	Negligible
R26	10.7	10.9	0.20	0.49	Negligible
R27	12.4	12.8	0.38	0.94	Negligible

Table A7.5.2: First Operational Year Annual Mean NO_2 at Human Health Receptors ($\mu g/m^3$)					
Receptor	Scenario 2 2026 Do Minimum	Scenario 3 2026 Do Something	Development Traffic Contribution	% Change in Concentration Relative NAQO	Impact Descriptor
R28	10.7	10.8	0.17	0.42	Negligible
R29	10.9	11.1	0.18	0.45	Negligible
R30	12.8	12.8	0.09	0.22	Negligible
R31	17.9	18.0	0.19	0.47	Negligible
R32	15.6	15.8	0.20	0.49	Negligible
R33	11.9	11.9	0.02	0.05	Negligible
R34	12.2	12.2	0.05	0.12	Negligible
R35	11.4	11.4	0.01	0.02	Negligible
R36	11.7	11.7	0.03	0.07	Negligible
R37	15.0	15.1	0.03	0.07	Negligible
R38	13.7	13.7	-0.01	-0.02	Negligible
R39	13.5	13.5	-0.05	-0.12	Negligible
R40	14.4	14.5	0.02	0.05	Negligible
R41	13.2	13.2	0.03	0.07	Negligible
R42	14.1	14.1	0.02	0.05	Negligible
R43	20.3	20.5	0.17	0.42	Negligible
R44	17.0	17.0	0.05	0.12	Negligible
R45	19.4	19.4	0.03	0.07	Negligible
R46	14.4	14.4	0.01	0.02	Negligible
R47	17.4	17.5	0.08	0.20	Negligible
R48	17.3	17.4	0.07	0.17	Negligible
R49	14.6	14.7	0.06	0.15	Negligible
R50	16.2	16.1	-0.09	-0.22	Negligible
R51	14.2	14.2	0.00	0.00	Negligible
R52	12.8	12.9	0.12	0.30	Negligible
R53	14.5	14.8	0.24	0.59	Negligible
R54	10.9	11.0	0.12	0.30	Negligible
R55	12.5	12.9	0.41	1.01	Negligible
R56	11.7	11.7	0.05	0.12	Negligible
R57	16.8	17.2	0.40	0.99	Negligible
R58	22.7	23.1	0.37	0.92	Negligible
R59	20.4	20.8	0.43	1.06	Negligible
R60	17.3	17.2	-0.02	-0.05	Negligible
R61	17.0	16.9	-0.03	-0.07	Negligible
R62	15.2	15.2	0.07	0.17	Negligible
R63	16.2	16.2	-0.03	-0.07	Negligible
R64	13.8	14.0	0.15	0.37	Negligible

Table A7.5.2: First Operational Year Annual Mean NO_2 at Human Health Receptors ($\mu g/m^3$)					
Receptor	Scenario 2 2026 Do Minimum	Scenario 3 2026 Do Something	Development Traffic Contribution	% Change in Concentration Relative NAQO	Impact Descriptor
R65	14.6	14.8	0.19	0.47	Negligible
R66	14.8	15.2	0.34	0.84	Negligible
R67	10.7	10.7	0.02	0.05	Negligible
R68	20.6	20.6	0.00	0.00	Negligible
R69	17.6	17.8	0.19	0.47	Negligible
R70	19.0	19.0	0.00	0.00	Negligible
R71	15.8	15.9	0.14	0.35	Negligible
R72	16.6	16.8	0.22	0.54	Negligible
R73	20.5	20.7	0.23	0.57	Negligible
Objective	40		-		

Table A7.5.3: First Operational Year Annual Mean PM_{10} at Human Health Receptors ($\mu g/m^3$)					
Receptor	Scenario 2 2026 Do Minimum	Scenario 3 2026 Do Something	Development Traffic Contribution	% Change in Concentration Relative NAQO	Impact Descriptor
R1	13.9	10.8	-0.07	-0.19	Negligible
R2	14.1	11.2	-0.28	-0.71	Negligible
R3	14.1	11.4	-0.35	-0.88	Negligible
R4	13.9	10.9	-0.12	-0.29	Negligible
R5	17.1	14.1	0.08	0.20	Negligible
R6	15.8	12.5	0.03	0.09	Negligible
R7	15.5	12.0	0.02	0.06	Negligible
R8	16.0	12.1	0.03	0.08	Negligible
R9	15.5	11.8	0.02	0.05	Negligible
R10	15.4	11.6	0.02	0.04	Negligible
R11	15.5	11.6	0.02	0.04	Negligible
R12	17.0	13.2	0.02	0.05	Negligible
R13	18.0	14.6	0.03	0.07	Negligible
R14	17.9	14.0	0.01	0.04	Negligible
R15	16.4	13.0	0.01	0.03	Negligible
R16	16.2	12.3	0.02	0.05	Negligible
R17	17.3	14.1	0.00	-0.01	Negligible
R18	16.5	12.9	0.00	0.00	Negligible
R19	17.6	14.9	0.06	0.14	Negligible
R20	17.8	13.4	0.04	0.09	Negligible
R21	15.7	12.7	0.03	0.07	Negligible
R22	15.0	12.4	0.03	0.07	Negligible
R23	14.7	12.0	0.02	0.04	Negligible

Table A7.5.3: First Operational Year Annual Mean PM_{10} at Human Health Receptors ($\mu g/m^3$)					
Receptor	Scenario 2 2026 Do Minimum	Scenario 3 2026 Do Something	Development Traffic Contribution	% Change in Concentration Relative NAQO	Impact Descriptor
R24	15.0	12.6	0.03	0.09	Negligible
R25	14.7	12.0	0.02	0.04	Negligible
R26	13.4	10.6	0.08	0.20	Negligible
R27	13.9	11.2	0.15	0.38	Negligible
R28	13.4	10.5	0.07	0.17	Negligible
R29	13.6	10.6	0.07	0.18	Negligible
R30	15.0	11.7	0.03	0.08	Negligible
R31	17.1	14.8	0.07	0.18	Negligible
R32	16.3	13.9	0.08	0.20	Negligible
R33	10.8	11.5	0.01	0.02	Negligible
R34	11.5	11.7	0.02	0.04	Negligible
R35	11.7	11.3	0.01	0.02	Negligible
R36	11.0	11.5	0.01	0.03	Negligible
R37	14.0	12.4	0.01	0.03	Negligible
R38	12.5	11.8	0.00	-0.01	Negligible
R39	11.9	11.7	-0.01	-0.04	Negligible
R40	12.0	12.0	0.01	0.02	Negligible
R41	11.7	12.0	0.01	0.03	Negligible
R42	11.6	12.3	0.01	0.02	Negligible
R43	11.6	14.6	0.07	0.17	Negligible
R44	13.2	13.5	0.03	0.06	Negligible
R45	14.6	14.1	0.01	0.03	Negligible
R46	14.0	12.7	0.01	0.02	Negligible
R47	13.0	12.9	0.01	0.03	Negligible
R48	12.3	12.9	0.01	0.03	Negligible
R49	14.1	12.0	0.01	0.02	Negligible
R50	12.9	12.6	-0.03	-0.08	Negligible
R51	14.9	12.3	0.00	0.00	Negligible
R52	13.4	11.7	0.06	0.14	Negligible
R53	12.6	12.5	0.11	0.27	Negligible
R54	12.4	10.6	0.05	0.13	Negligible
R55	12.0	11.4	0.17	0.44	Negligible
R56	12.6	11.3	0.02	0.04	Negligible
R57	12.0	14.0	0.18	0.45	Negligible
R58	10.5	16.1	0.17	0.42	Negligible
R59	11.1	12.1	0.07	0.18	Negligible
R60	10.5	12.0	-0.01	-0.01	Negligible

Table A7.5.3: First Operational Year Annual Mean PM_{10} at Human Health Receptors ($\mu g/m^3$)					
Receptor	Scenario 2 2026 Do Minimum	Scenario 3 2026 Do Something	Development Traffic Contribution	% Change in Concentration Relative NAQO	Impact Descriptor
R61	10.6	11.5	0.00	-0.01	Negligible
R62	11.6	12.1	0.02	0.06	Negligible
R63	14.7	13.8	-0.01	-0.02	Negligible
R64	13.9	12.5	0.06	0.15	Negligible
R65	11.5	13.2	0.09	0.22	Negligible
R66	11.7	13.7	0.15	0.39	Negligible
R67	11.3	12.4	0.00	0.01	Negligible
R68	11.5	13.7	0.00	0.01	Negligible
R69	12.4	13.4	0.08	0.19	Negligible
R70	11.8	13.1	0.00	0.00	Negligible
R71	11.7	12.6	0.05	0.13	Negligible
R72	12.0	13.0	0.08	0.20	Negligible
R73	12.0	14.2	0.09	0.22	Negligible
Objective	40		-		

Table A7.5.4: First Operational Year Annual Mean $PM_{2.5}$ at Human Health Receptors ($\mu g/m^3$)					
Receptor	Scenario 2 2026 Do Minimum	Scenario 3 2026 Do Something	Development Traffic Contribution	% Change in Concentration Relative NAQO	Impact Descriptor
R1	6.8	6.7	-0.04	-0.20	Negligible
R2	7.1	7.0	-0.15	-0.74	Negligible
R3	7.2	7.1	-0.18	-0.92	Negligible
R4	6.9	6.8	-0.06	-0.31	Negligible
R5	8.4	8.5	0.04	0.21	Negligible
R6	7.6	7.7	0.02	0.09	Negligible
R7	7.4	7.4	0.01	0.06	Negligible
R8	7.5	7.5	0.02	0.09	Negligible
R9	7.3	7.3	0.01	0.06	Negligible
R10	7.2	7.2	0.01	0.05	Negligible
R11	7.2	7.2	0.01	0.05	Negligible
R12	8.2	8.2	0.01	0.05	Negligible
R13	8.9	8.9	0.02	0.08	Negligible
R14	8.6	8.6	0.01	0.04	Negligible
R15	8.1	8.1	0.01	0.04	Negligible
R16	7.6	7.6	0.01	0.05	Negligible
R17	8.6	8.6	0.00	-0.01	Negligible
R18	8.0	8.0	0.00	0.00	Negligible
R19	8.7	8.8	0.03	0.15	Negligible

Table A7.5.4: First Operational Year Annual Mean $PM_{2.5}$ at Human Health Receptors ($\mu g/m^3$)					
Receptor	Scenario 2 2026 Do Minimum	Scenario 3 2026 Do Something	Development Traffic Contribution	% Change in Concentration Relative NAQO	Impact Descriptor
R20	8.1	8.1	0.02	0.11	Negligible
R21	7.5	7.5	0.02	0.09	Negligible
R22	7.3	7.3	0.02	0.08	Negligible
R23	7.1	7.1	0.01	0.05	Negligible
R24	7.4	7.4	0.02	0.09	Negligible
R25	7.1	7.1	0.01	0.05	Negligible
R26	6.5	6.5	0.04	0.21	Negligible
R27	6.8	6.9	0.08	0.40	Negligible
R28	6.5	6.5	0.04	0.18	Negligible
R29	6.5	6.5	0.04	0.19	Negligible
R30	7.2	7.2	0.02	0.08	Negligible
R31	8.0	8.0	0.04	0.20	Negligible
R32	7.5	7.6	0.04	0.21	Negligible
R33	7.1	7.1	0.00	0.02	Negligible
R34	7.2	7.2	0.01	0.05	Negligible
R35	7.0	7.0	0.00	0.02	Negligible
R36	7.1	7.1	0.01	0.03	Negligible
R37	7.5	7.5	0.01	0.03	Negligible
R38	7.2	7.2	0.00	-0.01	Negligible
R39	7.2	7.2	-0.01	-0.04	Negligible
R40	7.3	7.3	0.00	0.02	Negligible
R41	7.4	7.4	0.01	0.03	Negligible
R42	7.6	7.6	0.01	0.03	Negligible
R43	8.7	8.7	0.04	0.19	Negligible
R44	8.0	8.0	0.01	0.06	Negligible
R45	8.3	8.3	0.01	0.03	Negligible
R46	7.4	7.4	0.00	0.02	Negligible
R47	7.3	7.3	0.01	0.03	Negligible
R48	7.3	7.3	0.01	0.03	Negligible
R49	7.0	7.0	0.00	0.02	Negligible
R50	7.7	7.7	-0.02	-0.08	Negligible
R51	7.5	7.5	0.00	0.00	Negligible
R52	7.2	7.2	0.03	0.15	Negligible
R53	7.6	7.7	0.06	0.29	Negligible
R54	6.5	6.5	0.03	0.13	Negligible
R55	6.9	7.0	0.09	0.46	Negligible
R56	7.0	7.0	0.01	0.04	Negligible

Table A7.5.4: First Operational Year Annual Mean $PM_{2.5}$ at Human Health Receptors ($\mu g/m^3$)					
Receptor	Scenario 2 2026 Do Minimum	Scenario 3 2026 Do Something	Development Traffic Contribution	% Change in Concentration Relative NAQO	Impact Descriptor
R57	8.1	8.2	0.10	0.48	Negligible
R58	9.6	9.7	0.09	0.44	Negligible
R59	7.2	7.2	0.04	0.22	Negligible
R60	7.3	7.3	0.00	-0.02	Negligible
R61	6.8	6.8	0.00	-0.01	Negligible
R62	7.4	7.5	0.01	0.06	Negligible
R63	7.5	7.5	0.00	-0.02	Negligible
R64	7.7	7.8	0.03	0.16	Negligible
R65	8.1	8.1	0.05	0.23	Negligible
R66	7.9	8.0	0.08	0.41	Negligible
R67	6.9	6.9	0.00	0.01	Negligible
R68	7.8	7.8	0.00	0.01	Negligible
R69	8.1	8.2	0.04	0.20	Negligible
R70	7.6	7.6	0.00	0.00	Negligible
R71	7.7	7.8	0.03	0.14	Negligible
R72	7.9	7.9	0.04	0.21	Negligible
R73	8.5	8.6	0.05	0.24	Negligible
Objective	20		-		

Ecological

Table A7.5.5: First Operational Year Assessment of Nitrogen Deposition at Ecological Receptors					
Receptor	Distance to Road (m)	Dry Deposition (kg/N/ha/yr)		Change in N Deposition (kg N/ha/yr)	% Change Relative Lower Critical Load
		Scenario 2 2026 Do Minimum	Scenario 3 2026 Do Something		
ECO_AW_Faygate_1	13	25.5	25.5	0.01	0%
ECO_AW_Faygate_2	23	26.5	26.6	0.02	0%
ECO_AW_Faygate_3	33	25.5	25.6	0.02	0%
ECO_AW_Faygate_4	43	25.0	25.0	0.02	0%
ECO_AW_Faygate_5	53	24.7	24.7	0.02	0%
ECO_AW_Faygate_6	63	24.5	24.5	0.01	0%
ECO_AW_Faygate_7	73	24.3	24.3	0.01	0%
ECO_AW_Faygate_8	83	24.2	24.2	0.01	0%
ECO_AW_Faygate_9	93	24.1	24.1	0.01	0%
ECO_AW_Faygate_10	113	24.0	24.1	0.01	0%
ECO_AW_Faygate_11	123	24.0	24.0	0.01	0%
ECO_AW_Faygate_12	133	23.9	24.0	0.01	0%
ECO_AW_Faygate_13	143	23.9	23.9	0.01	0%
ECO_AW_Faygate_14	153	23.9	23.9	0.01	0%

Table A7.5.5: First Operational Year Assessment of Nitrogen Deposition at Ecological Receptors

Receptor	Distance to Road (m)	Dry Deposition (kg/N/ha/yr)		Change in N Deposition (kg N/ha/yr)	% Change Relative Lower Critical Load
		Scenario 2 2026 Do Minimum	Scenario 3 2026 Do Something		
ECO_AW_Faygate_15	163	23.9	23.9	0.01	0%
ECO_AW_Faygate_16	173	23.8	23.9	0.01	0%
ECO_AW_Faygate_17	183	23.8	23.8	0.01	0%
ECO_AW_Faygate_18	193	23.8	23.8	0.01	0%
ECO_AW_Faygate_19	203	23.8	23.8	0.01	0%
ECO_AW_Faygate_20	210	23.8	23.8	0.01	0%
ECO_AW_Hill_1	5	23.8	23.8	0.01	0%
ECO_AW_Hill_2	15	25.2	25.2	0.00	0%
ECO_AW_Hill_3	25	24.9	24.9	0.00	0%
ECO_AW_Hill_4	35	24.6	24.7	0.00	0%
ECO_AW_Hill_5	45	24.5	24.5	0.00	0%
ECO_AW_Hill_6	55	24.4	24.4	0.00	0%
ECO_AW_Hill_7	65	24.3	24.3	0.00	0%
ECO_AW_Hill_8	75	24.3	24.3	0.00	0%
ECO_AW_Hill_9	85	24.2	24.3	0.00	0%
ECO_AW_Hill_10	95	24.2	24.2	0.00	0%
ECO_AW_Hill_11	105	24.2	24.2	0.00	0%
ECO_AW_Hill_12	115	24.2	24.2	0.00	0%
ECO_AW_Hill_13	125	24.1	24.1	0.00	0%
ECO_AW_Hill_14	135	24.1	24.1	0.00	0%
ECO_AW_Hill_15	145	24.1	24.1	0.00	0%
ECO_AW_Hill_16	155	24.1	24.1	0.00	0%
ECO_AW_Hill_17	165	24.1	24.1	0.00	0%
ECO_AW_Punch_1	0	24.1	24.1	0.00	0%
ECO_AW_Punch_2	10	27.7	27.8	0.04	0%
ECO_AW_Punch_3	20	25.5	25.5	0.02	0%
ECO_AW_Punch_4	30	25.0	25.0	0.01	0%
ECO_AW_Punch_5	40	24.8	24.8	0.01	0%
ECO_AW_Punch_6	43	24.6	24.6	0.01	0%
ECO_AW_Rookfield_1	70	24.6	24.6	0.01	0%
ECO_AW_Rookfield_2	80	24.1	24.1	0.01	0%
ECO_AW_Rookfield_3	90	24.0	24.0	0.01	0%
ECO_AW_Rookfield_4	100	23.9	23.9	0.01	0%
ECO_AW_Rookfield_5	110	23.9	23.9	0.01	0%
ECO_AW_Rookfield_6	120	23.9	23.9	0.01	0%
ECO_AW_Rookfield_7	130	23.8	23.8	0.00	0%
ECO_AW_Rookfield_8	140	23.8	23.8	0.01	0%

Table A7.5.5: First Operational Year Assessment of Nitrogen Deposition at Ecological Receptors					
Receptor	Distance to Road (m)	Dry Deposition (kg/N/ha/yr)		Change in N Deposition (kg N/ha/yr)	% Change Relative Lower Critical Load
		Scenario 2 2026 Do Minimum	Scenario 3 2026 Do Something		
ECO_AW_Rookfield_9	150	23.8	23.8	0.01	0%
ECO_AW_Rookfield_10	160	23.7	23.8	0.00	0%
ECO_AW_Rookfield_11	170	23.7	23.7	0.00	0%
ECO_AW_Rookfield_12	180	23.7	23.7	0.00	0%
ECO_AW_Rookfield_13	190	23.7	23.7	0.01	0%
ECO_AW_Rookfield_14	196	23.7	23.7	0.00	0%
ECO_AW_Tilgate_1	5	23.7	23.7	0.00	0%
ECO_AW_Tilgate_2	15	26.6	26.7	0.09	1%
ECO_AW_Tilgate_3	25	25.6	25.6	0.06	1%
ECO_AW_Tilgate_4	35	25.1	25.2	0.04	0%
ECO_AW_Tilgate_5	45	24.9	24.9	0.03	0%
ECO_AW_Tilgate_6	55	24.7	24.8	0.03	0%
ECO_AW_Tilgate_7	65	24.6	24.7	0.02	0%
ECO_AW_Tilgate_8	75	24.6	24.6	0.02	0%
ECO_AW_Tilgate_9	85	24.5	24.5	0.02	0%
ECO_AW_Tilgate_10	95	24.5	24.5	0.01	0%
ECO_AW_Tilgate_11	105	24.4	24.4	0.01	0%
ECO_AW_Tilgate_12	115	24.4	24.4	0.01	0%
ECO_AW_Tilgate_13	125	24.4	24.4	0.01	0%
ECO_AW_Tilgate_14	135	24.3	24.4	0.01	0%
ECO_AW_Tilgate_15	145	24.3	24.3	0.01	0%
ECO_AW_Tilgate_16	155	24.3	24.3	0.01	0%
ECO_AW_Tilgate_17	165	24.3	24.3	0.01	0%
ECO_AW_Tilgate_18	175	24.3	24.3	0.01	0%
ECO_AW_Tilgate_19	185	24.3	24.3	0.01	0%
ECO_AW_Tilgate_20	195	24.3	24.3	0.01	0%
ECO_AW_Tilgate_21	200	24.3	24.3	0.01	0%
ECO_LNR_Broadfield_1	1	24.3	24.3	0.01	0%
ECO_LNR_Broadfield_2	11	25.9	26.0	0.07	1%
ECO_LNR_Broadfield_3	21	25.0	25.0	0.03	0%
ECO_LNR_Broadfield_4	31	24.7	24.7	0.02	0%
ECO_LNR_Broadfield_5	41	24.5	24.6	0.02	0%
ECO_LNR_Broadfield_6	51	24.5	24.5	0.01	0%
ECO_LNR_Broadfield_7	61	24.4	24.4	0.01	0%
ECO_LNR_Broadfield_8	71	24.4	24.4	0.01	0%
ECO_LNR_Broadfield_9	81	24.3	24.3	0.01	0%
ECO_LNR_Broadfield_10	91	24.3	24.3	0.01	0%

Table A7.5.5: First Operational Year Assessment of Nitrogen Deposition at Ecological Receptors

Receptor	Distance to Road (m)	Dry Deposition (kg/N/ha/yr)		Change in N Deposition (kg N/ha/yr)	% Change Relative Lower Critical Load
		Scenario 2 2026 Do Minimum	Scenario 3 2026 Do Something		
ECO_LNR_Broadfield_11	101	24.3	24.3	0.01	0%
ECO_LNR_Broadfield_12	111	24.3	24.3	0.01	0%
ECO_LNR_Broadfield_13	121	24.2	24.2	0.01	0%
ECO_LNR_Broadfield_14	131	24.2	24.2	0.01	0%
ECO_LNR_Broadfield_15	141	24.2	24.2	0.01	0%
ECO_LNR_Broadfield_16	151	24.2	24.2	0.01	0%
ECO_LNR_Broadfield_17	161	24.2	24.2	0.01	0%
ECO_LNR_Broadfield_18	171	24.2	24.2	0.01	0%
ECO_LNR_Broadfield_19	181	24.2	24.2	0.00	0%
ECO_LNR_Broadfield_20	191	24.2	24.2	0.01	0%
ECO_LNR_Broadfield_21	200	24.2	24.2	0.01	0%
ECO_LNR_WILL_1	4	24.2	24.2	0.00	0%
ECO_LNR_WILL_2	14	24.4	24.5	0.07	1%
ECO_LNR_WILL_3	24	24.2	24.3	0.04	0%
ECO_LNR_WILL_4	34	24.1	24.2	0.03	0%
ECO_LNR_WILL_5	44	24.1	24.1	0.02	0%
ECO_LNR_WILL_6	54	24.1	24.1	0.02	0%
ECO_LNR_WILL_7	64	24.1	24.1	0.02	0%
ECO_LNR_WILL_8	74	24.1	24.1	0.01	0%
ECO_LNR_WILL_9	84	24.1	24.1	0.01	0%
ECO_LNR_WILL_10	94	24.1	24.1	0.01	0%
ECO_LNR_WILL_11	104	24.1	24.1	0.01	0%
ECO_LNR_WILL_12	114	24.1	24.1	0.01	0%
ECO_LNR_WILL_13	124	24.0	24.1	0.01	0%
ECO_LNR_WILL_14	134	24.0	24.1	0.01	0%
ECO_LNR_WILL_15	144	24.0	24.1	0.01	0%
ECO_LNR_WILL_16	154	24.0	24.1	0.01	0%
ECO_LNR_WILL_17	164	24.0	24.0	0.01	0%
ECO_LNR_WILL_18	174	24.0	24.0	0.01	0%
ECO_LNR_WILL_19	184	24.0	24.0	0.01	0%
ECO_LNR_WILL_20	194	24.0	24.0	0.01	0%
ECO_LNR_WILL_21	200	24.0	24.0	0.01	0%
ECO_LWS_Buchan_1	14	24.0	24.0	0.01	0%
ECO_LWS_Buchan_2	24	24.8	24.8	0.00	0%
ECO_LWS_Buchan_3	34	25.4	25.4	0.00	0%
ECO_LWS_Buchan_4	44	25.1	25.1	0.00	0%
ECO_LWS_Buchan_5	54	25.0	25.0	0.00	0%

Table A7.5.5: First Operational Year Assessment of Nitrogen Deposition at Ecological Receptors

Receptor	Distance to Road (m)	Dry Deposition (kg/N/ha/yr)		Change in N Deposition (kg N/ha/yr)	% Change Relative Lower Critical Load
		Scenario 2 2026 Do Minimum	Scenario 3 2026 Do Something		
ECO_LWS_Buchan_6	64	24.9	24.9	0.00	0%
ECO_LWS_Buchan_7	74	24.8	24.8	0.00	0%
ECO_LWS_Buchan_8	84	24.8	24.7	-0.01	0%
ECO_LWS_Buchan_9	94	24.7	24.7	-0.01	0%
ECO_LWS_Buchan_10	104	24.7	24.7	-0.01	0%
ECO_LWS_Buchan_11	114	24.8	24.7	-0.01	0%
ECO_LWS_Buchan_12	124	24.8	24.8	-0.01	0%
ECO_LWS_Buchan_13	134	24.9	24.9	-0.01	0%
ECO_LWS_Buchan_14	144	25.0	25.0	-0.02	0%
ECO_LWS_Buchan_15	154	25.2	25.2	-0.02	0%
ECO_LWS_Ewhurst_0	2	25.5	25.5	-0.03	0%
ECO_LWS_Ewhurst_1	12	29.5	29.5	0.00	0%
ECO_LWS_Ewhurst_2	22	27.2	27.2	0.00	0%
ECO_LWS_Ewhurst_3	32	26.4	26.4	0.00	0%
ECO_LWS_Ewhurst_4	42	25.9	25.9	0.00	0%
ECO_LWS_Ewhurst_5	52	25.6	25.6	0.00	0%
ECO_LWS_Ewhurst_6	62	25.3	25.3	0.00	0%
ECO_LWS_Ewhurst_7	72	25.2	25.2	0.00	0%
ECO_LWS_Ewhurst_8	82	25.0	25.0	0.00	0%
ECO_LWS_Ewhurst_9	92	24.9	24.9	0.00	0%
ECO_LWS_Ewhurst_10	102	24.9	24.9	0.00	0%
ECO_LWS_Ewhurst_11	112	24.8	24.8	0.00	0%
ECO_LWS_Ewhurst_12	122	24.7	24.7	0.01	0%
ECO_LWS_Ewhurst_13	132	24.7	24.7	0.00	0%
ECO_LWS_Ewhurst_14	142	24.6	24.6	0.00	0%
ECO_LWS_Ewhurst_15	152	24.6	24.6	0.00	0%
ECO_LWS_Ewhurst_16	162	24.6	24.6	0.01	0%
ECO_LWS_Ewhurst_17	172	24.5	24.5	0.01	0%
ECO_LWS_Ewhurst_18	182	24.5	24.5	0.00	0%
ECO_LWS_Ewhurst_19	192	24.5	24.5	0.00	0%
ECO_LWS_Ewhurst_20	202	24.5	24.5	0.00	0%
ECO_SSSI_Buchan_1	12	24.4	24.4	0.00	0%
ECO_SSSI_Buchan_2	22	25.6	25.6	0.00	0%
ECO_SSSI_Buchan_3	32	25.1	25.1	0.00	0%
ECO_SSSI_Buchan_4	42	24.8	24.8	0.00	0%
ECO_SSSI_Buchan_5	52	24.6	24.6	0.00	0%
ECO_SSSI_Buchan_6	62	24.5	24.5	0.00	0%

Table A7.5.5: First Operational Year Assessment of Nitrogen Deposition at Ecological Receptors

Receptor	Distance to Road (m)	Dry Deposition (kg/N/ha/yr)		Change in N Deposition (kg N/ha/yr)	% Change Relative Lower Critical Load
		Scenario 2 2026 Do Minimum	Scenario 3 2026 Do Something		
ECO_SSSI_Buchan_7	72	24.5	24.5	0.00	0%
ECO_SSSI_Buchan_8	82	24.4	24.4	0.00	0%
ECO_SSSI_Buchan_9	92	24.4	24.4	0.00	0%
ECO_SSSI_Buchan_10	102	24.3	24.3	0.00	0%
ECO_SSSI_Buchan_11	112	24.3	24.3	0.00	0%
ECO_SSSI_Buchan_12	122	24.3	24.3	0.00	0%
ECO_SSSI_Buchan_13	132	24.3	24.3	0.00	0%
ECO_SSSI_Buchan_14	142	24.3	24.3	-0.01	0%
ECO_SSSI_Buchan_15	152	24.3	24.3	-0.01	0%
ECO_SSSI_Buchan_16	162	24.3	24.3	-0.01	0%
ECO_SSSI_Buchan_17	172	24.3	24.3	-0.01	0%
ECO_SSSI_Buchan_18	192	24.4	24.4	-0.01	0%
ECO_SSSI_Buchan_19	202	24.4	24.4	-0.01	0%
HorshamCorn_01	0	24.5	24.4	-0.01	0%
HorshamCorn_02	10	26.7	26.9	0.14	**1%**
HorshamCorn_03	20	25.3	25.4	0.07	1%
HorshamCorn_04	30	24.9	24.9	0.05	1%
HorshamCorn_05	40	24.6	24.7	0.03	0%
HorshamCorn_06	50	24.5	24.5	0.03	0%
HorshamCorn_07	60	24.4	24.4	0.03	0%
HorshamCorn_08	70	24.3	24.4	0.02	0%
HorshamCorn_09	80	24.3	24.3	0.02	0%
HorshamCorn_10	90	24.3	24.3	0.02	0%
HorshamCorn_11	100	24.2	24.2	0.01	0%
HorshamCorn_12	110	24.2	24.2	0.01	0%
HorshamCorn_13	120	24.2	24.2	0.01	0%
HorshamCorn_14	130	24.2	24.2	0.01	0%
HorshamCorn_15	140	24.1	24.2	0.01	0%
HorshamCorn_16	150	24.1	24.1	0.01	0%
HorshamCorn_17	160	24.1	24.1	0.01	0%
HorshamCorn_18	170	24.1	24.1	0.01	0%
HorshamCorn_19	180	24.1	24.1	0.01	0%
HorshamCorn_20	190	24.1	24.1	0.01	0%
HorshamCorn_21	200	24.1	24.1	0.01	0%

Completed Development Year, 2041

Human Health

Table A7.5.6: Completed Development Annual Mean NO_2 at Human Health Receptors (µg/m^3)

Receptor	Scenario 4 2041 Do Minimum	Scenario 5 2041 Do Something	Development Traffic Contribution	% Change in Concentration Relative NAQO	Impact Descriptor
R1	8.5	8.4	-0.15	-0.37	Negligible
R2	9.6	9.0	-0.56	-1.41	Negligible
R3	10.0	9.3	-0.71	-1.78	Negligible
R4	8.7	8.5	-0.22	-0.54	Negligible
R5	16.3	16.6	0.27	0.67	Negligible
R6	13.3	13.4	0.14	0.35	Negligible
R7	13.5	13.6	0.10	0.25	Negligible
R8	14.4	14.5	0.17	0.42	Negligible
R9	13.5	13.6	0.12	0.30	Negligible
R10	13.3	13.4	0.11	0.27	Negligible
R11	13.4	13.5	0.11	0.27	Negligible
R12	18.5	18.7	0.15	0.37	Negligible
R13	20.5	20.9	0.39	0.96	Negligible
R14	19.2	19.5	0.30	0.74	Negligible
R15	17.5	17.7	0.18	0.45	Negligible
R16	13.7	13.9	0.23	0.57	Negligible
R17	19.2	19.3	0.13	0.32	Negligible
R18	17.4	17.5	0.06	0.15	Negligible
R19	21.0	21.2	0.24	0.59	Negligible
R20	19.6	19.8	0.11	0.27	Negligible
R21	18.2	18.3	0.08	0.20	Negligible
R22	15.9	16.0	0.05	0.12	Negligible
R23	14.9	14.9	0.03	0.07	Negligible
R24	15.8	15.9	0.04	0.10	Negligible
R25	14.7	14.7	0.03	0.07	Negligible
R26	9.6	10.0	0.44	1.09	Negligible
R27	10.9	11.6	0.73	1.83	Negligible
R28	9.5	9.9	0.37	0.92	Negligible
R29	9.7	10.1	0.38	0.94	Negligible
R30	10.4	10.5	0.12	0.30	Negligible
R31	13.0	13.2	0.21	0.52	Negligible
R32	11.5	11.7	0.16	0.40	Negligible
R33	9.9	10.0	0.05	0.12	Negligible
R34	10.1	10.2	0.09	0.22	Negligible
R35	9.6	9.6	0.04	0.10	Negligible
R36	9.8	9.9	0.07	0.17	Negligible
R37	12.3	12.4	0.15	0.37	Negligible

Table A7.5.6: Completed Development Annual Mean NO_2 at Human Health Receptors ($\mu g/m^3$)					
Receptor	Scenario 4 2041 Do Minimum	Scenario 5 2041 Do Something	Development Traffic Contribution	% Change in Concentration Relative NAQO	Impact Descriptor
R38	11.5	11.6	0.07	0.17	Negligible
R39	11.4	11.4	0.05	0.12	Negligible
R40	11.9	12.0	0.07	0.17	Negligible
R41	10.7	10.8	0.08	0.20	Negligible
R42	11.3	11.4	0.09	0.22	Negligible
R43	15.7	15.9	0.23	0.57	Negligible
R44	12.9	13.0	0.11	0.27	Negligible
R45	14.4	14.5	0.13	0.32	Negligible
R46	11.0	11.1	0.07	0.17	Negligible
R47	13.0	13.1	0.18	0.45	Negligible
R48	12.8	13.0	0.19	0.47	Negligible
R49	11.1	11.2	0.13	0.32	Negligible
R50	13.1	13.2	0.14	0.35	Negligible
R51	11.6	11.9	0.34	0.84	Negligible
R52	10.7	10.9	0.17	0.42	Negligible
R53	12.0	12.3	0.30	0.74	Negligible
R54	9.7	9.9	0.24	0.59	Negligible
R55	10.9	11.7	0.75	1.88	Negligible
R56	9.8	9.9	0.07	0.17	Negligible
R57	12.5	12.8	0.35	0.87	Negligible
R58	16.7	17.2	0.50	1.26	Negligible
R59	17.2	17.8	0.52	1.31	Negligible
R60	14.9	15.0	0.09	0.22	Negligible
R61	14.8	14.9	0.09	0.22	Negligible
R62	12.4	12.5	0.05	0.12	Negligible
R63	12.1	12.2	0.15	0.37	Negligible
R64	10.7	11.0	0.22	0.54	Negligible
R65	11.3	11.6	0.30	0.74	Negligible
R66	11.2	11.5	0.29	0.72	Negligible
R67	8.6	8.7	0.08	0.20	Negligible
R68	14.9	15.1	0.13	0.32	Negligible
R69	13.8	14.1	0.34	0.84	Negligible
R70	14.3	14.4	0.05	0.12	Negligible
R71	12.7	12.9	0.20	0.49	Negligible
R72	13.2	13.5	0.31	0.77	Negligible
R73	16.1	16.4	0.27	0.67	Negligible
Objective	40		-		

Table A7.5.7: Completed Development Traffic Annual Mean PM_{10} at Existing Receptors ($\mu g/m^3$)					
Receptor	Scenario 4 2041 Do Minimum	Scenario 5 2041 Do Something	Development Traffic Contribution	% Change in Concentration Relative NAQO	Impact Descriptor
R1	10.6	10.5	-0.10	-0.24	Negligible
R2	11.3	10.9	-0.37	-0.93	Negligible
R3	11.5	11.0	-0.46	-1.15	Negligible
R4	10.7	10.5	-0.15	-0.38	Negligible
R5	13.8	13.9	0.15	0.37	Negligible
R6	12.2	12.3	0.08	0.19	Negligible
R7	11.7	11.7	0.05	0.12	Negligible
R8	11.8	11.8	0.06	0.15	Negligible
R9	11.5	11.5	0.04	0.11	Negligible
R10	11.3	11.3	0.03	0.08	Negligible
R11	11.3	11.3	0.03	0.08	Negligible
R12	12.9	13.0	0.08	0.20	Negligible
R13	14.2	14.5	0.24	0.59	Negligible
R14	13.6	13.8	0.19	0.46	Negligible
R15	12.7	12.8	0.11	0.28	Negligible
R16	12.0	12.1	0.14	0.35	Negligible
R17	13.7	13.8	0.08	0.20	Negligible
R18	12.6	12.6	0.04	0.10	Negligible
R19	14.7	14.8	0.15	0.38	Negligible
R20	13.1	13.2	0.05	0.12	Negligible
R21	12.6	12.7	0.03	0.07	Negligible
R22	12.3	12.3	0.02	0.06	Negligible
R23	11.8	11.8	0.02	0.04	Negligible
R24	12.4	12.5	0.03	0.07	Negligible
R25	11.8	11.8	0.01	0.04	Negligible
R26	10.2	10.5	0.28	0.70	Negligible
R27	11.0	11.5	0.49	1.23	Negligible
R28	10.2	10.4	0.24	0.61	Negligible
R29	10.3	10.6	0.24	0.61	Negligible
R30	11.3	11.4	0.07	0.17	Negligible
R31	14.3	14.4	0.13	0.33	Negligible
R32	13.5	13.6	0.11	0.26	Negligible
R33	11.2	11.2	0.03	0.09	Negligible
R34	11.3	11.4	0.06	0.15	Negligible
R35	11.0	11.0	0.03	0.07	Negligible
R36	11.1	11.2	0.04	0.11	Negligible
R37	12.0	12.1	0.11	0.26	Negligible
R38	11.4	11.5	0.04	0.11	Negligible

Table A7.5.7: Completed Development Traffic Annual Mean PM_{10} at Existing Receptors ($\mu g/m^3$)					
Receptor	Scenario 4 2041 Do Minimum	Scenario 5 2041 Do Something	Development Traffic Contribution	% Change in Concentration Relative NAQO	Impact Descriptor
R39	11.4	11.4	0.03	0.08	Negligible
R40	11.7	11.7	0.05	0.12	Negligible
R41	11.6	11.7	0.05	0.12	Negligible
R42	12.0	12.0	0.05	0.14	Negligible
R43	14.2	14.4	0.15	0.37	Negligible
R44	13.2	13.2	0.07	0.17	Negligible
R45	13.8	13.8	0.07	0.16	Negligible
R46	12.3	12.4	0.04	0.11	Negligible
R47	12.6	12.6	0.05	0.12	Negligible
R48	12.5	12.6	0.05	0.12	Negligible
R49	11.6	11.6	0.03	0.08	Negligible
R50	12.3	12.4	0.11	0.27	Negligible
R51	12.0	12.3	0.26	0.66	Negligible
R52	11.4	11.6	0.13	0.32	Negligible
R53	12.3	12.6	0.24	0.60	Negligible
R54	10.3	10.5	0.17	0.42	Negligible
R55	11.2	11.7	0.57	1.41	Negligible
R56	10.9	11.0	0.04	0.09	Negligible
R57	13.4	13.7	0.25	0.64	Negligible
R58	15.8	16.1	0.37	0.93	Negligible
R59	11.8	11.9	0.14	0.35	Negligible
R60	11.7	11.7	0.04	0.11	Negligible
R61	11.2	11.2	0.02	0.06	Negligible
R62	11.8	11.8	0.03	0.08	Negligible
R63	13.5	13.5	0.08	0.19	Negligible
R64	12.2	12.3	0.15	0.38	Negligible
R65	12.9	13.1	0.22	0.56	Negligible
R66	13.1	13.4	0.21	0.54	Negligible
R67	12.0	12.0	0.02	0.05	Negligible
R68	13.4	13.4	0.05	0.13	Negligible
R69	13.0	13.2	0.22	0.54	Negligible
R70	12.8	12.8	0.01	0.03	Negligible
R71	12.3	12.4	0.12	0.30	Negligible
R72	12.6	12.8	0.19	0.48	Negligible
R73	14.0	14.1	0.17	0.41	Negligible
Objective	40		-		

Table A7.5.8: Completed Development Traffic Annual Mean $PM_{2.5}$ at Existing Receptors ($\mu g/m^3$)					
Receptor	Scenario 4 2041 Do Minimum	Scenario 5 2041 Do Something	Development Traffic Contribution	% Change in Concentration Relative NAQO	Impact Descriptor
R1	6.5	6.5	-0.05	-0.25	Negligible
R2	6.9	6.7	-0.20	-0.98	Negligible
R3	7.0	6.8	-0.24	-1.21	Negligible
R4	6.6	6.5	-0.08	-0.40	Negligible
R5	8.2	8.3	0.08	0.40	Negligible
R6	7.4	7.4	0.04	0.20	Negligible
R7	7.1	7.2	0.03	0.13	Negligible
R8	7.2	7.3	0.03	0.17	Negligible
R9	7.1	7.1	0.02	0.12	Negligible
R10	7.0	7.0	0.02	0.10	Negligible
R11	7.0	7.0	0.02	0.10	Negligible
R12	7.9	7.9	0.04	0.22	Negligible
R13	8.6	8.7	0.13	0.64	Negligible
R14	8.3	8.4	0.10	0.50	Negligible
R15	7.8	7.8	0.06	0.31	Negligible
R16	7.3	7.4	0.08	0.38	Negligible
R17	8.3	8.4	0.04	0.22	Negligible
R18	7.7	7.7	0.02	0.11	Negligible
R19	8.5	8.6	0.08	0.40	Negligible
R20	7.8	7.8	0.03	0.14	Negligible
R21	7.4	7.4	0.02	0.08	Negligible
R22	7.1	7.2	0.01	0.07	Negligible
R23	6.9	6.9	0.01	0.04	Negligible
R24	7.2	7.2	0.02	0.08	Negligible
R25	6.8	6.9	0.01	0.04	Negligible
R26	6.2	6.4	0.15	0.75	Negligible
R27	6.6	6.9	0.26	1.30	Negligible
R28	6.2	6.3	0.13	0.65	Negligible
R29	6.3	6.4	0.13	0.65	Negligible
R30	6.9	6.9	0.04	0.18	Negligible
R31	7.7	7.7	0.07	0.35	Negligible
R32	7.2	7.3	0.06	0.28	Negligible
R33	6.9	6.9	0.02	0.09	Negligible
R34	6.9	7.0	0.03	0.16	Negligible
R35	6.7	6.8	0.02	0.08	Negligible
R36	6.8	6.8	0.02	0.12	Negligible
R37	7.2	7.3	0.06	0.28	Negligible
R38	6.9	6.9	0.02	0.12	Negligible

Table A7.5.8: Completed Development Traffic Annual Mean $PM_{2.5}$ at Existing Receptors ($\mu g/m^3$)					
Receptor	Scenario 4 2041 Do Minimum	Scenario 5 2041 Do Something	Development Traffic Contribution	% Change in Concentration Relative NAQO	Impact Descriptor
R39	6.9	6.9	0.02	0.09	Negligible
R40	7.0	7.1	0.03	0.13	Negligible
R41	7.1	7.1	0.02	0.12	Negligible
R42	7.3	7.3	0.03	0.14	Negligible
R43	8.4	8.5	0.08	0.40	Negligible
R44	7.7	7.7	0.04	0.18	Negligible
R45	7.9	8.0	0.04	0.18	Negligible
R46	7.1	7.1	0.02	0.11	Negligible
R47	7.0	7.0	0.03	0.15	Negligible
R48	7.0	7.0	0.03	0.14	Negligible
R49	6.6	6.7	0.02	0.10	Negligible
R50	7.4	7.5	0.06	0.28	Negligible
R51	7.3	7.4	0.14	0.69	Negligible
R52	7.0	7.0	0.07	0.34	Negligible
R53	7.4	7.6	0.13	0.64	Negligible
R54	6.3	6.4	0.09	0.44	Negligible
R55	6.7	7.0	0.30	1.49	Negligible
R56	6.7	6.7	0.02	0.10	Negligible
R57	7.8	7.9	0.13	0.67	Negligible
R58	9.3	9.5	0.19	0.97	Negligible
R59	6.9	7.0	0.08	0.42	Negligible
R60	7.0	7.0	0.03	0.13	Negligible
R61	6.5	6.6	0.01	0.07	Negligible
R62	7.2	7.2	0.02	0.09	Negligible
R63	7.2	7.3	0.04	0.20	Negligible
R64	7.5	7.5	0.08	0.39	Negligible
R65	7.8	8.0	0.12	0.59	Negligible
R66	7.6	7.7	0.11	0.57	Negligible
R67	6.6	6.7	0.01	0.06	Negligible
R68	7.5	7.5	0.03	0.14	Negligible
R69	7.8	7.9	0.11	0.57	Negligible
R70	7.3	7.3	0.01	0.04	Negligible
R71	7.4	7.5	0.06	0.32	Negligible
R72	7.6	7.7	0.10	0.50	Negligible
R73	8.3	8.4	0.09	0.44	Negligible
Objective	20		-		

Ecological

Table A7.5.9: Completed development Assessment of Nitrogen Deposition at Ecological Receptors

Receptor	Distance to Road (m)	Dry Deposition (kg/N/ha/yr)		Change in N Deposition (kg N/ha/yr)	% Change Relative Lower Critical Load
		Scenario 4 2041 Do Minimum	Scenario 5 2041 Do Something		
ECO_AW_Faygate_1	13	25.4	25.4	0.04	0%
ECO_AW_Faygate_2	23	24.8	24.8	0.03	0%
ECO_AW_Faygate_3	33	24.4	24.4	0.03	0%
ECO_AW_Faygate_4	43	24.2	24.2	0.02	0%
ECO_AW_Faygate_5	53	24.1	24.1	0.02	0%
ECO_AW_Faygate_6	63	24.0	24.0	0.02	0%
ECO_AW_Faygate_7	73	23.9	23.9	0.01	0%
ECO_AW_Faygate_8	83	23.9	23.9	0.01	0%
ECO_AW_Faygate_9	93	23.8	23.8	0.01	0%
ECO_AW_Faygate_10	113	23.8	23.8	0.01	0%
ECO_AW_Faygate_11	123	23.8	23.8	0.01	0%
ECO_AW_Faygate_12	133	23.7	23.7	0.01	0%
ECO_AW_Faygate_13	143	23.7	23.7	0.01	0%
ECO_AW_Faygate_14	153	23.7	23.7	0.01	0%
ECO_AW_Faygate_15	163	23.7	23.7	0.01	0%
ECO_AW_Faygate_16	173	23.7	23.7	0.01	0%
ECO_AW_Faygate_17	183	23.7	23.7	0.01	0%
ECO_AW_Faygate_18	193	23.7	23.7	0.01	0%
ECO_AW_Faygate_19	203	23.7	23.7	0.01	0%
ECO_AW_Faygate_20	210	23.7	23.7	0.01	0%
ECO_AW_Hill_1	5	24.7	24.7	0.02	0%
ECO_AW_Hill_2	15	24.5	24.5	0.01	0%
ECO_AW_Hill_3	25	24.3	24.4	0.01	0%
ECO_AW_Hill_4	35	24.3	24.3	0.01	0%
ECO_AW_Hill_5	45	24.2	24.2	0.01	0%
ECO_AW_Hill_6	55	24.1	24.2	0.01	0%
ECO_AW_Hill_7	65	24.1	24.1	0.01	0%
ECO_AW_Hill_8	75	24.1	24.1	0.01	0%
ECO_AW_Hill_9	85	24.1	24.1	0.01	0%
ECO_AW_Hill_10	95	24.0	24.1	0.01	0%
ECO_AW_Hill_11	105	24.0	24.0	0.01	0%
ECO_AW_Hill_12	115	24.0	24.0	0.01	0%
ECO_AW_Hill_13	125	24.0	24.0	0.00	0%
ECO_AW_Hill_14	135	24.0	24.0	0.01	0%
ECO_AW_Hill_15	145	24.0	24.0	0.00	0%
ECO_AW_Hill_16	155	24.0	24.0	0.00	0%

Table A7.5.9: Completed development Assessment of Nitrogen Deposition at Ecological Receptors

Receptor	Distance to Road (m)	Dry Deposition (kg/N/ha/yr)		Change in N Deposition (kg N/ha/yr)	% Change Relative Lower Critical Load
		Scenario 4 2041 Do Minimum	Scenario 5 2041 Do Something		
ECO_AW_Hill_17	165	24.0	24.0	0.00	0%
ECO_AW_Punch_1	0	26.4	26.7	0.23	**2%**
ECO_AW_Punch_2	10	25.0	25.1	0.09	1%
ECO_AW_Punch_3	20	24.6	24.7	0.06	1%
ECO_AW_Punch_4	30	24.5	24.5	0.04	0%
ECO_AW_Punch_5	40	24.4	24.4	0.03	0%
ECO_AW_Punch_6	43	24.4	24.4	0.03	0%
ECO_AW_Rookfield_1	70	23.8	23.8	0.01	0%
ECO_AW_Rookfield_2	80	23.8	23.8	0.01	0%
ECO_AW_Rookfield_3	90	23.7	23.8	0.01	0%
ECO_AW_Rookfield_4	100	23.7	23.7	0.01	0%
ECO_AW_Rookfield_5	110	23.7	23.7	0.01	0%
ECO_AW_Rookfield_6	120	23.7	23.7	0.01	0%
ECO_AW_Rookfield_7	130	23.7	23.7	0.01	0%
ECO_AW_Rookfield_8	140	23.6	23.7	0.01	0%
ECO_AW_Rookfield_9	150	23.6	23.6	0.01	0%
ECO_AW_Rookfield_10	160	23.6	23.6	0.01	0%
ECO_AW_Rookfield_11	170	23.6	23.6	0.01	0%
ECO_AW_Rookfield_12	180	23.6	23.6	0.01	0%
ECO_AW_Rookfield_13	190	23.6	23.6	0.01	0%
ECO_AW_Rookfield_14	196	23.6	23.6	0.01	0%
ECO_AW_Tilgate_1	5	25.6	25.7	0.12	**1%**
ECO_AW_Tilgate_2	15	25.0	25.0	0.07	1%
ECO_AW_Tilgate_3	25	24.7	24.8	0.05	1%
ECO_AW_Tilgate_4	35	24.6	24.6	0.04	0%
ECO_AW_Tilgate_5	45	24.5	24.5	0.03	0%
ECO_AW_Tilgate_6	55	24.4	24.4	0.03	0%
ECO_AW_Tilgate_7	65	24.4	24.4	0.03	0%
ECO_AW_Tilgate_8	75	24.3	24.3	0.02	0%
ECO_AW_Tilgate_9	85	24.3	24.3	0.02	0%
ECO_AW_Tilgate_10	95	24.3	24.3	0.02	0%
ECO_AW_Tilgate_11	105	24.3	24.3	0.02	0%
ECO_AW_Tilgate_12	115	24.2	24.3	0.02	0%
ECO_AW_Tilgate_13	125	24.2	24.2	0.02	0%
ECO_AW_Tilgate_14	135	24.2	24.2	0.01	0%
ECO_AW_Tilgate_15	145	24.2	24.2	0.01	0%
ECO_AW_Tilgate_16	155	24.2	24.2	0.01	0%

Table A7.5.9: Completed development Assessment of Nitrogen Deposition at Ecological Receptors					
Receptor	Distance to Road (m)	Dry Deposition (kg/N/ha/yr)		Change in N Deposition (kg N/ha/yr)	% Change Relative Lower Critical Load
		Scenario 4 2041 Do Minimum	Scenario 5 2041 Do Something		
ECO_AW_Tilgate_17	165	24.2	24.2	0.01	0%
ECO_AW_Tilgate_18	175	24.2	24.2	0.01	0%
ECO_AW_Tilgate_19	185	24.2	24.2	0.01	0%
ECO_AW_Tilgate_20	195	24.2	24.2	0.01	0%
ECO_AW_Tilgate_21	200	24.2	24.2	0.01	0%
ECO_LNR_Broadfield_1	1	25.2	25.3	0.09	1%
ECO_LNR_Broadfield_2	11	24.6	24.7	0.05	0%
ECO_LNR_Broadfield_3	21	24.4	24.5	0.03	0%
ECO_LNR_Broadfield_4	31	24.4	24.4	0.03	0%
ECO_LNR_Broadfield_5	41	24.3	24.3	0.02	0%
ECO_LNR_Broadfield_6	51	24.3	24.3	0.01	0%
ECO_LNR_Broadfield_7	61	24.2	24.2	0.01	0%
ECO_LNR_Broadfield_8	71	24.2	24.2	0.01	0%
ECO_LNR_Broadfield_9	81	24.2	24.2	0.01	0%
ECO_LNR_Broadfield_10	91	24.2	24.2	0.01	0%
ECO_LNR_Broadfield_11	101	24.2	24.2	0.01	0%
ECO_LNR_Broadfield_12	111	24.2	24.2	0.01	0%
ECO_LNR_Broadfield_13	121	24.2	24.2	0.01	0%
ECO_LNR_Broadfield_14	131	24.1	24.2	0.01	0%
ECO_LNR_Broadfield_15	141	24.1	24.1	0.01	0%
ECO_LNR_Broadfield_16	151	24.1	24.1	0.01	0%
ECO_LNR_Broadfield_17	161	24.1	24.1	0.01	0%
ECO_LNR_Broadfield_18	171	24.1	24.1	0.01	0%
ECO_LNR_Broadfield_19	181	24.1	24.1	0.01	0%
ECO_LNR_Broadfield_20	191	24.1	24.1	0.01	0%
ECO_LNR_Broadfield_21	200	24.1	24.1	0.01	0%
ECO_LNR_WILL_1	4	24.3	24.5	0.15	1%
ECO_LNR_WILL_2	14	24.2	24.2	0.08	1%
ECO_LNR_WILL_3	24	24.1	24.2	0.06	1%
ECO_LNR_WILL_4	34	24.1	24.1	0.05	0%
ECO_LNR_WILL_5	44	24.1	24.1	0.04	0%
ECO_LNR_WILL_6	54	24.1	24.1	0.03	0%
ECO_LNR_WILL_7	64	24.1	24.1	0.03	0%
ECO_LNR_WILL_8	74	24.0	24.1	0.03	0%
ECO_LNR_WILL_9	84	24.0	24.1	0.03	0%
ECO_LNR_WILL_10	94	24.0	24.1	0.02	0%
ECO_LNR_WILL_11	104	24.0	24.1	0.02	0%

Table A7.5.9: Completed development Assessment of Nitrogen Deposition at Ecological Receptors					
Receptor	Distance to Road (m)	Dry Deposition (kg/N/ha/yr)		Change in N Deposition (kg N/ha/yr)	% Change Relative Lower Critical Load
		Scenario 4 2041 Do Minimum	Scenario 5 2041 Do Something		
ECO_LNR_WILL_12	114	24.0	24.1	0.02	0%
ECO_LNR_WILL_13	124	24.0	24.1	0.02	0%
ECO_LNR_WILL_14	134	24.0	24.1	0.02	0%
ECO_LNR_WILL_15	144	24.0	24.0	0.02	0%
ECO_LNR_WILL_16	154	24.0	24.0	0.02	0%
ECO_LNR_WILL_17	164	24.0	24.0	0.02	0%
ECO_LNR_WILL_18	174	24.0	24.0	0.02	0%
ECO_LNR_WILL_19	184	24.0	24.0	0.02	0%
ECO_LNR_WILL_20	194	24.0	24.0	0.01	0%
ECO_LNR_WILL_21	200	24.0	24.0	0.02	0%
ECO_LWS_Buchan_1	14	24.5	24.5	0.01	0%
ECO_LWS_Buchan_2	24	24.8	24.8	0.02	0%
ECO_LWS_Buchan_3	34	24.7	24.7	0.02	0%
ECO_LWS_Buchan_4	44	24.5	24.6	0.02	0%
ECO_LWS_Buchan_5	54	24.5	24.5	0.02	0%
ECO_LWS_Buchan_6	64	24.4	24.5	0.02	0%
ECO_LWS_Buchan_7	74	24.4	24.4	0.01	0%
ECO_LWS_Buchan_8	84	24.4	24.4	0.02	0%
ECO_LWS_Buchan_9	94	24.4	24.4	0.02	0%
ECO_LWS_Buchan_10	104	24.4	24.4	0.02	0%
ECO_LWS_Buchan_11	114	24.4	24.5	0.02	0%
ECO_LWS_Buchan_12	124	24.5	24.5	0.02	0%
ECO_LWS_Buchan_13	134	24.6	24.6	0.03	0%
ECO_LWS_Buchan_14	144	24.7	24.7	0.03	0%
ECO_LWS_Buchan_15	154	24.9	25.0	0.04	0%
ECO_LWS_Ewhurst_0	2	27.6	27.6	0.04	0%
ECO_LWS_Ewhurst_1	12	26.0	26.1	0.03	0%
ECO_LWS_Ewhurst_2	22	25.5	25.5	0.02	0%
ECO_LWS_Ewhurst_3	32	25.2	25.2	0.02	0%
ECO_LWS_Ewhurst_4	42	25.0	25.0	0.02	0%
ECO_LWS_Ewhurst_5	52	24.8	24.9	0.02	0%
ECO_LWS_Ewhurst_6	62	24.7	24.8	0.01	0%
ECO_LWS_Ewhurst_7	72	24.7	24.7	0.02	0%
ECO_LWS_Ewhurst_8	82	24.6	24.6	0.01	0%
ECO_LWS_Ewhurst_9	92	24.5	24.6	0.01	0%
ECO_LWS_Ewhurst_10	102	24.5	24.5	0.01	0%
ECO_LWS_Ewhurst_11	112	24.5	24.5	0.01	0%

Table A7.5.9: Completed development Assessment of Nitrogen Deposition at Ecological Receptors					
Receptor	Distance to Road (m)	Dry Deposition (kg/N/ha/yr)		Change in N Deposition (kg N/ha/yr)	% Change Relative Lower Critical Load
		Scenario 4 2041 Do Minimum	Scenario 5 2041 Do Something		
ECO_LWS_Ewhurst_12	122	24.4	24.4	0.01	0%
ECO_LWS_Ewhurst_13	132	24.4	24.4	0.01	0%
ECO_LWS_Ewhurst_14	142	24.4	24.4	0.01	0%
ECO_LWS_Ewhurst_15	152	24.4	24.4	0.01	0%
ECO_LWS_Ewhurst_16	162	24.3	24.4	0.01	0%
ECO_LWS_Ewhurst_17	172	24.3	24.3	0.01	0%
ECO_LWS_Ewhurst_18	182	24.3	24.3	0.01	0%
ECO_LWS_Ewhurst_19	192	24.3	24.3	0.01	0%
ECO_LWS_Ewhurst_20	202	24.3	24.3	0.01	0%
ECO_SSSI_Buchan_1	12	24.9	25.0	0.03	0%
ECO_SSSI_Buchan_2	22	24.6	24.6	0.02	0%
ECO_SSSI_Buchan_3	32	24.4	24.4	0.02	0%
ECO_SSSI_Buchan_4	42	24.3	24.3	0.01	0%
ECO_SSSI_Buchan_5	52	24.3	24.3	0.01	0%
ECO_SSSI_Buchan_6	62	24.2	24.2	0.01	0%
ECO_SSSI_Buchan_7	72	24.2	24.2	0.01	0%
ECO_SSSI_Buchan_8	82	24.1	24.2	0.01	0%
ECO_SSSI_Buchan_9	92	24.1	24.1	0.01	0%
ECO_SSSI_Buchan_10	102	24.1	24.1	0.01	0%
ECO_SSSI_Buchan_11	112	24.1	24.1	0.01	0%
ECO_SSSI_Buchan_12	122	24.1	24.1	0.01	0%
ECO_SSSI_Buchan_13	132	24.1	24.1	0.01	0%
ECO_SSSI_Buchan_14	142	24.1	24.1	0.01	0%
ECO_SSSI_Buchan_15	152	24.1	24.1	0.01	0%
ECO_SSSI_Buchan_16	162	24.1	24.1	0.01	0%
ECO_SSSI_Buchan_17	172	24.1	24.2	0.01	0%
ECO_SSSI_Buchan_18	192	24.2	24.2	0.01	0%
ECO_SSSI_Buchan_19	202	24.2	24.2	0.02	0%
HorshamCorn_01	0	25.7	25.8	0.12	**1%**
HorshamCorn_02	10	24.8	24.9	0.06	1%
HorshamCorn_03	20	24.5	24.5	0.04	0%
HorshamCorn_04	30	24.4	24.4	0.03	0%
HorshamCorn_05	40	24.3	24.3	0.03	0%
HorshamCorn_06	50	24.2	24.2	0.02	0%
HorshamCorn_07	60	24.2	24.2	0.02	0%
HorshamCorn_08	70	24.1	24.2	0.02	0%
HorshamCorn_09	80	24.1	24.1	0.01	0%

Table A7.5.9: Completed development Assessment of Nitrogen Deposition at Ecological Receptors

Receptor	Distance to Road (m)	Dry Deposition (kg/N/ha/yr)		Change in N Deposition (kg N/ha/yr)	% Change Relative Lower Critical Load
		Scenario 4 2041 Do Minimum	Scenario 5 2041 Do Something		
HorshamCorn_10	90	24.1	24.1	0.01	0%
HorshamCorn_11	100	24.1	24.1	0.01	0%
HorshamCorn_12	110	24.1	24.1	0.01	0%
HorshamCorn_13	120	24.1	24.1	0.01	0%
HorshamCorn_14	130	24.1	24.1	0.01	0%
HorshamCorn_15	140	24.0	24.1	0.01	0%
HorshamCorn_16	150	24.0	24.0	0.01	0%
HorshamCorn_17	160	24.0	24.0	0.01	0%
HorshamCorn_18	170	24.0	24.0	0.01	0%
HorshamCorn_19	180	24.0	24.0	0.01	0%
HorshamCorn_20	190	24.0	24.0	0.01	0%
HorshamCorn_21	200	24.0	24.0	0.01	0%