The Sizewell C Project

6.3 Volume 2 Main Development Site

Chapter 12 Air Quality

Appendices 12A - 12F
Part 1 of 2

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VOLUME 2, CHAPTER 12, AIR QUALITY, APPENDICES 12A - 12F

Documents included in Part 1 are:

APPENDIX 12A: CONSTRUCTION DUST ASSESSMENT

APPENDIX 12B: TRANSPORT EMISSIONS ASSESSMENT

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1. Construction Dust Assessment for Main Development Site

1.1 Introduction

1.1.1 This appendix to **Volume 2, Chapter 12,** of the **Environmental Statement (ES)** presents the assessment of the dust effects arising from the construction of the power station at the main development site.

1.1.2 The mitigation measures described in **Volume 2**, **Chapter 12**, **section 12.5** of the **ES** were determined by conservatively assuming that all construction and removal and reinstatement activities associated with the proposed development would have a high risk of dust impact on sensitive receptors. The assessment seeks to identify those activities associated with the proposed development for which activity-specific mitigation may be required, by nature of (but not limited to):

- the duration of the activity;
- the coincidence of two or more high risk activities in location or time; or
- the inherent properties of dust potentially emitted by the activity, for example those with specific chemical or physical properties that are higher risk to receptors.

1.1.3 The embedded ('primary') mitigation measures were determined through an iterative process of environmental design and have been assumed within the assessment, for example the location of site access as far as practicable from sensitive receptors. Details of embedded mitigation measures assumed within the assessment are provided in **Annex 12A** of this appendix.

1.1.4 The assessment includes:

- the identification of potentially sensitive receptor locations that may be affected by dust from the construction phase of the proposed development;
- the screening assessment of potential risk of impacts from generic, unmitigated activities;
- the identification of the level of appropriate mitigation based on the risk screening assessment;
- the assessment of the significance of residual effects; and
- the identification of additional activity-specific mitigation.

1.1.5 The appendix describes and implements a qualitative and quantitative approach to determining significance of potential impacts of construction dust emissions and includes annexes as follows:

- **Annex 12A.1**: Proposed mitigation measures;
- **Annex 12A.2:** Construction materials – dust generation potential;
- **Annex 12A.3:** Further assessment of residual impacts from mitigated high risk activities;
- **Annex 12A.4**: Meteorological data analysis.

1.1.6 This assessment has been informed by **Volume 2**, **Chapter 3** of the **ES**.

1.2 Scope of the assessment

1.2.1 The scope of assessment includes the assessment of dust soiling, and impacts on human health and ecological receptors during the construction phase at the main development site. The construction site has been divided into different zones with different phases of activity, for the purposes of risk assessment and appropriate mitigation definition, as described in **Section 1.4** of this appendix.

1.2.2 The dust impacts from construction of off-site associated developments, including green rail route to the west of Abbey Road, and off-site sports facility are separately considered within the respective volumes of the **ES**.

1.2.3 The assessment has been used as part of an iterative process of design of embedded mitigation for the construction of the proposed development.

1.3 Methodology

a) Overview

1.3.1 The detailed method of assessment for air quality that has been applied for the Sizewell C Project is provided in **Volume 1, Chapter 6, Appendix 6H** of the **ES**.

1.3.2 This section provides specific details of the air quality methodology applied to the assessment of the potential impacts of construction dust from the main development site on identified sensitive receptors.

1.3.3 The guidance framework has been augmented within this assessment, in particular to segregate the development site into different physical zones, and into different phases of works, as described below, in recognition of the potential for dust impacts from shorter term and longer term activities within the different zones. The timescale definitions applied within the assessment are detailed below.

1.3.4 The screening assessment has been undertaken with a number of conservative assumptions, as follows:

- The magnitude of potential unmitigated dust emission would be large, unless specified, in recognition of the overall scale of the proposed development.
- Distances have been calculated from the nearest boundary of the worksite, if the location of the emissions source is not likely to be fixed throughout the duration of the works. This is considered to be a more conservative approach than the default Institute of Air Quality Management (IAQM) method, although it is likely to slightly overstate risks associated with emissions.
- The sensitivity of individual receptors (e.g. residential properties) and their proximity to a source of emissions or work site is considered, but not the absolute number. This is considered to be a more robust and more conservative approach than the default IAQM method.

1.3.5 The initial level of sensitivity assigned to a receptor may be modified to take account of location-specific or activity-specific circumstances and the justification for the reassignment reported. In this assessment, consideration of location-specific or activity-specific circumstances has usually only been undertaken at steps 4 and 5 during the determination of significance.

1.3.6 The type of location-specific or activity-specific circumstances that have been taken into account include:

- any history of dust generating activities in the area;
- the likelihood of concurrent dust generating activity on nearby sites;
- any pre-existing screening between the source and the receptors; any conclusions drawn from analysing local meteorological data which accurately represent the area, and if relevant the season during which the works would take place;
- any conclusions drawn from local topography;
- duration of the potential impact, as a receptor may become more sensitive over time; and
- any known specific receptor sensitivities beyond the classifications described in the guidance.

b) Definitions

i. Dust and particulates

1.3.7 The construction operations would involve a number of distinct activities from which fugitive dust emissions could occur, including excavation, loading, haulage and stockpiling. Dust emissions could occur as a result of material exposure to wind and weathering. Fugitive dust emissions could also occur from re-mobilisation of any spilled materials or mud from roadways.

1.3.8 Dust takes the form of finer particles that remain in suspension in the air, and coarser particles that settle to ground. Deposition to ground can occur for all dust size fractions, but typically soiling and smothering effects are associated with size fractions between 10–30microns (µm) in diameter (denoted PM_{10} to PM_{30}). Particulates larger than PM_{30} do not typically remain airborne for more than a few tens of metres from the point of generation and those below PM_{10} are readily re-entrained into the atmosphere.

1.3.9 Particulates less than 10µm in diameter are associated with detrimental human health effects such as cardiovascular and respiratory diseases. The IAQM methodology does not specifically include the effects of $PM_{2.5}$ from construction and demolition activities as these emissions are typically a fraction of the PM_{10} emission and consequentially a fraction of the predicted impact; the human health effects from particulates are therefore not separately considered for PM_{10} and $PM_{2.5}$ in this report. Potential impacts on human receptors from dust deposition may include amenity soiling of residential and commercial premises, predominantly from the PM_{30} fraction.

1.3.10 Potential impacts on ecological receptors include physical effects such as smothering of vegetation causing reduced photosynthesis, respiration and transpiration; filming of static watercourses and increase in sedimentation and contaminant build-up, leading to changes in water chemistry or soil chemistry, for example change in acidity. Such effects can also lead to longer term indirect effects, including susceptibility to pathogens and air pollution.

ii. Time-frame

1.3.11 The air quality assessment criteria are defined for impacts averaged over specific time periods: as the monthly mean (dust soiling effects) and the annual mean (PM_{10} health effects, ecological deposition effects); it can therefore be concluded that increased sensitivity to dust impacts could reasonably be expected where exceedance of an air quality assessment criterion occurs for multiples of the time-frame that the assessment criterion is defined by, for example exceedance of a dust soiling threshold for more than one year, or exceedance of the ecological deposition threshold over several growing seasons (years).

1.3.12 The definition of time-frames, for the purposes of assessment of temporary construction dust impacts, are:

- short-term temporary activities or impacts: less than one year;
- medium-term temporary activities or impacts: one to five years; and
- long-term temporary activities or impacts: more than five years.

iii. Study area

1.3.13 The study area within the red line boundary has been divided into distinct zones for the construction dust assessment within the overall main development site, with further consideration for the distinct phases of activity within the construction programme, as described in **Volume 2, Chapter 3** of the **ES**. The construction site zones are defined as follows:

- Zone A: the main construction area, including the area in which the main power station platform would be constructed (including the cut off wall); the foreshore area, including construction of, and presence of the permanent sea defences, and the beach landing facility.
- Zone B: the temporary construction contractor area, including the common user facilities, concrete batching plant, prefabrication facilities, construction contractors' compounds and rail head (including the green rail route extension and train holding area to the east of Abbey Road).
- Zone C: the temporary borrow pit and spoil storage areas (SSA), including spoil storage area adjacent to green rail route extension to the east of Abbey road.
- Zone D: site access hub, parking, offices and accommodation campus.
- Zone E: Land to the east of Eastlands Industrial Estate (LEEIE) and construction phase electrical cable route.
- Zone F: location of the Sizewell B relocated facilities, the national grid substation, and the preliminary access route for the early years.

iv. Assessment scenarios

1.3.14 Construction of the power station would take between 9 and 12 years. Construction is anticipated to be undertaken in five main phases, although these phases would overlap as work on different phases would be undertaken simultaneously in different areas across the main development site.

1.3.15 The definition of separate phases for the assessment of potential for dust impacts is not intended to limit the mitigation of a particular activity within a specific time-frame, but to indicate the likely time-frame over which an impact from one or more activities may be expected; it is intended that such mitigation would continue until cessation of the particular activity.

1.3.16 The anticipated indicative time-frames (as defined in above) are:

- Phase 1 – initial site establishment, including site clearance, initial excavations and stockpiling, anticipated to take place over circa 2 years.
- Phase 2 – main earthworks, including main construction area excavations, spoil management and backfill for foundations, anticipated to take place over circa 3.5 years.
- Phase 3 – main civils, including construction of foundations and main buildings, and backfilling against structures, anticipated to take place over circa 6.5 years.
- Phase 5 – commissioning and land restoration, including removal of temporary facilities and hardstanding, and landscaping, anticipated to take place over circa 2 years.

1.3.17 Phase 4 (mechanical and electrical installation, instrumentation and commissioning; circa 7 years duration) has been screened out of the assessment as these activities are unlikely to have the potential for dust generation. During Phase 4 there will be overlap of Phase 3 works, such as concrete batching and use, and backfilling against structures, however for the purposes of defining mitigation, such measures that are identified for control of activities within Phase 3 are assumed to be continued until cessation of the activities. No new dust generating activities are identified to commence during Phase 4, and therefore this phase is screened out.

v. Generic activities with potential for dust generation

1.3.18 The generic activities within each phase of construction works, as described in the Construction Method Statement that could potentially generate dust have been identified according to the categories outlined in the methodology, and are described in **Table 1.1**.

Table 1.1: Definition of generic activities for risk screening.

Activity	Includes:
Demolition	Demolition of buildings and structures. Use of crushing and screening plant for made-ground material processing. Demolition activities undertaken during the removal and reinstatement.
Earthworks	Site clearance and soil stripping. Excavation works (soils, made-ground, spoil, crag, sands and gravel, alluvium etc.). All stockpiling and reclamation activities. Lime use for stabilisation of soils. Off-loading and handling of bulk materials, including rail deliveries. Backfilling against structures. Landscaping works.
Construction	On-site batching and use of concrete and materials. Cutting and grinding of concrete. On-site generation of backfill materials.
Trackout	Heavy duty vehicle movements on unpaved surfaces and mud transferred onto the highway, including along the main site haul routes, in recognition of the significant volume of site traffic movement that could remobilise dust on these routes. Emissions from rail freight deliveries.

vi. Environmental design and embedded mitigation

1.3.19 The following embedded mitigation measures have been assumed in the design and layout of the construction site for the assessment of dust impacts from construction of the proposed development:

- implementation of a **Code of Construction Practice (CoCP)** (Doc Ref. 8.11), which requires the monitoring and management of dust impacts arising from the construction phase, through a **Dust Management Plan** as presented in **Appendix 12A** of this **Volume**;
- site access located as far as practicable from sensitive receptors, as presented in **Volume 2, Chapter 2** of the **ES**;
- concrete batching plant and bentonite farm located as far as practicable from sensitive receptors, as described in in **Volume 2, Chapter 2** of the **ES**;
- mobile crushing and screening plant located as far as practicable from sensitive receptors as described in in **Volume 2, Chapter 2** of the **ES** and **CoCP**, as, with the exception of Zone B, all zones carry a potentially high risk of dust impact without such mitigation.

1.3.20 Zone A would attract the need for high risk mitigation of activities, to prevent potential ecological impact, during all phases of the proposed development. Zone B activities carry a medium risk of ecological impact without mitigation. Earthworks, construction and trackout activities represent the highest risk activities for both Zones A and B.

1.3.21 Zones C, D and E would attract the need for high risk mitigation as a result of potential amenity dust soiling, during all phases of the proposed development. The highest risk of dust generation in these areas is associated with unmitigated earthworks and trackout activities. There is a medium risk of human health impacts from the same unmitigated activities within these zones.

1.3.22 Zone F activities are limited to Phase 1, for which there is potential for a medium risk of ecological impacts from all activities, and additionally a potentially high risk of amenity dust soiling from trackout which represents the highest risk activity.

1.3.23 Mitigation within certain areas, such as for trackout impacts in Zone A and Zone C, may reduce the risks from the site as a whole and therefore reduce the level of mitigation required for the same activities within the Zones B and D, subject to ongoing monitoring.

c) Step 4 – determination of significant effects

1.3.24 Step 4 of the assessment method is to determine whether significant effects on receptors would be likely, with the application of embedded (primary) and additional mitigation. In determining the significance of likely effects, location-specific and activity-specific factors have been taken into account in the findings of the dust risk assessment, as described below.

i. Location-specific factors

History of dust generating activities in the area

1.3.25 None of the zones have been identified to have a history of significant dust generating activities impacting on local receptors. The baseline dust deposition monitoring, shown in **Appendix 12E** of this volume, identified several locations close to Zone D with elevated dust levels, likely to be attributable to localised vehicle movements or agricultural activities, however these were not identified as persistent sources during the monitoring.

Likelihood of concurrent dust generating activity on nearby sites

1.3.26 Zone E is sufficiently distant from the other zones such that, with effective trackout control, it is not anticipated to contribute to the dust impact from other zones. Zone F activities are limited to Phase 1 and, thereafter, would not contribute to the dust impact from other zones.

1.3.27 Zones A, B, C and D have the potential to present concurrent dust raising activities with adjacent zones, which could have a combined impact on identified receptors. Zone D earthworks, construction and demolition activities would be limited to Phases 2 and 5; trackout from Zone D during other phases would be generated within adjacent zones and therefore effective trackout mitigation in those zones would reduce the risk from Zone D.

1.3.28 The potential for cumulative impact from other developments is specifically considered in **Volume 10** of the **ES**, however the proposed development is considered to be sufficiently distant from other long-term developments that concurrent dust generating activities would be principally limited to the adjacent zones of activity within the site.

Existing screening between the source and the receptors

1.3.29 Existing screening of the construction zones including existing trees, hedging and vegetation would lessen the potential for dust migration off-site in certain areas, as follows:

- Woodland and forested areas, such as Dunwich Forest and Goose Hill along the northern perimeter (Zones A, B), and Nursery Covert and Kenton Hills along the southern perimeter (Zone B) that would provide screening to the more sensitive ecological receptors beyond.
- Established vegetation along the bridleway east of Upper Abbey Farm, mature trees and hedges at the proposed site access off Eastbridge Road, and hedgerows and tree belts at the perimeter of the main development site that would provide screening from wind disturbance during surface stripping and site preparation activities (Zones B, C, D) and screen residential receptors.
- Established vegetation along the perimeter of Sizewell B site that would provide screening to ecological receptors to the west (Zone F activities).
- Additional early planting at sensitive boundaries has also been carried out to reinforce existing boundary vegetation around the LEEIE (Zone E) that would provide screening from wind disturbance during surface stripping and site preparation activities.

Local topography

1.3.30 The local topography is and will remain mainly flat or gently rolling landscape and therefore generally would not adversely or beneficially affect the potential for dust generation and dispersion within the local environment. Zone A topography falls away towards the beach and therefore the potential for dust generation from above ground activities may be potentially adversely influenced by wind-whipping without additional barriers or screening; however the majority of potential dust generating activities undertaken within this area would below the surrounding ground level.

1.3.31 The construction of sea defences and earth bunding or other screening at sensitive boundaries, as seen in **Volume 2 Chapter 3** of the **ES,** during the initial construction phase would provide some beneficial screening during subsequent phases of work.

1.3.32 Over the progression of the construction phase, temporary structures would alter the topography and would provide screening of activities and receptors, including the accommodation campus buildings (Zone D) which would provide screening to ground level activities within Zone C, and the common user facility buildings and earth bund along the southern boundary (Zone B) which would screen the sensitive ecological receptor to the south of the boundary, and lessen the potential for wind-whipping of dust within Zone B.

Local meteorological data

1.3.33 High wind speeds and dry conditions increase the risk of dust raising and therefore high risk meteorological conditions for receptors are: when the wind is coming from the direction of the dust source, above the threshold wind speed for initiation of dust generation (typically assumed to be more than 5m/s, or a moderate breeze); and during periods of dry weather (typically assumed to be less than 0.2mm precipitation per day). As outlined previously, the highest frequency of winds above 5m/s at the site occur from the south-west (as detailed in **Annex 12A.4** of this appendix, and therefore receptors located north and east of potential site dust sources, or any receptors within 20m of a source (Ref 1.12), have been assumed to be more sensitive to dust impacts than those receptors located south and west of such sources.

1.3.34 Coastal locations typically experience diurnal variation in wind strength (with strongest winds experienced mid-afternoon when the land is warmest), and wind direction (with onshore wind frequently experienced during the day and offshore wind at night).

ii. Activity-specific factors

Material dust potential

1.3.35 Materials identified as having low dust potential, for example as a result of being wet on excavation or at point of use, have been screened out of further assessment, although such materials have been included where there is potential for drying out and then being used such as reclaimed stockpile materials. Discussion of these materials is provided in **Annex 12A.3** of this appendix.

Duration of the potential impact

1.3.36 Receptors may become more sensitive over time; the potential dust raising activities in Zones A, B, C and E would be anticipated to last 10–12 years and therefore have the potential to have greater adverse effects as a result of increased sensitivity to dust impacts than the activities within Zones D and F which would be anticipated to last circa 12–24 months. Further details of anticipated duration of activities are provided in **Annex 12A.3** of this appendix.

Effectiveness of the proposed measures at other sites

1.3.37 Mitigation has been identified with reference to guidance documents as follows:

- IAQM (2016) Guidance on the assessment of dust from demolition and construction;
- Defra (2012) Process Guidance Notes (PGN3/01, PGN3/16); and
- European BREF (2006) Emissions from Storage.

1.3.38 The proposed measures are based on the IAQM (Ref 1.12) recommended packages of mitigation measures which represent appropriate measures to be applied to a given combination of activity and level of potential risk. These measures all have a long history of successful implementation in the UK and most are established good practice measures on any large construction site.

1.3.39 Identified mitigation for the highest risk activities has been used as the basis for the **outline Dust Management Plan (oDMP),** as presented in **Appendix 12A** of this **Volume** for the proposed development, as provided in **Annex 12A.2** of this appendix. Specific mitigation measures for the highest risk activities within each Zone and Phase, as described in **Table 1.1** of **Annex 12A.1**, reference the **oDMP**.

iii. Further assessment of residual impacts from high risk activities with mitigation

1.3.40 It is recognised that the likelihood of concurrent dust generating activities from several activities on specific receptors, and the long construction activity period could result in an increase in receptor sensitivity or an increase over the baseline dust level and therefore a higher level of risk mitigation could be required in order to limit the combined residual impacts from certain high risk activities on receptors.

1.3.41 However the above risk assessment and further consideration of additional influences on the significance of effect indicate that many of the activities within the identified zones and phases of the proposed development represent a low or medium risk of dust impact, and therefore with the application of the proposed high risk mitigation, dust impacts at the identified receptors as a result of these activities would be expected to be **not significant**, even where there are compounding factors .

1.3.42 The unmitigated activities which presented a potentially high risk of dust soiling, human health or ecological impact provided in **Table 1.5, Table 1.6** and **Table 1.7** of **Annex 12A.3** of this appendix have been further assessed to determine the requirement for activity-specific mitigation (secondary mitigation). These are summarised in **Table 1.8** of **Annex 12A.3** of this appendix.

Table 1.2: Further assessment of high risk activities for activity-specific mitigation.

Zone	Generic Activity.	Phase	Activity Details.	Embedded Mitigation – oDMP ID[1].	Assessment of Risk.	Activity-Specific Mitigation?
A	Earthworks	1	Surface stripping, loading and drop operations, temporary stockpiling.	G1.3, G1.4, G4.1–4.6.	Potentially low moisture retention properties of some material, close proximity to sensitive ecological receptor (E2), surface level works with limited screening.	Yes
		2, 3.	Excavation of main construction area, sea defences.	G4.2–4.6, G7.1, G7.4.	Materials would be wet at excavation and there would be minimal double handling within zone.	No
		5	Restoration & landscaping.	G4.2–4.5.	Short/medium-term activity; pre-existing screening of receptors; material dust potential would be readily mitigated by wet suppression.	No
	Trackout	1–5.	Dry, spilled or base materials subject to repeated traffic movement (internal haul routes).	G5.1–5.4, G6.1–6.8.	Long-term residual dust emissions within 50m of receptor (E2) with potential for impacts over several growing seasons.	Yes
	Construction	2, 3.	Concrete use.	G5.2–5.4, A2.1, A2.2.	Materials will be damp at point of use; majority of works undertake below surrounding ground level.	No
B			None identified.			
C	Earthworks	1, 5.	Surface stripping, loading and drop operations; restoration & landscaping.	G1.3, G1.4, G4.1–4.6.	Short/medium - term activity; pre-existing screening of receptors; material dust potential would be readily mitigated by wet suppression.	No
		1–5.	Stockpiling and reclamation.	G4.1–4.6, A5.1.	Long-term activities; minimal screening at maximum height; specific concern of local consultees.	Yes

Zone	Generic Activity.	Phase	Activity Details.	Embedded Mitigation – oDMP ID[1].	Assessment of Risk.	Activity-Specific Mitigation?
		2	In-situ lime treatment of peats and clays in borrow pits.	A4.1, A4.2.	Mostly sub-ground level activity with moist or wet base-screened out; lime treatment restricts use of water suppression, emissions within 20m of receptor (LE25), near-restoration level activity to be assessed.	Yes
	Trackout	1–5.	Dry, spilled or base materials subject to repeated traffic movement (internal haul routes).	G5.1–5.4, G6.1–6.8.	Long-term residual dust emissions within 20m of receptor (LE25) with potential for impacts over several growing seasons.	Yes
D	Trackout	1–5.	Dry, spilled materials subject to repeated traffic movement.	G5.1–5.4, G6.1–6.8	Short-term localised activities associated with construction phase. Long-term residual trackout via access road, with sources from other zones that are controlled at point of exit; readily mitigated by proposed measures.	No
	Construction	2	Access hub and campus construction.	G5.1	Short-term localised activities; mostly modular construction, construction limited to concrete footings; pre-existing screening of receptors.	No
	Earthworks	1, 5.	Surface stripping, loading and drop operations; restoration & landscaping.	G1.3, G1.4, G4.1–4.6.	Short/medium - term activity; pre-existing screening of receptors; material dust potential would be readily mitigated by wet suppression.	No
E	Earthworks	1, 5.	Surface stripping, loading and drop operations, bund creation; restoration and landscaping.	G1.3, G1.4, G4.1–4.6.	Short/medium - term activity; pre-existing screening of receptors; material dust potential would be readily mitigated by wet suppression.	No

Zone	Generic Activity.	Phase	Activity Details.	Embedded Mitigation – oDMP ID[1].	Assessment of Risk.	Activity-Specific Mitigation?
	Earthworks	1-5	Stockpiling and reclamation of aggregates.	G4.1–4.6, A5.1.	Site layout such that active aggregate stockpiling and transfer activities are central to site, and more than 100m from sensitive receptors; pre-existing screening of receptors.	No
	Trackout	1-5	Dry, spilled materials subject to repeated traffic movement – Heavy Duty Vehicles.	G5.1–5.4, G6.1-6.8.	Short-term localised activities associated with construction phase. Long-term residual trackout via access route to Zone B; no nearby concurrent activities; dust source readily mitigated by proposed measures. (Cumulative impact on special protection area (SPA) with East Anglia 1 North and East Anglia 2 considered within **Volume 2, Chapter 14** of the **ES**).	No
F	Demolition	1	Sizewell B facilities relocation, stripping and demolition of buildings.	G3.1–3.3.	Limited spatial overlap with other sources; receptor screened by existing trees and vegetation; short-term activity.	No

1.3.43 Zones A and C are identified as featuring concurrent activities and activities that span several phases and therefore have the potential for cumulative impacts from these activities. The two zones are separated by a distance of approximately 1km and therefore the potential for cumulative effects on receptors from both areas is considered to be low, based on the distance screening criteria, provided in **Volume 1, Chapter 6, Appendix H** of the **ES**. Trackout is identified as high risk in adjacent Zones C and D however this has been in part defined by the carry-over from one zone to another; effective mitigation in the highest risk areas should therefore reduce the overall risk.

1.3.44 In order to demonstrate the efficacy of the proposed mitigation, a detailed assessment of the residual dust impacts of the highlighted construction activities with activity-specific mitigation applied has been carried out. The detailed assessment methodology and assumptions are provided in **Annex 12A.4** of this appendix. The same detailed methods generated outputs of NOx, which are not directly relevant to this assessment of dust effects, but are reported in **Annex 12A.5** of this appendix as they are relevant to the consideration of air quality impacts for the Main Development Site.

d) Step 5 – residual effects conclusions

1.3.45 The final step of the assessment is to assess the significance of the likely residual effects of dust impacts with embedded mitigation, and where necessary, activity-specific mitigation.

1.3.46 Through the use of embedded mitigation and the identified activity-specific mitigation, secured through the **Dust Management Plan** as presented in **Appendix 12A** of this **Volume**, it is considered that all activities can be controlled and managed so as to prevent significant effects occurring. An **oDMP** is presented in **Annex 12A.1** to this document.

1.4 Conclusions

1.4.1 The dust risk and assessment process has been an iterative process, and potential impacts identified in the preliminary assessments have informed the design and selection of embedded mitigation measures.

1.4.2 A risk assessment of the likely activities associated with the construction of the proposed development, including the removal of temporary facilities and restoration and landscaping of the temporary construction site, has been carried out to consider the ability of embedded mitigation measures to control the risk of emissions such that significant effects are not experienced at sensitive receptor locations.

1.4.3 Additional site-specific and activity-specific mitigation measures have been defined within the **oDMP** as necessary, and the residual effects of dust soiling and particulates and ecological effects would be **not significant**.

1.4.4 Monitoring of specific activities and of baseline dust levels would be undertaken to ensure that mitigation measures are effective and that residual impacts would be **not significant**.

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Annex 12A.1 Proposed Mitigation Measures

1.1 Outline Dust Management Plan

1.1.1 The **oDMP** detailed in **Table 1.1** describes the approach to dust mitigation that has been assumed for the purposes of Environmental Impact Assessment (EIA). The measures identified within the **oDMP** would be implemented through the contractors Construction Environmental Management Plan and **Dust Management Plan**.

Table 1.1: Outline Dust Management Plan.

Zones	Reference Activity	DMP ID	Mitigation Measure
General Measures (All Zones).			
A–F.	Site management.	G1.1	A **Dust Management Plan** will be prepared and implemented, including details of monitoring, mitigation and complaints procedures.
		G1.2	A stakeholder communications plan will be implemented prior to commencement of works, including contact details for person(s) accountable for air quality and dust issues, and relevant details displayed at the site boundary.
		G1.3	Adequate water supply will be made available for dust/particulate matter suppression and house-keeping.
		G1.4	High risk dust generation activities would be minimised or avoided where practicable during prolonged dry or windy conditions.
		G1.5	Run-off of mud and water from site would be managed in accordance with the with with **section 11** - Groundwater and Surface Water of this **CoCP**.
		G1.6	The **Dust Management Plan** would be subject to regular review, and reviewed in coordination with other high risk construction sites within the study area, to ensure dust mitigation is adequate.
		G1.7	Bonfires and burning of waste materials would be prohibited.
A–F.	Site layout.	G2.1	Site access would be located as far as practicable from sensitive receptors.
		G2.2	The site layout would be planned so that significant dust generating activities, including concrete batching plant and mobile crushing and screening plant, would be located as far as possible, and at least 200m from the site boundary and sensitive receptors.
		G2.3	Earth bunds with grassing / seeding, and early planting would be used to screen sensitive boundaries where possible.
		G2.4	Screens or barriers would be used to provide wind reduction for plant with significant dust raising potential.
		G2.5	Stockpiled materials with potential to produce dust would be reused as soon as possible, or covered, seeded or fenced to prevent wind whipping.

Zones	Reference Activity	DMP ID	Mitigation Measure
A–F.	Demolition	G3.1	Demolition methods would be selected to minimise dust, and equipment generally fitted with automatic water suppression.
		G3.2	Cutting and grinding activities would be controlled or suppressed to minimise dust generation.
		G3.3	Buildings would be soft stripped inside prior to demolition.
A–F.	Earthworks	G4.1	Surface stripping would be planned accordingly to minimise the potential for dust generation upwind of sensitive receptors.
		G4.2	Damping down would be used prior to commencement of extraction works, with surface binding agents as required, to suppress and minimise dust generation.
		G4.3	Stockpiles would be seeded or fenced to minimise wind-blown dust.
		G4.4	Drop heights would be restricted from loaders, hoppers and other handling equipment to the minimum required for safe and efficient operations, to minimise dust emissions.
		G4.5	Stockpile worked areas would be minimised to avoid unnecessary disturbance.
A		G4.6	Temporary stockpiles (prior to SSSI crossing) would be located at least 50m from sensitive boundaries in the direction of the prevailing wind, where possible.
A, B, D, E, F.	Construction	G5.1	Use of modular (pre-fabricated) buildings as far as practicable for temporary accommodation and site facilities during construction phase to minimise dust raising during the final removal and reinstatement phase.
		G5.2	Scabbling (roughening of concrete surfaces) would be avoided where possible.
		G5.3	Sand and aggregates would be stored in three-sided bays damped down as necessary, or enclosed storage, to avoid wind-blown dust.
		G5.4	Bulk powders such as cement would be delivered in enclosed tankers and stored in silos with industry standard emission control systems.
A–F.	Trackout	G6.1	Use of hard-standing areas and hard-surfaced roadways as far as practicable to reduce vehicles movements on unmade ground, and minimise the trackout of mud and dust raising from vehicle movements.
		G6.2	Wheel wash-facilities would be installed at strategic points within the main development site to minimise tracked out materials from high risk to lower risk areas.
		G6.3	Wheel wash facilities would be maintained for the duration of works, specifically those which involve creating dust or material output.
		G6.4	All vehicles exiting the site would pass through a wheel wash facility and any vehicle carrying loose aggregate, cement or soil would be checked to ensure sheeting is in place.

Zones	Reference Activity	DMP ID	Mitigation Measure
		G6.5	All vehicles carrying dusty spoil and other materials within the site and exporting offsite would be dampened down and the load subsequently covered prior to transport.
		G6.6	Regular water-assisted road sweeping of the site access road and local roads as necessary to remove residual tracked out materials.
		G6.7	Use of fewer, larger Heavy Duty Vehicles with lower emission rates as far as practicable on temporary construction area haul road (Zones A, B, C) to limit the number of vehicle trips and dust and emissions generation.
B, E.	Trackout	G6.8	Rail freight to pass through wet suppression system and wagons with potentially dusty materials (concrete batching, aggregate fines) to be transported in enclosed wagons.
A–F.	Vehicles & Machinery.	G7.1	The contractor would seek to ensure that all road vehicles would comply with the requirements of Euro V emission standards (98/69/EC) as a minimum, unless otherwise agreed with the local authority.
		G7.2	There will be a maximum speed-limit of 15mph for on-site surfaced roads and 10mph on unsurfaced haul roads and work areas.
		G7.3	Off-site freight and deliveries would be managed via the Construction Transport Management Plan.
		G7.4	Vehicles and machinery would not be left idling unnecessarily.
		G7.5	The use of stationary generators would be avoided where practicable and power would be provided by the construction electricity supply. Stationary generators where used would be controlled through an Environmental Permit, if applicable, to be issued by the appropriate regulatory authority, and in accordance with the requirements of the Medium Combustion Plant Directive, or the Industrial Emissions Directive as appropriate.
		G7.6	The use of mobile power plant including diesel or petrol powered mobile plant would be avoided where practicable and then limited to temporary functions (less than six months) and non-distribution functions in accordance with environment agency regulatory guidance Note 2 and the Medium Combustion Plant Directive.
Activity Specific Measures.			
A, C.	Alluvium (peat and clay) extraction & haulage.	A1.1	Alluvium extraction would be undertaken where possible during drier months (April to September), provided in **Annex 12D.3** of this document, in order to improve workability and minimise mud generation and subsequent trackout on roads.
A, C.	Crag haulage.	A1.2	All vehicles carrying dusty spoil and other materials within the site would be dampened down prior to transport.
		A1.3	On leaving the loading areas, haulage vehicles would pass through a wheel wash facility.
B, E.	Concrete batching.	A2.1	Concrete batching plant would be operated in accordance with all relevant Environmental Permit requirements.

Zones	Reference Activity	DMP ID	Mitigation Measure
		A2.2	Enclosed equipment fitted with dust arrestment would be employed on all dry batch transfers and mixing operations.
C, E.	Mobile crushing and screening plant.	A3.1	Mobile crushing and screening plant would be operated in accordance with all relevant Environmental Permit requirements.
		A3.2	Enclosed conveyors and transfer points would be employed as far as is practicable.
		A3.3	Water suppression over the crusher aperture, or containment of crusher system would be employed where practicable.
		A3.4	External plant would be cleaned regularly to minimise wind-blown dust.
C	Lime treatment of alluvium.	A4.1	Employ combined spreader-mixer plant with skirted mixer area under truck to minimise wind-blown dust; otherwise minimise treatment area between spreader and mixer and avoid lime spreading during periods of high wind.
		A4.2	At near-restoration level, the treatment area would be planned according to daily wind-direction to minimise the potential source term upwind of sensitive receptors; minimising the cross-sectional treatment area lying perpendicular to the wind-direction.
A, C, E.	Stockpiling	A5.1	Active worked areas would be managed according to the risk of dust blow identified through monitoring (M5.3, M5.4) such as enhancement of wet suppression using a binding agent , or limiting activities close to receptors during prolonged dry or windy conditions.
Monitoring and Inspection.			
A–F.	All	M5.1	Regular site inspections would be carried out to ensure compliance with the **oDMP** and monitoring results and corrective actions would be recorded. Site inspections would be increased in frequency during periods of prolonged dry or windy conditions.
		M5.2	All dust and air quality complaints, and corrective actions, would be recorded.
A, C, E.	All	M5.3	Daily weather conditions would be reviewed prior to works to be undertaken within 50m of sensitive boundaries in Zones A and E and within 100m of sensitive boundaries in Zone C to determine the need for additional mitigation.
A–F.	All	M5.4	Baseline and activity-specific dust and particulates monitoring would be carried out according to the requirements identified within the risk assessment.
A, C.	Haulage	M5.5	Regular monitoring of on-site haul roads within 50m of sensitive boundaries during prolonged dry or windy conditions to determine the need for additional mitigation, such as use of boundary misting.
A, C.	Haulage	M5.6	Regular inspection of haul routes would be made, with repairs as required, to ensure surfaces are maintained.

1.2 Detailed mitigation of activities

Table 1.2: Mitigation of activities with dust generation potential.

Zones	Assessment Category.	Activity Description.	Material with Dust Generation Potential.	Mitigation – oDMP ID[1].
G1 & G2 Measures are Assumed to be Applied Site-wide for the Sizewell C Project Duration.				
Phase 1 – Site Establishment.				
A–F	Earthworks, trackout.	Site clearance, surface stripping, Made Ground breaking.	Topsoils, subsoils, weathered made-ground.	G4.1–4.5; G6.2–6.6; G6.1–6.6.
A–E	Earthworks, trackout.	Creation of access roads and haul roads, bund creation.	Aggregates (newly graded), soils.	G4.4; G6.3–6.5.
A,C,E	Earthworks, trackout.	Stockpiling of soils and spoil (A: temporary, prior to SSSI crossing construction).	Topsoils, subsoils, weathered Made Ground.	G4.2–4.6.
A	Earthworks	Excavation of Bent Hills, Northern Mound and sea defences along foreshore; construction of beach landing facility (modular).	Sands and gravels, weathered Made Ground, aggregates.	G4.1–4.6.
A	Earthworks	Treatment of alluvium layers for construction-phase sea defences.	Lime/concrete	-
A	Earthworks	Creation of construction-phase sea defences.	Sands, rock armour and landscaping materials – granular, screened out.	G4.4
A, B	Earthworks, construction, trackout.	SSSI temporary crossing construction, including ground stabilisation, piling, use of pre-cast units.	(Wet ground conditions- low potential, modular-precast units – low potential; screened out).	-
B	Earthworks, trackout.	Placement of suitable materials for plateau creation and land raising.	Crag, subjected to traffic & weathering.	G4.4; G6.3–6.6.
B	Construction	Temporary site infrastructure: concrete batching plant, contractor facilities.	Plateau creating, hardstanding, concrete.	G5.1–5.4.
B	Earthworks	Rail infrastructure construction.	Soils, sand, ballast, silica.	G4.1-4.5
C	Earthworks, trackout.	Stockpiling of soils and spoil.	Topsoils, subsoils, weathered made-ground.	G4.3–4.5.
C	Earthworks, trackout.	Borrow pit excavation; stockpiling of crag.	Clay overburden, crag, sand, gravel – dry material & material subjected to traffic.	G4.2–4.5.

Zones	Assessment Category.	Activity Description.	Material with Dust Generation Potential.	Mitigation – oDMP ID[1].
D	Trackout	Early years site access.	Unmade ground.	-
E	Earthworks, trackout.	Stockpiling of soils and spoil.	Topsoils, subsoils.	G4.2–4.5.
E	Construction, trackout.	Creation of hard-standing areas for caravans, site facilities.	Concrete cutting, grinding.	G5.1–5.4.
E	Earthworks	Rail infrastructure construction.	Soils, sand, ballast, silica.	G4.4, G5.3.
E	Earthworks, trackout.	Off-loading and storage of bulk materials.	Imported aggregate/cement (destination cut off wall and main construction area).	G4.3–4.5.
E	Construction, trackout.	Generation of bulk backfill; concrete batching – cut off wall.	Category R3 backfill: granular fill/aggregate/cement.	G5.3–5.4.
E	Earthworks, trackout.	Underground cable routing for construction phase power supply.	Topsoils, subsoils.	G4.1–4.2.
F	Demolition	SZB facilities relocation.	Concrete breaking.	G3.1–3.3.
F	Construction	SZB facilities relocation.	Concrete cutting, grinding.	G5.1–5.4.
Phase 2 – Main Earthworks.				
A	Trackout	Excavation of cut off wall (cut off wall).	Peat/clay, crag subjected to traffic.	G6.1; G6.3–6.6.
A	Construction, trackout.	Construction of cut off wall, bentonite farm.	Concrete batching materials; dry spilled bentonite.	G5.3.–5.4
A	Screened out.	Bulk backfill against cut off wall.	(Damp material – screened out).	-
A	Earthworks, trackout.	Excavation of made ground.	Made Ground handling, processing, stockpiling.	G4.2–4.6.
A	Trackout	Excavation of peat/clay within main platform area and haulage.	Peat/clay – wet on excavation but dry spilled material subjected to traffic could generate dust.	-
A, B	Trackout	Excavation of weathered crag within main platform area and haulage to stockpile.	Crag, sands/gravels – wet on excavation but dry spilled material subjected to traffic could generate dust.	-
A	Screened out.	Bulk backfill to underside of foundation levels.	(Damp granular fill, within deep excavation – screened out).	-
B	Earthworks, trackout.	Soils stockpiling, from SSA, at southern entrance, and southern boundary earth	Topsoils, subsoils.	G4.2–4.5.

Zones	Assessment Category.	Activity Description.	Material with Dust Generation Potential.	Mitigation – oDMP ID[1].
		bund creation.		
B	Trackout	Haulage to borrow pit.	Peat/clay – wet on excavation but dry spilled material subjected to traffic could generate dust.	-
B	Construction	Generation of bulk backfill, concrete batching.	Category R1 backfill: granular fill/aggregate/cement.	G5.3–5.4.
B	Earthworks, trackout.	Off-loading, haulage and storage of bulk materials – aggregates & concrete batching.	Imported aggregate/cement.	G4.2–4.5.
C	Earthworks, trackout.	Placement of peat/clay in borrow pits, possibly with lime stabilisation to aid structure and workability.	Peat/clay, lime.	G4.4
C	Demolition	Made Ground crushing and screening.	Made Ground handling, processing, stockpiling.	A3.1–3.4.
C	Trackout	Stockpiling of crag.	Crag – wet on excavation but dry spilled material subjected to traffic could generate dust.	-
D	Construction, earthworks.	Construction of foundations, accommodation campus and site entrance hub.	Concrete cutting, grinding; (pre-fabricated, modular building construction – screened out).	G4.4; G5.1–5.3.
E	Earthworks, trackout.	Off-loading, haulage and storage of bulk materials – aggregates & concrete batching.	Imported aggregate/cement.	G4.2–4.5.
Phase 3 – Main Civil Works.				
A	Construction, trackout.	Construction of foundations and main building structures.	Concrete cutting, grinding; spilled dry materials subjected to traffic.	G5.2
A	Construction	Construction of cooling water intake and outfall tunnels and structures; bentonite farm.	Dry spilled bentonite; (sub-surface, wet marine arisings, precast pipework – screened out).	G5.2
A	Earthworks, trackout.	Installation of secondary backfill against structures.	(Damp granular fill, within sub-surface excavation – screened out).	-
B	Construction, trackout.	Off-loading, haulage and storage of bulk materials – aggregates & concrete batching.	Imported aggregate/cement.	G5.3–5.4.
B	Construction,	Concrete batching,	Concrete cutting, grinding;	G5.1–5.4.

Zones	Assessment Category.	Activity Description.	Material with Dust Generation Potential.	Mitigation – oDMP ID[1].
	trackout.	construction of building structures.	aggregates handling, spilled dry materials subjected to traffic.	
B	Construction	Generation of secondary bulk backfill.	Granular fill/aggregate/ cement.	G5.3–5.4.
C	Earthworks, trackout.	Reclamation of crag from stockpiles.	Weakened crag, sands/ gravels.	G4.2–4.5.
C	Earthworks, trackout.	Stockpiling of excavated material.	(Wet marine arisings – screened out).	-
E	Construction, trackout.	Off-loading, haulage and storage of bulk materials – aggregates & concrete batching.	Imported aggregate/ cement.	G4.2–4.5; G5.3–5.4.
Phase 4 – M&E Fit Out, Instrumentation and Commissioning (Screened Out).				
Phase 5 – Removal and Restoration.				
B	Construction, trackout.	Construction and installation of permanent infrastructure (car park etc.).	Concrete cutting, grinding, aggregates (newly graded).	G5.2–5.4.
B, D, E.	Demolition, earthworks.	Removal of temporary facilities (campus & contractor facilities, temporary access roads, rail infrastructure).	Concrete breaking; hardstanding breaking, (modular buildings – screened out).	G3.1–3.3; G4.2–4.5.
A–E	Earthworks, trackout.	Restoration and landscaping.	Topsoils, subsoils; suitable spoil for landscaping.	G4.2–4.5.

Notes: The general mitigation measures described in oDMP ID G1.1–1.5 and G2.1–2.4 are assumed to be applied to all zones.

Annex 12A.2 Construction Materials – Dust Generation Potential

1.1 Materials overview

1.1.1 The construction operations would involve a number of distinct activities from which fugitive dust emissions could occur, including soil and rock excavation, loading, haulage and stockpiling. Dust emissions could occur as a result of material exposure to wind and weathering. Fugitive dust emissions could also occur from re-mobilisation of any spilled materials or mud from roadways.

1.1.2 A qualitative risk assessment has been carried out for the potential for dust generation from handling and storage of the principal materials, from excavation, demolition and construction of the development.

1.2 Surface strip

a) Source

1.2.1 Surface stripping would take place across the main working areas and soils would be stockpiled within the Spoil Storage Area (SSA) in Zone C, and in perimeter bunds (Zone B, D). Topsoil and subsoil would be used for reinstatement and landscaping works post-construction.

1.2.2 Removal of material would involve excavation and temporary storage of the topsoil, excavation and stockpiling of subsoil, and finally placement of the topsoil over subsoil in order to maintain the organic content of the topsoil for future restoration purposes.

1.2.3 Surface strip material from Zone A is anticipated to have low organic content and therefore would not be separated into top/sub soil. Surface strip material from the cut off wall construction would initially be stockpiled within Zone A prior to the SSSI crossing, and then removed to Zone B or C, for bunding or plateau creation.

b) Logistics

1.2.4 Surface stripping would be likely carried out using bulldozers and excavators, loading articulated dump trucks.

1.2.5 Bund formation would be carried out using bulldozers. Stockpiling and bund formation would be carried out locally to the stripping activities where feasible, minimising haulage requirements, with the exception of main construction area / cut off wall stripped materials which would be relocated once the SSSI crossing is available.

1.2.6 Main construction area / cut off wall materials would be transferred to Zone C using articulated dump trucks via the haul road.

c) Consideration of dust potential and activity duration

1.2.7 Soil stripping activities could result in dust emissions, from plant movements over unsurfaced ground and scraping/ tipping activities. Dust generation is dependent on both the silt and moisture content of the soils. The formation of bunds and stockpiles requires considerable initial disturbance of materials; in particular the double handling of topsoil has the potential for surface dried materials to generate dust emissions during relocation, depending on the length of temporary storage time and weather conditions.

1.2.8 The strip material from Zone A could present a high dust potential as a result of the material being principally historic made ground and therefore of low organic content. Transfer via dump trucks to Zone C would be likely to generate dust emissions, both from wind-blown material in the truck and from re-entrainment of material on the road from wheel-transfer.

1.2.9 Once placed, these materials would be likely to remain undisturbed until required for final restoration. Therefore in the period following placement, stockpiles represent a diminishing emissions source as a result of the finite availability of erodible material (which is further limited by any natural crust formation that may occur). Furthermore, topsoils may provide some naturally occurring re-vegetation or be reseeded, and this would further stabilise the material.

1.2.10 The activity would be expected to take less than one year.

1.2.11 Further assessment of surface stripping activities, within Zones A and C, is therefore considered appropriate, however dust generation from stockpiled soil strip materials from Zones B, D, E and F is considered to be low risk.

1.3 Made ground

a) Source

1.3.1 The Made Ground source is principally present in Zone A. The material is estimated to be principally sands and gravels, with some clays and demolition materials. It is anticipated that materials would be segregated and classified for re-use as backfill, general fill and landscaping, or if necessary with any material unsuitable for these uses exported for recycling or re-use off-site.

1.3.2 Cut off wall arisings would be initially stored in Zone A and then transferred to the SSA in Zone C. Screened and classified materials would be stockpiled within the appropriate stockpiles in Zone C.

b) Logistics

1.3.3 Drilling is not anticipated to be required to breakup made ground in the main construction area; although clam-shell grabs or hydromills may be used to excavate loose material. Excavator(s) would be used in the main construction area to excavate made ground, and to load articulated dump trucks which would stand on the base of the excavation, minimising drop distance and elevation.

1.3.4 Material would be transferred to Zone C via dump trucks on the haul road.

1.3.5 Segregation and processing of made ground arisings is proposed within a dedicated processing area of Zone C. The operations would require the use of crushing and screening plant, also a number of excavators fitted with breaking and screening attachments, articulated dump trucks, bulldozers and loading shovels.

1.3.6 The processed materials for re-use would be segregated into sands and gravels or cohesive materials (clays) and would be placed in the appropriate SSA stockpiles by bulldozer.

c) Consideration of dust potential and activity duration

1.3.7 Made ground arisings could present a significant dust source, by nature of the large volumes generated, although this is dependent on the moisture content of the material during excavation and haulage, and the proportion of fines. The majority of the material is anticipated to be sands and gravels, with some cobble or boulder-size fragments and construction wastes (e.g. wood) with limited dust potential at excavation.

1.3.8 Transfer via dump trucks could generate dust emissions, both from wind-blown material in the truck and from wheel-transfer to road and re-entrainment.

1.3.9 The segregation and processing area would have the potential for high dust emissions, particularly during dry, windy conditions which results in surface evaporation. Surface wetness causes fine particles to agglomerate on or to adhere to larger stones, with a resulting dust suppression effect, however crushing and screening activities expose drier core material which reduces this mitigative effect. Processing and screening activities would require a Part B permit from the Local Authority, under the Environmental Permitting (England and Wales) Regulations (2010).

1.3.10 Stockpiled sands and gravels are anticipated to have moderate to high dust generation potential at every pile disturbance event. Undisturbed materials would have finite availability of erodible material and therefore a finite emissions source.

1.3.11 Made ground excavations and processing are not seasonally dependent and would be carried out over approximately two years.

1.3.12 Further assessment of the processing area activities is considered appropriate.

1.4 Clay overburden

a) Source

1.4.1 Clay overburden would be removed from the borrow pits area in Zone C, to access underlying crag. The material is likely to be fairly high moisture and cohesive unless heavily trafficked. It would be likely stockpiled for landscaping purposes or used to raise the plateau in Zone B.

b) Logistics

1.4.2 Material would be excavated in a single layer starting at the access point, using an excavator standing on the overburden and loading articulated dump trucks standing on the exposed crag. The articulated dump trucks would haul the overburden to the point of use or storage where it would be placed by a bulldozer.

1.4.3 The borrow pits would have perimeter screening, likely to be in the form of fencing.

c) Consideration of dust potential and activity duration

1.4.4 Zone C clay overburden is considered unlikely to have significant dust generation potential as a stockpiled material. However material subjected to heavy traffic could break down and generate dust through re-entrainment, for example from spilt material in transit, in dry, windy conditions. The perimeter screening and avoidance of heavy trafficking during excavation of the material, together with management measures would minimise overburden dust generation potential within Zone C.

1.4.5 The removal of clay overburden would be expected to take less than year.

1.4.6 No further assessment of specific clay overburden handling is considered to be required.

1.5 Alluvium

a) Source

1.5.1 Alluvium would be removed from the cut off wall and main construction area, within Zone A. The alluvium would be either placed in the borrow pits in Zone C, following crag excavation in this area, or exported off-site.

1.5.2 If the borrow pits option is employed, the material is likely to become unworkable for vehicle access in placements of greater than 0.3m depth, therefore lime stabilisation is proposed both to absorb water and provide structure. This treatment would allow for increased compaction and placement within the borrow pits.

b) Logistics

1.5.3 Alluvium would be excavated from the cut off wall using grab or hydromill and in the main construction area using an excavator or face-shovel, and would be transported via articulated dump truck for placement in borrow pits (with possible temporary stockpiling in Zone A prior to SSSI crossing).

c) Consideration of dust potential and activity duration

1.5.4 There are seasonal restrictions in handling alluvium, to the period April–September, as the material is very soft and difficult to handle and traffic when wet. The material is not considered to represent a significant dust source because of the water content on excavation, and continued leaching potential on storage. Furthermore it is understood that oxidation, caused by drying, produces a more acidic leachate which is undesirable, therefore the material is preferred wet. If the borrow pits option is employed, the material would likely be placed directly into the borrow pits without significant interim storage and therefore mitigating the potential for surface drying and dust release. Trackout of spilt material could result in dust generation from traffic, however appropriate management would minimise the potential dust generation from this activity.

1.5.5 The extraction and placement of alluvium would be expected to take less than one year.

1.5.6 No further assessment of specific alluvium handling is considered to be required.

1.6 Crag

a) Source

1.6.1 Some 2.5Mm^3 crag is anticipated to be excavated and stockpiled, and potentially used for backfill within the main construction area, with lime and/or cement treatment. The principal sources of the arisings are within Zones A and C.

1.6.2 The crag is fine shelly sand with minor gravel, silt and clay layers; British Geological Survey data suggests a mean grading of 7% at 62.5µm or below; suspended particulate material is typically classified as particles of less than 75µm. On excavation, the crag would have weakly cementitious properties and would be wet. Following stockpiling however, the cementitious properties are anticipated to be weakened or eliminated and the granular property of the material means that it would have low moisture retention.

b) Logistics

1.6.3 Crag would be excavated from the cut off wall using a hydromill with bentonite/water slurry and hauled to Zone C (with possible temporary stockpiling in Zone A prior to SSSI crossing). Crag would be excavated from the main construction area using an excavator standing on the top of the excavation and loading articulated dump trucks standing on the base of the excavation.

1.6.4 Crag would be placed in the SSA stockpile by bulldozer. Crag from Zone A would be transferred to the stockpile using articulated dump trucks via the haul road. Crag would be used for sequential backfilling of specific areas in the main construction area following construction of the plant units.

c) Consideration of dust potential and activity duration

1.6.5 Crag excavated by hydromill would be wet on separation from the bentonite, and on placement in the temporary stockpile, where a crust may form minimising wind-blown dust. However the material is considered likely to have a high dust generation potential on drying as the cementation would be destroyed by the hydromill extraction process and this potential is likely to be greatest on transfer from the temporary stockpile in Zone A (prior to the SSSI crossing) to the SSA stockpile.

1.6.6 Excavation and handing of crag from the other sites may have moderate potential for dust generation depending on the moisture content of the material and prevailing weather conditions. Trafficking and handling of the crag is likely to progressively destroy the cementation, producing a material with greater dust generation potential.

1.6.7 Transfer via dump trucks could generate dust emissions, both from wind-blown material in the truck and from wheel-transfer to road and re-entrainment.

1.6.8 Stockpiled crag is anticipated to have moderate dust generation potential following every pile disturbance event, depending on the residual moisture content of the material. Undisturbed materials would have finite availability of erodible material. If used for backfilling in the main construction area, it is anticipated to have moderate to high dust generation potential as cementitious properties are degraded.

1.6.9 Crag excavation, stockpiling and use would be expected to take place over ten years.

1.6.10 Further assessment of crag transfer activities is considered appropriate.

1.7 Lime – imported

a) Source

1.7.1 Lime stabilisation of alluvium placement in the borrow pits is proposed, as described in **Annex 12A.2** of this document, lime and/or cement may also be required in preparation of main construction area backfill materials of the appropriate specification.

b) Logistics

1.7.2 The lime application within the borrow pits is proposed using combined spreader-mixers. The lime would be stored in silos and pumped into the spreader-mixer trucks. The lime spreading and mixing would take place beneath the truck within a skirted area to provide dust containment during the operation; the whole borrow pits area would receive lime treatment approximately every six days with placement of the alluvium.

1.7.3 Lime treatment of alluvium at the surface, prior to placement within the borrow pits, has been discounted on the basis of risk and in-situ mixing is the preferred option.

1.7.4 The need for lime stabilisation of backfill materials can only be evaluated once the materials become available for use, however should this be required, it is anticipated that materials would be added from hoppers to an enclosed batching plant for moisture control, and therefore lime dust emissions would be minimal.

c) Consideration of dust potential and activity duration

1.7.5 There is a risk that lime dust emissions could be generated during placement with alluvium, particularly during periods of high winds or gusty winds, either through inadequate mixing or displacement of the truck skirt during spreading. The material would need to be maintained in a dry state for optimum treatment properties.

1.7.6 The initial placement operations would be at a depth of -10m within the borrow pits, where the potential for lime dust emissions are judged to be limited as the pit sides would mitigate wind-generated dust. However as the placement progresses and the working surface is raised, this embedded mitigation would be less effective and additional mitigation may be required.

1.7.7 Lime treatment would be expected to take around 100 days.

1.7.8 Further assessment of the lime placement in the borrow pits is considered appropriate for restoration-level working to determine whether additional mitigation may be required.

1.8 Cement – imported

a) Source

1.8.1 Cement would be imported for use in concrete batching plants in Zones A and B and potentially for use with crag to produce a hydraulically-bound material in site establishment works. The anticipated requirement for concrete is around $1Mm^3$ over five years, with peak demand of around $7,500m^3$ per week.

b) Logistics

1.8.2 Cement would be imported and transferred pneumatically into silos or hoppers and onwards to concrete plants. All storage and transfer vessels would be fitted with dust collection devices to industry best practice standards, minimising the emissions of dust.

1.8.3 No open-air mixing of cement and other materials would take place.

1.8.4 Cement unloading and concrete batching is controlled under Defra Process Guidance Note (PGN) 3/01 (12) Statutory guidance for blending, packing, loading, unloading and use of cement.

c) Consideration of dust potential and activity duration

1.8.5 The controls for cement transfer and use on-site would meet the requirements of PGN 3/01 and therefore would minimise the potential for dust generation, however in light of the volume of cement required for on-site batching and the duration of activity the potential magnitude of effect is considered moderate to large.

1.8.6 Concrete batching would be undertaken on site for a period of circa five to six years.

1.8.7 Further assessment is therefore considered appropriate.

1.9 Aggregates – imported

a) Source

1.9.1 Additional aggregates, including sands and gravels, would be imported for use within concrete batching and as primary backfill within the main construction area. Imported aggregates would be of the order of $0.26Mm^3$.

b) Logistics

1.9.2 Aggregates may be imported by rail or road and stored within Zones B and E. Transfer from rail wagons would be via grab-buckets or direct transfer to conveyor, or grab to articulated dump truck, for onward transfer to storage silos or hoppers, or via excavator transfer from storage to hopper for use in the cement plant.

c) Consideration of dust potential and activity duration

1.9.3 Transfer via articulated dump truck is likely to generate moderate dust emissions, both from wind-blown material in the truck and from wheel-transfer to road and re-entrainment. Conveyor transfer is likely to generate moderate dust emissions from wind-entrainment of dropped material. Excavator transfer of materials within the cement plant area is likely to have low dust potential as the storage area, cement plant structures and wider compound would provide some screening from wind.

1.9.4 Stored materials are anticipated to have low to moderate dust generation potential following every pile disturbance event, depending on the residual moisture content of the material. Undisturbed materials would have finite availability of erodible material.

1.9.5 Aggregate transfer for use within the proposed development would continue for around ten years.

1.9.6 Good practice embedded mitigation is anticipated to provide adequate control of dust from imported aggregates and no further assessment of aggregate handling is considered to be required.

Annex 12A.3 Further Assessment of Residual Impacts from Mitigated High Risk Activities

1.1 Introduction

a) Assessment approach

1.1.1 The potential for cumulative effects on identified receptors from high risk dust raising activities, either as a result of concurrent operation with other high risk activities or as a result of operation over a long period, has been further assessed in order to establish the likely efficacy of the proposed mitigation.

1.1.2 The assessment has been carried out by estimation of the potential dust emission source term associated with each activity assuming mitigation is applied; dispersion modelling of the mitigated source term has then been carried out to estimate the potential off-site dust deposition level, and the predicted dust deposition levels have been compared with the defined threshold levels within this annex

b) Source term estimation

1.1.3 The assessment of high risk activities has taken as its basis the emission factors derived from the US EPA AP42 Compilation of Air Pollutant Emission Factors (Ref. 1.1, specific chapters referenced within appropriate section). The AP42 methodologies enable emission factors to be estimated based on material properties (such as particle sizing, silt and moisture content), height of the source, wind speed and direction and frequency and duration of activities.

1.1.4 The data within AP42 is based on measurement studies at one or more sites and by its nature can only be regarded as indicative; furthermore the assumptions made regarding the scale of activities, study area and construction programme can only be considered indicative at this design stage; therefore the conclusions drawn from the assessment are based on the likely scale of impacts for comparison with threshold levels, rather than determining specific values.

1.1.5 The predicted results from modelling have been assessed for sensitivity to input model parameters such as variations in meteorological data, height of release and other scenario-specific factors, as described in the below sections, to determine the influence on the reported results, such that the likely worst-case results are reported.

c) Mitigation effects

1.1.6 Mitigation factors for specific activities, where published, have been used to confirm the scale of mitigation likely to be required to control dust to acceptable levels. Attenuation factors associated with mitigation measures are site-specific and may be affected by several factors, such as seasonal meteorological changes, and natural weathering of materials such as crust formation on stockpiles. Therefore the application of an attenuation factor to determine the effect of mitigation on dust impacts, as with estimation of uncontrolled emissions, can only be indicative and based on typical experiences at other construction sites.

1.1.7 AP42 provides indicative attenuation factors for some sources; additional attenuation factors have been determined from data provided in the European BREF Note for Emissions from Storage (Ref. 1.2).

1.1.8 The specific level of mitigation required during construction would be reviewed regularly as part of the **Dust Management Plan** to ensure efficacy of measures being applied.

d) Dispersion modelling

1.1.9 The proprietary dispersion model atmospheric dispersion modelling system (ADMS) 5.2 has been used to determine the dispersion and deposition of dust from the identified high risk sources. ADMS uses a continuous calculation method to determine the conditions of the receiving atmosphere based on the Monin-Obukhov length, which represents the height of the boundary layer and the degree of turbulence within the atmosphere. This is generally regarded as a more comprehensive modelling approach than that employed by older models such as ISC, which use discrete approximations to the atmospheric conditions known as Pasquill stability classes.

1.1.10 The degree of turbulence in the atmosphere affects the rate at which pollutants are dispersed in the environment. The more unstable the atmosphere – for example due to high solar insolation – the greater the degree of mixing. ADMS utilises site-specific hourly sequential meteorological data to enable a realistic assessment of dispersion from point or area sources to be conducted for weather conditions that are directly applicable to the site.

1.1.11 Typically, dispersion models such as ADMS are used to model deliberate releases to air from point sources such as stacks or vents. These releases occur over the whole day, often throughout the year, and are modelled as continuous emissions with constant or varying source terms. However the model can be adapted to include intermittent source terms, and those with a negligible vertical efflux velocity, as occurs from a fugitive release. The use of ADMS is therefore considered appropriate for the estimation of impacts from the dust raised from proposed construction activities, given their intensity and duration at peak operation.

1.1.12 The dispersion modelling has been conducted using hourly sequential meteorological data obtained from the UK Meteorological Office numerical weather prediction (NWP) model specific to the site, for the period 2008–2012. A summary of the meteorological data is provided in **Annex 12A.4** of this document.

e) Assessment criteria

1.1.13 The Air Quality Standards Regulations (2010) limit particulates concentrations in ambient air for the protection of human health. There are no statutory limits for dust deposition levels, however guideline threshold levels have been derived for dust soiling impacts and potential ecological effects, as summarised in **Table 1.1**:

Table 1.1: Dust deposition threshold levels.

Receptor Impact.	Assessment Level.	Averaging Period.	Guideline
Dust soiling of amenity (PM_{30}).	(1) 200mg/m^2/day; (2) 260mg/m^2/day.	Monthly mean.	Indicative guideline [1]: (1) Complaints possible; (2) Complaints likely.
Deposited dust (PM_{30}) (ecological effects).	(3) 500mg/m^2/day.	Annual mean.	Indicative guideline: (3) Insignificant effects.

1 GLA and London Councils, Best Practice Guidance, The Control of Dust and Emissions from Construction and Demolition

1.1.14 Human health impacts from dust and particulate emissions have been screened out of further assessment, as described in **section 1.4** of **Appendix 12A**, the main appendix of this document.

1.1.15 The dispersion model is not able to calculate a monthly mean daily deposition rate, therefore the maximum daily deposition rate and the annual mean daily deposition rate have been calculated for comparison with the monthly mean threshold level as an approximation.

1.1.16 Where the model results indicate a potential risk of exceedance of the threshold levels, taking into consideration that the evaluation can only be considered indicative, the requirement for activity specific mitigation has been identified. Where the threshold levels are not predicted to be exceeded it is considered that significant effects at the receptors are unlikely.

1.2 Activity assessment

a) Surface stripping

i. Source term assumptions

1.2.1 Soil stripping and enabling earthworks would be carried out within Zone A, and in Zones B, C, D and E along haul routes and where contractor facilities, common user facilities, temporary accommodation and stationary plant are proposed.

1.2.2 Zone A surface-stripped materials are assumed to be principally made-ground materials which may present a dust risk because of the anticipated low organic content and thus poor moisture retention properties. Surface-stripped materials from other areas are assumed to be principally topsoil and subsoil, which are likely to have higher moisture retention properties but potentially higher silt content which could contribute to dust generation when dry, however such materials would be expected to be readily mitigated by wet suppression methods.

1.2.3 The emission factors for estimating dust generation from surface stripping activities and loading/drop operations and associated assumptions are described in AP42 Compilation of Air Pollutant Emission Factors, Heavy Construction Operations, Aggregate Handling, and Western Surface Coal Mining (Refs. 1.3, 1.4, 1.5). The emission source term is estimated based on generic factors, including tonnage of material to be moved, the material moisture content and mean wind speed.

1.2.4 The dust (as PM_{30}) associated with site clearance activities such as soil scraping, loading

1.2.5 and unloading have been estimated and the emissions from two scenarios have been estimated: a bulldozer scraping topsoil; and the excavation and loading of low moisture materials.

1.2.6 The emission factors reported for topsoil removal and unloading by scraper (0.02–0.03kg/tonne) are significantly higher than reported emission factors for loading and drop operations (0.001kg/tonne, material of 5% moisture). These factors are generic, and therefore a range of values have been reviewed to determine the scale of potential impacts from dust generation.

1.2.7 Mitigation for dust generation from loading and drop operations includes:

- wet suppression, which can reduce dust emissions by:
  - 90% from vehicle movements in the loading area;
  - 60% from material drop operations; and

- reduction in wind-speed with barriers or similar, which can reduce the dust source term by 60% for a halving of the mean wind-speed.

1.2.8 For the purposes of the assessment, a control efficiency of 90% over uncontrolled emissions has been assumed to be achievable through standard mitigation measures. The assumed factors are presented in **Table 1.2**.

Table 1.2: Estimated emissions (PM_{30}) from surface stripping & material loading/drop.

Activity Scenario.		Site Assumptions.	Controlled PM_{30} (kg/hr, 90% Attenuation).
Lower rate:	Single bulldozer – Zone C soil scraping.	Removal rate = 180 t/hr; material density 1.2kg/m^3.	0.52
Higher rate:	Bulldozer – Zone A surface strip, made-ground removal.	Removal rate = 640t/hr; material density 1.6kg/m^3.	1.86
	Loading/drop operations, surface strip.	Assumed 5% moisture content; loading/drop rate = 640t/hr; material density 1.6kg/m^3.	0.18

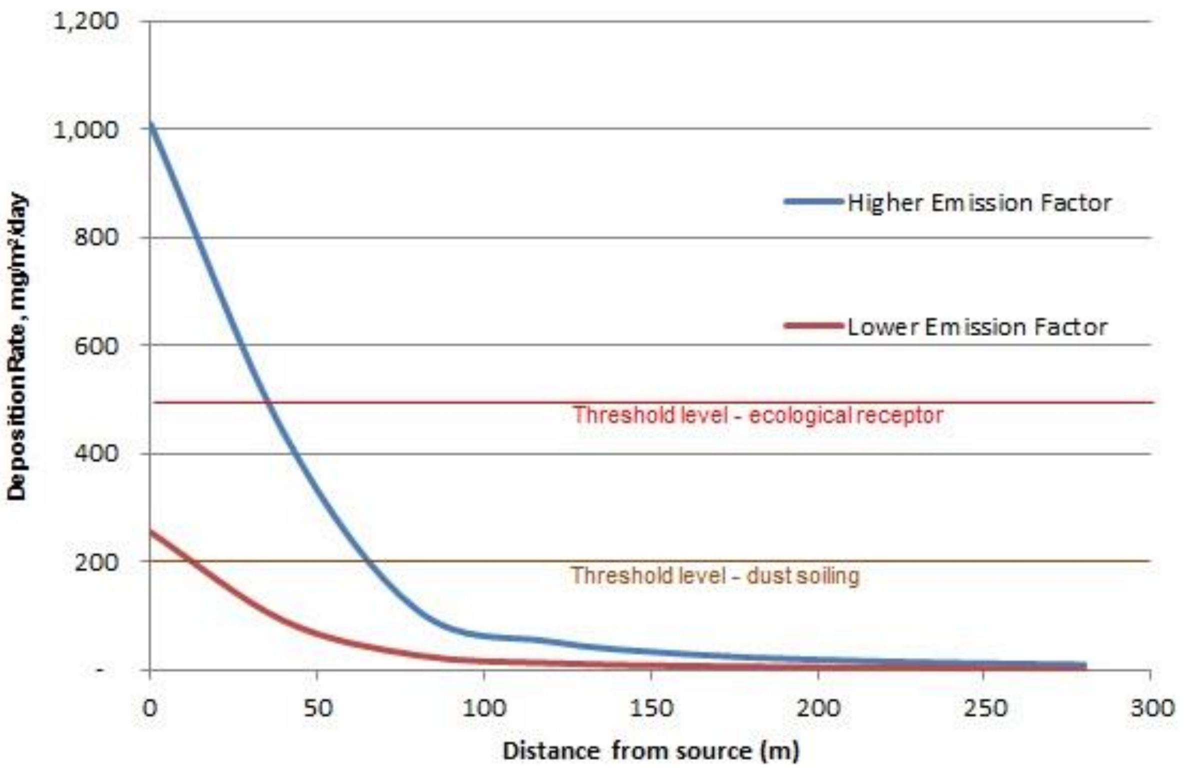
1.2.9 The emission factors for the higher and lower rate scenarios have been modelled to determine the deposition rate of particulates with distance from the source. The emission source has been modelled as a mitigated, fugitive area source at slight elevation (3–5m), to represent the scraping and loading of material with wet suppression employed.

ii. Predicted results

1.2.10 The drop-off with distance of deposited dust is shown in **Plate 1.1** for:

- higher emission factor (single bulldozer, surface stripping or made ground excavation, plus loading/drop operation); and
- lower emission factor (single bulldozer, soil scraping plus loading/drop operation).

Plate 1.1: Dust deposition (mg/m²/day) with distance from mitigated surface stripping activities (90% attenuation).



1.2.11 The lower emission rate scenario (with mitigation) is predicted to result in a maximum dust deposition rate below the threshold level for ecological impacts (500mg/m²/day), and below the threshold level for dust soiling impacts (200mg/m²/day) within 15m of the source. The higher emission rate scenario (with mitigation) is predicted to result in a maximum dust deposition rate below the ecological threshold level within 50m of the source.

1.2.12 The predicted dispersion of dust from the higher emission rate scenario has been plotted as an isopleth and shown, at two alternative locations, on a plan of Zone A as shown in **Figure 12A.1**. The isopleth shows the two sets of bulldozer/loader working approximately 200m apart.

iii. Discussion

1.2.13 The dispersion model does not include the effects of barriers, for example boundary fencing, existing vegetation and trees or new planting, or variations in topography on either the dispersion of the emission or on the attenuation of the dust, therefore the effects of wind speed reduction from barriers and topography would provide additional attenuation of dust from the site.

1.2.14 A buffer zone of at least 25m would be maintained between the main construction area site boundary and sensitive receptors, and additional early planting along sensitive boundaries would also be considered to enhance dust mitigation.

1.2.15 The **Dust Management Plan** would include a requirement to review the daily weather conditions prior to commencement of surface works within 100m of the sensitive receptor boundaries. The need for additional mitigation measures, including wet suppression of surface materials prior to and during scraping and clearance activities, and during excavation of made ground would be reviewed prior to commencement of works.

b) Stockpiling

i. Source term assumptions

1.2.16 The main stockpile in Zone C would cover an area of approximately 20 hectares and would vary between 35–43m height above the existing ground level at its maximum. Stockpiled material in this area will be predominantly excavated crag sand from the borrow pits and other areas, with estimated capacity for 1.1Mm^3. Other, smaller open-air stockpiles will also be employed within the proposed development, including topsoil and subsoil storage for later landscaping and reinstatement, and short-term stockpiling of excavated materials in Zone A prior to the SSSI crossing availability.

1.2.17 The assessment of stockpile dust generation has considered the Zone C (SSA) crag stockpile (C5) and the temporary Zone A (main construction area) made ground stockpile, as the sources with greatest potential for dust impacts.

1.2.18 The dust emission from stockpiling of topsoil and subsoils has not been included in this further assessment, as the material, once placed, will remain largely undisturbed for the duration of the construction programme; furthermore the surface of soil stockpiles can be readily stabilised with seeding, thus effectively reducing the potential for wind-blown dust; therefore soil stockpiles at the site are not considered to represent prolonged or significant dust source terms.

1.2.19 This assessment has been conducted using emission factors derived from AP42 Compilation of Air Pollutant Emission Factors for Industrial Wind Erosion (Ref. 1.5), with general assumptions regarding the study area and construction programme. The AP42 method for estimating dust generation from stockpiles describes the erosion potential of a stockpile following pile disturbance. The erosion potential is the finite availability of erodible material at the surface following pile disturbance (such as excavation or loading) and which is subjected to the threshold wind speed, defined as the wind speed at which wind erosion may occur and the threshold wind speed is dependent on both the typical particle size of stockpiled materials and the wind speed between each disturbance (where fresh material is exposed). The method assumes that all erodible material at the surface is released to atmosphere during a single peak wind gust; therefore the total annual emission is the sum of erosion potentials between each period of disturbance.

1.2.20 The threshold wind speed represents the wind speed above which material of specific threshold friction velocity (TFV) will be eroded from a surface. The TFV for sand/silt is assumed to be similar to that published for coal dust of 0.55m/s[1] and requires a threshold wind speed (or gust of wind) of approximately 10–10.5m/s typically occurring during hourly mean wind speeds of more than 8.5–8.9m/s.

1.2.21 The source term has been derived in two ways:

- Scenario 1: emissions from the completed stockpile (maximum height), resulting from the maximum wind speed. This scenario assumes that all erodible surface material is released from the stockpile during a single peak gust wind event (typically two minutes duration) and represents the likely maximum emission event within a ten-year period.
- Scenario 2: continuous emissions from the construction/reclamation of the stockpile, resulting from wind speeds in excess of the threshold wind speed. This scenario considers a small, flat surface area of disturbance on the stockpile surface, corresponding to the likely volume of material (9,700m^3) deposited between mean periods of threshold wind speed (every 24 hours) and represents the likely minimum emission scenario.

1.2.22 Meteorological data analysis for the site has identified that hourly-mean wind speeds in excess of 8.9m/s represent 4% of hours within the ten-year period or a mean period of 24 hours between threshold wind speed events. This is a simplified representation of wind gusts, as typically such events will be clustered hours rather than regular events, however where wind gusts are clustered for example over several hours in a day, lesser surface area of the stockpile will be disturbed in the period of study and therefore the emission would be over-represented by the model; and conversely where the threshold wind events occur more than 24 hours apart, greater surface area of the stockpile will be disturbed leading to a larger erosion potential, thus the emission would be under-represented by the model.

[1] Overburden, including rocks and soils has a published TFV of 1.05m/s, representing a hourly wind-speed of 15.8m/s for dust to be eroded, which occurs for only 28 hours within the ten-year period.

1.2.23 Mitigation measures to minimise dust generation from regularly disturbed stockpiles include:

- working as small an area as possible to minimise the freshly exposed material, with the surface area directly proportional to the emission rate;
- wet suppression, achieving attenuation of more than 80% and higher where use of a binding agent or similar is applied with water-spraying .

1.2.24 For the purposes of the assessment, a conservative control efficiency of 75% over uncontrolled emissions has been assumed. The area source has been modelled using ADMS to determine the maximum long-term dust deposition rates at identified receptor locations:

- Scenario 1: the likely maximum emission rate as predicted by the highest wind speed over the whole stockpile within the ten-year meteorological period (from 2018), modelled with the single hour of meteorological data, to give the maximum hourly predicted deposition rate of dust (PM_{30}) (with the result averaged over 24 hours for comparison with assessment criteria).
- Scenario 2: the 24-hour variable emission rate modelled with the most recent five years of meteorological data (Wattisham 2014–18), to give the maximum daily deposition of dust and the long-term average daily deposition rate of dust for comparison with the threshold levels. The emission from the working face has been modelled at different stockpile heights (5m, 10m, 30m, 43m), representing the progression of the stockpile from earthworks.

1.2.25 The assumed factors are presented in **Table 1.3**.

Table 1.3: Estimated (controlled) erosion potential (PM_{30}) from stockpiles.

Stockpile Assessment.	Description	Controlled PM_{30} Emission (75% Attenuation).
Zone C (5m/10m/30m/43m height).	Scenario 1: single peak wind event over whole C5 crag pile, theoretical hourly maximum emission event.	18g/m² 24-hour average.
	Scenario 2: frequent small-scale disturbance, maximum continuous emission (C5 or C8 pile).	12g/m²
Zone A (maximum 7–10m height).	Scenario 1: single peak wind event over whole pile, theoretical hourly maximum.	18g/m² 24-hour average.
	Scenario 2: frequent small-scale disturbance, maximum continuous emission.	12g/m²

1.2.26 The potential dust raised by loading and drop operations during the stockpile construction/reclamation activities has also been modelled, using the parameters defined for the higher rate activities in **section 1.2** of this annex, Surface Stripping, to assess the cumulative effects. For both stockpile areas, the construction/reclamation activities are assumed to be carried out with a bulldozer and loader, working at an elevation of 5m above the surrounding landform. An attenuation factor of 90% has been assumed for wet suppression of bulldozer and loader operations.

ii. Predicted results – Zone C, stockpile erosion

1.2.27 The indicative dust deposition rates from SSA stockpile erosion, with mitigation assuming wet suppression achieves attenuation of dust at 75% of the uncontrolled erosion source, are shown in **Table 1.4** of this annex.

1.2.28 The maximum emission rate, as predicted by the highest wind speed (January 2018) over the whole stockpile, is predicted to result in a maximum deposition of particulates to ground (as PM_{30}) of 600mg/m^2/day, occurring some 300m to the north-east of the stockpile. The result cannot be directly compared with the monthly mean soiling rate as the event is predicted for a single worst-case hour, however it indicates the potential for occasional high dust deposition events.

1.2.29 The **Dust Management Plan** would include a requirement to review the weather conditions prior to works within 100m of the receptor. The need for additional mitigation measures, including avoiding active working close to the receptor during dry and windy conditions, and the use of binding agents, would be reviewed prior to commencement of works.

1.2.30 During pile construction or reclamation, the maximum daily mean dust soiling rate, with a stockpile height of 5m, is predicted to be 20mg/m^2/day when the disturbance area is within 25m of the receptor, representing 10% of the monthly mean threshold for dust soiling (200mg/m^2/day);The annual mean daily deposition rate (assuming the disturbance area does not move for the duration of the year) is predicted to be 0.5mg/m^2/day, representing less than 1% of the monthly mean threshold for dust soiling.

1.2.31 The daily mean dust soiling rate drops off with distance from the source, as shown in **Plate 1.3** of this annex, such that when the disturbance area is more than 100m from the receptor, the long-term soiling rate is predicted to be less than 5% of the monthly mean threshold.

1.2.32 The deposition rate also decreases with increased stockpile height, because of increased distance between the ground and the maximum erosion surface (flat top) resulting in greater dispersion of the emission prior to deposition to ground, as shown in **Plate 1.3** of this annex. The maximum deposition rate occurs with a 5m high stockpile; stockpiles and earth moving activities below this height are expected to be screened by existing hedges, trees and other structures.

1.2.33 The maximum deposition rate at the most sensitive ecological receptors E2 and E5 to the north of the SSA (more than 1km), represented an annual mean daily deposition rate of 0.1mg/m^2/day or less than 1% of the ecological threshold (500mg/m^2/day), therefore the potential for ecological impacts at these receptors from SSA stockpile erosion is considered to be negligible.

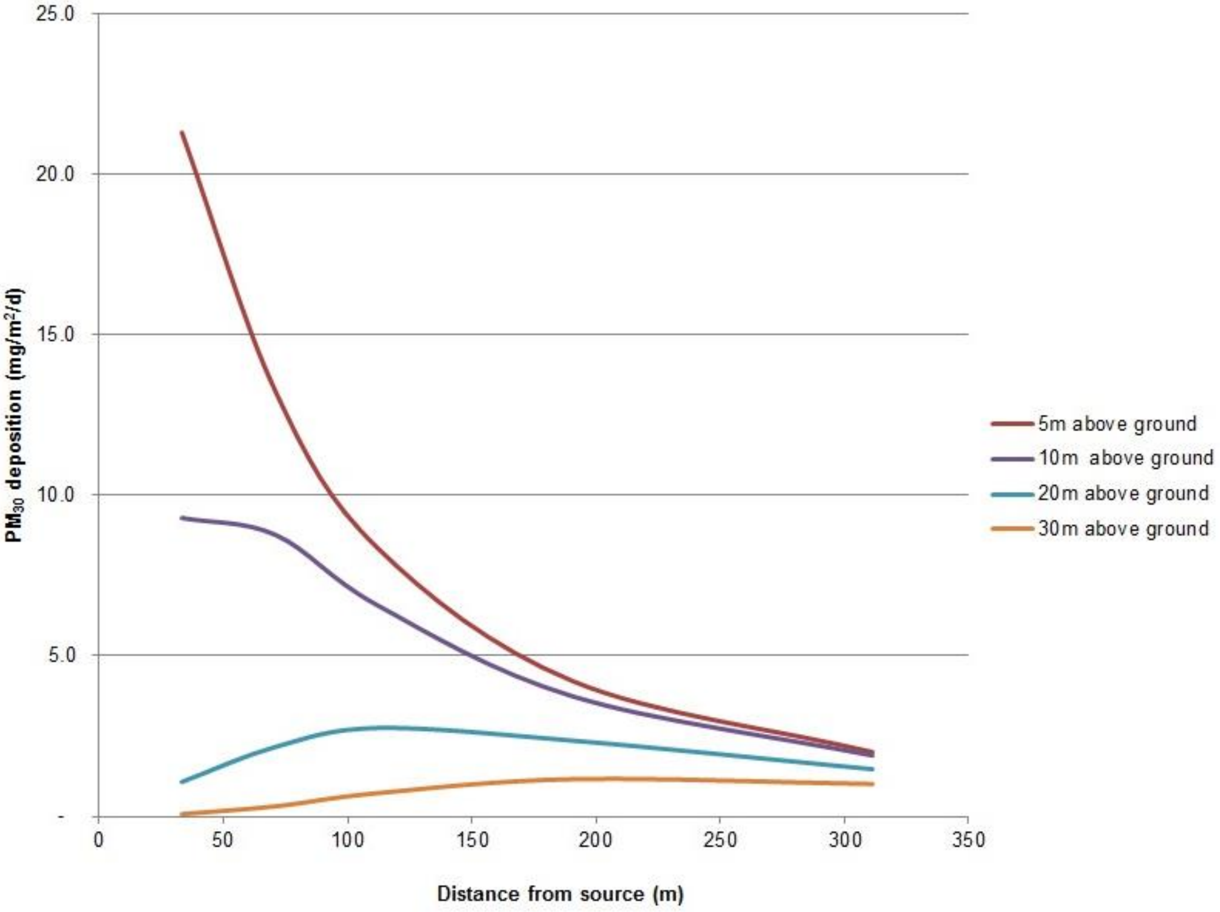
1.2.34 The maximum predicted PM_{10} concentration from stockpile erosion, for any height stockpile, is less than 1% of the national air quality standard (reported as the 90.4th percentile of 24-hour means) and therefore is considered to be negligible.

Table 1.4: Indicative maximum dust deposition levels at sensitive receptors from Zone C crag stockpile erosion (controlled).

Assessment Criterion.	Threshold Level.	Maximum Controlled PC at Receptor[1].	Controlled PC/AQS.
PM_{30}, dust soiling deposition – maximum monthly.	200mg/m^2/day (monthly mean).	20mg/m^2/day (5m high stockpile, within 25m of receptor).	10% (See **oDMP** A5.1, A5.3, A5.4).
		5mg/m^2/day (Max 43m high stockpile).	3%
PM_{30}, dust soiling deposition – maximum single hour.	-	600mg/m^2/day average (Max 43m high stockpile, maximum deposition location occurs over C6 stockpile).	300% of monthly mean threshold.
PM_{30}, dust soiling deposition – annual mean.	200mg/m^2/day (monthly mean).	0.9mg/m^2/day (43m high stockpile, maximum, occurs within 300m of source).	<1%
		0.5mg/m^2/day (5m high stockpile 25m from receptor).	<1%
PM_{30}, ecological deposition – annual mean.	500mg/m^2/day	0.8mg/m^2/day (5m high stockpile, max ecological receptor, E5).	<1%
PM_{10}, maximum 24-hour mean (90.4th %ile).	50µg/m^3	0.5µg/m^3 (5m high stockpile, 25m from receptor).	1%

1. Assuming wet suppression achieving 75% attenuation over uncontrolled source

Plate 1.2: Annual mean dust deposition from mitigated stockpile erosion of active area, by height above ground (75% attenuation).



iii. Predicted results – Zone C, loading and drop operations

1.2.35 The maximum monthly mean dust soiling rate at the LE25 receptor from controlled loading and drop operations within the C5 main crag stockpile, at 5m in height, was predicted at nearly 100mg/m^2/day, representing 50% of the monthly mean threshold level. The maximum daily mean PM_{10} concentration, from controlled loading and drop operations within 100m, represents 50% of the national air quality standard (reported as the 90.4th percentile of 24-hour means) and therefore additional mitigation may be required.

1.2.36 The maximum monthly deposition rate from combined emissions from erosion of the active stockpile and loading and drop operations during the peak month for high winds is illustrated in the isopleth in **Figure 12A.2**. The deposition is dominated by the loading and dropping operations emission.

1.2.37 The **Dust Management Plan** would include a requirement to review the weather conditions prior to commencement of works within 100m of the receptor. The need for additional mitigation measures, including avoiding active working close to the receptor during windy and dry conditions, and the use of binding agents, would be reviewed prior to commencement of works.

1.2.38 The maximum dust deposition rate at identified ecological receptors was predicted at less than 1% of the threshold level, for E2 (Sizewell Marshes SSSI) to the east of the site.

Table 1.5: Indicative maximum predicted dust levels at sensitive receptors from Zone C stockpile construction (controlled).

Assessment Criterion.	Threshold Level.	Maximum Controlled PC at Receptor[1].	Controlled PC/AQS.
PM_{30}, dust soiling deposition – maximum daily mean.	200mg/m^2/day (monthly mean).	100mg/m^2/day (5m in height, LE25).	50%
PM_{30}, ecological deposition –annual mean.	500mg/m^2/day	2.0mg/m^2/day (5m in height, E5 receptor).	<1%
PM_{10}, maximum 24-hour mean (90.4th %ile).	50µg/m^3	25µg/m^3 (5m in height, LE25).	50%

1. Assuming wet suppression achieving 90% attenuation over uncontrolled source

iv. Predicted results – Zone A stockpile erosion

1.2.39 Temporary stockpiles within the main construction area are assumed to be located at least 50m from sensitive boundaries.

1.2.40 Assuming wet suppression (75% attenuation) use during pile construction or reclamation, the indicative annual mean daily dust deposition rate is greater than 5mg/m^2/day at E2 and E5 receptor sites downwind, representing less than 1% of the threshold level of 500mg/m^2/day.

1.2.41 The maximum predicted PM_{10} concentration at the LE47 receptor (beach users) from stockpile erosion is 5% of the national air quality standard (reported as the 90.4th percentile of 24-hour means) and therefore is considered to be negligible.

Table 1.6: Indicative maximum predicted dust levels at sensitive receptors from Zone A stockpile erosion (controlled).

Receptor	Assessment Criterion.	Threshold Level.	Maximum Controlled PC at Receptor[1].	Controlled PC/AQS.
E2 (Minsmere – Walberswick Heaths and Marshes SAC, SPA, Ramsar, SSSI – north).	PM_{30}, ecological deposition ($mg/m^2/day$).	$500mg/m^2/day$	$3.2mg/m^2/day$ (7m stockpile).	<1%
E5 (Sizewell Marshes SSSI – west).	PM_{30}, ecological deposition ($mg/m^2/day$).	$500mg/m^2/day$	$0.4mg/m^2/day$ (7m stockpile).	<1%
LE47 (Beach users).	PM_{10} human health (90.4^{th} %ile of daily mean, $\mu g/m^3$).	$50\mu g/m^3$	$2.5\mu g/m^3$	5%

1. Assuming wet suppression achieving 75% attenuation over uncontrolled source

v. Predicted results – Zone A, loading and drop operations

1.2.42 The peak monthly PM_{30} deposition rate, from controlled loading and drop operations is predicted to be less than $500mg/m^2/day$ within 25m of the operation, therefore below the ecological deposition threshold.

1.2.43 The maximum daily mean PM_{10} concentration, from controlled loading and drop operations within 100m of the beach receptor, (LE47) represents 50% of the national air quality standard (reported as the 90.4^{th} percentile of 24-hour means) and therefore additional mitigation may be required during very windy and dry weather, and when operations are necessarily within 50m of the beach and public right of way.

1.2.44 However, these results assume that the operations remain in the same place over the course of the year and therefore represent an overestimation of the potential impact at the receptor location. Furthermore, the model does not take into account screening effects from boundary fencing and other structures that would lower the wind-speed across the activity area.

vi. Discussion

1.2.45 The results indicate that wind erosion of stockpiles within Zone A, assuming adequate wet suppression, would be unlikely to result in dust deposition levels that could cause significant impacts on the identified ecological receptors.

1.2.46 Loading and dropping operations close to the beach area in Zone A would require additional mitigation in order to minimise the potential for elevated PM_{10} concentrations. However the assessment assumes a continuous source which remains in the same location for the full year leading to a maximum concentration in a particular impact area, whereas actual onsite activities would be mobile and non-continuous, so the emission would be more dispersed across the construction zone and over time. This means the potential impact would be likely much lower. Particulates monitoring downwind of the active areas within Zone A is proposed to ensure that mitigation measures are proportionate and effective.

1.2.47 The results indicate that wind erosion of stockpiles within Zone C, following disturbance but assuming adequate wet suppression, and monitoring to avoid high wind events, would be unlikely to result in dust deposition levels or PM_{10} concentrations that could cause significant impacts on the identified receptors; the nearest receptor is LE25. However loading and dropping activities, in combination with erosion events, could result in peak deposition levels that exceed the dust soiling threshold value during very windy and dry conditions, and therefore the review of the need for additional mitigation is proposed during these conditions.

1.2.48 However no account has been made within the modelling of the screening effect of the surrounding temporary construction site structures, such as campus accommodation blocks, that may reduce surface wind-speeds and therefore the potential for dust erosion from these potential dust generating activities[2].

1.2.49 The use of additional mitigation measures, such as enhancement of wet suppression using a binding agent, or limiting activities during very windy and dry conditions, may be considered for stockpiling disturbance near to sensitive boundaries. Particulates monitoring downwind of the active areas within Zone C is proposed to ensure that mitigation measures are proportionate and effective.

c) Lime treatment of alluvium

i. Source term assumptions

1.2.50 Alluvium is proposed to be placed in the borrow pits, following crag excavation. The material is likely to become unworkable for vehicle access in placements of greater than 0.3m depth, therefore lime stabilisation is proposed both to absorb water and provide structure. This treatment will allow for increased compaction and placement within the borrow pits.

[2] The ADMS dispersion model does not allow for area source modelling with barrier or structure effects

1.2.51 The lime treatment of alluvium within the borrow pits is proposed to be applied using a combined spreader-mixer. The lime spreading and mixing would take place beneath the truck within a skirted area to provide dust containment during the operation. There is a risk that lime dust emissions could be generated during placement with alluvium, particularly during periods of high winds or gusty winds, either through displacement of the truck skirt during spreading or if separate spreader and mixer were to be employed.

1.2.52 The potential for dust emissions has been estimated using the AP42 method for calculating wind-blown erosion potential (Ref. 1.5), as described in **section 1.2** of this annex. The emission source term has been estimated based on the lime dust particle size (affecting the threshold wind speed at which erosion can occur) and the rate of application.

Table 1.7: Source term assumptions – lime treatment of alluvium.

Parameter	Assumption
Area treatment rate.	2,000m^2/hour
Lime application rate.	6kg/m^2, 1% by weight alluvium (Ref. 1.6).
Borrow pit treatment duration.	100 days.
Lime erosion potential.	30g/m^2, 0.5% by weight of applied material.
Slaked lime particle size distribution.	80% PM_{30} or below.

1.2.53 Assuming a TFV of 0.55m/s (roughly equivalent to coal dust, or particle size of 0.6mm) and a maximum wind speed of 15m/s at the surface results in an estimated erosion potential of 30–35g/m^2, or approximately 0.5% of the applied lime is lost through wind erosion. Slaked lime particle size distribution typically has 80% at PM_{30} or below, so the defined particle size for TFV may be somewhat large resulting in an underestimate of erosion potential, however the method assumes a flat surface (e.g. concrete pad) for erosion, which the alluvium surface is not.

1.2.54 An area source term within the borrow pits has been modelled using ADMS5.2 to determine the indicative deposition rates of dust at nearby receptors. The emission source has been modelled at ground level as a worst-case, representing near-restoration level of the borrow pits area, as the majority of the treatment would occur below the surrounding ground level.

ii. Predicted results – lime treatment erosion

1.2.55 The treatment operations at near-restoration level are likely to take several weeks, and in the event that such operations coincided with a period of high wind in the vicinity of the residential receptor (LE25, Roundhouse), emission concentrations may have the potential to exceed the dust soiling threshold at the receptor. Dust deposition could also present a source of trackout material on the Eastbridge Road, during similar high risk conditions.

1.2.56 Eroded dust from the lime treatment is predicted to result in deposited dust levels above the 500mg/m^2/day threshold within 150m of the source, therefore potentially within an area of the marsh harrier habitat (E15) if there were high-wind events during restoration level lime treatment close to the receptor. The indicative peak dust deposition level within this area is shown in **Figure 12A.3,** although the model does not take into account the potential mitigation from existing hedges or vegetation that border the marsh harrier habitat area.

iii. Discussion

1.2.57 The erosion potential, and thus also opportunities for mitigation, are dependent on both the particle size of the lime, and the wind-speed at ground level.

1.2.58 Long term (annual mean) impacts are likely to be overestimated as the treatment period is estimated to be of the order of 100 days and the majority of this would be below the surrounding ground level which would provide a degree of wind speed reduction, thereby reducing the source term.

1.2.59 Furthermore, the modelled peak dust erosion rate is based on the assumption that the lime used in the treatment has a similar TFV to coal-dust and therefore will become airborne during mean wind-speeds in excess of 15m/s, which typically occur for only a few hours per year; at lower wind-speeds (and dependent on the grain size of the lime used in the treatment) the rate of erosion would be expected to reduce.

1.2.60 The use of a combined spread-mixer, with suitable containment below the truck, is recommended to minimise wind-blown dust and therefore impacts on nearby receptors. Where such plant is unavailable, the process should be carefully managed to ensure the minimum treatment area between spreader and mixer and to avoid lime spreading during periods of high wind. The moisture within the alluvium will provide a degree of mitigation during lime spreading and therefore the alluvium should be treated as soon as practicable following placement.

1.2.61 Additional mitigation that could be employed during high risk conditions, and particularly when the treatment level is approaching restoration level, include:

- Planning works according to the wind direction relative to sensitive receptors and cross-sectional treatment area that would lie perpendicular to the wind-direction;

- Use of a coarser grain lime within treatment at approaching restoration level to reduce erosion potential, and where the level of compaction and workability of the material may be less critical;
- Use of boundary barrier fencing; and
- Boundary fence misting during periods of very dry weather (although use of direct water suppression on the treatment area could reduce the beneficial effects of the treatment on the alluvium).

d) Trackout

i. Source term assumptions

1.2.62 Trackout is typically defined as mud or materials transferred by vehicles onto public highways from which dust is raised by vehicle movements, however vehicles travelling on haul roads within construction sites can also lead to dust generation by the same process. Emissions from uncontrolled trackout could potentially occur along the haul roads and access roads within the main construction site, and on public roads from vehicles exiting the site.

1.2.63 The screening assessment identified that whilst uncontrolled trackout onto public roads could result in high risk of dust soiling at local residential and commercial receptors, use of effective controls for trackout onto public roads is likely to reduce this to negligible risk. The screening assessment also identified that, as a consequence of the haul road proximity to the downwind receptor and the duration of the works, the vehicles movements on the haul roads from Zone A to Zone C may present a prolonged high risk of dust deposition impacts on the adjacent ecological receptor (E2, Minsmere – Walberswick Heaths and Marshes SPA and SAC) and that therefore additional control measures beyond those embedded mitigation measures described in the **outline Dust Management Plan** may need to be adopted as necessary.

1.2.64 This assessment has been conducted using emission factors derived from AP42 Compilation of Air Pollutant Emission Factors for Unpaved Roads (Ref. 1.7), with general assumptions regarding the study area and construction programme. The US EPA methodology enables emissions from re-suspended road surface material (trackout) to be estimated, based on weight of traffic and road surface properties.

1.2.65 The largest source of potential dust raising from trackout within the proposed development is anticipated to be generated by Heavy Duty Vehicle haulage between Zone A and Zone C, with some seven million tonnes of spoil excavated from Zone A and transported for storage within Zone C, during Phases 1–2; and subsequent backfilling around the structures with suitable materials principally during Phases 3–4. The peak activity on the haul road is likely to be during the main earthworks in Phase 2 of the construction period, therefore this scenario has been assessed in detail as a worst-case.

1.2.66 The dust emission associated with Heavy Duty Vehicle movements on the haul road has been estimated based on the emission factors presented in the AP42 chapter, and assumptions laid out in **Table 1.8**. The Heavy Duty Vehicles employed for haulage of materials are likely to be equivalent to CAT777 or articulated dump truck (40 tonne).

1.2.67 The dust emission varies directly with the surface material silt fraction (particles less than 75µm diameter), for which example measured values are provided in AP42 where actual data is unavailable, noting that the range in values can be over two orders of magnitude and therefore represents a considerable uncertainty; two alternative values have therefore been assessed:

- Silt content: 7% (mean) – typical content for sand and gravel processing, stone quarrying haul routes; assumed indicative value during crag haulage.
- Silt content: 24% (maximum) – typical content for freshly-graded haul road; assumed indicative value during alluvium haulage.

1.2.68 AP42 provides a bi-linear relationship for road-watering control efficiency to minimise dust generation. A small increase in the surface moisture content of the road (where the controlled moisture content is double that of the uncontrolled moisture content) results in a large increase in control efficiency, up to 75%; beyond this, control efficiency grows slowly with increased moisture content. For the purposes of the assessment, a control efficiency of 75% has been assumed.

Table 1.8: Source term assumptions – haul road trackout.

Parameter	Assumptions – articulated dump truck	Assumptions – CAT777.
Average weight of vehicle on road (loaded).	68t	165t
Average weight of vehicle on road (unloaded, return trip).	31t	65t
Estimated two-way trips per hour.	66	24
Watering control efficiency.	75% reduction.	
Average controlled dust emission rate ($mg/m^2/hour$).	210 (7% silt loading); 510 (24% silt loading).	110 (7% silt loading).

1.2.69 The potential emission factor, as the hourly average emission rate from the haul road, has been determined based on the above assumptions. The emission has been modelled using dispersion model ADMS5.2 to determine the potential deposition rate of particulates with distance from the source. The emission source has been modelled as a fugitive area source at ground level, and is assumed to be the stretch of haul road from closest to the ecological receptor, at the SSSI crossing.

1.2.70 The use of articulated dump trucks is predicted result in higher emissions from surface dust raising as a result of the greater total combined weight of vehicles and payloads per tonne of material transfer, compared with CAT777s; a ratio of 1.2 : 1 per tonne of material transfer.

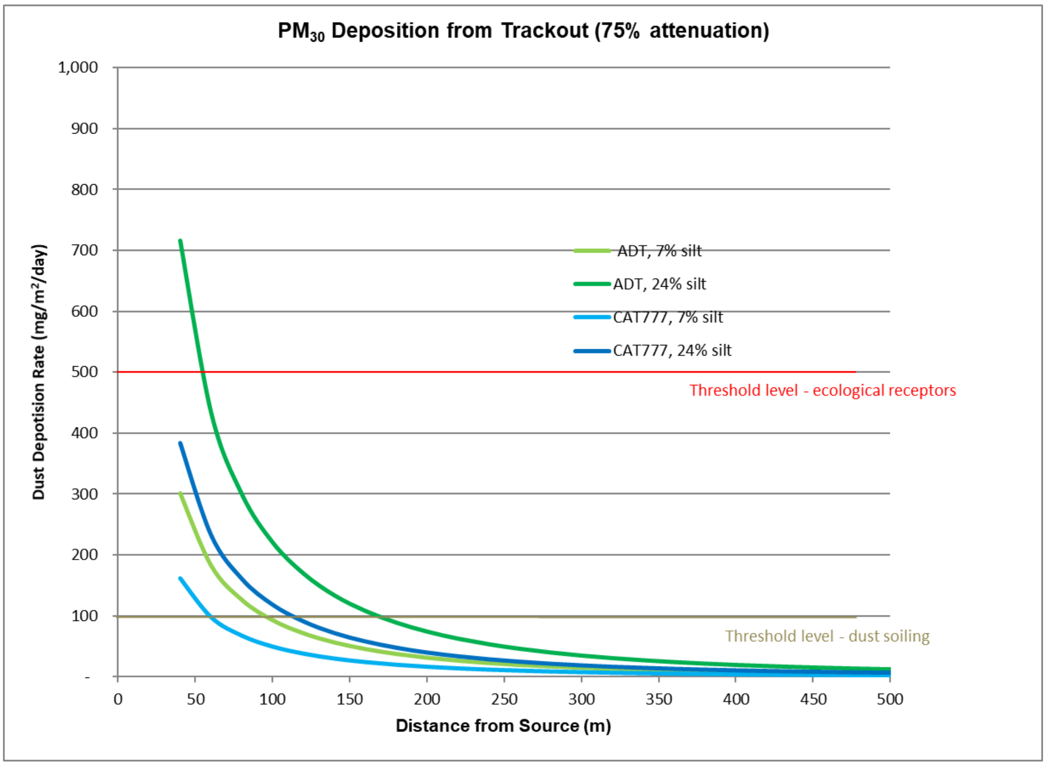
ii. Predicted results

1.2.71 The indicative dust deposition rates with distance from the source are shown in the graphic in **Plate 1.3**, for each of the model scenarios. The results indicate that for the worst-case scenario (articulated dump truck transfers, 24% road silt loading) the dust deposition rate falls below the ecological threshold level for ecological receptors within approximately 60m of the road, and below the dust soiling threshold level within around 170m from the road. For the best-case modelled scenario, the dust deposition rate falls below the ecological threshold level at less than 50m from the road, and below the dust soiling threshold at around 60m of the road.

1.2.72 The results of the dispersion modelling predict impacts at greater distances from the road-side than indicated by the IAQM screening assessment (50m) however the dispersion model does not take into account the effects of barriers and vegetation, or other natural suppressants such as rainfall, that provide mitigation in real-world dispersion; Furthermore, the effects of trackout within the screening assessment are considered only for paved roads at the site exit, rather than for an operational road within the construction site, which would be expected to present a larger potential dust source than a paved road.

1.2.73 The model assumes a continuous source of silt and dust, that would be associated with vehicles routinely travelling over the source material. Use of a graded haul road and regular housekeeping to minimise and mitigate spilled materials would be expected to limit the available source material.

Plate 1.3: Dust deposition with distance from trackout (75% attenuation).



Zone A impacts

1.2.74 As shown in the graph in **Plate 1.3**, the drop off in dust deposition is very rapid with distance from the source, and therefore it is not possible to predict with certainty the maximum deposition rate at a nearby receptor. An estimate of the likely maximum predicted model impacts at the sensitive receptor from haul road trackout are presented in **Table 1.9**. The worst-case model results indicate the potential for deposition of dust above the ecological threshold level of 500mg/m^2/day at the Minsmere-Walberswick Heaths and Marshes SPA/SAC/Ramsar/SSSI receptor; the area of impact is shown in **Figure 12A.4**, indicating approximately 0.9ha of the SSSI to the north of Zone A, including approximately 0.5ha of the SAC, could be subject to dust deposition above the threshold level. The maximum dust deposition rate predicted at the SAC and SSSI receptors, assuming use of articulated dump trucks, 24% silt loading in the material and 75% attenuation, is approximately 1,750mg/m^2/day at the closest point to the source.

Table 1.9: Indicative maximum predicted dust levels at sensitive receptors from haul road trackout (controlled).

Scenario	Assessment Criterion.	Threshold Level (mg/m^2/day)[1].	Maximum Controlled PC at Receptor.	Controlled PC/AQS.

Scenario	Assessment Criterion.	Threshold Level (mg/m²/day)[1].	Maximum Controlled PC at Receptor.	Controlled PC/AQS.
Average-case: articulated dump truck, 7% silt loading.	PM_{30}, ecological deposition.	500	750	150%
Worst-case: articulated dump truck, 24% silt loading.	PM_{30}, ecological deposition.	500	1750	350%
Best-case: CAT777, 7% silt loading.	PM_{30}, ecological deposition.	500	400	8%

1. E2, Assuming road watering achieving 75% attenuation over uncontrolled source

1.2.75 The results from models assuming a road silt-loading of 7% indicate dust deposition rates at the receptor below the ecological threshold, as shown in **Figure 12A.5**.

1.2.76 The potential for dust raising from trackout has also been considered along the western boundary of Zone A with receptor E5 (Sizewell Marshes SSSI). The speed of vehicles is likely to be lower within the main construction area compound than that on the haul road; additionally, the majority of the excavated material will be wet and therefore the haul routes within Zone A are considered likely to be higher moisture level.

Zone C impacts

1.2.77 Dust raising from trackout within Zone C could result in dust soiling above the threshold value at the LE25 receptor (the Roundhouse), dependent upon the volume of traffic passing the receptor. Dust deposition above the threshold value could also occur at the edge Ash Wood ecological receptor (E16).

1.2.78 The proposed placement of alluvium within the borrow pits in particular is considered to have the potential for trackout impacts as a result of the relatively high silt content of the alluvium, compared with other extracted materials. The **Dust Management Plan** would include a requirement to visually monitor for deposited dust at the receptor. The need for additional mitigation measures, including damping down of haul routes and the use of binding agents, would be regularly reviewed.

1.2.79 Particulates monitoring downwind at the LE25 receptor location is proposed to ensure that mitigation measures are proportionate and effective.

iii. Discussion

Topography and vegetation considerations

1.2.80 The dispersion model does not include the effects of screening barriers, for example boundary fencing, existing vegetation and trees or new planting, or variations in topography on either the dispersion of the emission or on the attenuation of the dust.

1.2.81 Planting and vegetation close to a source are known to result in moderate attenuation of atmospheric dust, both through the effect of lowering incident wind-speed at the source and through impaction (deposition) on leaves.

1.2.82 The effects of vegetation on coarse particle attenuation are reported to be up to 50% for tall trees, such as oak or cedar, and up to 35% for tall grasses, where such vegetation is located within 25m of a source (in light winds) (Ref. 1.8). The level of attenuation depends on the density / porosity of the planted area; low porosity, dense planting can resulting in "lofting" of atmospheric dust such that the dust is blown over the top of the vegetation; whilst high porosity, low density planting results in lower opportunity for deposition of dust on vegetation and therefore minimises the attenuation effect.

1.2.83 Maintenance of trees and hedges at site boundaries with additional early planting are recommended for potential design mitigation of dust impacts (Ref. 1.9). Existing woodland and hedging would be maintained as far as practicable along the northern boundary of Zones A and B, with additional early planting to enhance mitigative effects in high risk areas. The embankment of the SSSI crossing would also be planted which would reduce wind-speed across the top of the crossing. The boundary fencing would also reduce off-site wind-blown dust, by lowering wind-speeds and by the creation of low-level turbulent conditions which in turn creates greater residence time for dust near to the ground and obstacles, and therefore increases the level of dust impaction and deposition close to the source.

1.2.84 The use of larger capacity vehicles with fewer trips (CAT777-type) over smaller capacity vehicles (articulated dump truck-40 type) would be prioritised as far as practicable, to lower the potential trackout source.

1.2.85 As such the dust impacts are therefore likely to be lower than predicted in this assessment.

1.2.86 It is considered that the attenuation effects afforded by the fencing and vegetation along this boundary, in addition to the proposed mitigation measures as described, will result in dust deposition rates over the wider receptor site well below those predicted by the model.

Additional mitigation

1.2.87 The potential for dust generation from trackout from haulage vehicles on the haul road between Zone A and Zone C has been assessed through estimation of the potential source term range using AP42 methodology, and dispersion modelling of the dust emission to determine the potential long-term dust deposition rates on the nearby ecological receptor. Assumptions regarding the silt-loading on the road and the number and weight of vehicles movements along the haul route have been made, however these can only be regarded as indicative in order to present the scale of potential impacts, rather than specific values.

1.2.88 The worst-case model results indicate a small area (less than 0.1% by area) of the E2 and E5 receptors to the north-west of the SSSI crossing may be subject to levels of dust deposition that are higher than the ecological threshold, however the result does not take into account potential mitigative effects of barriers and vegetation, nor the sensitivity of the receptor at the locations predicted to be impacted.

1.2.89 Additional mitigation measures that could be employed include:

- use of larger HDVs for fewer trips;
- early/supplementary planting at sensitive boundaries;
- boundary fence misting (wet suppression);
- speed limit restrictions to minimise turbulent effects; and
- regular use of road-sweeping on the SSSI crossing to reduce the dust source on the haul road close to the E2 and E5 receptors.

b) Results summary

1.2.90 The results from the above individual activity assessments are summarised in **Table 1.10**.

Table 1.10: Summary results for individual activity assessment.

Activity	Assumed Dust Mitigation (Attenuation Factor).	Receptor(s) (Metres from Source).	Indicative Location at which Dust Threshold Value Exceeded (Metres from Source).	Potential Risk of Exceedance of Threshold Value at Receptor.	Activity-specific Mitigation Required.
Zone A: Main Construction Area.					
Surface stripping (bulldozer, loading/drop operations); Made Ground excavation.	Wet suppression (90%); (Existing barriers (trees, vegetation, Bent Hills) not included).	E5 (25m) E2 (50m) LE47 (50m).	Up to 40m.	E5– moderate risk E2 – low risk LE47 – moderate risk.	Yes
Stockpiling of spoil (disturbance).	Wet suppression (75%).	E5 (50m) E2 (50m) LE47 (100m)	(not exceeded).	Negligible risk.	No
Stockpiling of spoil (loading/drop operations).	Wet suppression (90%); (Existing barriers not included).	E5 (50m) E2 (50m) LE47 (100m).	Up to 25m Up to 50m.	E5 - low risk E2 – low risk LE47 – moderate risk.	Yes
Trackout	Wet suppression (75%); (Existing barriers (trees, vegetation) not included).	E5 (25m) E2 (50m).	Up to 80–200m (dependent on silt loading of road; vehicle type).	E5 - high risk E2 – high risk.	Yes

Activity	Assumed Dust Mitigation (Attenuation Factor).	Receptor(s) (Metres from Source).	Indicative Location at which Dust Threshold Value Exceeded (Metres from Source).	Potential Risk of Exceedance of Threshold Value at Receptor.	Activity-specific Mitigation Required.
Zone C: Spoil Storage Area / Borrow Pits Area.					
Stockpiling of spoil (disturbance – wind erosion).	Wet suppression (75%).	LE25 (100m).	Up to 50m (from active of stockpile area).	Moderate risk (only a few predicted occurrences per year).	Yes
Stockpiling of spoil (loading/drop operation).	Wet suppression (90%).	LE25 (100m).	Up to 50m.	High risk.	Yes
Lime spreading (BP alluvium treatment).	Combined spreader-mixer.	E15 (30m) E16 (20m).	Up to 150m.	High risk.	Yes
		LE25 (20m) LE27b (20m).	Up to 170m.	High risk.	
Trackout	Wet suppression (75%); Existing barriers (trees, vegetation) not included.	LE25 (25m).	Up to 200m (dependent on silt loading of road; vehicle type).	High risk.	Yes

1.3 Cumulative effects

a) Combined effects from Zone C activities

1.3.1 The screening assessment identified stockpiling and earthworks activities within Zone C as potentially representing a high risk of dust impacts because of the large volume of spoil to be moved and stored, the duration of earth and spoil moving activities, and the close proximity of several receptors.

1.3.2 The potential impact from lime-dust erosion during placement and treatment of alluvium in the borrow pits has also been assessed, however these activities would necessarily be carried out before the main stockpiling activities and therefore are unlikely to present a significant concurrent dust generating activity with those other higher risk activities assessed.

1.3.3 The potential dust emissions from stockpile erosion, and drop and loading activities have been estimated using the emission factors in AP42, and assumptions for site construction works, as detailed in **sections 1.2–1.3** of this appendix.

1.3.4 The results indicate that wind erosion of the stockpile may result in occasional high levels of dust deposition at the nearby residential receptor LE25, although this is dependent on the frequency of disturbance of the pile and the level of attenuation of the dust achieved through wet suppression. However with the application of suitable mitigation, it is considered unlikely that dust emissions from the stockpile would result in the dust soiling threshold being exceeded at the receptor.

1.3.5 Loading and drop operations, assuming a single bulldozer and loader in operation on the stockpile surface using wet suppression, are predicted to result in dust soiling at LE25 at around 50% of the soiling threshold level. Therefore when the activity is in close proximity to the receptor, in combination with wind erosion from the stockpile, and other construction activities occurring locally (vehicles on the haul road) there is considered to be potential for the dust soiling threshold level being exceeded at the receptor for short periods.

1.3.6 The **Dust Management Plan** would include a requirement to review the weather conditions prior to commencement of works within 100m of the receptor. The need for additional mitigation measures, including avoiding active working close to the receptor during windy and dry conditions, and the use of binding agents, would be reviewed prior to commencement of works.

1.3.7 Particulates monitoring downwind of the active areas within Zone C is also proposed to ensure that mitigation measures are proportionate and effective.

1.3.8 Lime dust erosion may result in the dust soiling threshold or ecological threshold value for dust deposition being exceeded within 150m of the source, assuming that the activities are coincident with high wind events. The lime treatment period is anticipated to last in the region of 100 days. Therefore whilst there is potential for cumulative dust impact at the receptor from earthmoving activities, the duration of such an impact would be over a few months only.

1.3.9 Additional mitigation measures that could be applied during high risk periods (activities in close proximity to receptor, prolonged dry and windy conditions) include:

- use of binding agents in the earthworks wet suppression spray;
- management of stockpile shape/form to minimise dust erosion;
- minimisation of reclaim area and maintenance of undisturbed surfaces close to receptors and sensitive boundaries as far as practicable;
- use of barriers/screens at activity or site boundaries to reduce wind-speeds;
- planning treatment zones to minimise cross-sectional treatment area that is perpendicular to wind-direction; and
- use of a coarser grain lime within treatment at approaching restoration level to reduce the potential for erosion.

1.3.10 Combined effects may also occur with trackout on the haul roads, in particular from haulage vehicles exiting the borrow pit area during alluvium placement. Additional mitigation may be required for the offloading of alluvium to minimise trackout onto the haul road.

b) Combined effects from Zone A activities

1.3.11 The screening assessment identified earthworks activities and trackout within Zone A as potentially representing a high risk of dust impacts because of the close proximity of high sensitivity ecological receptors to high volume earthmoving and spoil excavation activities, and the duration of potential trackout effects.

1.3.12 The potential dust emissions from stockpile erosion and drop and loading activities have been estimated using the emission factors in AP42, and assumptions for site construction works, as detailed in **sections 1.2–1.3** of this appendix.

1.3.13 Trackout was predicted to represent the highest potential source of dust deposition on E2 (Minsmere to Walberswick Heaths and Marshes SAC), with a worst-case predicted level of 1,000mg/m^2/day at the closest point to the source, dependent upon actual silt loadings and moisture levels on the road surface, and dependent on the level of mitigation afforded by existing and augmented vegetation boundaries.

1.3.14 The contribution to cumulative dust deposition at E2 from mitigated surface stripping, earthworks and stockpiling activities was predicted to be negligible.

1.3.15 Surface stripping and made ground excavation close to the western main construction area boundary with E5 could result in elevated levels of dust above the threshold value during surface levels works; however additional contributions to dust deposition at the receptor from other, mitigated sources is predicted to be negligible.

1.3.16 Additional mitigation could include use of barriers at the western main construction area boundary, to limit wind-speed and therefore dust raising during surface levels works; and the use of boundary-misting (wet suppression spray) along the eastern boundary of the haul road as necessary.

Annex 12A.4 Meteorological Data Analysis

1.1 Meteorological data analysis

1.1.1 Meteorological data was obtained from the UK Meteorological Station at Wattisham to represent the site, for the period 2009–2018. The local conditions, in particular the patterns in wind direction, wind speed and rainfall, were reviewed to inform the assessment of likely effects of dust generation on local receptors.

1.1.2 The Wattisham monitoring station is located 40km west of the site, at a flat airfield. The anemometer height is 10m.

1.1.3 The frequency of winds within each sector are shown in **Table 1.1**, indicating the prevailing wind direction is from the south-west. The table also shows the percentage of hours for different wind speeds, by sector; wind speeds above 5m/s are typically associated with generation and distribution of airborne dust.

Table 1.1: Frequency of winds, by sector and speed (Wattisham, 2009–2018).

Wind Direction [1].	Sector (°)	Percentage of Hours per Sector.	Percentage of Hours by Sector and Speed (m/s).			
			0–0.5	0.5–5.0	5.0–10	>10
N	0	8%	0.1%	5.3%	2.9%	0.1%
NE	45	10%	0.1%	6.5%	3.8%	0.1%
E	90	6%	0.1%	4.2%	1.4%	<0.1%
SE	135	10%	0.1%	7.6%	2.5%	<0.1%
S	180	13%	0.1%	8.5%	4.5%	0.1%
SW	225	24%	0.1%	13%	10%	0.9%
W	270	15%	0.1%	7.7%	6.7%	0.7%
NW	315	13%	0.2%	7.7%	4.8%	0.2%
	Total	*100%*	*0.8%*	*61%*	*37%*	*2%*

1. Direction wind blowing from.

1.1.4 The met data sets indicate that the highest frequencies of winds above 5m/s at the site are from south-west as also indicated in the wind-roses in **Plates 1.1** and **1.2**. Windroses showing wind-speed and direction for individual years are shown at the end of this annex.

Plate 1.1: Windroses, Wattisham 2009–18.

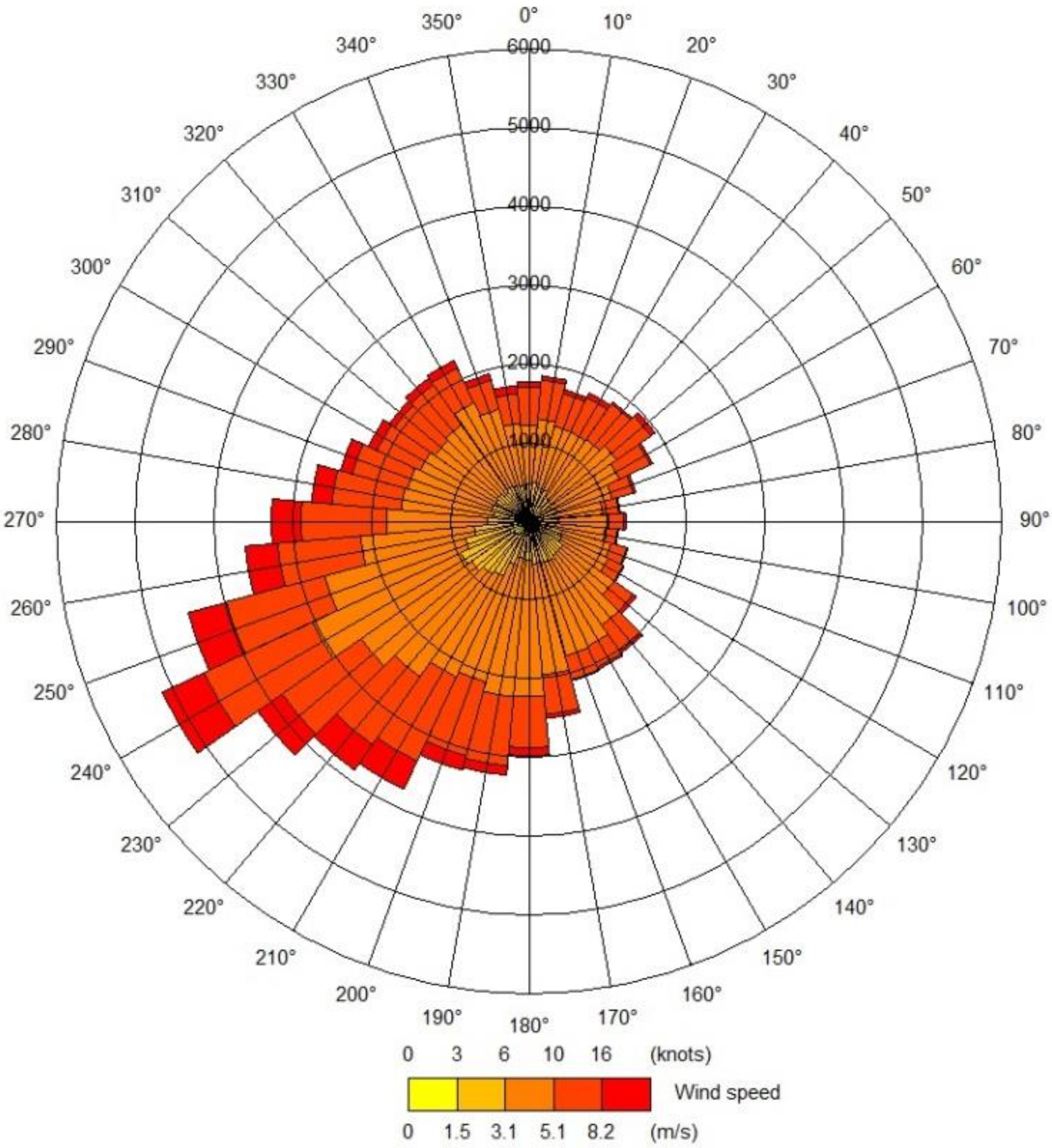
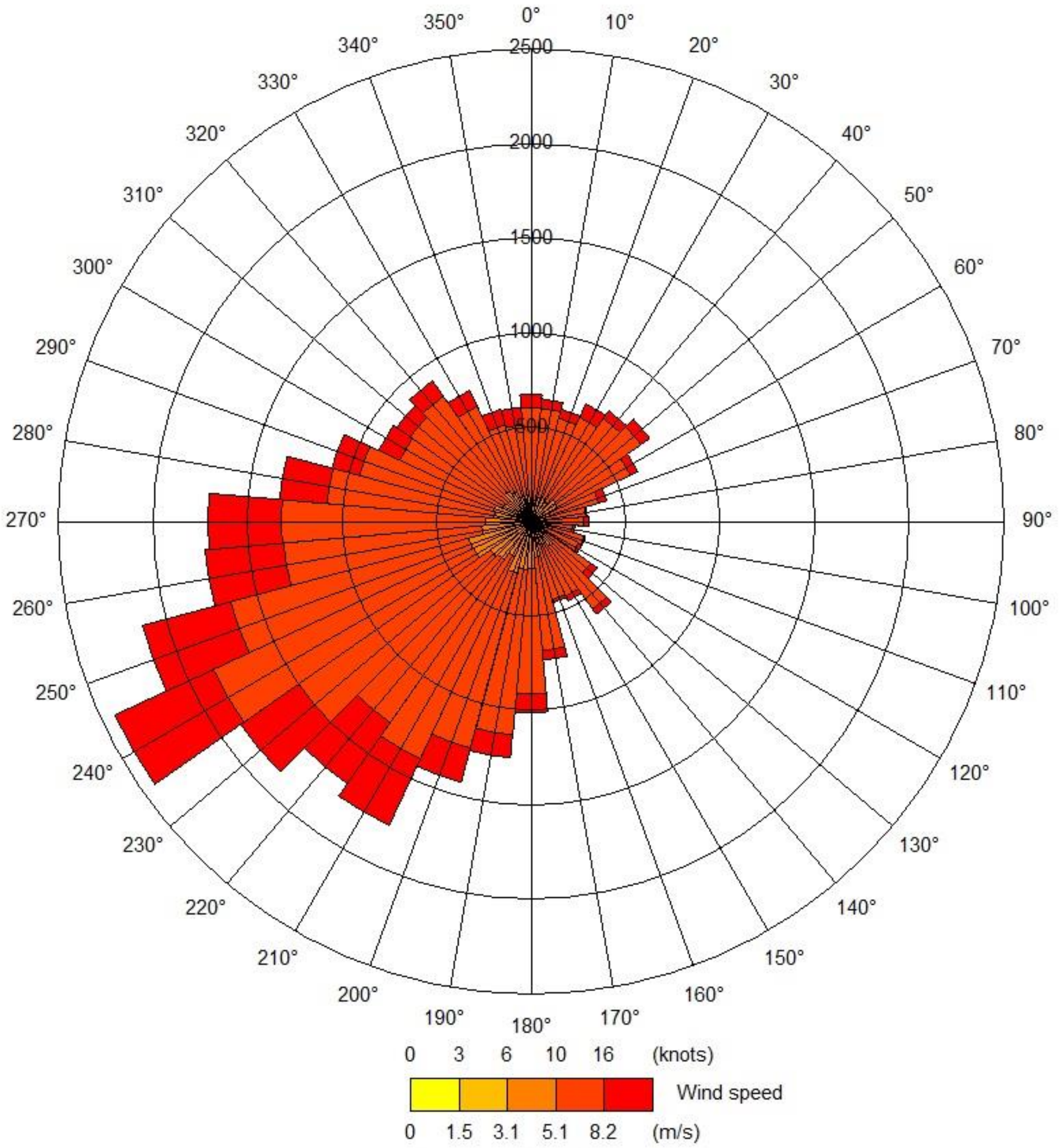


Plate 1.2: Windrose, Wattisham 2009–18, winds more than 5m/s.



1.1.5 Mean and maximum hourly wind speeds have been determined for the data sets and are shown by month in **Table 1.2**, for the most recent five years of data and for the full ten-year data set for comparison. The data shows a tendency to lower mean and maximum wind speeds in the summer months with the highest mean wind speeds in February and December, and the maximum wind speeds in January, February and November.

1.1.6 The comparison between the five-year and ten-year data sets shows that the maximum recorded wind speeds have mostly been within the last five years, and with greater difference in monthly mean wind speeds between summer and winter months, than as a ten-year average.

Table 1.2: Wind speeds, by month (m/s).

Month	Mean Wind Speed (m/s).		Maximum Wind Speed (m/s).	
	5yr, 2014–18.	10yr, 2009–18.	5yr, 2014–18.	10yr, 2009–18.
January	5.19	4.56	19.5	19.5
February	5.32	5.01	18.0	18.0
March	5.02	4.72	17.0	17.0
April	4.36	4.43	13.4	14.4
May	4.42	4.58	12.9	12.9
June	4.15	4.28	13.4	13.4
July	4.18	4.15	12.4	12.4
August	4.18	4.25	12.9	12.9
September	3.97	4.23	15.4	15.4
October	4.35	4.53	14.9	15.4
November	4.76	4.73	18.0	18.0
December	5.11	5.07	13.4	15.4

1.1.7 The maximum hourly wind speed for each of the ten years is shown in **Table 1.3**, together with the wind sector (the direction the wind is coming from) and the recorded precipitation for the same hour of data.

1.1.8 The data indicates that the maximum hourly wind speeds are associated with winds from the south-west and west. The data also shows that of the highest wind speed in each year, four of the five highest have occurred in the period 2014–2018; furthermore the ten hours of maximum wind speeds within the ten-year period occur in the years 2015–2018.

1.1.9 These maximum wind speeds and directions have been used within the calculation of threshold wind-speed and erosion of materials from stockpiles, as described in this appendix.

Table 1.3: Maximum hourly wind speeds, by year.

Year	Max Wind Speed (m/s).	Sector °	Precipitation (mm/hr).
2009	13.9	230–280	0–0.7
2010	13.9	240	0
2011	14.9	250	0
2012	18.5	260	<0.1
2013	16.5	270	<0.1
2014	16.0	220	0.2

Year	Max Wind Speed (m/s).	Sector °	Precipitation (mm/hr).
2015	18.0	250	0
2016	17.0	250	0
2017	18.0	280	0
2018	19.5	270	0.8
Five-year average (2014–18).	17.7	-	-
Ten-year average (2009–18).	16.6	-	-

1.1.10 Rainfall data has been analysed for the Wattisham data for the most recent five-year and ten-year periods, for the average monthly rainfall, and the average number of days per month with greater than 1mm of rainfall recorded, as shown in **Table 1.4**.

1.1.11 The data indicates that the winter months tend to feature the most days with greater than 1mm of rainfall, however the total rainfall recorded per month showed a less distinct seasonal pattern, with high total monthly rainfall also recorded in July and August. March, April and May tend to exhibit lower rainfall and fewer rainy days generally.

1.1.12 Maximum daily rainfall analysis, as shown in **Table 1.5**, indicates that the days recording the highest rainfall tend to occur in the summer months, and that the maximum daily rainfall has remained fairly consistent over the ten-year period, without any trend towards drier or wetter days in recent years.

1.1.13 Rainfall provides natural attenuation of dust within the atmosphere and from removal of surface deposited dust.

Table 1.4: Monthly mean rainfall (mm).

Month	Total Rainfall (mm).		Days with Rain >1mm.	
	5yr, 2014–18.	10yr, 2009–18.	5yr, 2014–18.	10yr, 2009–18.
January	56	50	12.8	11.1
February	41	43	8.6	8.8
March	42	36	8.4	8.2
April	30	32	6.0	7.2
May	53	44	7.6	7.5
June	39	44	5.6	7.7
July	52	57	8.0	10.3
August	56	59	7.2	8.8
September	36	35	6.6	7.7

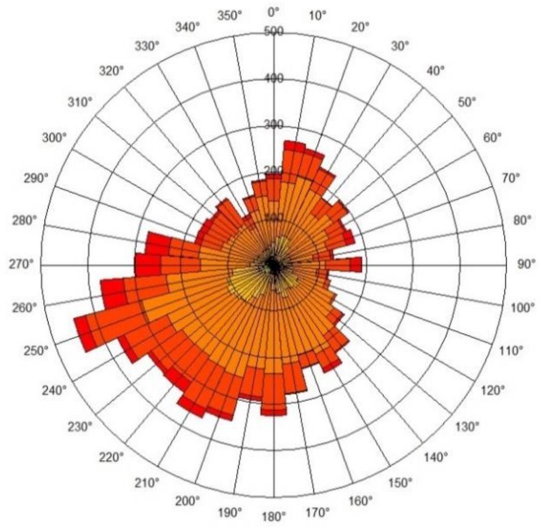
Month	Total Rainfall (mm).		Days with Rain >1mm.	
	5yr, 2014–18.	10yr, 2009–18.	5yr, 2014–18.	10yr, 2009–18.
October	40	54	7.6	10.8
November	61	58	10.6	10.5
December	47	52	10.8	12.5
Annual	*552*	*564*	*100*	*111*

Table 1.5: Maximum daily rainfall.

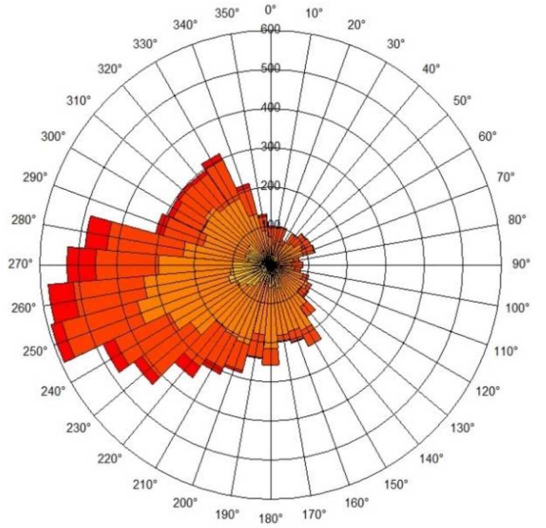
Year	Month	Total Daily Rainfall (mm).
2014	October	40.7
2014	May	38.0
2010	August	37.2
2016	June	33.5
2017	August	32.9
2015	July	27.6
2015	September	23.6
2009	July	23.2
2012	July	22.6
2016	September	21.0

Plate 1.3: Windroses – individual year data sets (Wattisham)

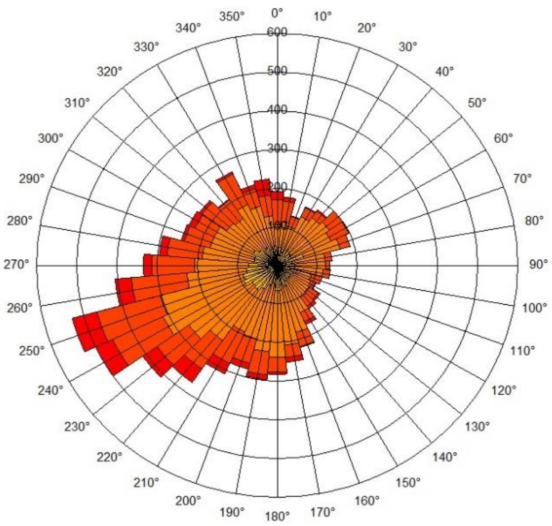
Wattisham 2018



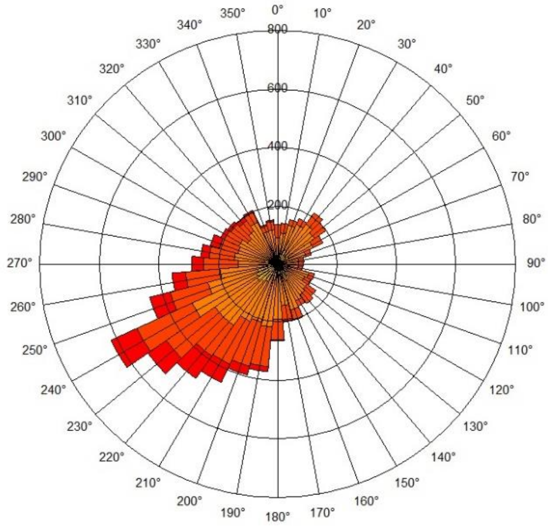
Wattisham 2017

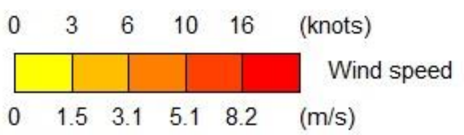


Wattisham 2016

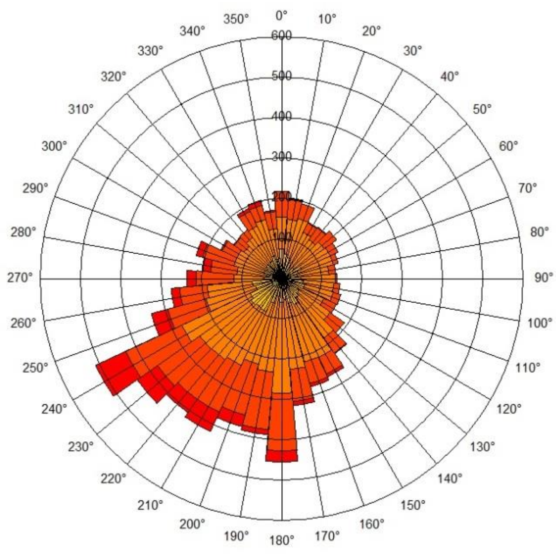


Wattisham 2015

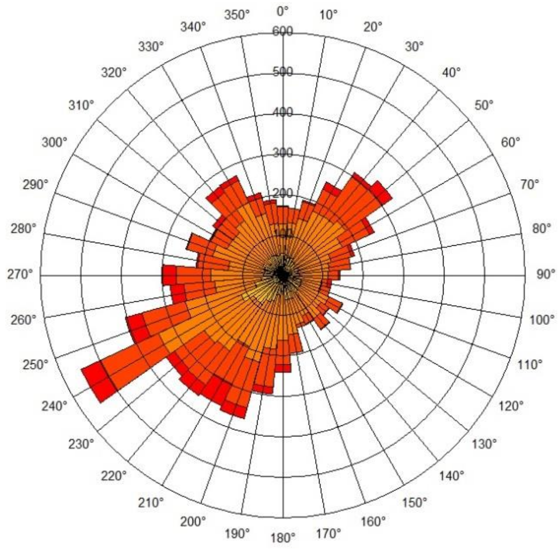




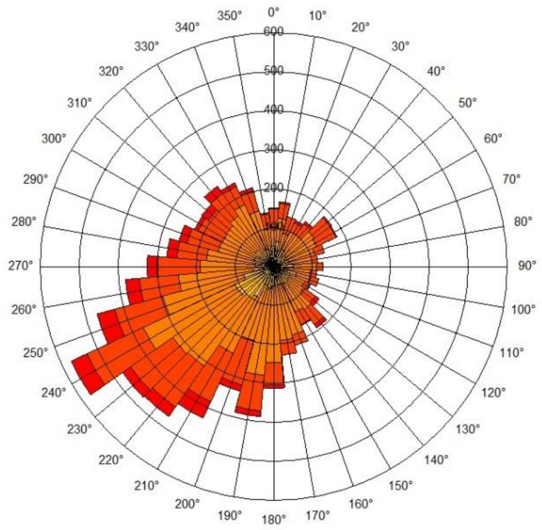
Wattisham 2014



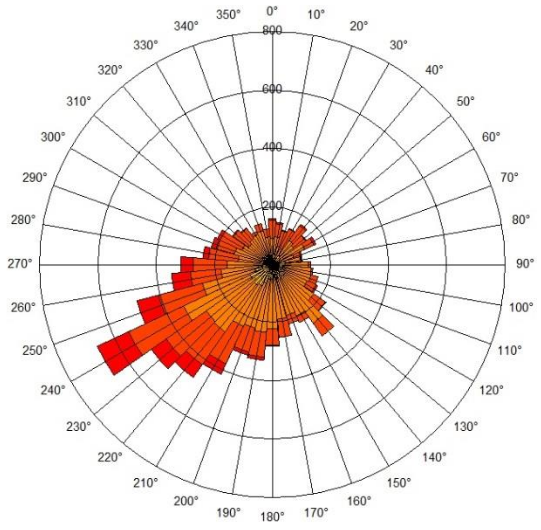
Wattisham 2013



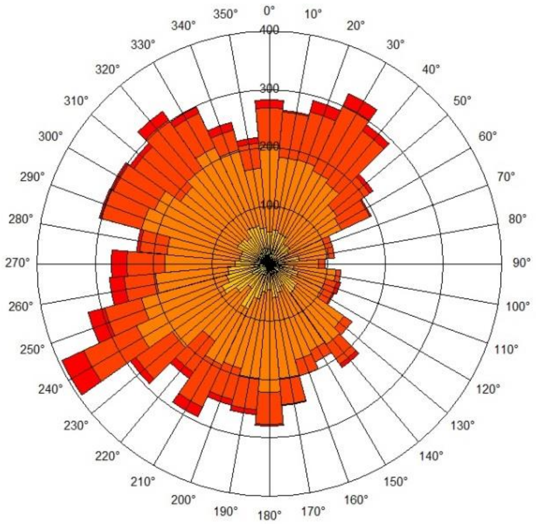
Wattisham 2012



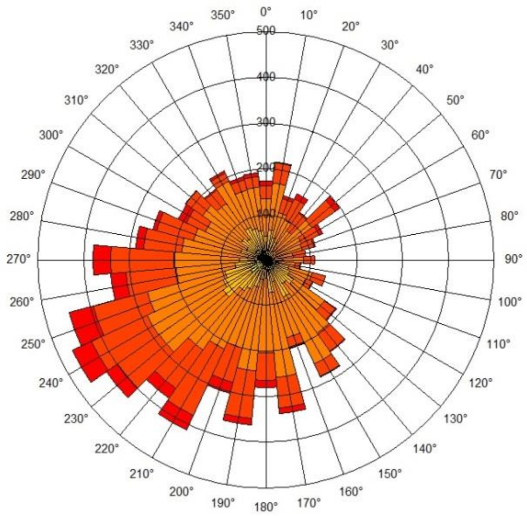
Wattisham 2011



Wattisham 2010



Wattisham 2009



Annex 12A.5 Non-Road Mobile Machinery Exhaust Emissions

1.1 Non-Road Mobile Machinery Exhaust Emissions

1.1.1 Annex 12A.3 sets out the methodology for quantifying emissions of dust from the use of the haul route and the magnitude of predicted impacts at Minsmere-Walberswick Heaths and Marshes SPA/SAC/Ramsar/SSSI and Sizewell Marshes SSSI. The same non-road mobile machinery that is considered in Annex 12A.3, also emits oxides of nitrogen (NOx). This annex reports the model inputs and the predicted magnitude of impacts from emissions of NOx using the same model scenarios and models as described in Annex 12A.3.

1.1.2 The methodology for the modelling is as described in **Annex 12A.3**, emissions rates of NO_x for articulated dump truck and CAT777 NRMM are taken from, European Environment Agency legislation for emission from NRMM (**Ref 1.14)** and US EPA Tier 4 emission ratings **(Ref 1.15),** respectively, shown in **Table 1.1.**

Table 1.1: Source assumptions

Parameter	Assumptions – articulated dump truck.	Assumptions – CAT777.
Average weight of vehicle on road (loaded).	68t	165t
Average weight of vehicle on road (unloaded, return trip).	31t	65t
Estimated two-way trips per hour.	66	24
Average NO_x tailpipe emission rate (mg/m^2/hour).	2.46	5.34

1.1.3 As described in the **Methodology** set out in **Volume 1, Appendix 6H** of the **ES**, NO_X is used as a model output parameter for combustion sources as there are a number of species of oxides of nitrogen emitted from engines. As ecological sites are sensitive to oxides of nitrogen as a collective, it is appropriate to report concentrations as such, and the values can be used to derive deposited nitrogen and deposited acid.

1.1.4 For human health receptors, Air Quality objective values are for nitrogen dioxide (NO_2). For NRMM impacts 70% of long term averaged concentrations of NO_x are in the form of NO_2 .For short term (hourly) mean concentrations 35% of NOx is reported as NO_2. In addition to this, background concentrations of pollutants are doubled for short term averaged concentrations.

1.1.5 The requirement to assess pollutants with a more in-depth approach can be determined with consideration to the Environment Agency's risk assessment method, as specified in the **Methodology** set out in **Chapter 1, Appendix 6H** of the **ES.** The Environment Agency's Environmental Permitting Regulations risk assessment screening criteria for comparison of process contributions with Air Quality Strategy state that an emission may be considered imperceptible (or negligible impact) where:

- short-term process contributions less than or equal to10% of the AQS; and
- long-term process contributions less than or equal to 1% of the AQS.

1.1.6 The second stage of screening considers the process contributions in the context of the existing background pollutant concentrations; the Predicted Environmental Concentration (PEC) is considered acceptable where:

- short-term process contributions less than 20% of the short-term AQS minus twice the long-term background concentration; and
- long-term PEC (process contributions + background concentration) less than 70% of the AQS.

1.1.7 As a supplementary approach, descriptors for magnitude of change and effect as described by the IAQM (Ref 1.14) can then be applied.

1.1.8 Determination of which ecological receptor points to model follows the same approach as described in the modelling of deposited dust in **Annex 12A.3**. Selected locations for human receptors are limited to those which can be considered to experience the highest concentration of NO_2. These are residential receptors LE13 and LE30, which can be considered representative of the worst case impacts at any human receptor. Suffolk Coastal Path is also included as a receptor for 1-hour mean NO_2.

a) Concentrations of NO_x at Ecological Receptors

1.1.9 **Table 1.2** presents annual mean concentrations of NO_x as contributed by movements of articulated dump trucks and CAT777s at these receptor locations. It is shown that the concentrations of NO_x at the closest point to the haul road for Minsmere-Walberswick Heaths and Marshes SPA/SAC/Ramsar/SSSI and Sizewell Marshes SSSI are below the Critical Level objective value, and close to or below the threshold for insignificance at the worst-affected location within the SAC.

Table 1.2: Indicative maximum predicted annual mean NO_x concentrations at sensitive receptors from NRMM.

Scenario	Assessment Criterion.	Critical Level ($\mu g/m^3$).	Maximum PC at Receptor ($\mu g/m^3$).	PC/Critical level objective value.
Articulated dump truck	NOx, ecological concentration.	30	0.4	1.3%
CAT777	NOx, ecological concentration.	30	0.2	0.6%

1.1.10 **Table 1.3** presents daily mean concentrations of NO_x as contributed by movements of articulated dump trucks and CAT777s at these receptor locations. It is shown that the concentrations of NO_x at the closest point to the haul road for Minsmere-Walberswick Heaths and Marshes SPA/SAC/Ramsar/SSSI and Sizewell Marshes SSSI are below the Critical Level objective value, and below the threshold for insignificance at the worst-affected location within the SAC.

Table 1.3: Indicative maximum predicted daily mean NO_x concentrations at sensitive receptors from NRMM.

Scenario	Assessment Criterion.	Critical Level ($\mu g/m^3$).	Maximum PC at Receptor ($\mu g/m^3$).	PC/Critical level objective value.
Articulated dump truck	NOx, ecological concentration.	75	6.6	9%
CAT777	NOx, ecological concentration.	75	3.0	4%

1.1.11 **Table 1.4** presents concentrations of deposited nitrogen as contributed by movements of articulated dump trucks and CAT777s at these receptor locations. It is shown that the concentrations of deposited nitrogen at the closest point to the haul road for Minsmere-Walberswick Heaths and Marshes SPA/SAC/Ramsar/SSSI is below the lower Critical Load objective value with use of articulated dump trucks, and below the threshold for insignificance at the worst-affected location within the SAC.

Table 1.4: Indicative maximum predicted deposited nitrogen concentrations at sensitive receptors from NRMM.

Scenario	Assessment Criterion.	Critical Load (kgN/ha/Yr).	Maximum PC at Receptor (kgN/ha/Yr).	PC/Critical Load (lower).
Articulated dump trucks	Ecological deposition of nitrogen.	8-15	0.06	0.7%
CAT777	Ecological	8-15	0.03	0.3%

Scenario	Assessment Criterion.	Critical Load (kgN/ha/Yr).	Maximum PC at Receptor (kgN/ha/Yr).	PC/Critical Load (lower).
	deposition of nitrogen.			

1.1.12 **Table 1.5** presents concentrations of deposited nitrogen as contributed by movements of articulated dump trucks and CAT777s at these receptor locations. The contribution of SO_2 is assumed to be zero as the emission is expected to be negligible. It is shown that the concentrations of acid deposition at the closest point to the haul road for Minsmere-Walberswick Heaths and Marshes SPA/SAC/Ramsar/SSSI is below the Critical Load with use of articulated dump trucks, and below the threshold for insignificance at the worst-affected location within the SAC.

Table 1.5: Indicative maximum predicted deposited acid concentrations at sensitive receptors from NRMM.

Scenario	Maximum PC at Receptor (N:S keq/ha/Yr).	Baseline (N:S keq/ha/Yr).	Critical Load CLmax N: CLmax S	PC/Critical Load.
Articulated dump truck	0.006 : 0.000	0.9 : 0.2	0.57 : 0.20	0.9%
CAT777	0.003 : 0.000	0.9 : 0.2	0.57 : 0.20	0.4%

b) Concentrations of NO_2 at Human Receptors

1.1.13 In this section, only the highest predicted concentrations of pollutants are reported at human health receptors are reported. These are residential receptors LE13, LE30, which can be considered to be the closest relevant receptor location to this source. Suffolk Coastal Path is also included as a receptor for 1-hour mean NO_2.

1.1.14 Predicted annual mean concentrations of NO_2 at human receptor locations are displayed in **Table 1.6.** The results show that all receptor locations would experience an imperceptible predicted change in annual mean concentration of NO_2 is less than 0.1 µg/m^3 (less than 1% of the objective value).

1.1.15 Predicted 1-hour mean concentrations of NO_2 at human receptors are displayed in **Table 1.7**. The results show that residential receptors experience a predicted change in annual mean concentration of NO_2 of less than 0.5 µg/m^3. The predicted imperceptible change to baseline 1-hour mean concentrations at the closest point of Suffolk Coastal Path, are in the range 0.2 µg/m^3 to 3.3 µg/m^3 for the model scenarios.

Table 1.6: Indicative maximum annual mean NO_2 concentrations at sensitive receptors from NRMM.

Receptor ID	Scenario	Assessment Criterion.	Background concentration (µg/m³).	AQS (µg/m³).	Maximum PC (µg/m³) and % of AQS in parentheses	Maximum PEC (µg/m³) and % of AQS in parentheses
LE13	Articulated dump trucks	Annual mean NO_2 concentrations for protection of human health	5.8	40	<0.1 (<0.1%)	5.8 (14.5%)
	CAT777	Annual mean NO_2 concentrations for protection of human health	5.8	40	<0.1 (<0.1%)	5.8 (14.5%)
LE30	Articulated dump trucks	Annual mean NO_2 concentrations for protection of human health	5.8	40	<0.1 (<0.1%)	5.8 (14.5%)
	CAT777	Annual mean NO_2 concentrations for protection of human health	5.8	40	<0.1 (<0.1%)	5.8 (14.5%)

Table 1.7: Indicative maximum 1-hour mean NO_2 concentrations (99.8th percentile) at sensitive receptors from NRMM.

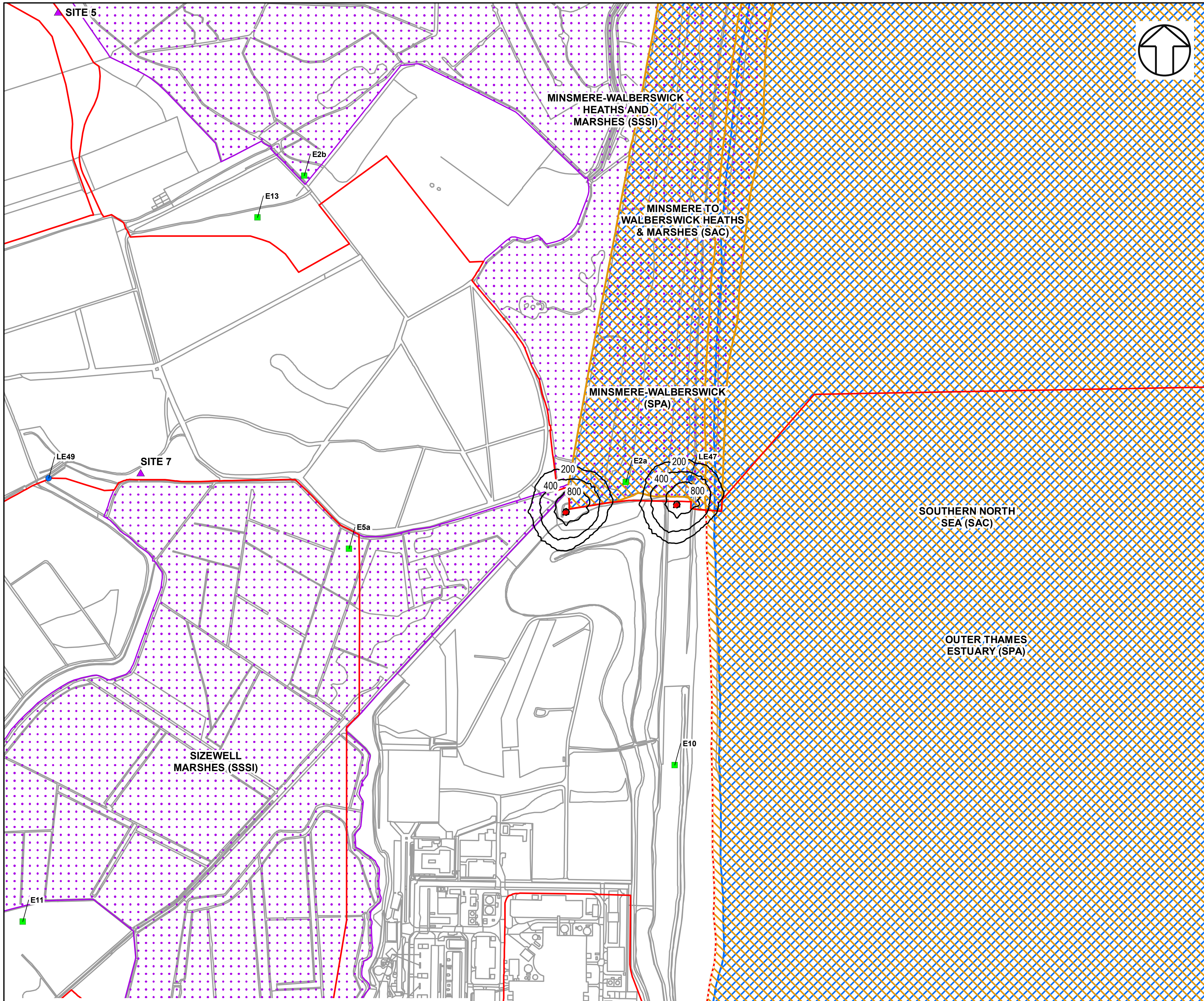
Receptor ID	Scenario	Assessment Criterion.	Background concentration (µg/m³).	AQS (µg/m³).	Maximum PC (µg/m³) and % of AQS in parentheses	Maximum PEC (µg/m³) and % of AQS in parentheses
LE13	Articulated dump trucks	1-hour mean NO_2 (99.8th %) concentrations for protection of human health	11.6	200	0.3 (0.2%)	11.9 (6%)
	CAT777	1-hour mean NO_2 (99.8th %) concentrations for protection of human health	11.6	200	0.2 (0.1%)	11.7 (5.9%)
LE30	Articulated dump trucks	1-hour mean NO_2 (99.8th %) concentrations for protection of	11.6	200	0.4 (0.2%)	12 (6%)

Receptor ID	Scenario	Assessment Criterion.	Background concentration ($\mu g/m^3$).	AQS ($\mu g/m^3$).	Maximum PC ($\mu g/m^3$) and % of AQS in parentheses	Maximum PEC ($\mu g/m^3$) and % of AQS in parentheses
		human health				
	CAT777	1-hour mean NO_2 (99.8th %) concentrations for protection of human health	11.6	200	0.2 (0.1%)	11.8 (5.9%)
Suffolk Coastal Path	Articulated dump trucks	1-hour mean NO_2 (99.8th %) concentrations for protection of human health	11.8	200	3.3 (1.6%)	15.1 (7.5%)
	CAT777	1-hour mean NO_2 (99.8th %) concentrations for protection of human health	11.8	200	1.5 (0.7%)	13.3 (6.7%)

1.1.16 Predicted concentrations of tailpipe pollutant emissions at ecological receptors have been presented within this appendix, the potential significance of these concentrations are assessed in **Volume 2, Chapter 14** of the **ES.**

VOLUME 2, CHAPTER 12, APPENDIX 12A: CONSTRUCTION DUST ASSESSMENT

FIGURES



NOTES

KEY

- SIZEWELL C MAIN DEVELOPMENT SITE BOUNDARY
- DEMARCATION LINE
- AIR QUALITY HUMAN HEALTH RECEPTOR, CONSTRUCTION DUST
- AIR QUALITY ECOLOGICAL RECEPTOR, CONSTRUCTION DUST
- DUST MONITORING LOCATIONS
- DUST DEPOSITION (mg/m^2/day)
- SOURCE
- SPECIAL PROTECTION AREA (SPA)
- SPECIAL AREA OF CONSERVATION (SAC)
- SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

NOT PROTECTIVELY MARKED

DOCUMENT:
SIZEWELL C
ENVIRONMENTAL STATEMENT
VOLUME 2
APPENDIX 12A
CONSTRUCTION DUST ASSESSMENT

DRAWING TITLE:
DUST DEPOSITION (MG/M^2/DAY) FROM MITIGATED SCRAPING ACTIVITIES WITHIN ZONE A (TWO SETS OF BULLDOZERS AND LOADERS, HIGHER EMISSION RATE)

DRAWING NO:
FIGURE 12A.1

DATE:	DRAWN:	SCALE :
JAN 2020	A.B.	1:7,000 @A3

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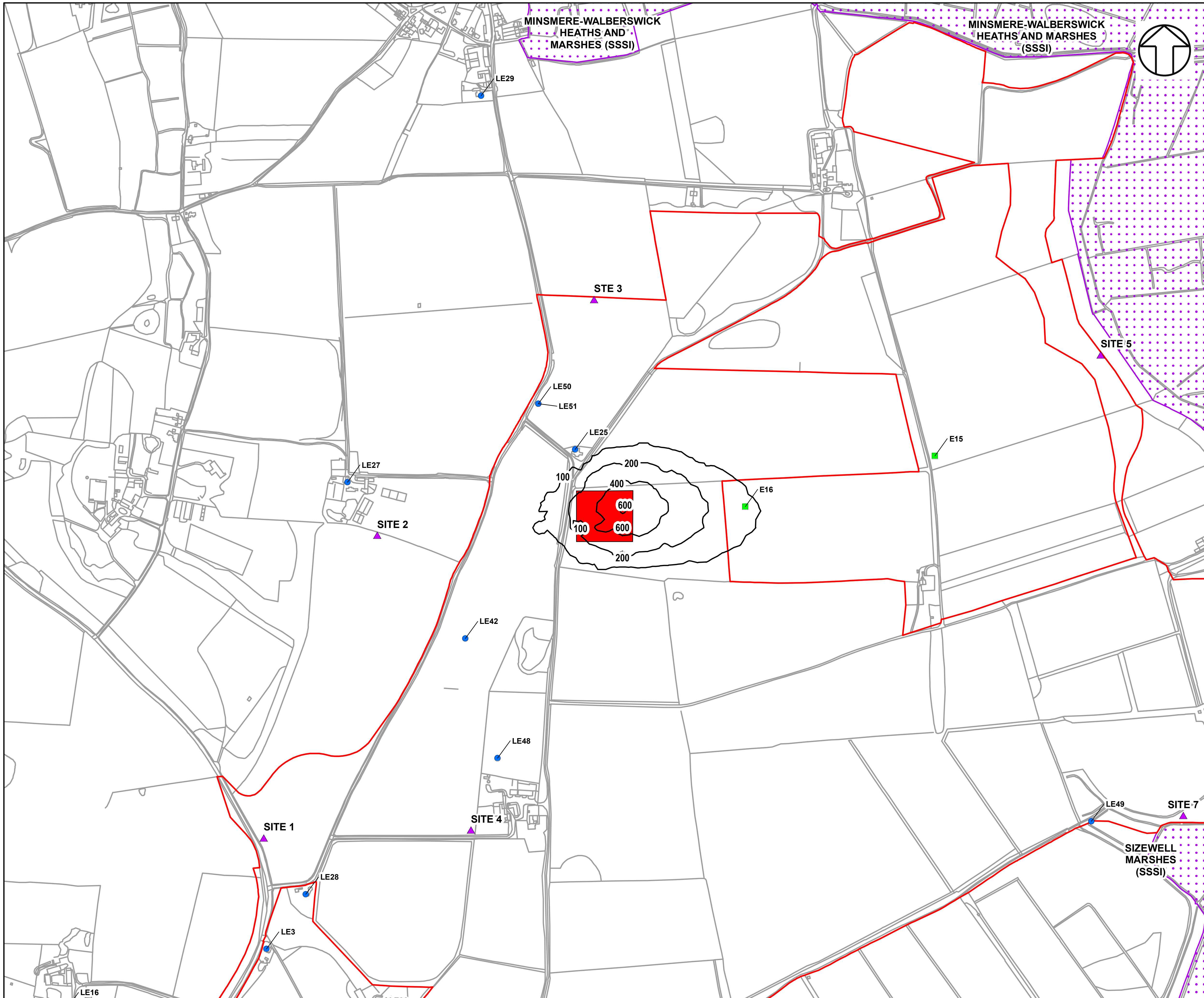

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- SPECIAL PROTECTION AREA (SPA)
- SPECIAL AREA OF CONSERVATION (SAC)
- SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

NOT PROTECTIVELY MARKED

DOCUMENT:
SIZEWELL C
ENVIRONMENTAL STATEMENT
VOLUME 2
APPENDIX 12A
CONSTRUCTION DUST ASSESSMENT

DRAWING TITLE:
PEAK MONTHLY MEAN DUST DEPOSITION FROM COMBINED MITIGATED EROSION OF ACTIVE STOCKPILE AREA AND DROPPING AND LOADING OPERATIONS (MG/M^2/DAY)

DRAWING NO:
FIGURE 12A.2

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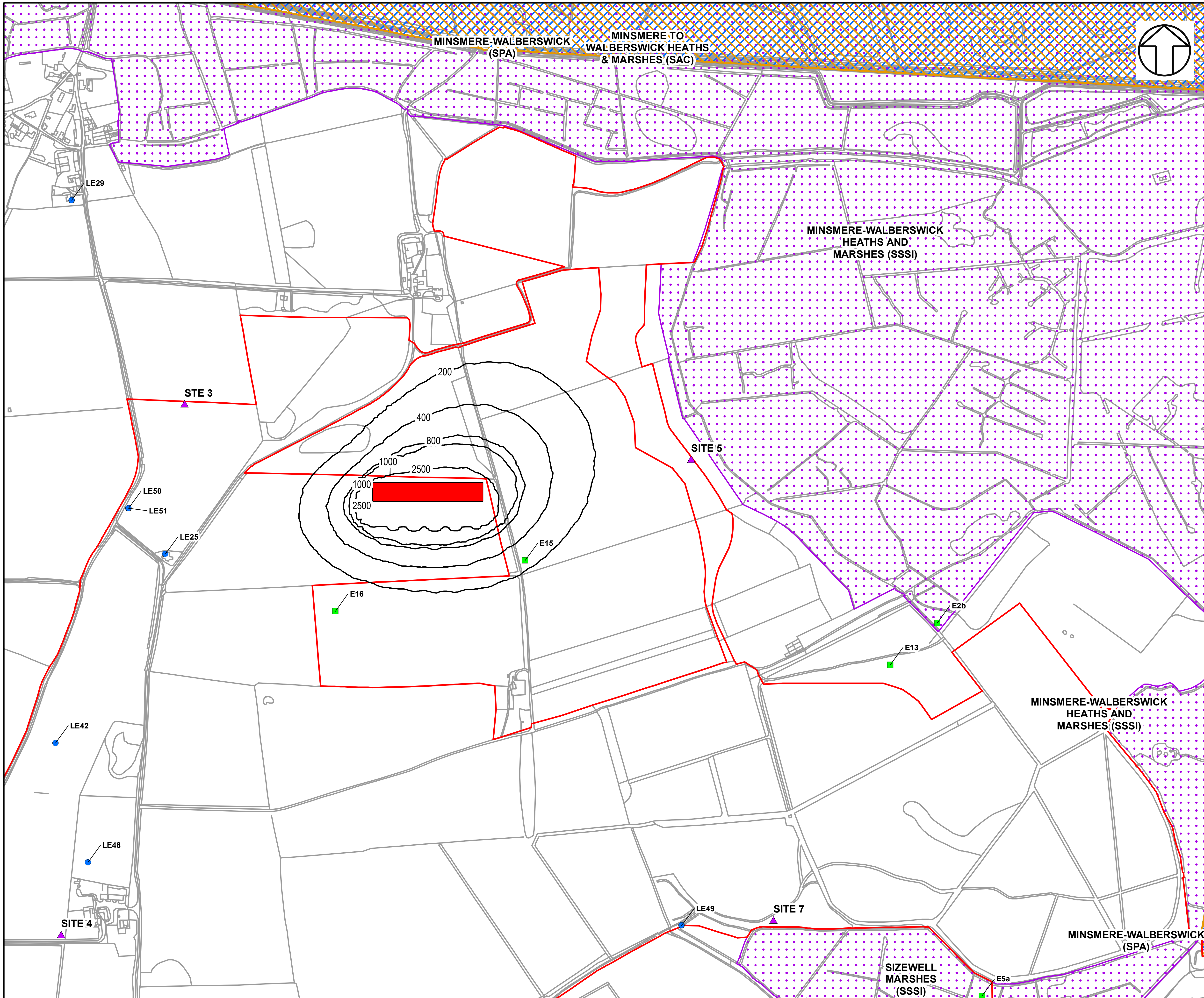

NOTES

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- SPECIAL AREA OF CONSERVATION
- SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

NOT PROTECTIVELY MARKED

EDF ENERGY SZC CGN

DOCUMENT:
SIZEWELL C
ENVIRONMENTAL STATEMENT
VOLUME 2
APPENDIX 12A
CONSTRUCTION DUST ASSESSMENT

DRAWING TITLE:
PEAK PREDICTED DUST DEPOSITION RATES FROM CONTROLLED LIME APPLICATION (MG/M^2/DAY)

DRAWING NO:
FIGURE 12A.3

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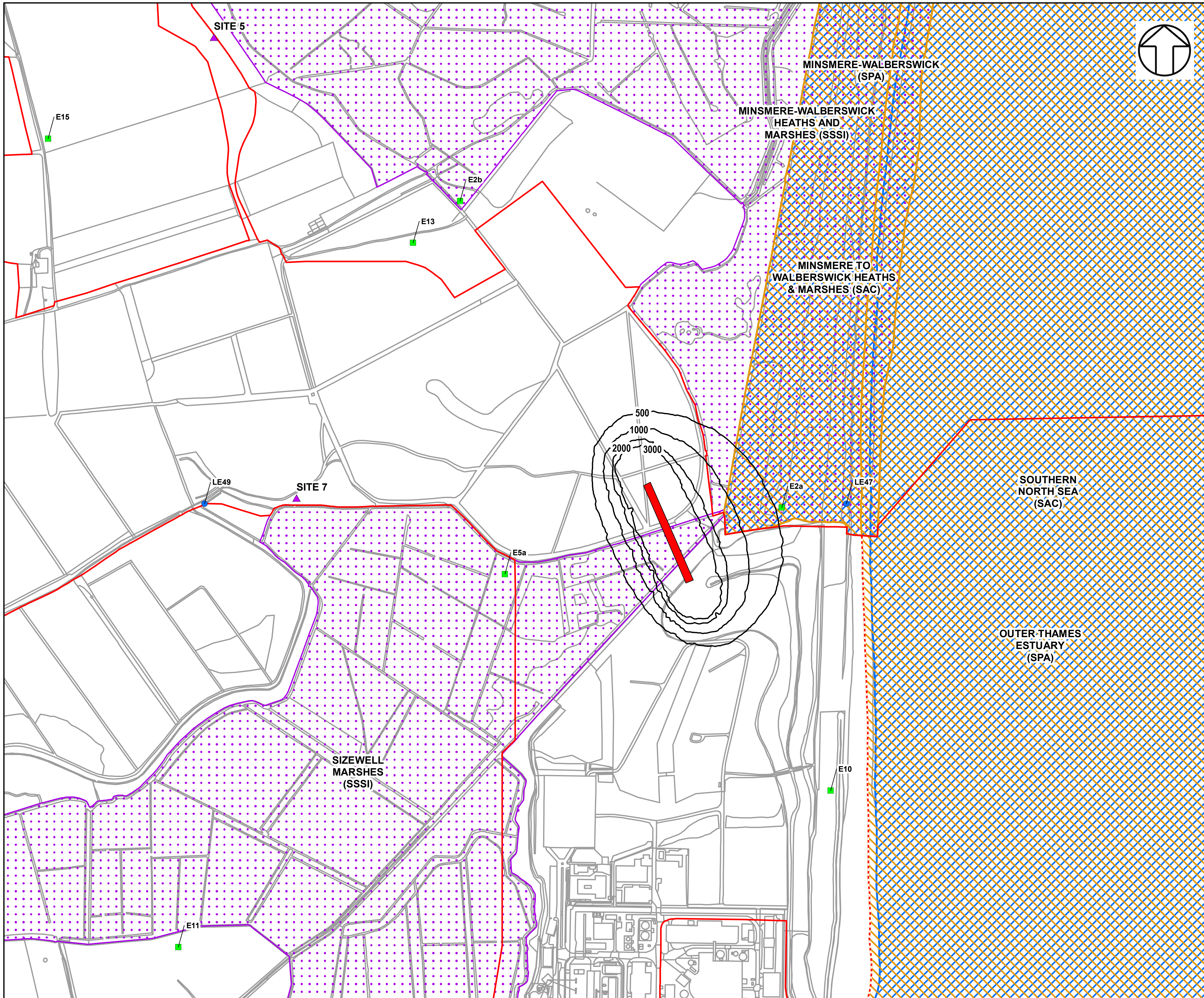

NOTES

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- SPECIAL AREA OF CONSERVATION (SAC)
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DOCUMENT:
SIZEWELL C
ENVIRONMENTAL STATEMENT
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DRAWING TITLE:
ISOPLETH SHOWING WORST-CASE PREDICTED DUST DEPOSITION RATES FROM CONTROLLED TRACKOUT, ASSUMING 75% ATTENUATION (MG/M^2/DAY)

DRAWING NO:
FIGURE 12A.4

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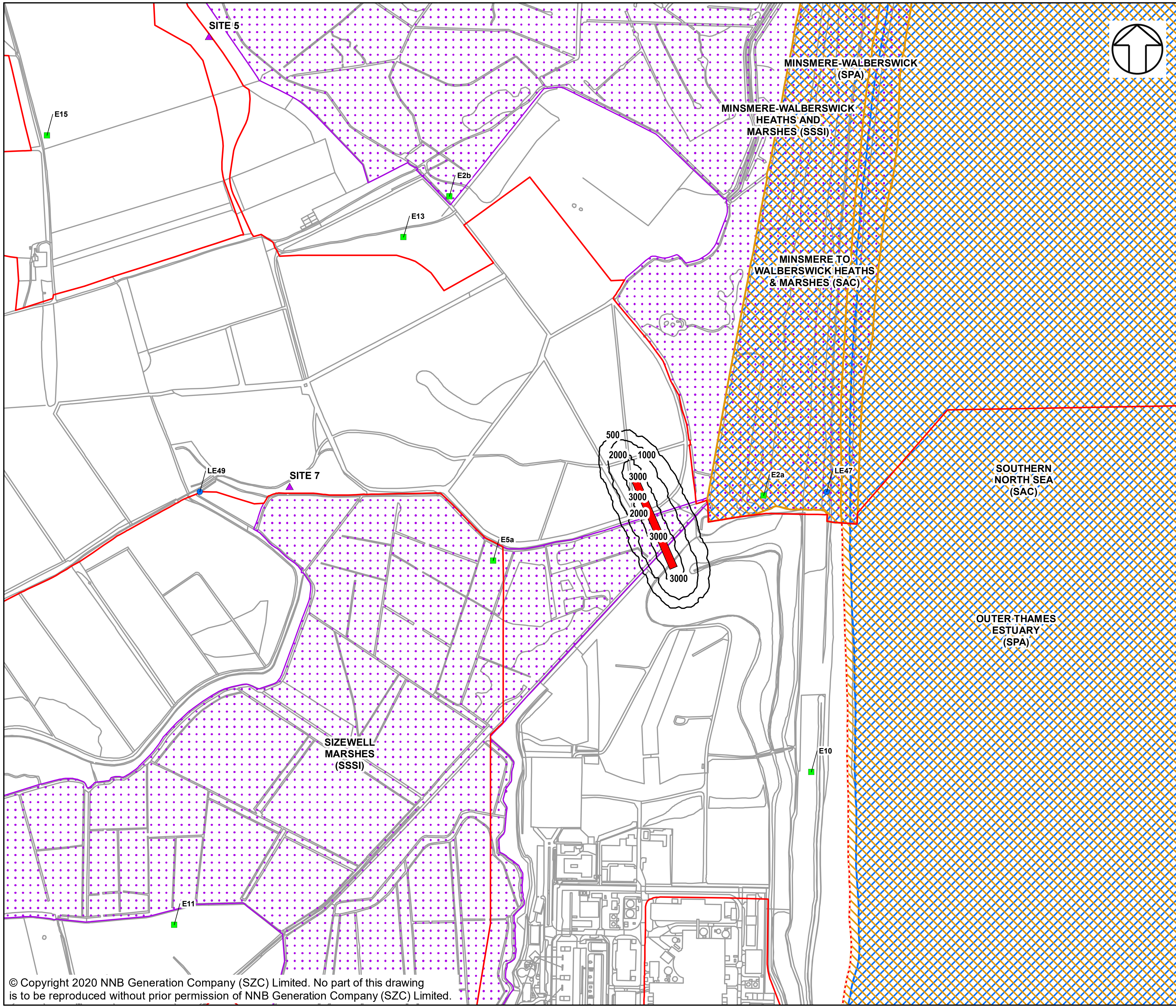

NOTES

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NOT PROTECTIVELY MARKED

EDF ENERGY SZC CGN

DOCUMENT:
SIZEWELL C
ENVIRONMENTAL STATEMENT
VOLUME 2
APPENDIX 12A
CONSTRUCTION DUST ASSESSMENT

DRAWING TITLE:
ISOPLETH SHOWING BEST-CASE PREDICTED DUST DEPOSITION RATES FROM CONTROLLED TRACKOUT, ASSUMING 75% ATTENUATION (MG/M^2/DAY)

DRAWING NO:
FIGURE 12A.5

DATE:	DRAWN:	SCALE :
JAN 2020	A.B.	1:7,000 @A3

SCALE BAR
0 100 200 300 M

VOLUME 2, CHAPTER 12, APPENDIX 12B : TRANSPORT EMISSIONS ASSESSMENT

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1. Transport Emissions Assessment

1.1 Introduction

1.1.1 This appendix to **Volume 2, Chapter 12** of the **Environmental Statement** (**ES**) presents the methods for quantifying changes to air pollutant concentrations caused by changes to the magnitude of emissions from road traffic and rail associated with the Sizewell C Project.

1.1.2 The methodologies prescribed herein are applicable to the the main development site and all associated development site volumes, unless otherwise indicated in the topic methodology sub-sections of the site assessment volumes.

1.1.3 The assessment methodology has been developed taking account of relevant legislation, policy and guidance. Legislation and policies of relevance to this air quality assessment are detailed in **Volume 1, Appendix 6H** of the **ES.**

1.2 Methodology

a) Overview

1.2.1 As the proposed development, and the associated developments required to facilitate it, are expected to take several years to construct, the air quality assessment is conducted in two separate representative years. This is undertaken using the first, 'early year' construction phase assessment in 2023, and subsequent 'peak year' construction phase assessment in 2028. An operational phase assessment was also undertaken for 2034, though during its operation, the Sizewell C Project is not expected to have a significant impact on road traffic emissions.

1.2.2 Two scenarios have been assessed for the integrated freight strategy 'peak year', a scenario representative of a 'typical day' and one of a 'busiest day' with the only difference being the number of Sizewell C heavy goods vehicles (HGVs).

1.2.3 In early years and operational phases the HGV volumes are expected to be more consistent so a 'busiest day' scenario has not been assessed for these years. In summary, the development scenarios assessed are:

- 2023 early years;
- 2028 peak construction 'typical day';
- 2028 peak construction 'busiest day'; and

- 2034 operational traffic.

b) Definitions

i. Scoping and study area

1.2.4 Scoping seeks to decide how much effort should be expended in the assessment of environmental impacts to determine conclusively the impacts of a development. The objective of the scoping exercise for local air quality assessment was to indicate whether there are likely to be significant impacts associated with particular roads, routes or corridors. For the purpose of this assessment, and to provide the most comprehensive network, traffic data provided by WSP was scoped using a process informed by, but not limited to, a combination of the most stringent criteria from both the EPUK/ Institute of Air Quality Management (IAQM) (Ref. 1.1) and Sustainability & Environment Appraisal LA 105 Air Quality (Ref. 1.2) criteria provided in **Table 1.1** below. The EPUK/IAQM criteria give a higher number of road links to be assessed, owing to the slightly lower assessment thresholds for transport impacts, and so this was conservatively used to identify affected roads based on traffic flow changes.

1.2.5 The principal qualifying criteria in the EPUK/IAQM guidance is a change of Light Duty Vehicle (LDV) flows of more than 100 24-hour Annual Average Daily Traffic (AADT) within or adjacent to an Air Quality Management Area (AQMA) (or more than 500 AADT elsewhere), or a change of Heavy Duty Vehicle (HDV) flows of more than 25 AADT within or adjacent to an AQMA (or more than 100 AADT elsewhere). Applying these criteria to the road network refines the assessment to focus on roads that are likely to experience a perceptible impact.

1.2.6 However, EPUK/IAQM does not account for changes in speed in the scoping criteria. These have the potential to be significant if related to congestion and queing traffic, with which the highest road traffic emissions are associated. Therefore, where average daily speed speed changes are greater than 10 kilometres per hour (kph), these roads became part of the modelled network.

1.2.7 Finally, under a purely numeric scoping approach, the network becomes disjointed, with gaps in the domain where the traffic data do not fulfill the appropriate criteria. With potential receptors alongside some of these routes, often assessed for other emission sources, over 300 roads were added to the model domain to create a consolidated road network.

1.2.8 The impact of the Sizewell C Project is assessed in two variations, a scenario representative of a ‘typical’ day, under normal operation of the facility, and a scenario representative of a ‘busiest’ day, with an outage, in which demand on the local road network is expected to be higher. As the most likely scenarios to be in operation in reality, the 'typical' day scenarios are assessed quantitatively, through dispersion modelling.

1.2.9 In accordance with the conclusions of the 'Air Quality Affected Roads Risk Evaluation' conducted in December 2016 (Ref. 1.3), the 'busiest' day scenarios are assessed qualitatively, again applying the scoping methodology described above to identify if there are likely to be any significantly greater impacts in the 'busiest' day scenario as compared to a 'typical' day.

1.2.10 The affected road network represents the road links that are considered to have the potential to experience a large enough change in road traffic movements or change in composition of the fleet to be able to affect local air quality. The study area extends 200 metres (m) from the individual road links comprising the affected road network.

1.2.11 In general terms, the study area for the affected road networks includes:

- the A12 between Ipswich and Lowestoft;
- the B1122 between A12 and main development site;
- new build sections of highway;
- road links within AQMAs; and
- other roads that are likely to experience a change in traffic flow above the criteria listed in **Table 1.1.**

Table 1.1:Affected road network links – principal selection criteria

Parameter	Criteria	Reference
Road alignment change.	5 metres (m) or more.	HA (Ref. 1.2).
Change in total 2-way AADT traffic flows.	1,000 or more.	HA (Ref. 1.2).
Change in daily average speed.	10 kilometres per hour (km/hr) or more.	HA (Ref. 1.2).
Change in peak hour speed.	20 km/hr or more.	HA (Ref. 1.2).
Change in 2-way AADT flows of LDV within or adjacent to an AQMA.	100 vehicles a day (veh/day) or more.	IAQM (Ref. 1.1).
Change in 2-way AADT flows of HDV within or adjacent to an AQMA.	25 veh/day or more.	IAQM (Ref. 1.1).
Change in 2-way AADT flows of LDV not within or adjacent to an AQMA.	500 veh/day or more.	IAQM (Ref. 1.1).

ii. Assessment scenarios

1.2.12 Dispersion modelling of road and rail transport emissions was carried out to predict baseline pollutant concentrations from existing road and rail traffic, expected concentrations in the early and peak years of the development accounting for pollutant emissions from projected transport flows without the development and a quantification of the impact of the proposed development in each year. Concentrations of NO_2, PM_{10} and $PM_{2.5}$ were predicted at existing receptors that could be affected by the proposed development for the following scenarios:

- baseline 2018 scenario (2018 BC) to enable model verification;
- early year 2023 reference case scenario (2023 RC) i.e. without the proposed development;
- early year 2023 typical day scenario (2023 AD) i.e. with some elements of the associated developments under construction;
- peak year 2028 reference case scenario (2028 RC) i.e. without the proposed development;
- peak year 2028 typical day scenario (2028 AD) i.e. with the peak construction of the proposed development;
- peak year 2028 busiest day scenario (2028 BD) i.e. with the peak construction of the proposed development;
- operational year 2034 reference case scenario (2034 RC) i.e. without the proposed development; and
- operational year 2034 typical day scenario (2034 AD) i.e. with the proposed development in place.

1.2.13 The “early year” 2023 AD scenario assumes no mitigation in place, a smaller construction workforce and fewer HGV deliveries to the main site than in the 2028 scenarios, but does include construction workers and HGV deliveries to the associated development sites (i.e. construction of the two park and rides and road schemes). All forecast year scenarios include traffic from Sizewell B outage and committed development within the study area that have been discussed and agreed with the local authorities.

c) Transport data

i. Road traffic

1.2.14 Traffic data used for the assessment was produced by the appointed consultants, WSP. Data covering an extensive network, from Ipswich to

Lowestoft, was provided, which was screened using the methodology in **section 1.2 b)** of this appendix to give a more refined network for assessment.

1.2.15 The traffic data was output from VISUM (micro-simulation) modelling, compliant with the Department for Transport (DfT)'s web-based Transport Analysis Guidance (WebTAG) (Ref. 1.4). In addition to the VISUM model, a number of junction models and local micro-simulation models produced detailed assessment in specific areas.

1.2.16 The traffic flow data applied in the air quality assessment was representative of a 24 hour AADT.

ii. Rail traffic

1.2.17 A maximum of three freight trains (a total of six movements) will run per day during peak year construction of the main development site, as described in **Volume 9**, **Chapter 2** of the **ES**. Each train will consist of up to 20 wagons, with one locomotive per train.

1.2.18 Trains will use the exisiting East Suffolk Line and the Saxmundham to Leiston branch line. Upgrades and developments associated with Sizewell C are described in the **Volume 9**, **Chapter 2** of the **ES**.

1.2.19 As the rail operates, trains will be required to wait for the line to be clear at three locations along the route. For completeness of data, emissions from engine idling at these locations is included within this assessment.

1.2.20 This assessment does not quantify pollutants derived from passenger trains which will continue to use the East Suffolk Line. Pollutants from these trains will be included within relevant background concentrations.

1.2.21 The traffic data for the early year construction phase (2023) does not consider rail traffic using the Saxmundham to Leiston branch line travelling to land east of Eastlands Industrial Estate (LEEIE) that would take place during the early years following the completion of the proposed rail improvement works. However, for the purpose of this assessment it is considered as part of the peak year construction phase (2028) assessment when all rail is operational. Based on UK projections the baseline air quality in 2028 will be the same or better than in 2023 due to gradual improvements in the UK vehicle fleet emissions performance.

d) Emissions and dispersion modelling

i. Emissions modelling

1.2.22 The latest version dispersion modelling software ‘ADMS-Roads’ version 4.1.1.0 (Ref. 1.5) has been used to model the dispersion of emissions from road and traffic. ADMS-Roads is a dispersion model that has an extensive published track record of use in the UK for the assessment of local air quality impacts, including model validation studies.

1.2.23 Road vehicle emission rates for NO_x, PM_{10} and $PM_{2.5}$ were taken from Defra’s Emission Factor Toolkit version 9.0 (Ref. 1.6), for the “England (rural)” road type with the ‘Basic Split’ traffic format.

1.2.24 A majority of the road and rail network, comprised of Lowestoft and Sizewell C areas stated in **Table 1.2** in this appendix and shown in **Figure 12B.1**, was modelled using road width and elevation parameters representative of the physical characteristics of the road link. However, Stratford St Andrew AQMA, Woodbridge AQMA and Sizewell Road in the centre of Leiston, wherein elevated concentrations of NO_2 are monitored, were modelled using the basic street canyon module. By limiting the dispersion via the presence of buildings (i.e. a ‘canyon height’), pollutants are entrained in a recirculation region. This has the effect of increasing the modelled road contribution to a pollutant concentrations. The concentrations within this region is calculated by balancing the inflow from traffic exhausts against the outflow at the top of the recirculation region.

1.2.25 Emissions of NO_x from locomotives were calculated from emission factors for Class 66 locomotives (120g/km) as determined by AEA Technology (Ricardo) in 2001 (Ref. 1.7). This emission factor is consistent with a conservatively high estimate. As described for dispersion modelling of road vehicles, ‘ADMS-Roads’ version 4.1.1.0 (Ref. 1.5) has also been used to model train movements.

1.2.26 Emissions from idling locomotives were determined using the emission factors for moving trains, scaled by a third, as described by USEPA (2008) (Ref. 1.8). The volume source function of ADMS-Roads was used to model these scenarios, assumed to occur for three hours at a time on a daily basis, and again consistent with a conservatively high estimate.

ii. Post processing

1.2.27 Annual mean NO_2 concentrations were calculated from the modelled road-NO_x concentrations following the methodology in LAQM.TG(16) (Ref. 1.9). Defra’s latest NO_x to NO_2 calculator (Ref. 1.10) was used with the ‘All UK traffic’ mix assumed to convert modelled road NO_x to NO_2 concentrations, which were then added to background NO_2 concentrations for the relevant location and year (Ref. 1.11).

1.2.28 In the prediction of short term NO_2 impacts, LAQM.TG(16) stipulates that exceedances of the one-hour mean AQS objective / EU limit value for NO_2 are unlikely to occur where the annual mean NO_2 concentration is less than 60µg/m^3. This approach has been adopted in the air quality assessment.

1.2.29 Annual mean PM_{10} and $PM_{2.5}$ road contributions were also output from the model and combined with the relevant background annual mean PM_{10} and $PM_{2.5}$ concentrations to obtain a total ambient PM_{10} and $PM_{2.5}$ concentrations.

1.2.30 In the prediction of short term PM_{10}, LAQM.TG(16) outlines an empirical relationship between the annual mean and the number of exceedances of the 24-hour mean AQS objective for PM_{10} which is calculated as follows: *# 24hr Mean Exceedances = -18.5 + 0.00145 * annual mean^3 + 206/annual mean*

1.2.31 This relationship has been adopted to determine whether exceedances of short-term PM_{10} AQS objective are likely.

iii. Verification

1.2.32 The ADMS-Roads dispersion model has been widely validated for this type of assessment, though as this is undertaken by the software developer (CERC), it will not have included validation within the modelled domain. It is therefore necessary to perform a comparison of modelled results with local monitoring data. This process of verification attempts to minimise modelling uncertainty and systematic error by correcting modelled results by an adjustment factor to gain greater confidence in the final results.

1.2.33 The predicted results from a dispersion model may differ from measured concentrations for many reasons, including uncertainties associated with backgrounds, emissions sources, monitoring data and model limitations. In reality, the differences between modelled and monitored results are likely to be a combination of some or all of these aspects.

1.2.34 Model setup parameters and input data were checked prior to running the models to reduce these uncertainties and ensure the greatest possible accuracy. However, it was still appropriate to adjust the outputs.

1.2.35 The verification of the modelling output was performed in accordance with the methodology provided in Chapter 7 of LAQM.TG(16).

1.2.36 Verification of the ADMS-Roads assessment of NO_2 transport emissions has been undertaken using the appropriate monitoring locations across the modelled domain. It was identified that there were no appropriate PM_{10} or $PM_{2.5}$ monitoring locations against which to verify the model, so the factor calculated for NO_2 has also been applied to PM concentrations, an approach considered robust in LAQM.TG(16).

1.2.37 An initial comparison across 27 local authority monitoring sites and 24 monitoring sites set up by AECOM within the modelled domain showed that the model was under predicting at each location save two, which overpredicted, in many cases outside of the acceptable 25% range, so therefore model verification was required.

1.2.38 There are three model domains representing Stratford St Andrew AQMA, Woodbridge AQMA, and the wider study area, so as to provide an appropriate factor for each model study area, as each would be subject to different characteristics and therefore potential bias.

1.2.39 For each of the model domains, a comparison of the unadjusted model output is given in **Table 1.2** below. As can be seen, unadjusted, the majority of sites still under predict outside of the acceptable 25% range. Verification across each of the domains results in a range of adjustment ratios, as demonstrated in **Table 1.3** and **Plates 1.1** to **1.3** in this appendix for Stratford St. Andrew AQMA, Woodbridge AQMA and the wider study area domain, respectively.

1.2.40 These factors (derived from a comparison of modelled results with local monitoring data) range from 2.34 to 2.87, so are relatively consistent across each model domain.

Table 1.2: Comparison of unadjusted results against monitoring results across all domains

Domain Name	Site ID	Background NO_2 (µg/m^3)	Monitored Total NO_2 (µg/m^3)	Modelled Total NO_2 (µg/m^3)	% Difference (Unadjusted Modelled vs. Monitored)
Stratford St Andrew AQMA.	STA 1	8.0	34.0	18.5	-45.5
	STA 2	8.0	24.1	14.1	-41.6
	STA 7	8.0	30.2	14.1	-53.5
	STA 8	8.0	37.7	19.5	-48.2
Woodbridge AQMA.	WBG 1	11.8	32.8	20.3	-38.1
	WBG 5	11.8	20.6	15.5	-24.8
	WBG 6	11.8	32.4	20.4	-37.2
	WBG 8	11.8	32.5	20.8	-36.1
	WBG 15	11.8	32.4	20.2	-37.7
	WBG 17	11.8	23.3	18.8	-19.3
	WBG 20	11.8	31.0	21.6	-30.2
	LGM 2	8.3	18.9	12.4	-34.4

Domain Name	Site ID	Background NO_2 (µg/m³)	Monitored Total NO_2 (µg/m³)	Modelled Total NO_2 (µg/m³)	% Difference (Unadjusted Modelled vs. Monitored)
Wider study area.	FAR 1	8.0	23.5	14.2	-39.7
	FAR 2	8.0	27.4	13.9	-49.4
	STA 6	8.0	21.3	12.6	-40.7
	LEI 1	8.8	20.5	12.4	-39.4
	LEI 2	8.8	25.9	18.3	-29.5
	LEI 3	8.8	22.7	14.4	-36.4
	MEL 5	10.4	23.0	14.7	-36.1
	KSG 9	11.7	29.7	21.8	-26.6
	KSG 10	11.7	34.7	18.9	-45.5
	LOW 1	24.7	27.2	28.1	3.3
	LOW 6	24.7	34.7	30.1	-13.1
	LOW 7	24.7	29.2	29.0	-0.7
	OBR 1	12.7	26.2	18.0	-31.3
	OBR 2	12.7	26.0	19.9	-23.6
	OBR 3	10.8	22.8	17.8	-22.0
	DT1	8.0	12.7	9.6	-24.9
	DT2	8.2	10.8	8.9	-18.0
	DT3	7.8	10.9	9.3	-14.5
	DT4	7.6	11.4	8.7	-24.1
	DT5	7.8	9.2	8.2	-10.9
	DT6	7.8	13.6	11.5	-15.5
	DT7	7.8	10.6	8.4	-20.8
	DT8	7.6	21.7	12.0	-44.8
	DT9	7.7	15.6	12.3	-21.2
	DT10	7.8	16.2	12.3	-23.7
	DT11	7.7	16.3	13.4	-17.9
	DT12	7.7	8.8	9.2	4.6
	DT13	7.7	11.2	8.1	-28.0
	DT14	7.9	11.6	9.0	-22.9
	DT15	7.9	8.2	8.0	-2.3
	DT16	8.6	14.8	9.9	-32.8
	DT17	8.6	15.0	10.3	-31.5
	DT18	11.5	14.7	12.4	-15.5

Domain Name	Site ID	Background NO_2 (µg/m³)	Monitored Total NO_2 (µg/m³)	Modelled Total NO_2 (µg/m³)	% Difference (Unadjusted Modelled vs. Monitored)
	DT19	11.6	15.5	13.9	-10.8
	DT20	12.5	20.6	15.0	-27.4
	DT21	9.7	16.4	14.7	-10.4
	DT22	8.8	19.1	18.8	-1.2
	DT23	11.0	16.5	15.0	-8.6
	DT24	11.1	16.4	13.3	-19.4

Table 1.3: Adjustment factor and comparison of verified results against monitoring results across all domains

Domain Name	Site ID	Ratio of Monitored Road NO_x / Modelled Road NO_x	Adjustment Factor for Modelled Road NO_x	Adjusted Modelled Road NO_x (µg/m^3)	Modelled Total NO_2 (Based on NO_x / NO_2 Relationship) (µg/m^3)	Monitored Total NO_2 (µg/m^3)	% Diff. (Adjusted Modelled NO_2 vs. Monitored NO_2)
Stratford St Andrew AQMA.	STA 1	2.6	2.87	57.4	35.8	34.0	5.3
	STA 2	2.8		32.4	24.6	24.1	2.1
	STA 7	3.9		32.2	24.5	30.2	-18.8
	STA 8	2.8		62.96	38.2	37.7	1.2
Woodbridge AQMA.	WBG 1	2.6	2.34	38.3	30.8	32.8	-6.1
	WBG 5	2.4		16.4	20.3	20.6	-1.5
	WBG 6	2.5		38.5	30.9	32.4	-4.6
	WBG 8	2.4		40.3	31.7	32.5	-2.4
	WBG 15	2.6		37.6	30.5	32.4	-5.9
	WBG 17	1.7		31.3	27.6	23.3	18.4
	WBG 20	2.0		44.4	33.6	31.0	8.3
Wider study area.	LGM 2	2.6	2.60	20.6	18.9	18.9	0.2
	FAR 1	2.6		30.0	23.4	23.5	-0.3
	FAR 2	3.5		28.6	22.7	27.4	-17.1
	STA 6	3.0		22.2	19.7	21.3	-7.7
	LEI 1	3.4		17.3	18.0	20.5	-12.3
	LEI 2	1.9		46.5	31.8	25.9	22.8
	LEI 3	2.6		27.2	22.9	22.7	0.7

Domain Name	Site ID	Ratio of Monitored Road NO_x / Modelled Road NO_x	Adjustment Factor for Modelled Road NO_x	Adjusted Modelled Road NO_x (µg/m^3)	Modelled Total NO_2 (Based on NO_x / NO_2 Relationship) (µg/m^3)	Monitored Total NO_2 (µg/m^3)	% Diff. (Adjusted Modelled NO_2 vs. Monitored NO_2)
	MEL 5	3.0		21.0	21.3	23.0	-7.5
	KSG 9	1.9		50.4	36.2	29.7	21.8
	KSG 10	3.5		35.4	29.5	34.7	-15.0
	LOW 1	0.7		17.5	33.3	27.2	22.5
	LOW 6	1.9		28.2	38.3	34.7	10.3
	LOW 7	1.0		22.2	35.5	29.2	21.7
	OBR 1	2.6		26.1	26.0	26.2	-0.8
	OBR 2	1.9		35.6	30.4	26.0	17.0
	OBR 3	1.8		34.4	28.1	22.8	23.3
	DT1	3.0		7.3	12.0	12.7	-5.9
	DT2	4.0		3.0	9.9	10.8	-8.7
	DT3	2.0		7.2	11.7	10.9	7.2
	DT4	3.7		5.0	10.3	11.4	-9.5
	DT5	3.3		2.0	8.9	9.2	-3.4
	DT6	1.6		17.6	17.1	13.6	26.3
	DT7	4.6		2.9	9.4	10.6	-11.5
	DT8	3.4		21.1	18.7	21.7	-14.0
	DT9	1.8		21.8	19.2	15.6	23.3
	DT10	1.9		22.0	19.3	16.2	19.4

Domain Name	Site ID	Ratio of Monitored Road NO_x / Modelled Road NO_x	Adjustment Factor for Modelled Road NO_x	Adjusted Modelled Road NO_x ($\mu g/m^3$)	Modelled Total NO_2 (Based on NO_x / NO_2 Relationship) ($\mu g/m^3$)	Monitored Total NO_2 ($\mu g/m^3$)	% Diff. (Adjusted Modelled NO_2 vs. Monitored NO_2)
	DT11	1.5		27.7	22.0	16.3	34.9
	DT12	0.7		7.0	11.5	8.8	30.9
	DT13	8.7		2.0	8.7	11.2	-22.1
	DT14	3.4		5.0	10.6	11.6	-8.5
	DT15	1.3		0.7	8.3	8.2	0.6
	DT16	4.8		6.3	12.0	14.8	-18.7
	DT17	3.9		7.9	12.9	15.0	-14.1
	DT18	3.5		4.4	13.8	14.7	-5.7
	DT19	1.8		11.0	17.4	15.5	12.0
	DT20	3.3		12.2	18.9	20.6	-8.4
	DT21	1.4		24.2	22.2	16.4	35.7
	DT22	1.0		49.4	33.1	19.0	73.8
	DT23	1.4		19.5	21.2	16.5	28.7
	DT24	2.5		10.3	16.6	16.4	0.9

Plate 1.1: Comparison of the modelled road contribution NO_x versus monitored road contribution NO_x for the Stratford St Andrew AQMA domain

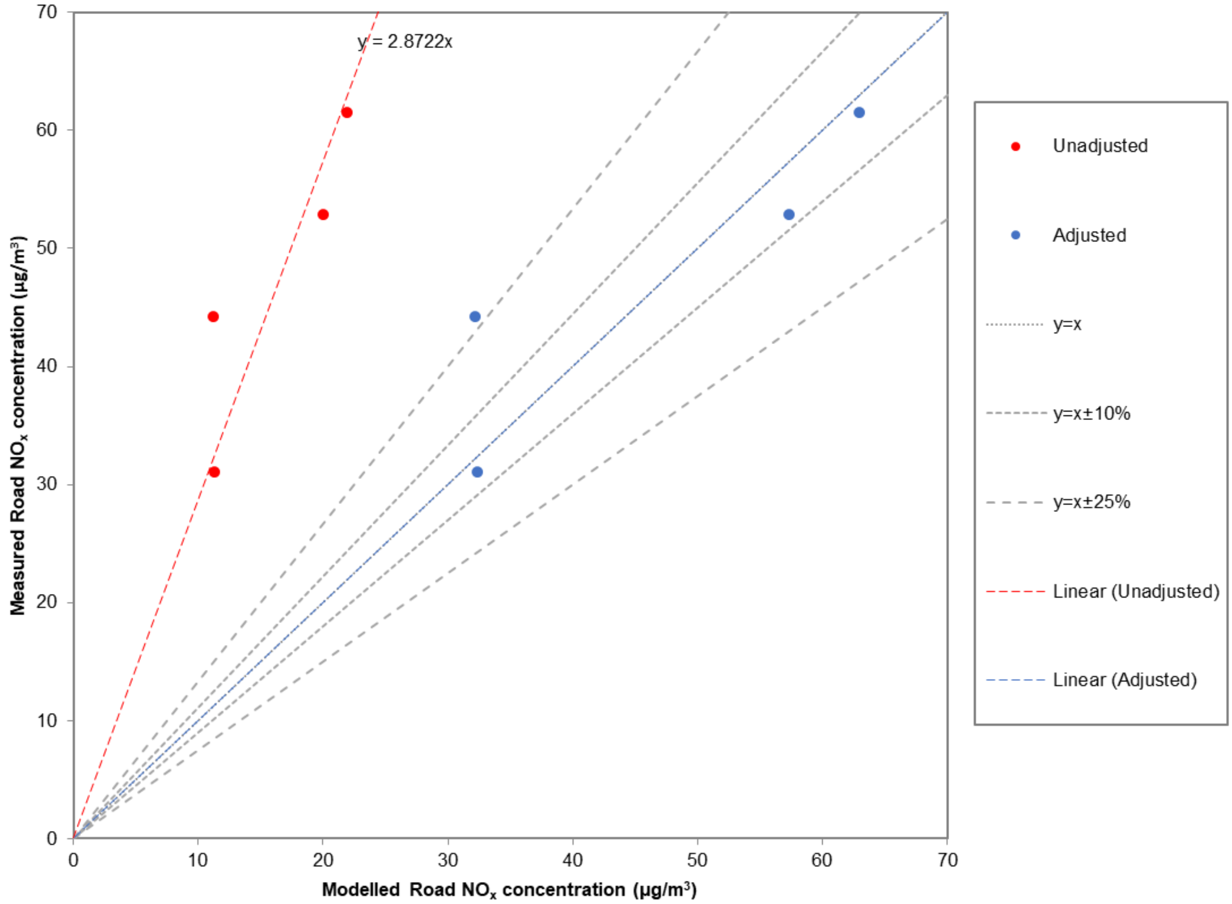


Plate 1.2: Comparison of the modelled road contribution NO_x versus monitored road contribution NO_x for the Woodbridge AQMA domain

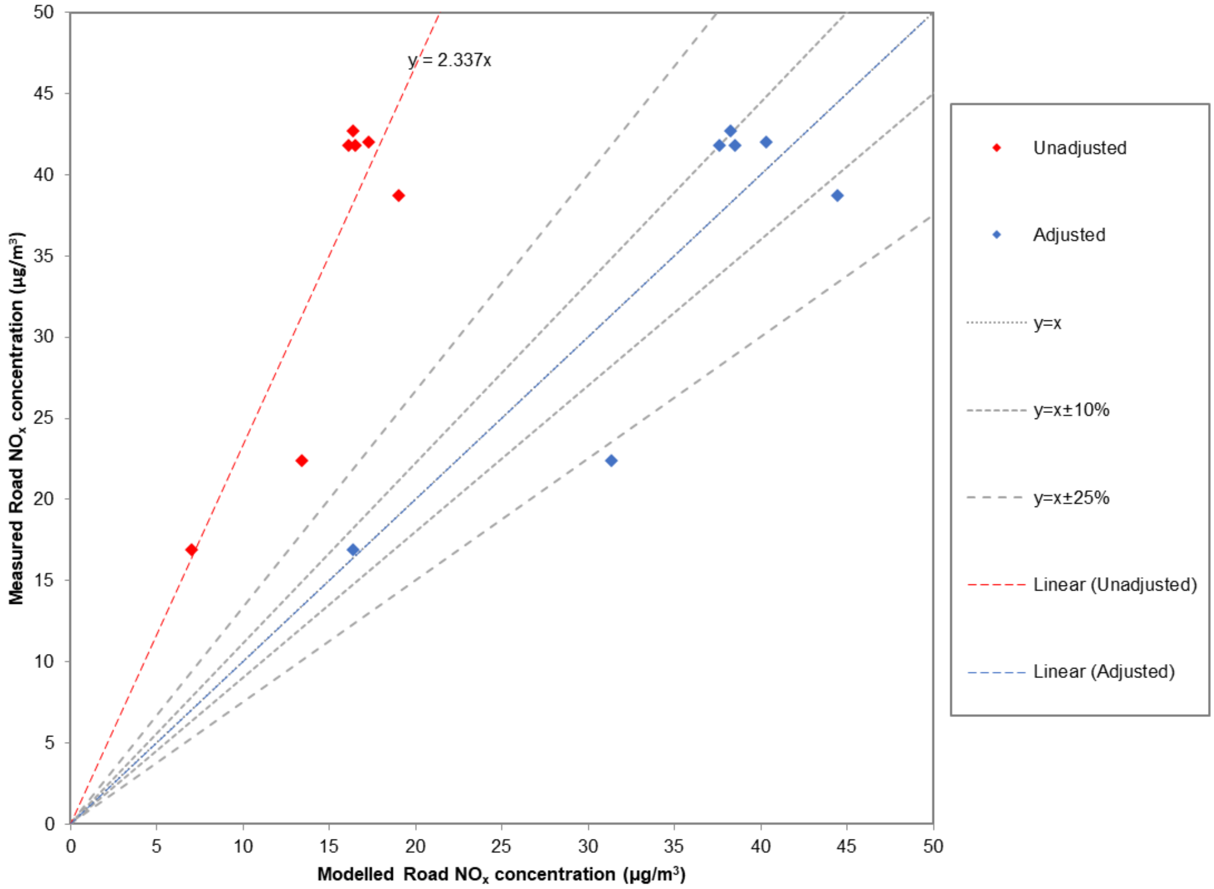
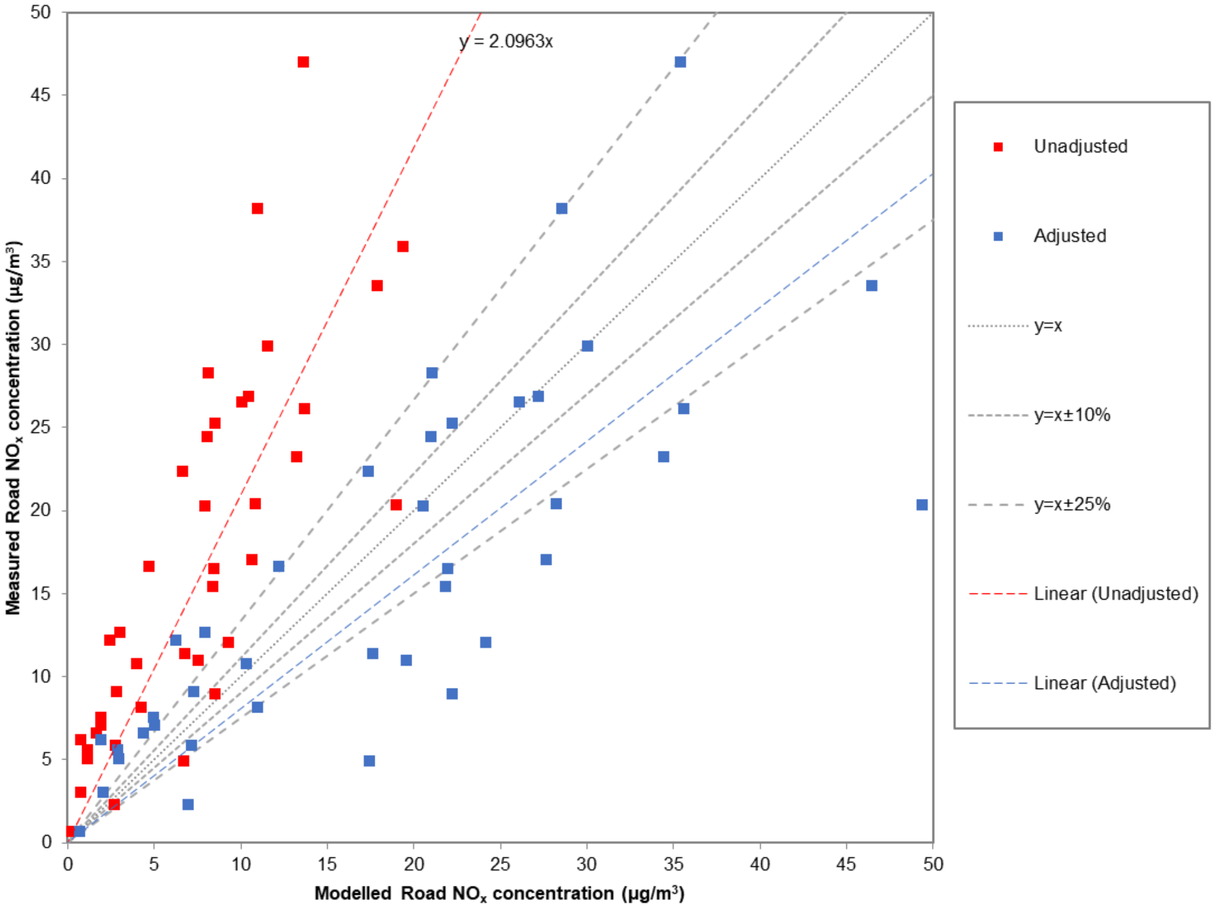


Plate 1.3: Comparison of the modelled road contribution NO_x versus monitored road contribution NO_x for the wider study area domain



1.2.41 The adjustment factors in each domain were derived, as reported in **Table 1.4** below. Following this process, the initial adjustment factor for the wider study area domain of 2.1 resulted in an acceptable level of model performance. Professional judgement was applied to assign a slightly larger than necessary adjustment factor to the wider study area domain to further reduce the number of measurement locations at which NO_2 concentrations are underpredicted whilst maintaining a good match to measurement data overall. This adjustment factor results in DT6, DT11, DT12, DT21, DT22 and DT23 being overpredicted by more than 25%, possibly due to idling traffic near the monitoring locations, but as concentrations reported at these receptors are low and an overprediction does not introduce the risk of exceedances of the air quality objective value, this robust approach is considered appropriate and conservative.

1.2.42 Each factor was applied to the road-NO_x concentrations predicted by the model in the appropriate domain, then added to the background concentration, to arrive at the final NO_2 concentrations for the Stratford St

Andrew AQMA, Woodbridge AQMA and the wider study area domain, as in **Plate 1.4** to **Plate 1.6** in this appendix, respectively.

Table 1.4: Verification factors

Area	Verification Factor
Stratford St Andrew AQMA.	2.87
Woodbridge AQMA.	2.34
Wider study area .	2.60

1.2.43 With this approach, the sites show strong agreement across each domain, all within the acceptable range of ±25% except for one site which overpredicts at a rural site at the edge of the study area, but the overprediction is considered insignificant due to the low concentration at this site. Uncertainty is also reduced, and the root mean squared error (RMSE) and fractional bias values are summarised before and after adjustment for each domain in **Table 1.5.**

Table 1.5: Performance of adjusted model output

Domain	RMSE		Fractional Bias	
	Unadjusted	Adjusted	Unadjusted	Adjusted
Stratford St Andrew AQMA.	15.3	3.0	0.6	0.0
Woodbridge AQMA.	10.2	2.3	0.4	0.0
Wider study area.	6.0	4.0	0.3	-0.1

Plate 1.4: Comparison of the modelled NO_2 versus monitored NO_2 for the Stratford St Andrew AQMA domain

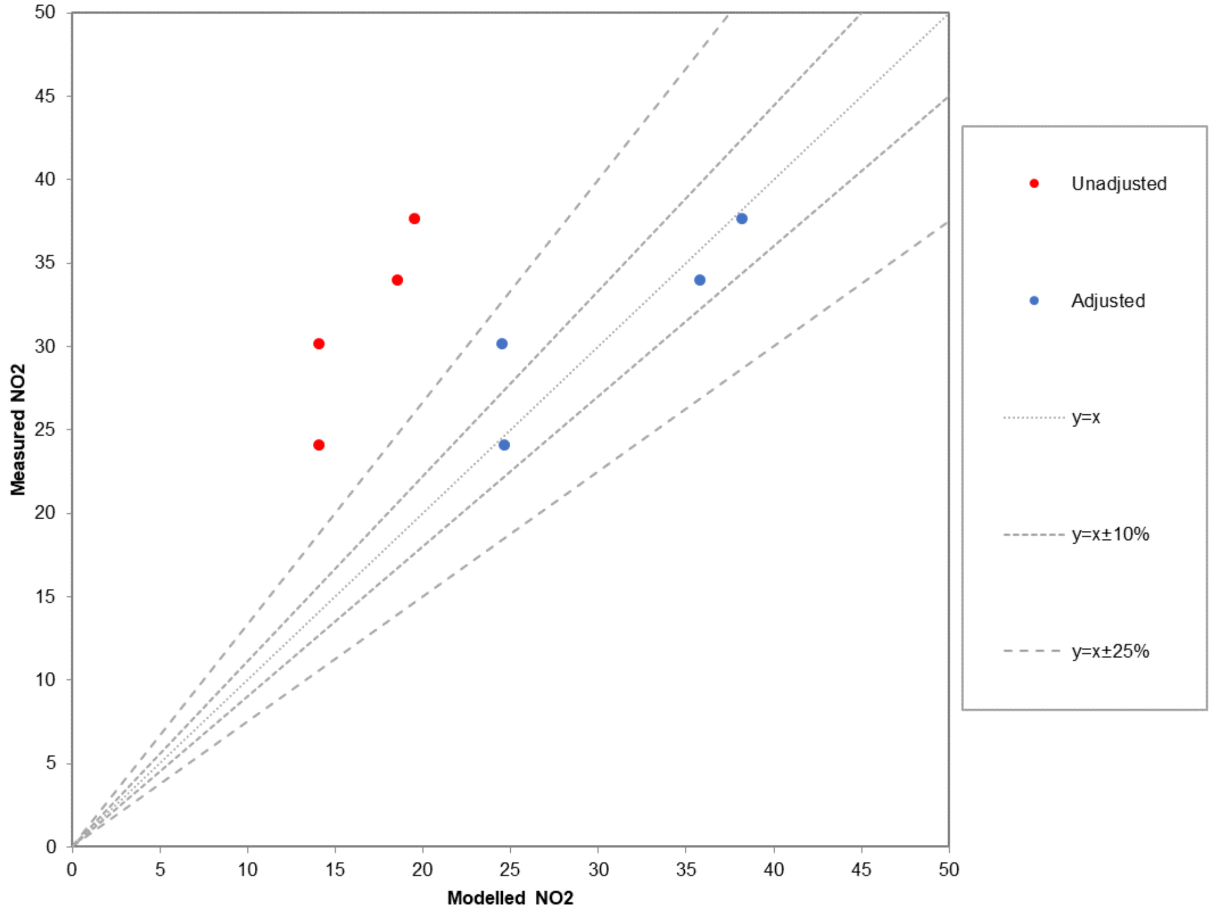


Plate 1.5: Comparison of the modelled NO_2 versus monitored NO_2 for the Woodbridge AQMA domain

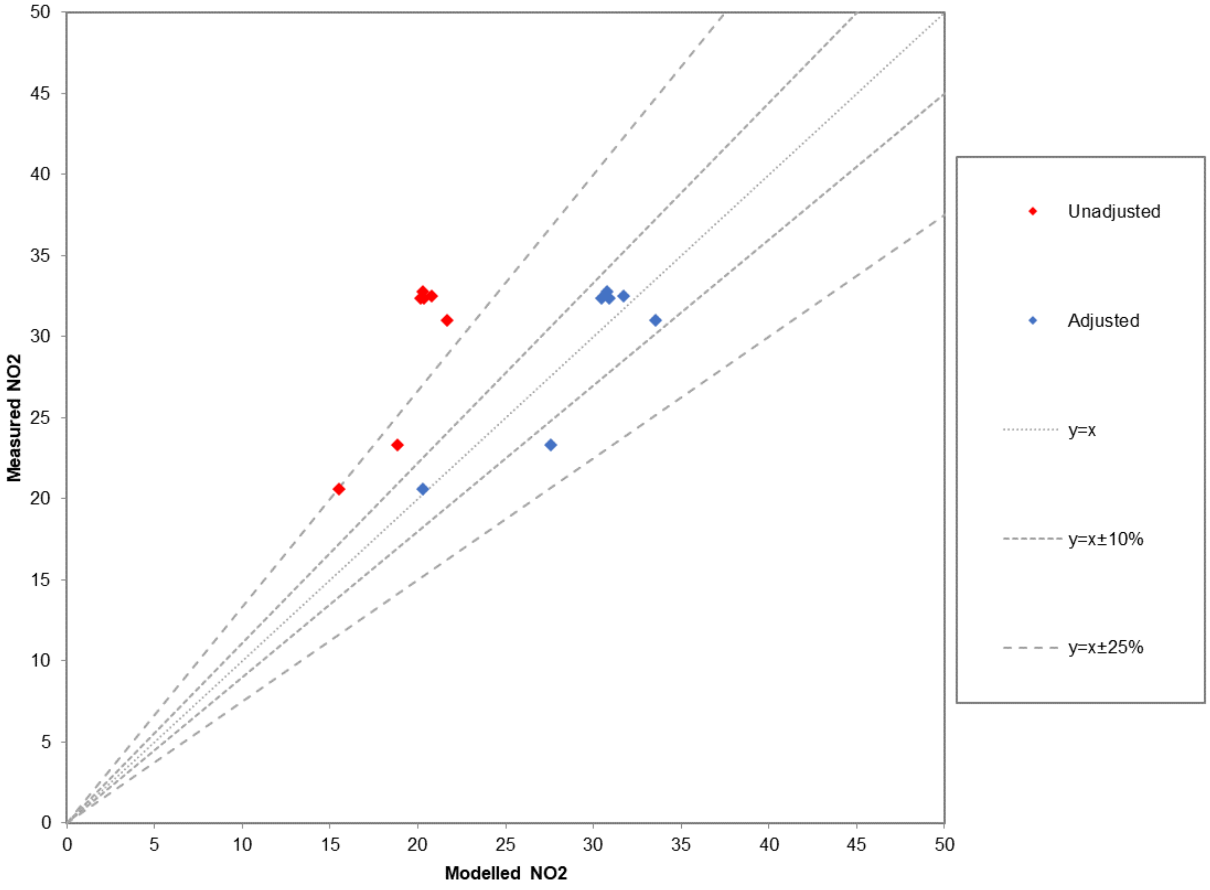
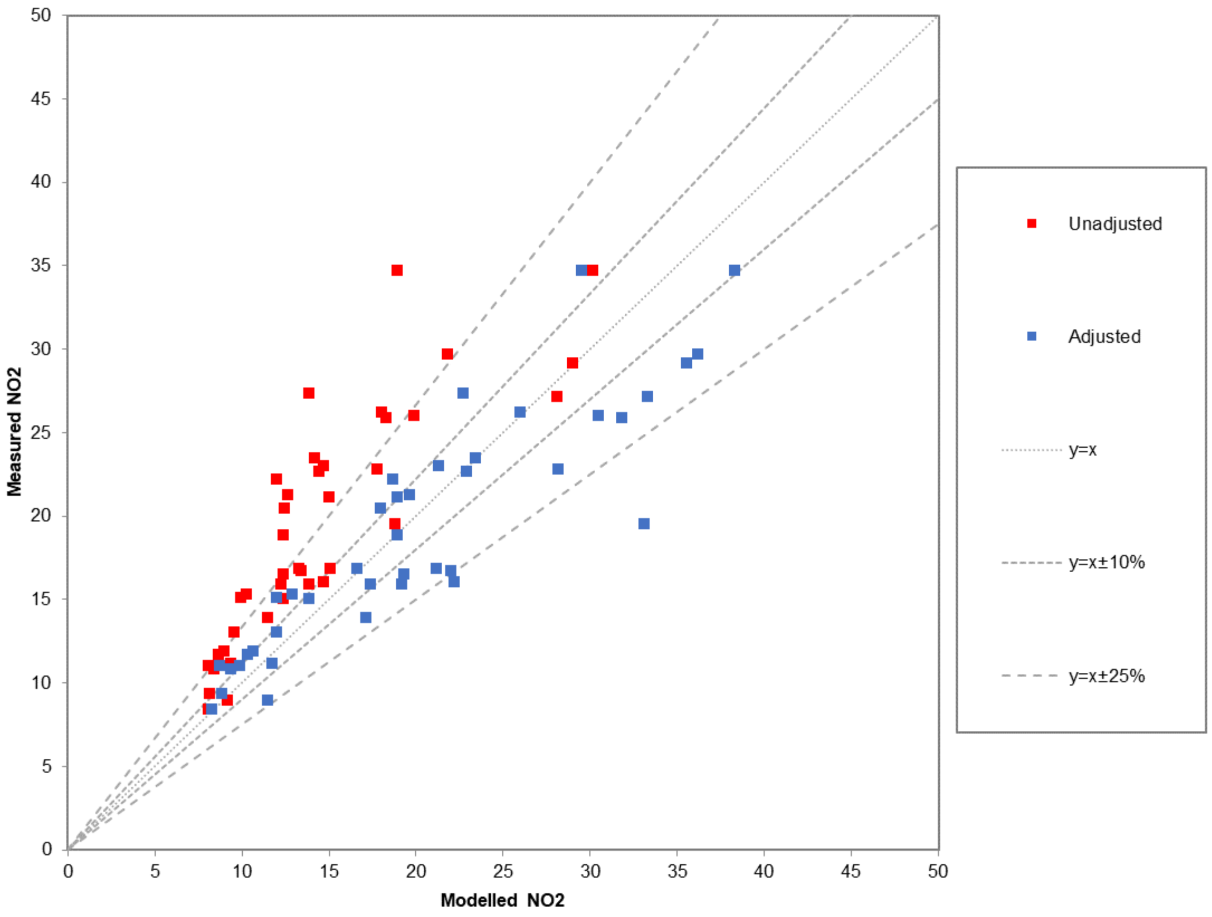


Plate 1.6: Comparison of the modelled NO_2 versus monitored NO_2 for the wider study area domain



1.2.44 All NO_2 results residing within their respective geographic regions presented and discussed herein are those calculated following the process of model verification. As no appropriate PM_{10} or $PM_{2.5}$ monitoring was available against which to verify, the corresponding factors have also been applied to PM_{10} and $PM_{2.5}$ concentrations, an approach considered robust in LAQM.TG(16). Model domains are shown in **Figure 1.2** to **Figure 1.6.**

1.2.45 Railway emissions were added to the concentrations calculated to give a final modelled concentration on which model verification was carried out. From this final concentration, the impact of transport emissions was assessed.

e) Monitoring

1.2.46 A number of local authority managed monitoring locations are in situ throughout the modelled domain to aid the process of model verification described above. The data from these sites is available on request and from within Annual Status Reports (ASRs) (Ref. 1.12 and Ref. 1.13) from the appropriate Local Authorities, including East Suffolk Council and Mid Suffolk District Council. As this data was obtained prior to the publication of ASRs, it is possible that the data used herein differs from those within the final published ASRs.

1.2.47 However, as the study area is so extensive, a bespoke and supplementary NO_2 monitoring survey was conducted in order to gather an appropriate coverage of monitoring data and improve the model verification process.

1.2.48 The sites used were scoped for both their applicability to the verification of the modelled roads (in accordance with guidance in LAQM.TG(16)), and their safe accessibility.

1.2.49 The monitoring was conducted over a three month period, bias adjusted and annualised using the methodology outlined in LAQM.TG(16).

1.2.50 The details and results of the additional monitoring conducted for the purposes of model verification are presented in **Table 1.6.**

Table 1.6: Additional NO_2 diffusion tube monitoring

Site ID	X, Y Location	Period Data Capture (%)	Raw Monitored Mean NO_2 (µg/m^3)	Bias Adjusted and Annualised Mean NO_2 (µg/m^3)
DT1	649314, 282201	100%	18.7	12.7
DT2	641655, 277376	100%	15.9	10.8
DT3	643505, 283239	100%	16.1	10.9
DT4	643669, 273884	100%	16.8	11.4
DT5	644707, 269685	100%	13.5	9.2
DT6	640405, 269604	100%	19.9	13.6
DT7	641462, 267821	100%	15.6	10.6
DT8	638602, 267046	100%	31.9	21.7
DT9	640875, 270145	100%	22.9	15.6
DT10	640636, 269880	100%	23.8	16.2
DT11	638319, 266015	100%	24.0	16.3
DT12	643222, 266548	100%	12.9	8.8
DT13	644351, 265089	67%	16.5	11.2
DT14	644498, 263759	100%	17.1	11.6
DT15	640592, 264076	100%	12.1	8.2
DT16	631300, 256943	100%	21.7	14.8
DT17	631168, 256771	100%	22.0	15.0
DT18	623208, 240954	100%	21.6	14.7
DT19	623520, 242349	100%	22.8	15.5
DT20	622164, 241502	100%	30.3	20.6
DT21	613212, 253933	67%	24.1	16.4

Site ID	X, Y Location	Period Data Capture (%)	Raw Monitored Mean NO_2 (µg/m^3)	Bias Adjusted and Annualised Mean NO_2 (µg/m^3)
DT22	612066, 259428	100%	28.0	19.0
DT23	626060, 249198	33%	24.2	16.5
DT24	625347, 247744	100%	24.2	16.4

f) Receptors

1.2.51 Receptors susceptible to changes in long term air quality typically include residential properties, schools, care homes, hospitals and designated ecological sites. This report considers both human and ecological receptors. Receptors adjacent to the affected road network in each scenario have been selected, and non-designated ecological receptors required for the terrestrial ecology and ornithology assessment, provided in **Volume 2, Chapter 14** of the **ES**, have also been included.

i. Human

1.2.52 The human receptors chosen represent locations where people are likely to be present for extended periods of time and are based on AQS objectives that are relevant to public exposure. The AQS values have been set at concentrations that provide protection to all members of society, including more vulnerable groups such as the very young, the elderly or people who are unwell. As such the sensitivity of receptors was considered in their definition, and therefore no additional subdivision of human health receptors on the basis of building or location type is necessary.

1.2.53 The human receptors selected for this assessment are those adjacent to roads affected by the proposed development, and therefore extend over a wide area. To assist the reader in identifying the location of the receptors, each has been codified using a regional identifier, as demonstrated in **Table 1.7** below. The receptor locations are illustrated in **Figure 1.7**.

Table 1.7: Receptor location codes

Label Code	Relevant Location
BC	Residential properties on A146 Loddon - Beccles - Worlingham.
	Residential properties on A145 Beccles - Brampton.
	Residential properties on B1127 Worlingham - Hulver.
BK	Residential properties on A14 Trimley St Martin - Bucklesham - Nacton.
	Residential properties on A12 Bucklesham - Martlesham.
FR	Residential properties on B1119 Saxtead Green - Framlingham.
	Residential properties on A1120 Dennington.

Label Code	Relevant Location
	Residential properties on B1117 Ashfield Green - Laxfield.
HS	Residential properties on A144 Halesworth - Darsham.
IP	Residential properties on A14 Nacton - Belstead.
	Residential properties on A12 Holton St Mary - Washbrook.
	Residential properties on A1071 Sproughton - Ipswich.
	Residential properties on A1156 Whitton.
	Residential properties on A1022 - A1156 Ipswich centre.
	Residential properties on A1214 Ipswich - Kesgrave - Martlesham.
KS	Residential properties on A12 Kessingland - Wrentham.
	Residential properties on B1127 Henstead - Wrentham.
LE	Residential properties on B1122 Theberton - Leiston - Aldringham - Aldeburgh.
	Residential properties on Lover's Lane.
	Residential properties on B1119 Leiston.
	Residential properties on B1069 Leiston - Coldfair Green - Friston.
	Residential properties on King George's Avenue - Sizewell Gap.
LW	Residential properties on A1144 Lowestoft.
	Residential properties on A1117 Bridge Road - Cotmer Road - Elm Tree Road.
	Residential properties on B1384 Stadbroke Road.
	Residential properties on A12 Tom Crisp Way - Bloodmoor Road.
	Residential properties on A47/Denmark Road.
ND	Residential properties on A14 Claydon - Needham Market.
	Residential properties on A140 Needham Market - Earl Stonham.
	Residential properties on B1078 Needham Market - Coddenham - Otley.
	Residential properties on B1079 Otley - Helmingham.
SX	Residential properties on A12 Kelsale - Saxmundham - Stratford St Andrew.
	Residential properties on B1119 Rendham Road.
	Residential properties on B1121 High Street.
	Residential properties on A1094 Benhall - Church Common.
	Residential properties on B1069 Church Common - Snape - Tunstall.
SW	Residential properties on A1095 Southwold.
	Residential properties on A12 Wangford - Blythburgh.
	Residential properties on A145 Henham - Blythburgh.
WB	Residential properties on A1152 Melton.
	Residential properties on B1438 Melton - Woodbridge - Martlesham.
	Residential properties on Top Street - Main Road, Martlesham.
	Residential properties on A12 Martlesham - Woodbridge.
WM	Residential properties on A12 Marlesford - Lower Hacheston - Ufford.
	Residential properties on B1078 Wickham Market - Charsfield - Clopton.
	Residential properties on B1079 Clopton - Otley.

Label Code	Relevant Location
	Residential properties on B1438 Wickham Market - Pettistree.
YX	Residential properties on A12 Darsham - Yoxford.
	Residential properties on A1120 Hemp Green - Yoxford.
	Residential properties on B1122 Yoxford - Middleton.
	Residential properties on B1125 Middleton - Westleton.
	Residential properties on New road - Yoxford - Middleton.

ii. Ecological

1.2.54 The ecological receptors chosen represent designated (Special Protection Areas (SPAs); Sites of Special Scientific Interest (SSSIs); Special Area of Conservations (SACs); County Wildlife Sites (CWS) and Local Nature Reserves (LNRs)) areas where the designated feature is located within 200m of the affected road. At such locations, a transect of receptors with a spacing of 5m for the first five points along the transect, 10m for the next eight, the 25m thereafter up to a maximum of 200m from the road was modelled in order to demonstrate the fall off in deposition with distance from the road. **Table 1.8** below demonstrates the features considered and the location of the receptor nearest to the road.

Table 1.8: Ecological receptor sites

ID	Name	Type	X	Y
E1	Alde-Ore and Butley Estuaries.	SAC, SPA and Ramsar.	644357.9	257741.5
E2	Minsmere - Walberswick Heaths and Marshes.	SAC, SPA, Ramsar and SSSI.	647500.0	264500.0
E3	Orfordness to Shingle Street.	SAC	646279.2	254665.0
E4	Sandlings	SPA	646505.8	262396.2
E5	Sizewell Marshes.	SSSI	647014.9	263572.3
E6	Leiston Aldeburgh.	SSSI	647600.0	262000.0
E7	Leiston Common.	CWS	646000.0	263700.0
E8	Aldringham to Aldeburgh Disused Railway Line.	CWS	646050.0	261920.0
E9	Dower House.	CWS	647613.0	262001.0
E10	Suffolk Shingle Beaches.	CWS	647600.0	264000.0
E11	Reckham Pits Wood.	CWS	646532.0	263708.0
E12	Sizewell Levels and Associated Areas.	CWS	647392.0	264551.0
E13	Minsmere South Levels.	CWS	647103.0	264879.0
E24	Blaxhall Heath.	SSSI	638193.7	256492.7
E25	Deben Estuary.	Ramsar, SSSI.	627575.3	248774.0
E26	Sinks Valley, Kesgrave.	SSSI	622685.2	246025.0

ID	Name	Type	X	Y
E17	Spring Wood, Belstead.	LNR	614421.1	241242.6
E18	Stour and Orwell Estuary.	SAC, SPA, Ramsar and SSSI.	617478.2	241246.1
E19	Pipers Vale.	LNR	617746.0	241279.0
E20	Bridge Wood.	LNR	618626.5	240940.5
E21	The Broads.	SAC, SSSI (different name).	651496.7	292336.0
E22	Yoxford 197	Roadside Nature Reserve	639943	268675
E23	Foxburrow Woods	County Wildlife Site	636825	259940

g) Deposition at ecological receptors

1.2.55 The deposition of nutrient nitrogen and acid at sensitive ecological receptors is calculated, using the modelled NO_x emission predicted at the receptor points. The deposition rates are determined using conversion rates and factors contained within Environment Agency guidance (Ref. 1.14), which account for variations in the deposition mechanisms in different types of habitat.

1.2.56 The conversion rates and factors used in the assessment are detailed in **Table 1.9.**

Table 1.9: Conversion factors – calculation of nitrogen and acid deposition

Pollutant	Deposition Velocity Grasslands (m/s)	Deposition Velocity Forests (m/s)	Conversion Factor (μg/m²/s to kg/ha/yr)	Conversion Factor (kg/ha/yr to keq/ha/yr)
NO_x as NO_2.	0.0015	0.003	95.98	0.0714

1.2.57 For the purposes of this assessment, dry deposition rates of nitrogen and acidic equivalents at the identified ecological receptors have been calculated by applying the ‘grassland’ deposition velocities, as detailed in **Table 1.9** above, to the modelled annual mean concentrations of NO_x. Wet deposition has not been assessed since this is not a significant contributor to total deposition over shorter ranges (Ref. 1.15).

h) Backgrounds

i. Defra mapped

1.2.58 A large number of small sources of air pollutants exist, which individually may not be significant, but collectively, over a large area, need to be considered in the modelling process. Pollutant emissions from these sources contribute to background air quality which when added to modelled emissions allow estimates of total ambient pollutant concentrations to be made.

1.2.59 Defra has produced 1 x 1 kilometre (km) grid maps of background pollutant concentrations covering the whole of the UK for use by local authorities and consultants in the completion of LAQM reports and air quality assessments where local background monitoring is unavailable or inappropriate for use. The maps provide background pollutant concentrations for each 1-km grid square within the UK for all years between 2017 and 2030 (Ref. 1.11).

1.2.60 Mapped values for the relevant local authorities were downloaded for the appropriate years, namely 2018, 2023 and 2028. 2034 is represented by the background maps for 2030, the latest available year.

1.2.61 The total mapped concentrations are comprised of a number of source sectors, which when explicitly modelled should be removed from the background component so as to avoid double counting. For all pollutants (NO_2, PM_{10} and $PM_{2.5}$), this was done using the Defra NO_2 Adjustment for NO_x Sector Removal Tool (Ref. 1.16), removing the Motorway_in, Trunk_A_Rd_in and Primary_A_Rd_in contributions. The sector removed backgrounds were added to the modelled transport emissions to give the total ambient pollutant concentrations.

ii. Ecological backgrounds/critical loads

1.2.62 **Table 1.10** below demonstrates the critical loads considered for this assessment. **Table 1.11** in this appendix demonstrates the estimated background deposition rates of nutrient nitrogen and total acid deposition for the ecological receptors considered in this study, as obtained from the APIS website (Ref. 1.15). APIS does not provide critical loads for County Wildlife Sites and Local Nature Reserves. To assess whether there is a potential exceedance of the critical load, total acid deposition should be plotted on critical load function graphs, based on nitrogen deposition (on the x-axis), and sulphur deposition (on the y-axis). In this assessment, as sulphur deposition has not been modelled, acid deposition is compared with the nitrogen critical load only.

1.2.63 It should be noted that the level of uncertainty associated with these modelled estimates is relatively high as the results are presented from the model across the UK on a 5km grid square resolution, though this represents the best available data set.

Table 1.10: Ecological habitat parameters

ID	Name	Type	Habitat (Deposition)	Lower-Upper Critical Load	Habitat (N or A)	MinCL MaxN
E1	Alde-Ore and Butley Estuaries.	SAC, SPA and Ramsar.	Grassland	20–30	Estuaries	-
E2	Minsmere - Walberswick Heaths and Marshes.	SAC, SPA, Ramsar and SSSI.	Grassland	8–15	Perrenial vegetation of stony banks.	0.568
E3	Orfordness to Shingle Street.	SAC	Grassland	8–15	Perrenial vegetation of stony banks.	4.353
E4	Sandlings	SPA	Forest	5–15	Coniferous woodland.	1.218
E5	Sizewell Marshes.	SSSI	Forest	15–25	Fen Marsh and swamp.	0.713
E6	Leiston Aldeburgh.	SSSI	Grassland	8–15	Acid grassland.	0.703
E7	Leiston Common.	CWS	Grassland	-	-	-
E8	Aldringham to Aldeburgh Disused Railway Line.	CWS	Grassland	-	-	-
E9	Dower House.	CWS	Grassland	-	-	-
E10	Suffolk Shingle Beaches.	CWS	Grassland	-	-	-
E11	Reckham Pits Wood.	CWS	Forest	-	-	-
E12	Sizewell Levels and Associated Areas.	CWS	Grassland	-	-	-
E13	Minsmere South Levels.	CWS	Grassland	-	-	-
E24	Blaxhall Heath.	SSSI	Grassland	8–15	Supralittoral Sediment.	0.703
E25	Deben Estuary.	Ramsar, SSSI.	Grassland	8–15	Supralittoral Sediment.	0.703
E26	Sinks Valley, Kesgrave.	SSSI	Grassland	8–15	Acid grassland.	0.713
E17	Spring Wood, Belstead.	LNR	Forest	-	-	-
E18	Stour and Orwell Estuary.	SAC, SPA, Ramsar and SSSI.	Grassland	20–30	Littoral sediment.	0.703
E19	Pipers Vale.	LNR	Grassland	-	-	-
E20	Bridge Wood.	LNR	Forest	-	-	-
E21	The Broads.	SAC, SSSI (diff name).	Grassland	10–15	Transition mires.	0.497

ID	Name	Type	Habitat (Deposition)	Lower-Upper Critical Load	Habitat (N or A)	MinCL MaxN
E22	Yoxford 197	RNR	Grassland	-	-	-
E23	Foxburrow Woods	CWS	Forest	-	-	-

- APIS data not available for this location.

Table 1.11: APIS background concentrations and deposition rates

X, Y Location	N Deposition (kg N/ha/yr)	NOx (µg/m^3)	Acid Deposition (Keq/ha/yr)
642500,257500	14.84	9.6	1.14
647500,262500	12.04	9.9	0.94
647500,267500	11.76	9.6	0.92
647500,252500	0	0	0.7
647500,277500	15.12	12.2	1.17
647500,272500	14.2	9.7	1.11
642500,272500	19.74	10.8	1.5
642500,267500	16.1	10.2	1.23
647500,257500	11.2	0	0.88
637500,257500	16.1	10.2	1.24
627500,247500	17.5	13.1	1.35
622500,247500	18.06	14.3	1.4
612500,242500	17.78	21.9	1.38
617500,242500	15.82	20.3	1.27
652500,292500	15.68	18.0	1.23
637500,267500	19.74	10	1.5

i) Meteorological data

1.2.64 Data from Wattisham meteorological site recorded for 2018 was used to model atmospheric dispersion of road and rail pollutants. The site is located approximately 45km from Sizewell C and is representative of the meteorological conditions present at the modelled network.

1.3 Results

1.3.1 This section presents the results of the transport emissions assessment.

a) Human health receptors

1.3.2 Predicted total NO_2 concentrations for the 2018 baseline year at representative sensitive receptors are presented in **Table 1.33** of **Annex 12B.2**. The results of the dispersion modelling presented in **Table 1.33** reports the predicted concentrations of NO_2 in the 2018 reference case scenario which has been calibrated against current measurement data. Predicted NO_2 concentrations for all future year scenarios are presented in **Table 1.34** to **Table 1.45** of **Annex 12B.2**.

1.3.3 The descriptors given to represent the effects of predicted changes in NO_2, PM_{10} and $PM_{2.5}$ on individual receptors in all scenarios are all 'Negligible' for those with 'Low', 'Very Low' and 'Imperceptible' magnitude of change due to the absolute concentrations predicted at the receptors being well below the air quality objective value. Where there is predicted to be a 'Medium' change in concentration at an individual receptor, then due to the absolute concentrations being well below the air quality objective value, the effect is described as 'Minor'.

1.3.4 Predicted total NO_2 concentrations for 2023 baseline and 2023 early construction year scenarios at representative sensitive receptors are presented in **Table 1.34** of **Annex 12B.2**. **Table 1.12** below presents receptor locations where a 'Very Low' or higher magnitude of change is predicted for NO_2 concentrations for modelled year 2023. All other receptors not presented have an imperceptible change. In all instances total NO_2 concentrations are considerably below the air quality objective value.

1.3.5 Predicted total PM_{10} concentrations for 2023 baseline and 2023 early construction year scenarios at representative sensitive receptors are presented in **Table 1.35** of **Annex 12B.2**. **Table 1.13** below presents receptor locations where a 'Low' or higher magnitude of change is predicted for PM_{10} concentrations for modelled year 2023. All other receptors not presented have an imperceptible change. In all instances total PM_{10} concentrations are considerably below the air quality objective value.

1.3.6 Predicted total $PM_{2.5}$ concentrations for 2023 baseline and 2023 early construction year scenarios at representative sensitive receptors are presented in **Table 1.36** of **Annex 12B.2**. **Table 1.14** below presents receptor locations where a 'Low' or higher magnitude of change is predicted for $PM_{2.5}$ concentrations for modelled year 2023. All other receptors not presented have an imperceptible change. In all instances total $PM_{2.5}$ concentrations are considerably below the air quality objective value.

1.3.7 The predicted change in impacts from transport emissions compared to the 2023 reference case scenario would have a 'Negligible' effect at all receptors. The overall effects resulting from transport emissions associated with the construction of the main development site and associated developments are predicted to be **not significant** for all sensitive receptors within the study area.

Table 1.12: Modelled receptor locations with a magnitude of change other than imperceptible for NO_2 2023 scenario

Receptor	2023RC Total Baseline Concentration (µg/m³)	2023AD Total Early Construction Year Construction Concentration (µg/m³)	Magnitude of Change (µg/m³)	Magnitude of Change Descriptor	Effect Descriptor at Individial Receptor
YX3	14.2	14.9	0.7	Very Low.	Negligible.
YX7	7.8	8.2	0.4	Very Low.	Negligible.
LE3	8.8	9.4	0.6	Very Low.	Negligible.
LE9	17.4	18.0	0.6	Very Low.	Negligible.
WM2	20.0	20.8	0.8	Low.	Negligible.
WB2	15.1	13.1	-2.0	Low.	Negligible.
YX2	11.3	11.7	0.4	Very Low.	Negligible.
YX6	9.6	10.4	0.8	Low.	Negligible.
SX4	13.5	13.9	0.4	Very Low.	Negligible.
SX5	14.1	14.6	0.6	Very Low.	Negligible.
SX6	18.4	19.1	0.7	Very Low.	Negligible.
SX7	19.8	20.5	0.7	Very Low.	Negligible.
YX8	9.3	9.7	0.4	Very Low.	Negligible.
LE13	10.5	10.9	0.4	Very Low.	Negligible.
LE6	9.9	10.7	0.8	Very Low.	Negligible.
LE5	8.6	9.0	0.4	Very Low.	Negligible.
BK1	18.2	19.3	1.1	Low.	Negligible.
SX15	22.5	23.7	1.2	Low.	Negligible.
YX19	8.3	8.8	0.4	Very Low.	Negligible.
BK6	11.7	11.0	-0.6	Very Low.	Negligible.
LE57	8.6	9.8	1.1	Low.	Negligible.

Table 1.13: Modelled receptor locations with a magnitude of change other than imperceptible for PM_{10} 2023 scenario

Receptor	2023RC Total Baseline Concentration (μg/m³)	2023AD Total Early Construction Year Construction Concentration (μg/m³)	Magnitude of Change (μg/m³)	Magnitude of Change Descriptor	Effect Descriptor at Individual Receptor
YX1	16.1	16.8	0.7	Very Low.	Negligible.
YX20	14.8	15.2	0.4	Very Low.	Negligible.

Table 1.14: Modelled receptor locations with a magnitude of change other than imperceptible for $PM_{2.5}$ 2023 scenario

Receptor	2023RC Total Baseline Concentration (μg/m³)	2023AD Total Early Construction Year Construction Concentration (μg/m³)	Magnitude of Change (μg/m³)	Magnitude of Change Descriptor	Effect Descriptor at Individual Receptor
YX1	10.2	9.6	-0.6	Low.	Negligible.
WM2	11.4	11.8	0.4	Very Low.	Negligible.
YX6	8.8	9.0	0.3	Very Low.	Negligible.
SX6	10.7	11.1	0.3	Very Low.	Negligible.
SX7	11.0	11.4	0.4	Very Low.	Negligible.
LE6	9.0	9.3	0.3	Very Low.	Negligible.
BK1	10.1	10.4	0.3	Very Low.	Negligible.
SX15	11.5	11.9	0.4	Very Low.	Negligible.
YX20	9.3	9.0	-0.3	Very Low.	Negligible.

1.3.8 Predicted total NO_2 concentrations for 2028 baseline and 2028 average day peak construction year scenarios at representative sensitive receptors are presented in **Table 1.37** of **Annex 12B.2**. **Table 1.15** below presents receptor locations where a 'Low' or higher magnitude of change is predicted for NO_2 concentrations for modelled year 2028 on an typical day. All other receptors not presented have an imperceptible change. In all instances total NO_2 concentrations are considerably below the air quality objective value.

1.3.9 Predicted total PM_{10} concentrations for 2028 baseline and 2028 average day peak construction year scenarios at representative sensitive receptors are presented in **Table 1.38** of **Annex 12B.2**. **Table 1.16** below presents receptor locations where a 'Low' or higher magnitude of change is predicted for PM_{10} concentrations for modelled year 2028 on a typical day. All other receptors not presented have an imperceptible change. In all instances total PM_{10} concentrations are considerably below the air quality objective value.

1.3.10 Predicted total $PM_{2.5}$ concentrations for 2028 baseline and 2028 average day peak construction year scenarios at representative sensitive receptors are presented in **Table 1.39** of **Annex 12B.2**. **Table 1.17** below presents receptor locations where a 'Low' or higher magnitude of change is predicted for $PM_{2.5}$ concentrations for modelled year 2028 on an typical day. All other receptors not presented have an imperceptible change. In all instances total $PM_{2.5}$ concentrations are considerably below the air quality objective value.

1.3.11 The predicted change in impacts from transport emissions compared to the 2028 reference case scenario would have a 'Negligible' effect at most receptors. A limited number of receptors would experience beneficial effects on local air quality that would be 'Minor' or 'Moderate'. The overall effects resulting from transport emissions associated with the construction of the main development site and associated developments are predicted to be **not significant** for all sensitive receptors within the study area.

Table 1.15: Modelled receptor locations with a magnitude of change other than imperceptible for NO_2 2028 typical day scenario

Receptor	2028RC Total Baseline Concentration ($\mu g/m^3$)	2028AD Total Early Construction Year Construction Concentration ($\mu g/m^3$)	Magnitude of Change ($\mu g/m^3$)	Magnitude of Change Descriptor	Effect Descriptor at Individial Receptor
YX1	11.4	12.3	0.9	Low.	Negligible.
YX7	6.7	6.2	-0.5	Very Low.	Negligible.
LE3	7.4	8.2	0.7	Very Low.	Negligible.
LE9	13.8	15.5	1.7	Low.	Negligible.
LE10	11.4	12.4	1.0	Low.	Negligible.
LE11	8.2	8.7	0.5	Very Low.	Negligible.
WM2	15.3	15.8	0.5	Very Low.	Negligible.
WB12	10.3	11.1	0.8	Low.	Negligible.
WB6	10.9	11.3	0.4	Very Low.	Negligible.
WB2	12.4	10.9	-1.5	Low.	Negligible.
SX5	11.0	6.6	-4.5	High.	Moderate beneficial.
SX6	14.1	6.7	-7.5	High.	Moderate beneficial.
SX7	15.1	6.8	-8.3	High.	Moderate beneficial.
SW3	10.3	10.9	0.6	Very Low.	Negligible.
SW2	9.0	9.4	0.4	Very Low.	Negligible
LE1	10.4	12.3	1.9	Low.	Negligible.
LE8	8.7	9.1	0.4	Very Low.	Negligible
LE6	8.2	6.3	-1.9	Low.	Negligible.
LE5	7.3	6.2	-1.0	Low.	Negligible.
SX8	6.3	7.0	0.8	Low.	Negligible.

Receptor	2028RC Total Baseline Concentration (µg/m³)	2028AD Total Early Construction Year Construction Concentration (µg/m³)	Magnitude of Change (µg/m³)	Magnitude of Change Descriptor	Effect Descriptor at Individial Receptor
SX9	6.3	7.0	0.6	Very Low.	Negligible.
BK1	14.6	15.5	0.9	Low.	Negligible.
LW8	22.2	21.5	-0.7	Very Low.	Negligible.
LE2	6.8	7.2	0.4	Very Low.	Negligible.
SX15	16.9	6.5	-10.4	High.	Moderate beneficial.
YX10	9.2	9.7	0.5	Very Low.	Negligible.
LE36	7.4	8.4	1.0	Low.	Negligible.
LE37	7.5	9.1	1.6	Low.	Negligible.
LE38	7.6	9.3	1.7	Low.	Negligible.
YX13	9.4	9.9	0.5	Very Low.	Negligible.
YX16	8.3	8.7	0.4	Very Low.	Negligible.
YX20	8.8	9.3	0.5	Very Low.	Negligible.
BK6	9.9	9.5	-0.4	Very Low.	Negligible.
LE57	7.3	8.2	0.9	Low.	Negligible.

Table 1.16: Modelled receptor locations with a magnitude of change other than imperceptible for PM_{10} 2028 typical day scenario

Receptor	2028RC Total Baseline Concentration (µg/m³)	2028AD Total Early Construction Year Construction Concentration (µg/m³)	Magnitude of Change (µg/m³)	Magnitude of Change Descriptor	Effect Descriptor at Individial Receptor
SX5	14.6	13.9	-0.7	Very Low.	Negligible.
SX6	14.9	13.6	-1.3	Low.	Negligible.
SX7	15.1	13.6	-1.4	Low.	Negligible.
SX15	15.6	13.9	-1.7	Low.	Negligible.

Table 1.17: Modelled receptor locations with a magnitude of change other than imperceptible for $PM_{2.5}$ 2028 typical day scenario

Receptor	2028RC Total Baseline Concentration (µg/m³)	2028AD Total Early Construction Year Construction Concentration (µg/m³)	Magnitude of Change (µg/m³)	Magnitude of Change Descriptor	Effect Descriptor at Individial Receptor
SX5	9.6	8.4	-1.2	Low.	Negligible.
SX6	10.5	8.3	-2.2	Medium.	Minor beneficial.
SX7	10.8	8.4	-2.5	High.	Moderate beneficial.
LE1	8.9	9.3	0.3	Very Low.	Negligible.
LE6	8.8	8.2	-0.5	Very Low.	Negligible.
LE5	8.5	8.2	-0.3	Very Low.	Negligible.
BK1	9.9	10.2	0.3	Very Low.	Negligible.
SX15	11.3	8.3	-3.0	High.	Moderate beneficial.

1.3.12 Predicted total NO_2 concentrations for 2028 baseline and 2028 busiest day peak construction year scenarios at representative sensitive receptors are presented in **Table 1.40** of **Annex 12B.2**. **Table 1.18** below presents receptor locations where a 'Low' or higher magnitude of change is predicted for NO_2 concentrations for modelled year 2028 on a 'busiest' day. All other receptors not presented have an imperceptible change. In all instances total NO_2 concentrations are considerably below the air quality objective value.

1.3.13 Predicted total PM_{10} concentrations for 2028 baseline and 2028 busiest day peak construction year scenarios at representative sensitive receptors are presented in **Table 1.41** of **Annex 12B.2**. **Table 1.19** below presents receptor locations where a 'Low' or higher magnitude of change is predicted for PM_{10} concentrations for modelled year 2028 on a busiest day. All other receptors not presented have an imperceptible change. In all instances total PM_{10} concentrations are considerably below the air quality objective value.

1.3.14 Predicted total $PM_{2.5}$ concentrations for 2028 baseline and 2028 busiest day peak construction year scenarios at representative sensitive receptors are presented in **Table 1.42** of **Annex 12B.2**. **Table 1.20** below presents receptor locations where a 'Low' or higher magnitude of change is predicted for $PM_{2.5}$ concentrations for modelled year 2028 on a busiest day. All other receptors not presented have an imperceptible change. In all instances total $PM_{2.5}$ concentrations are considerably below the air quality objective value.

1.3.15 The predicted change in impacts from transport emissions compared to the 2028 reference case scenario would have a 'Negligible' effect at most receptors. A limited number of receptors would experience beneficial effects on local air quality that would be 'Minor' or 'Moderate'. The overall effects resulting from transport emissions associated with the construction of the main development site and associated developments are predicted to be **not significant** for all sensitive receptors within the study area.

Table 1.18: Modelled receptor locations with a magnitude of change other than imperceptible for NO_2 2028 busiest day scenario

Receptor	2028RC Total Baseline Concentration (µg/m^3)	2028BD Total Early Construction Year Construction Concentration (µg/m^3)	Magnitude of Change (µg/m^3)	Magnitude of Change Descriptor	Effect Descriptor at Individial Receptor
YX1	11.4	12.3	0.9	Low.	Negligible.
YX7	6.7	6.2	-0.5	Very Low.	Negligible.
LE3	7.4	8.2	0.7	Very Low.	Negligible.
LE9	13.8	15.5	1.8	Low.	Negligible.
LE10	11.4	12.4	1.0	Low.	Negligible.
LE11	8.2	8.7	0.5	Very Low.	Negligible.
WM2	15.3	15.9	0.6	Very Low.	Negligible.
WB12	10.3	11.1	0.8	Low.	Negligible.
WB6	10.9	11.4	0.5	Very Low.	Negligible.
WB5	15.4	15.7	0.4	Very Low.	Negligible.
SX5	11.0	6.6	-4.5	High.	Moderate beneficial.
SX6	14.1	6.7	-7.4	High.	Moderate beneficial.
SX7	15.1	6.8	-8.3	High.	Moderate beneficial.
SW3	10.3	10.9	0.6	Very Low.	Negligible.
SW2	9.0	9.4	0.4	Very Low.	Negligible
LE1	10.4	12.3	1.9	Low.	Negligible.
LE8	8.7	9.1	0.4	Very Low.	Negligible
LE6	8.2	6.3	-1.9	Low.	Negligible.
LE5	7.3	6.2	-1.0	Low.	Negligible.
SX8	6.3	7.0	0.8	Low.	Negligible.

Receptor	2028RC Total Baseline Concentration (µg/m³)	2028BD Total Early Construction Year Construction Concentration (µg/m³)	Magnitude of Change (µg/m³)	Magnitude of Change Descriptor	Effect Descriptor at Individial Receptor
SX9	6.3	7.0	0.6	Very Low.	Negligible.
BK1	14.6	15.4	0.8	Low.	Negligible.
WM10	11.4	11.7	0.4	Very Low.	Negligible.
LW8	22.2	21.5	-0.7	Very Low.	Negligible.
LE2	6.8	7.2	0.4	Very Low.	Negligible.
SX15	16.9	6.5	-10.4	High.	Moderate beneficial.
YX10	9.2	9.7	0.5	Very Low.	Negligible.
LE36	7.4	8.4	1.0	Low.	Negligible.
LE37	7.5	9.1	1.6	Low.	Negligible.
LE38	7.6	9.3	1.7	Low.	Negligible.
YX13	9.4	9.9	0.5	Very Low.	Negligible.
YX16	8.3	8.7	0.4	Very Low.	Negligible.
YX20	8.8	9.3	0.5	Very Low.	Negligible.
BK6	9.9	9.5	-0.4	Very Low.	Negligible.
LE57	7.3	8.2	0.9	Low.	Negligible.

Table 1.19: Modelled receptor locations with a magnitude of change other than imperceptible for PM_{10} 2028 busiest day scenario

Receptor	2028RC Total Baseline Concentration (µg/m³)	2028BD Total Early Construction Year Construction Concentration (µg/m³)	Magnitude of Change (µg/m³)	Magnitude of Change Descriptor	Effect Descriptor at Individial Receptor
SX5	14.6	13.9	-0.7	Very Low.	Negligible.
SX6	14.9	13.6	-1.3	Low.	Negligible.
SX7	15.1	13.6	-1.4	Low.	Negligible.
SX15	15.6	13.9	-1.7	Low.	Negligible.

Table 1.20: Modelled receptor locations with a magnitude of change other than imperceptible for $PM_{2.5}$ 2028 busiest day scenario

Receptor	2028RC Total Baseline Concentration (µg/m³)	2028BD Total Early Construction Year Construction Concentration (µg/m³)	Magnitude of Change (µg/m³)	Magnitude of Change Descriptor	Effect Descriptor at Individial Receptor
LE10	9.4	9.7	0.3	Very Low.	Negligible.
WM2	11.2	11.6	0.5	Low.	Negligible.
SX5	9.6	8.4	-1.2	Low.	Negligible.
SX6	10.5	8.3	-2.2	Medium.	Minor beneficial.
SX7	10.8	8.4	-2.5	High.	Moderate beneficial.
LE1	8.9	9.3	0.3	Very Low.	Negligible.
LE6	8.8	8.2	-0.5	Low.	Negligible.
LE5	8.5	8.2	-0.3	Very Low.	Negligible.
BK1	9.9	10.2	0.3	Very Low.	Negligible.
SX15	11.3	8.3	-3.0	High.	Moderate beneficial.

1.3.16 Predicted total NO_2 concentrations for 2034 baseline and 2034 operational year scenarios at representative sensitive receptors are presented in **Table 1.43** of **Annex 12B.2**. **Table 1.21** below presents receptor locations where a 'Low' or higher magnitude of change is predicted for NO_2 concentrations for modelled year 2034. All other receptors not presented have an imperceptible change. In all instances total NO_2 concentrations are considerably below the air quality objective value.

1.3.17 Predicted total PM_{10} concentrations for 2034 baseline and 2034 operational year scenarios at representative sensitive receptors are presented in **Table 1.44** of **Annex 12B.2**. **Table 1.22** below presents receptor locations where a 'Low' or higher magnitude of change is predicted for PM_{10} concentrations for modelled year 2034. All other receptors not presented have an imperceptible change. In all instances total PM_{10} concentrations are considerably below the air quality objective value.

1.3.18 Predicted total PM_{10} concentrations for 2034 baseline and 2034 operational year scenarios at representative sensitive receptors are presented in **Table 1.45** of **Annex 12B.2**. **Table 1.23** below presents receptor locations where a 'Low' or higher magnitude of change is predicted for $PM_{2.5}$ concentrations for modelled year 2034. All other receptors not presented have an imperceptible change. In all instances total $PM_{2.5}$ concentrations are considerably below the air quality objective value.

1.3.19 The predicted change in impacts from transport emissions compared to the 2034 reference case scenario would have a 'Negligible' effect at most receptors. A limited number of receptors would experience beneficial effects on local air quality that would be 'Minor' or 'Moderate'. The overall effects resulting from transport emissions associated with the construction of the main development site and associated developments are predicted to be **not significant** for all sensitive receptors within the study area.

Table 1.21: Modelled receptor locations with a magnitude of change other than imperceptible for NO_2 2034 scenario

Receptor	2034RC Total Baseline Concentration (µg/m³)	2034AD Operational Year Construction Concentration (µg/m³)	Magnitude of Change (µg/m³)	Magnitude of Change Descriptor	Effect Descriptor at Individial Receptor
YX1	10.8	11.3	0.5	Very Low.	Negligible.
YX7	6.5	6.0	-0.5	Very Low.	Negligible.
WB12	10.2	10.6	0.4	Very Low.	Negligible.
SX5	10.5	6.4	-4.1	High.	Moderate beneficial.
SX6	13.4	6.5	-6.9	High.	Moderate beneficial.
SX7	14.3	6.8	-7.5	High.	Moderate beneficial.
LE6	7.8	6.0	-1.8	Low.	Negligible.
LE5	7.0	6.0	-1.0	Low.	Negligible.
SX8	6.1	6.8	0.7	Very Low.	Negligible.
SX9	6.2	6.7	0.6	Very Low.	Negligible.
SX15	15.9	6.3	-9.6	High.	Moderate beneficial.
BK6	9.5	9.2	-0.4	Very Low.	Negligible.
LE57	7.1	7.8	0.7	Very Low.	Negligible.

Table 1.22: Modelled receptor locations with a magnitude of change other than imperceptible for PM_{10} 2034 scenario

Receptor	2034RC Total Baseline Concentration (µg/m³)	2034AD Operational Year Construction Concentration (µg/m³)	Magnitude of Change (µg/m³)	Magnitude of Change Descriptor	Effect Descriptor at Individial Receptor
SX5	14.7	13.9	-0.8	Low.	Negligible.
SX6	15.0	13.6	-1.3	Low.	Negligible.
SX7	15.2	13.7	-1.5	Low.	Negligible.
SX15	15.7	13.9	-1.8	Low.	Negligible.

Table 1.23: Modelled receptor locations with a magnitude of change other than imperceptible for $PM_{2.5}$ 2034 scenario

Receptor	2034RC Total Baseline Concentration ($\mu g/m^3$)	2034AD Operational Year Construction Concentration ($\mu g/m^3$)	Magnitude of Change ($\mu g/m^3$)	Magnitude of Change Descriptor	Effect Descriptor at Individial Receptor
SX5	9.7	8.4	-1.3	Low.	Negligible.
SX6	10.7	8.3	-2.3	Medium.	Minor beneficial.
SX7	11.0	8.4	-2.6	High.	Moderate beneficial.
LE6	8.8	8.2	-0.6	Low.	Negligible.
LE5	8.5	8.2	-0.3	Very Low.	Negligible.
SX15	11.5	8.3	-3.1	High.	Moderate beneficial.

b) Ecological receptors

1.3.20 **Table 1.24** shows total maximum NO_x concentrations predicted at any of the modelled receptor locations within each ecological site, as presented in **Table 1.8**. Total NO_x concentrations are predicted by summing road and rail (where applicable) NO_x, appropriately factored as described in **section 1.2 d)** of this appendix, with background NO_x concentrations as detailed in **Table 1.11**. **Table 1.24** also presents these NO_x concentrations as a portion of the NO_x critical level objective value (30 µg/m^3). Dispersion modelling predicts that concentrations of NO_x are greatest in the 2018 reference case scenario. It is predicted that under peak construction and operation of the proposed development, NO_x concentrations will be lower than currently experienced.

Table 1.24: Maximum modelled total NO_x at each ecological site for each modelled scenario

Site	Total NO_x (µg/m^3) and % of Critical Level in Parenthesis							
	2018 RC	2023 RC	2023 AD	2028 RC	2028 AD	2028 BD	2034 RC	2034 AD
Alde-Ore and Butley Estuaries	10.2 (33.9%)	10 (33.3%)	10 (33.3%)	9.9 (32.9%)	9.9 (33%)	9.9 (33%)	9.8 (32.8%)	9.8 (32.8%)
Minsmere - Walberswick Heaths and Marshes	25.4 (84.6%)	20.4 (67.9%)	20.8 (69.2%)	17.9 (59.8%)	18.8 (62.6%)	18.8 (62.6%)	17.5 (58.4%)	17.5 (58.4%)
Orfordness to Shingle Street	0.3 (1.2%)	0.2 (0.8%)	0.2 (0.8%)	0.2 (0.5%)	0.2 (0.6%)	0.2 (0.6%)	0.2 (0.5%)	0.2 (0.5%)
Sandlings	22.9 (76.2%)	20.1 (66.8%)	20.6 (68.7%)	17.2 (57.5%)	18.1 (60.2%)	18.1 (60.2%)	17.2 (57.3%)	17.3 (57.7%)
Sizewell Marshes	14 (46.6%)	13.7 (45.7%)	14.5 (48.3%)	12.5 (41.7%)	12.7 (42.2%)	12.7 (42.2%)	12.3 (41%)	12.3 (41%)
Leiston Aldeburgh	10.4 (34.6%)	10.2 (34.2%)	10.3 (34.2%)	10.1 (33.8%)	10.2 (34%)	10.2 (34%)	10.1 (33.7%)	10.1 (33.7%)
Leiston Common	10.6 (35.2%)	10.4 (34.6%)	10.4 (34.8%)	10.2 (34.1%)	10.4 (34.6%)	10.4 (34.6%)	10.2 (34.1%)	10.2 (34.1%)
Aldringham to Aldeburgh Disused Railway Line	10.5 (35.1%)	10.4 (34.6%)	10.4 (34.7%)	10.2 (34.1%)	10.5 (35%)	10.5 (35%)	10.2 (34%)	10.2 (34%)
Dower House	10.4 (34.5%)	10.2 (34.2%)	10.3 (34.2%)	10.1 (33.8%)	10.2 (34%)	10.2 (34%)	10.1 (33.7%)	10.1 (33.7%)
Suffolk Shingle Beaches	10.4 (34.7%)	10.3 (34.3%)	10.3 (34.4%)	10.2 (33.9%)	10.2 (34.1%)	10.2 (34.1%)	10.2 (33.9%)	10.2 (33.9%)
Reckham Pits Wood	10.5 (35%)	10.4 (34.5%)	10.4 (34.7%)	10.2 (34.1%)	10.3 (34.4%)	10.3 (34.4%)	10.2 (34%)	10.2 (34%)
Sizewell Levels and Associated Areas	10.4 (34.6%)	10.3 (34.2%)	10.3 (34.2%)	10.1 (33.8%)	10.2 (34%)	10.2 (34%)	10.1 (33.8%)	10.1 (33.8%)
Minsmere South Levels	10.4 (34.6%)	10.2 (34.2%)	10.3 (34.2%)	10.1 (33.8%)	10.2 (34%)	10.2 (34%)	10.1 (33.7%)	10.1 (33.8%)
Blaxhall Heath	23.6 (78.7%)	20.6 (68.8%)	21.2 (70.7%)	17.7 (58.9%)	18.5 (61.7%)	18.5 (61.8%)	17.6 (58.6%)	17.7 (59.1%)
Deben Estuary	15.2 (50.6%)	14.8 (49.3%)	14.8 (49.4%)	14.2 (47.3%)	14.3 (47.6%)	14.3 (47.7%)	14.2 (47.3%)	14.2 (47.3%)
Sinks Valley, Kesgrave	19.6 (65.2%)	18.1 (60.3%)	18 (60.1%)	16.8 (56%)	16.8 (56.1%)	16.8 (56.1%)	16.6 (55.2%)	16.6 (55.2%)
Spring Wood, Belstead	101.5 (338.5%)	73.6 (245.3%)	73.4 (244.7%)	56.9 (189.6%)	57 (190.1%)	57 (190%)	54.9 (183.1%)	54.9 (183%)
Stour and Orwell Estuary	178.1 (593.6%)	117.8 (392.8%)	117.1 (390.2%)	86.7 (288.9%)	87.3 (291%)	87.2 (290.8%)	82.1 (273.7%)	82 (273.3%)
Pipers Vale	70.8 (235.9%)	51.5 (171.6%)	51.2 (170.7%)	41.5 (138.2%)	41.7 (138.9%)	41.7 (138.8%)	40 (133.3%)	40 (133.2%)

Site	Total NO_x (µg/m^3) and % of Critical Level in Parenthesis							
	2018 RC	2023 RC	2023 AD	2028 RC	2028 AD	2028 BD	2034 RC	2034 AD
Bridge Wood	37.8 (125.9%)	31.1 (103.8%)	31 (103.4%)	27.6 (92.1%)	27.7 (92.3%)	27.7 (92.3%)	27.1 (90.4%)	27.1 (90.3%)
The Broads	19.3 (64.4%)	19 (63.2%)	19 (63.2%)	18.6 (62.1%)	18.6 (62.1%)	18.6 (62.1%)	18.6 (61.9%)	18.6 (61.9%)
Yoxford 197	21.3 (71.1%)	18.3 (60.9%)	20.7 (68.9%)	15.7 (52.3%)	13.8 (45.9%)	13.8 (46.1%)	15.3 (51%)	12.9 (43%)
Foxburrow Wood	11.5 (38.2%)	11.1 (37%)	11.1 (37.1%)	10.8 (36%)	14.6 (48.7%)	14.6 (48.7%)	10.8 (35.9%)	14.2 (47.3%)

1.3.21 **Table 1.25** shows total maximum nutrient nitrogen deposition rates predicted at any of the modelled receptor location within each ecological site. The table also presents these nutrient nitrogen deposition rates as a proportion of the site relevant critical load for designated site with critical loads provided by APIS. Dispersion modelling predicts that nutrient nitrogen deposition rates are highest in the 2018 reference case scenario. It is predicted that under peak construction and operation of the proposed development, nutrient nitrogen rates will be lower than currently experienced.

1.3.22 **Table 1.25** presents very small changes in deposition rates across all scenarios. This is a result of a very small contribution of nutrient nitrogen deposition from modelled road and rail sources, background sources therefore form the only considerable contribution to total nutrient nitrogen.

Table 1.25: Maximum modelled total nutrient nitrogen deposition at each ecological site for each modelled scenario

Site	Total Nutrient Nitrogen Deposition (kg/Ha/yr) and % of Critical Load in Parenthesis							
	2018 RC	2023 RC	2023 AD	2028 RC	2028 AD	2028 BD	2034 RC	2034 AD
Alde-Ore and Butley Estuaries	14.9 (74.6%)	14.9 (74.5%)	14.9 (74.5%)	14.9 (74.4%)	14.9 (74.4%)	14.9 (74.4%)	14.9 (74.4%)	14.9 (74.4%)
Minsmere - Walberswick Heaths and Marshes	19.9 (249%)	19.9 (248.4%)	19.9 (248.6%)	19.8 (247.9%)	19.8 (248%)	19.8 (248%)	19.8 (247.8%)	19.8 (247.8%)
Orfordness to Shingle Street	0.1 (0.6%)	0 (0.4%)	0 (0.4%)	0 (0.3%)	0 (0.3%)	0 (0.3%)	0 (0.3%)	0 (0.3%)
Sandlings	19.7 (394.8%)	18.9 (378.7%)	19.1 (381.8%)	18.1 (362.5%)	18.4 (367.2%)	18.4 (367.2%)	18.1 (362.1%)	18.1 (363%)
Sizewell Marshes	12.6 (84.2%)	12.6 (83.9%)	12.7 (84.7%)	12.4 (82.8%)	12.4 (82.9%)	12.4 (82.9%)	12.4 (82.6%)	12.4 (82.6%)
Leiston Aldeburgh	12.1 (151.3%)	12.1 (151.1%)	12.1 (151.2%)	12.1 (150.9%)	12.1 (151%)	12.1 (151%)	12.1 (150.9%)	12.1 (150.9%)
Leiston Common	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
Aldringham to Aldeburgh Disused Railway Line	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
Dower House	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
Suffolk Shingle Beaches	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
Reckham Pits Wood	12.2	12.2	12.2	12.1	12.1	12.1	12.1	12.1
Sizewell Levels and Associated Areas	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
Minsmere South Levels	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
Blaxhall Heath	18 (225.3%)	17.6 (220%)	17.7 (221.1%)	17.2 (214.7%)	17.3 (216.2%)	17.3 (216.2%)	17.2 (214.5%)	17.2 (214.8%)

Site	Total Nutrient Nitrogen Deposition (kg/Ha/yr) and % of Critical Load in Parenthesis							
	2018 RC	2023 RC	2023 AD	2028 RC	2028 AD	2028 BD	2034 RC	2034 AD
Deben Estuary	17.8 (222.5%)	17.7 (221.8%)	17.7 (221.9%)	17.7 (220.8%)	17.7 (220.9%)	17.7 (220.9%)	17.7 (220.7%)	17.7 (220.7%)
Sinks Valley, Kesgrave	18.8 (235.3%)	18.6 (232.7%)	18.6 (232.5%)	18.4 (230.3%)	18.4 (230.4%)	18.4 (230.4%)	18.4 (229.9%)	18.4 (229.9%)
Spring Wood, Belstead	40.7	32.7	32.6	27.9	27.9	27.9	27.3	27.3
Stour and Orwell Estuary	38.5 (192.7%)	29.9 (149.4%)	29.8 (148.8%)	25.4 (126.9%)	25.5 (127.4%)	25.5 (127.3%)	24.7 (123.6%)	24.7 (123.5%)
Pipers Vale	23.1	20.3	20.3	18.9	18.9	18.9	18.7	18.7
Bridge Wood	20.9	19	18.9	17.9	18	18	17.8	17.8
The Broads	15.9 (158.7%)	15.8 (158.2%)	15.8 (158.2%)	15.8 (157.7%)	15.8 (157.8%)	15.8 (157.8%)	15.8 (157.7%)	15.8 (157.7%)
Yoxford 197	21.2	20.8	21.1	20.4	20	20	20.4	19.9
Foxburrow Wood	16.5	16.4	16.4	16.3	17.4	17.4	16.3	17.2

1.3.23 **Table 1.26** shows total maximum acid deposition rates predicted at any of the modelled receptor locations within each ecological site. The table also presents these acid deposition rates as a proportion of the site relevant critical load for designated site with critical loads provided by APIS. Dispersion modelling predicts that nutrient nitrogen deposition rates are highest in the 2018 reference case scenario. It is predicted that under peak construction and operation of the proposed development, acid deposition rates will be lower than currently experienced.

Table 1.26: Maximum modelled total acid deposition at each ecological site for each modelled scenario

Site	Total Acid Deposition (keq/ha/yr) and % of Critical Load in Parenthesis							
	2018 RC	2023 RC	2023 AD	2028 RC	2028 AD	2028 BD	2034 RC	2034 AD
Alde-Ore and Butley Estuaries	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Minsmere - Walberswick Heaths and Marshes	1.5 (266.4%)	1.5 (265.7%)	1.5 (266%)	1.5 (265.2%)	1.5 (265.3%)	1.5 (265.3%)	1.5 (265.1%)	1.5 (265.1%)
Orfordness to Shingle Street	0.7 (16.2%)	0.7 (16.1%)	0.7 (16.1%)	0.7 (16.1%)	0.7 (16.1%)	0.7 (16.1%)	0.7 (16.1%)	0.7 (16.1%)
Sandlings	1.5 (123.2%)	1.4 (118.4%)	1.5 (119.4%)	1.4 (113.7%)	1.4 (115.1%)	1.4 (115.1%)	1.4 (113.6%)	1.4 (113.8%)
Sizewell Marshes	1 (137.7%)	1 (137.3%)	1 (138.5%)	1 (135.6%)	1 (135.8%)	1 (135.8%)	1 (135.3%)	1 (135.3%)
Leiston Aldeburgh	0.9 (134.4%)	0.9 (134.2%)	0.9 (134.2%)	0.9 (134.1%)	0.9 (134.1%)	0.9 (134.1%)	0.9 (134%)	0.9 (134%)
Leiston Common	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Aldringham to Aldeburgh Disused Railway Line	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Dower House	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Suffolk Shingle Beaches	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Reckham Pits Wood	1	0.9	1	0.9	0.9	0.9	0.9	0.9
Sizewell Levels and Associated Areas	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Minsmere South Levels	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Blaxhall Heath	1.4 (196%)	1.3 (191.6%)	1.4 (192.5%)	1.3 (187.3%)	1.3 (188.5%)	1.3 (188.6%)	1.3 (187.2%)	1.3 (187.4%)
Deben Estuary	1.4 (195.1%)	1.4 (194.5%)	1.4 (194.6%)	1.4 (193.7%)	1.4 (193.8%)	1.4 (193.8%)	1.4 (193.7%)	1.4 (193.7%)

Site	Total Acid Deposition (keq/ha/yr) and % of Critical Load in Parenthesis							
	2018 RC	2023 RC	2023 AD	2028 RC	2028 AD	2028 BD	2034 RC	2034 AD
Sinks Valley, Kesgrave	1.5 (204%)	1.4 (201.9%)	1.4 (201.8%)	1.4 (200%)	1.4 (200.1%)	1.4 (200.1%)	1.4 (199.7%)	1.4 (199.7%)
Spring Wood, Belstead	3	2.4	2.4	2.1	2.1	2.1	2.1	2.1
Stour and Orwell Estuary	2.9 (411.5%)	2.3 (323.4%)	2.3 (322.3%)	2 (277.8%)	2 (278.7%)	2 (278.6%)	1.9 (271.1%)	1.9 (271%)
Pipers Vale	1.8	1.6	1.6	1.5	1.5	1.5	1.5	1.5
Bridge Wood	1.6	1.5	1.5	1.4	1.4	1.4	1.4	1.4
The Broads	1.2 (250.3%)	1.2 (249.5%)	1.2 (249.5%)	1.2 (248.8%)	1.2 (248.9%)	1.2 (248.9%)	1.2 (248.7%)	1.2 (248.7%)
Yoxford 197	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5
Foxburrow Wood	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3

1.3.24 **Table 1.27** shows maximum proposed development road contributions to NO_x concentrations, nutrient nitrogen deposition and acid deposition predicted at any of the modelled receptor locations within each ecological site for 2023. The table also presents the results as a percentage of the apprioate critical level and critical load (for designated site with critical loads provided by APIS) in parentheses.

1.3.25 **Table 1.27** also shows that the majority of ecological sites will experience a maximum contribution of pollutants from proposed development transport of less than 1%. Locations where this value is exceeded are as a result of the site being immediately adjacent to or below (as is the case for Stour and Orwell Estuary) modelled roads. In these cases it is important to acknowledge that this value is only representative of the portion of the site immediately adjacent to the road. It is also important to acknowledge that predicted pollutant concentrations with the proposed development in 2023 are lower than those predicted for the ecological sites as they currently exist.

1.3.26 **Table 1.28** shows maximum proposed development road and rail contributions to NO_x concentrations, nutrient nitrogen deposition and acid deposition predicted at any of the modelled receptor location within each ecological site for a 2028 average day. The table also presents these percentage of critical level / critical load (for designated site with critical loads provided by APIS) appropriately in parenthesis.

1.3.27 As is predicted for 2023, **Table 1.28** shows that the majority of ecological sites will experience a maximum contribution of pollutants from proposed development road and rail transport of less than 1%.

1.3.28 **Table 1.29** shows maximum proposed development road and rail contributions to NO_x concentrations, nutrient nitrogen deposition and acid deposition predicted at any of the modelled receptor location within each ecological site for a 2028 busiest day. The table also presents these percentage of critical level / critical load (for designated site with critical loads provided by APIS) appropriately in parenthesis.

1.3.29 As is predicted for 2023 and 2028 average day, **Table 1.29** also shows that the majority of ecological sites will experience a maximum contribution of pollutants from proposed development road and rail transport of less than 1%.

1.3.30 **Table 1.30** shows maximum proposed development road contributions to NO_x concentrations, nutrient nitrogen deposition and acid deposition predicted at any of the modelled receptor location within each ecological site for 2034. The table also presents these percentage of critical level / critical load (for designated site with critical loads provided by APIS) appropriately in parenthesis.

1.3.31 As is predicted for 2023 and 2028, **Table 1.30** also shows that the majority of ecological sites will experience a maximum contribution of pollutants from proposed development transport of less than 1%.

Table 1.27: Maximum modelled road contribution of pollutants at each ecological site, 2023 typical day scenario relative to 2023 reference case

Site	PC NO_x ($\mu g/m^3$) and % Critical Load in Parenthesis	PC Nutrient Nitrogen Deposition (kg/ha/yr) % Critical Load in Parenthesis	PC Acid deposition (keq/ha/yr) % Critical Load in Parenthesis
Alde-Ore and Butley Estuaries	0.0 (0.0%)	0.001 (0%)	0.000 (0.0%)
Minsmere - Walberswick Heaths and Marshes	1.1 (3.7%)	0.161 (2%)	0.012 (2%)
Orfordness to Shingle Street	0.0 (0.0%)	0.001 (0%)	0.000 (0.0%)
Sandlings	0.6 (1.8%)	0.159 (3.2%)	0.011 (0.9%)
Sizewell Marshes	1 (3.3%)	0.144 (1%)	0.01 (1.4%)
Leiston Aldeburgh	0.0 (0.0%)	0.002 (0%)	0.000
Leiston Common	0.0 (0.0%)	0.006	0.000
Aldringham to Aldeburgh Disused Railway Line	0.0 (0.0%)	0.004	0.000
Dower House	0.0 (0.0%)	0.002	0.000
Suffolk Shingle Beaches	0.0 (0.0%)	0.004	0.000
Reckham Pits Wood	0.0 (0.0%)	0.01	0.001
Sizewell Levels and Associated Areas	0.0 (0.0%)	0.003	0.000
Minsmere South Levels	0.0 (0.0%)	0.003	0.000
Blaxhall Heath	0.6 (1.9%)	0.084 (1.1%)	0.006 (0.9%)
Deben Estuary	0.0 (0.0%)	0.003 (0%)	0.000 (0.0%)
Sinks Valley, Kesgrave	0.0 (0.0%)	-0.002 (0%)	0.000 (0.0%)
Spring Wood, Belstead	0.0 (0.0%)	-0.006	0.000
Stour and Orwell Estuary	0.0 (0.0%)	-0.006 (0%)	0.000 (0.0%)
Pipers Vale	0.0 (0.0%)	-0.005	0.000
Bridge Wood	0.0 (0.0%)	-0.006	0.000

Site	PC NO_x (µg/m^3) and % Critical Load in Parenthesis	PC Nutrient Nitrogen Deposition (kg/ha/yr) % Critical Load in Parenthesis	PC Acid deposition (keq/ha/yr) % Critical Load in Parenthesis
The Broads	0.0 (0.0%)	0.002 (0%)	0.000 (0.0%)
Yoxford 197	2.4 (8%)	0.345	0.025
Foxburrow Wood	0.0 (0.0%)	0.011	0.001

Table 1.28: Maximum modelled rail and road contribution of pollutants, 2028 average day scenario relative to 2028 reference case

Site	PC Total NO_x (µg/m^3) and % Critical Load in Parenthesis	PC Nutrient Nitrogen Deposition (kg/ha/yr) % Critical Load in Parenthesis	PC Acid Deposition (keq/ha/yr) % Critical Load in Parenthesis
Alde-Ore and Butley Estuaries	0.0 (0.0%)	0.004 (0%)	0.000 (0.0%)
Minsmere - Walberswick Heaths and Marshes	0.9 (2.9%)	0.124 (1.6%)	0.009 (1.6%)
Orfordness to Shingle Street	0.0 (0.0%)	0.002 (0%)	0.000 (0.0%)
Sandlings	0.8 (2.7%)	0.234 (4.7%)	0.017 (1.4%)
Sizewell Marshes	0.4 (1.5%)	0.064 (0.4%)	0.005 (0.6%)
Leiston Aldeburgh	0.1 (0.2%)	0.008 (0.1%)	0.001 (0.1%)
Leiston Common	0.1 (0.4%)	0.019	0.001
Aldringham to Aldeburgh Disused Railway Line	0.3 (1%)	0.041	0.003
Dower House	0.1 (0.2%)	0.008	0.001
Suffolk Shingle Beaches	0.1 (0.2%)	0.01	0.001
Reckham Pits Wood	0.1 (0.4%)	0.034	0.002
Sizewell Levels and Associated Areas	0.1 (0.2%)	0.008	0.001
Minsmere South Levels	0.1 (0.2%)	0.008	0.001
Blaxhall Heath	0.9 (2.9%)	0.124 (1.6%)	0.009 (1.3%)
Deben Estuary	0.1 (0.3%)	0.013 (0.2%)	0.001 (0.1%)

Site	PC Total NO_x ($\mu g/m^3$) and % Critical Load in Parenthesis	PC Nutrient Nitrogen Deposition (kg/ha/yr) % Critical Load in Parenthesis	PC Acid Deposition (keq/ha/yr) % Critical Load in Parenthesis
Sinks Valley, Kesgrave	0.0 (0.0%)	0.005 (0.1%)	0.000 (0.0%)
Spring Wood, Belstead	0.2 (0.5%)	0.045	0.003
Stour and Orwell Estuary	0.6 (2%)	0.088 (0.4%)	0.006 (0.9%)
Pipers Vale	0.2 (0.6%)	0.028	0.002
Bridge Wood	0.1 (0.2%)	0.019	0.001
The Broads	0.0 (0.0%)	0.002 (0%)	0.000 (0.0%)
Yoxford 197	0.0 (0.0%)	0.005	0.000
Foxburrow Wood	3.8 (12.6%)	1.092	0.078

Table 1.29: Maximum modelled rail and road contribution of pollutants, 2028 busiest day scenario relative to 2028 reference case

Site	PC Total NO_x ($\mu g/m^3$) and % Critical Load in Parenthesis	PC Nutrient Nitrogen Deposition (kg/ha/yr) % Critical Load in Parenthesis	PC Acid deposition (keq/ha/yr) % Critical Load in Parenthesis
Alde-Ore and Butley Estuaries	0.0 (0.0%)	0.046 (0.2%)	0.000 (0.0%)
Minsmere - Walberswick Heaths and Marshes	0.9 (3%)	0.945 (11.8%)	0.009 (1.6%)
Orfordness to Shingle Street	0.0 (0.0%)	0.026 (0.3%)	0.000 (0.0%)
Sandlings	0.8 (2.7%)	2.262 (45.2%)	0.017 (1.4%)
Sizewell Marshes	0.4 (1.4%)	0.398 (2.7%)	0.004 (0.6%)
Leiston Aldeburgh	0.1 (0.2%)	0.043 (0.5%)	0.001 (0.1%)
Leiston Common	0.1 (0.4%)	0.067	0.001
Aldringham to Aldeburgh Disused Railway Line	0.3 (1%)	0.088	0.003
Dower House	0.1 (0.2%)	0.042	0.001

Site	PC Total NO_x (µg/m³) and % Critical Load in Parenthesis	PC Nutrient Nitrogen Deposition (kg/ha/yr) % Critical Load in Parenthesis	PC Acid deposition (keq/ha/yr) % Critical Load in Parenthesis
Suffolk Shingle Beaches	0.1 (0.2%)	0.049	0.001
Reckham Pits Wood	0.1 (0.4%)	0.125	0.002
Sizewell Levels and Associated Areas	0.1 (0.2%)	0.043	0.001
Minsmere South Levels	0.1 (0.2%)	0.043	0.001
Blaxhall Heath	0.9 (2.9%)	1.198 (15%)	0.009 (1.3%)
Deben Estuary	0.1 (0.3%)	0.175 (2.2%)	0.001 (0.1%)
Sinks Valley, Kesgrave	0.0 (0.0%)	0.37 (4.6%)	0.000 (0.0%)
Spring Wood, Belstead	0.1 (0.4%)	10.119	0.003
Stour and Orwell Estuary	0.6 (1.8%)	9.642 (48.2%)	0.006 (0.8%)
Pipers Vale	0.2 (0.6%)	3.081	0.002
Bridge Wood	0.1 (0.2%)	2.145	0.001
The Broads	0.0 (0.0%)	0.097 (1%)	0.000 (0.0%)
Yoxford 197	0.0 (0.0%)	0.518	0.000
Foxburrow Wood	3.8 (12.7%)	1.27	0.078

Table 1.30: Maximum modelled road contribution of pollutants, 2034 typical day scenario relative to 2034 reference case

Site	PC Total NOx (µg/m³) and % Critical Load in Parenthesis	PC Nutrient Nitrogen Deposition (kg/ha/yr) % Critical Load in Parenthesis	PC Acid deposition (keq/ha/yr) % Critical Load in Parenthesis
Alde-Ore and Butley Estuaries	0.0 (0.0%)	0.000 (0.0%)	0.000 (0.0%)
Minsmere - Walberswick Heaths and Marshes	0.0 (0.0%)	0.001 (0%)	0.000 (0.0%)
Orfordness to Shingle Street	0.0 (0.0%)	0.000 (0.0%)	0.000 (0.0%)

Site	PC Total NOx (µg/m^3) and % Critical Load in Parenthesis	PC Nutrient Nitrogen Deposition (kg/ha/yr) % Critical Load in Parenthesis	PC Acid deposition (keq/ha/yr) % Critical Load in Parenthesis
Sandlings	0.1 (0.5%)	0.042 (0.8%)	0.003 (0.2%)
Sizewell Marshes	0.1 (0.4%)	0.017 (0.1%)	0.001 (0.2%)
Leiston Aldeburgh	0.0 (0.0%)	0.000 (0.0%)	0.000 (0.0%)
Leiston Common	0.0 (0.0%)	0.001	0.000 (0.0%)
Aldringham to Aldeburgh Disused Railway Line	0.0 (0.0%)	0.000	0.000
Dower House	0.0 (0.0%)	0.000	0.000
Suffolk Shingle Beaches	0.0 (0.0%)	0.000	0.000
Reckham Pits Wood	0.0 (0.0%)	0.001	0.000
Sizewell Levels and Associated Areas	0.0 (0.0%)	0.000	0.000
Minsmere South Levels	0.0 (0.0%)	0.000	0.000
Blaxhall Heath	0.2 (0.5%)	0.022 (0.3%)	0.002 (0.2%)
Deben Estuary	0.0 (0.0%)	0.000 (0.0%)	0.000 (0.0%)
Sinks Valley, Kesgrave	0.0 (0.0%)	0.000 (0.0%)	0.000 (0.0%)
Spring Wood, Belstead	0.0 (0.0%)	-0.001	0.000
Stour and Orwell Estuary	0.0 (0.0%)	-0.001 (0%)	0.000 (0.0%)
Pipers Vale	0.0 (0.0%)	-0.001	0.000
Bridge Wood	0.0 (0.0%)	-0.001	0.000
The Broads	0.0 (0.0%)	0.000 (0.0%)	0.000 (0.0%)
Yoxford 197	0.0 (0.0%)	-0.001	0.000
Foxburrow Wood	3.4 (11.4%)	0.985	0.07

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Annex 12B.1: Traffic Data

Table 1.1: Road types, widths, All traffic flows (AADT), HDV flows (AADT) and Speed (kph) for 2018 BC, 2023 RC, 2023 AD and 2028 RC scenarios

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
8	Rural (not London)	6	10392	617	94	10883	607	94	11826	1368	93
32	Rural (not London)	18	31719	3225	56	33594	3206	48	33594	3462	48
34	Rural (not London)	18	27936	3348	58	28918	3225	49	28835	3479	50
36	Rural (not London)	24	30846	3157	61	32197	3027	60	32260	3336	60
40	Rural (not London)	12	9591	409	63	10567	418	63	11115	857	63
64	Rural (not London)	18	21408	1191	57	18875	1026	62	18082	1438	62
116	Rural (not London)	10	10563	438	95	11406	447	95	11530	473	95
144	Rural (not London)	12	26864	1422	51	29693	1390	47	29967	1822	46
146	Rural (not London)	12	28437	1503	48	29907	1536	41	29847	1975	40
148	Rural (not London)	12	25303	1425	53	26031	1364	51	25578	1766	51
150	Rural (not London)	12	18483	1030	59	19131	991	58	19340	1408	58
154	Rural (not London)	9	17129	706	93	18623	717	92	18778	743	92
156	Rural (not London)	9	17311	539	93	18753	550	91	18874	576	91
280	Rural (not London)	6	4525	117	93	5456	124	92	5700	144	91
300	Rural (not London)	12	9689	236	63	8380	226	63	8591	322	63
324	Rural (not London)	12	20454	1237	57	21128	1207	57	20810	1646	57
328	Rural (not London)	18	26557	1433	92	29220	1399	90	28161	1799	79
340	Rural (not London)	12	29675	1474	47	30896	1503	40	30881	1934	39

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
354	Rural (not London)	12	15462	1912	107	19138	1938	104	19365	1923	104
390	Rural (not London)	6	14293	791	48	14939	800	48	15945	1288	48
416	Rural (not London)	6	8764	381	80	9575	390	80	-	-	-
546	Rural (not London)	6	10439	617	94	10933	607	94	11882	1368	93
552	Rural (not London)	6	11119	668	48	11595	674	48	12364	1163	48
592_1	Rural (not London)	12	9610	472	80	10150	465	80	-	-	-
598	Rural (not London)	6	26143	3535	69	29348	3552	64	29868	3527	63
606	Rural (not London)	12	11632	465	112	12772	477	112	13356	831	112
614	Rural (not London)	6	9725	436	90	10200	414	90	10458	845	88
636	Rural (not London)	12	24020	4066	98	27657	4637	91	27377	4918	91
676	Rural (not London)	6	8144	436	93	8813	444	92	8939	470	91
758	Rural (not London)	6	13375	113	47	13735	108	46	13841	214	46
898	Rural (not London)	6	5000	346	63	5205	353	63	5494	432	62
1320	Rural (not London)	18	21168	1199	57	19824	1156	62	19366	1576	62
1330	Rural (not London)	12	24912	1394	53	25779	1355	52	25312	1788	52
1332	Rural (not London)	12	21484	1069	57	21370	1083	56	21410	1522	56
1380	Rural (not London)	18	30636	3708	49	30347	3603	48	30584	3909	48
1406	Rural (not London)	6	2741	63	95	3074	62	95	3104	104	95
1482	Rural (not London)	6	5244	150	64	2701	139	64	2717	159	64
1502	Rural (not London)	12	19061	1028	59	20433	1015	57	20929	1440	56
1514	Rural (not London)	12	13362	962	83	13937	937	94	13388	1271	94
1560_1	Rural (not London)	6	1604	85	96	1954	88	96	-	-	-
1564	Rural (not London)	6	2292	45	95	2586	41	95	2539	59	95

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
1576	Rural (not London)	12	20000	2387	51	20762	2245	48	20669	2553	48
1582	Rural (not London)	7	8760	598	59	8933	575	59	8884	566	59
1586	Rural (not London)	7	9024	418	63	10693	445	53	10663	440	53
1590	Rural (not London)	6	2052	133	64	2604	128	64	2381	123	64
1606	Rural (not London)	7	7807	236	64	5891	226	64	5965	307	64
1652	Rural (not London)	18	13655	1061	95	14292	1021	95	13869	1444	83
1678	Rural (not London)	12	13597	962	50	16428	937	60	15537	1274	60
1696	Rural (not London)	6	3164	61	95	3610	60	94	3678	78	94
1704	Rural (not London)	6	1561	74	95	2128	78	95	2393	98	95
1706	Rural (not London)	6	4352	113	94	4736	112	93	4740	132	93
1716	Rural (not London)	6	4409	100	94	5291	99	92	5500	119	92
1862	Rural (not London)	6	10299	534	90	11170	540	88	11290	566	88
1864	Rural (not London)	7	8144	436	96	8813	444	95	8939	470	95
2322	Rural (not London)	12	25584	2942	98	27613	3004	95	27732	3264	94
2324	Rural (not London)	12	22328	3170	100	24877	3366	96	25265	3686	95
2366	Rural (not London)	12	9610	472	80	10150	465	80	-	-	-
2396	Rural (not London)	12	10299	428	63	11502	438	63	12049	877	62
2426	Rural (not London)	12	12259	639	112	12783	631	112	13249	982	112
2482	Rural (not London)	6	17777	516	59	18205	519	59	18442	623	58
2484	Rural (not London)	6	17777	516	59	18205	519	59	18442	623	58
2488	Rural (not London)	6	17777	516	59	18205	519	59	18442	623	58
2494	Rural (not London)	6	17777	516	92	18205	519	91	18442	623	91
2556	Rural (not London)	6	5371	262	63	5574	252	62	5874	329	62

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
3030	Rural (not London)	6	3381	154	48	3885	167	48	4788	667	48
3212	Rural (not London)	6	11	11	0	11	11	0	9	9	0
3452	Rural (not London)	6	6405	181	45	8568	183	41	9155	176	41
3456	Rural (not London)	6	4452	155	47	4659	152	46	4508	144	46
4188	Rural (not London)	5	5165	155	47	5658	152	46	5263	144	46
4548	Rural (not London)	6	1826	39	64	1997	39	64	2412	39	64
4978	Rural (not London)	6	10857	336	46	13227	335	43	13663	320	43
5966	Rural (not London)	6	8028	600	94	9444	603	94	9886	584	94
5980	Rural (not London)	5	1702	0	96	1903	0	96	2310	0	96
6120_1	Rural (not London)	6	2822	145	48	3267	156	48	4157	640	48
6122	Rural (not London)	6	1958	0	96	2185	0	96	2591	0	96
6240	Rural (not London)	6	8608	210	96	9343	212	96	9435	239	96
6246	Rural (not London)	6	3996	72	95	4554	72	95	4627	114	95
6296	Rural (not London)	6	9171	564	64	10685	577	64	10824	577	64
6968	Rural (not London)	8	12898	366	38	14925	374	34	14257	353	35
7036	Rural (not London)	6	3549	171	48	3886	173	48	4295	173	48
7770	Rural (not London)	6	10596	584	79	11945	589	79	12394	589	79
7794	Rural (not London)	6	9673	220	96	10753	224	64	11062	172	64
7812	Rural (not London)	4	9472	618	58	9864	595	57	9819	585	57
7998	Rural (not London)	6	12898	366	38	14925	374	34	14257	353	35
8096	Rural (not London)	10	10722	288	63	11765	281	61	11518	281	61
8242	Rural (not London)	9	4559	154	80	4890	153	80	5252	153	80
8282	Rural (not London)	4	11035	334	48	11131	335	48	11176	304	48

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
8284	Rural (not London)	11	11104	296	48	11780	308	48	11747	259	48
8826	Rural (not London)	6	12088	51	46	11599	48	46	11679	154	46
9230	Rural (not London)	6	11888	659	63	10809	668	63	10297	668	63
9248	Rural (not London)	8	10722	288	95	11765	281	93	11518	281	93
9250	Rural (not London)	10	10722	288	63	11765	281	61	11518	281	61
9254	Rural (not London)	10	10722	288	63	11765	281	61	11518	281	61
9374	Rural (not London)	6	13147	287	48	13807	300	48	13777	300	48
9378	Rural (not London)	6	13147	287	48	13807	300	48	13777	300	48
9394	Rural (not London)	6	13147	287	48	13807	300	48	13777	300	48
9480	Rural (not London)	8	6879	151	48	7483	153	48	7858	153	48
9490_1	Rural (not London)	6	3774	102	64	4376	99	64	-	-	-
9520	Rural (not London)	6	4237	291	64	3780	292	64	3893	344	64
9862	Rural (not London)	5	5478	138	95	8467	142	95	8326	161	95
9864	Rural (not London)	6	5244	150	64	3443	139	64	3470	162	64
10360	Rural (not London)	6	4309	82	96	6461	92	96	6963	455	96
10408	Rural (not London)	6	3512	20	32	4437	27	32	6200	25	31
10410	Rural (not London)	6	2327	0	32	2423	0	32	2456	0	32
10442	Rural (not London)	6	2418	73	96	3018	80	96	-	-	-
10452	Rural (not London)	6	2454	73	96	3068	82	96	-	-	-
10456	Rural (not London)	6	4193	0	95	6639	10	93	7304	533	91
14551_1	Rural (not London)	12	22328	3170	100	24877	3366	96	25265	3686	95
21334_1	Rural (not London)	12	25584	2942	98	27613	3004	95	27732	3264	94
24151	Rural (not London)	12	25584	2942	98	27613	3004	95	27732	3264	94

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
25681	Rural (not London)	12	22328	3170	100	24877	3366	96	25265	3686	95
25856	Rural (not London)	12	25584	2942	98	27613	3004	95	27732	3264	94
32192	Rural (not London)	6	11733	1584	95	15228	1624	93	15570	1617	93
37252	Rural (not London)	12	13114	1628	96	13758	1630	96	13865	1520	96
37484	Rural (not London)	12	16837	2029	96	19648	2086	96	19801	2048	96
44647_1	Rural (not London)	12	10495	1380	96	10646	1375	96	10654	1267	96
45436	Rural (not London)	12	13378	1750	96	14763	1798	96	14866	1760	96
54412_1	Rural (not London)	6	18066	2634	76	20415	2636	73	20790	2612	73
88271	Rural (not London)	12	25584	2942	98	27613	3004	95	27732	3264	94
93892	Rural (not London)	18	16503	2490	52	19485	2526	54	19768	2840	53
103552_1	Rural (not London)	8	24250	3726	98	29236	4237	89	29580	4230	88
236584	Rural (not London)	12	34370	5743	112	36248	6194	112	36162	6415	112
239282	Rural (not London)	12	35389	5273	112	40006	5867	112	39990	6125	112
289834	Rural (not London)	12	25304	4322	96	26378	4747	92	26307	5044	92
751609_1	Rural (not London)	12	31673	4851	86	33886	5288	80	33825	5638	79
758932_1	Rural (not London)	12	28638	4245	92	32941	4821	82	32381	5152	83
788584	Rural (not London)	6	7143	564	64	8632	577	64	8773	577	64
816271	Rural (not London)	12	22397	3866	100	23818	4370	97	23802	4730	96
818812	Rural (not London)	12	22919	3911	99	24802	4488	95	24194	4817	96
841861	Rural (not London)	6	2026	0	48	2055	0	48	2049	0	48
979984	Rural (not London)	12	29771	4220	112	30807	4741	112	30788	5021	112
981377	Rural (not London)	12	27204	4264	112	28809	4828	112	28808	5125	112
1047976	Rural (not London)	18	15928	1054	45	16385	1023	63	15900	1418	63

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
1060981	Rural (not London)	12	21309	1217	57	21679	1175	55	20770	1586	56
1127221	Rural (not London)	6	22139	629	48	22911	643	48	22923	563	48
1204741	Rural (not London)	12	19718	1086	112	20884	1073	112	20925	1399	112
1210931	Rural (not London)	12	19919	1160	112	22672	1135	112	22721	1477	112
1237417	Rural (not London)	12	21126	1070	112	22762	1059	112	22961	1396	112
1245262	Rural (not London)	12	20421	993	112	23260	970	112	23252	1322	112
1286459	Rural (not London)	12	20122	1011	105	21514	976	75	20531	1371	75
1338091	Rural (not London)	12	21958	3307	112	22868	3858	112	22887	3904	112
1349522	Rural (not London)	12	17285	494	96	17857	477	96	17548	831	96
1351159	Rural (not London)	12	19361	511	96	19528	513	96	19504	840	96
1361002	Rural (not London)	6	36646	1005	96	37385	990	96	37051	1672	96
1377487	Rural (not London)	12	19361	511	96	19528	513	96	19504	840	96
1382452	Rural (not London)	12	17285	494	96	17857	477	96	17548	831	96
1480211	Rural (not London)	12	19176	1195	64	19726	1184	64	20079	1529	64
1483642	Rural (not London)	12	19246	897	64	18826	906	64	18760	1261	64
1526867_1	Rural (not London)	12	22220	3587	112	23751	4192	112	23831	4249	112
1539082	Rural (not London)	5	1792	0	32	2278	0	32	2163	0	32
1561897	Rural (not London)	6	5135	0	96	5617	0	95	5828	0	95
1671209	Rural (not London)	6	23892	1104	96	25651	1112	96	26672	1817	96
1722631	Rural (not London)	12	11632	465	112	12772	477	112	13356	831	112
1897109	Rural (not London)	12	12259	639	112	12783	631	112	13249	982	112
2178859	Rural (not London)	12	12259	639	112	12783	631	112	13249	982	112
2183026_3	Rural (not London)	12	11632	465	112	12772	477	112	13356	831	112

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
2252359	Rural (not London)	6	5165	140	95	5749	141	95	5791	161	95
2254477	Rural (not London)	12	9361	532	112	10108	544	112	10658	864	112
2262959	Rural (not London)	12	9894	586	112	10032	582	112	10458	922	112
2288501	Rural (not London)	12	11507	675	112	11986	673	112	12494	1007	112
2299186	Rural (not London)	12	10884	617	112	11651	629	112	12259	967	112
2925361	Rural (not London)	6	8764	381	80	9575	390	80	-	-	-
2932609	Rural (not London)	6	7301	170	64	8164	171	64	-	-	-
3008032	Rural (not London)	6	5986	342	96	6330	339	96	6739	644	96
3015382	Rural (not London)	6	6459	357	96	7158	355	96	7301	653	96
3017834	Rural (not London)	6	5557	286	96	5964	291	96	6430	600	96
3022741	Rural (not London)	6	5808	303	96	6824	316	96	7269	620	96
3054734	Rural (not London)	6	12267	661	96	14021	671	96	14653	1273	96
3062141	Rural (not London)	6	17876	839	93	19284	846	93	19436	898	92
3081937	Rural (not London)	12	6764	300	80	7350	311	64	-	-	-
3242609	Rural (not London)	6	8031	269	47	8781	273	47	8903	270	47
3319334	Rural (not London)	6	4387	49	48	5153	47	48	5474	23	48
3327056	Rural (not London)	6	6706	224	48	7341	231	48	7439	216	48
3355447	Rural (not London)	6	6706	224	48	7341	231	48	7439	216	48
3549586	Rural (not London)	6	14293	791	48	14939	800	48	15945	1288	48
3637927	Rural (not London)	6	22071	1220	88	23961	1274	86	24201	1326	86
3681151	Rural (not London)	8	11316	588	95	12247	602	95	12373	628	95
3831686	Rural (not London)	6	16966	987	92	18405	1042	91	18655	1094	90
4272196	Rural (not London)	6	4395	147	48	5161	159	48	5509	159	48

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
4339609	Rural (not London)	6	8800	616	96	9031	621	96	9255	747	96
4449166	Rural (not London)	6	2327	0	32	2423	0	32	2456	0	32
4458109	Rural (not London)	6	2697	291	80	2550	292	80	2686	344	80
4620622	Rural (not London)	6	5685	321	64	5437	321	64	5549	361	64
4626697	Rural (not London)	6	5279	306	64	5069	313	64	5326	356	64
4657132	Rural (not London)	6	2981	0	96	7469	0	95	7589	0	95
4660181	Rural (not London)	6	10095	611	48	10375	621	48	10976	747	48
4693786	Rural (not London)	6	10964	627	64	10506	634	64	10876	717	64
4829416	Rural (not London)	12	4176	212	96	3977	219	96	4206	262	96
4923001	Rural (not London)	12	4727	194	96	4542	188	96	4684	235	96
4960687	Rural (not London)	6	4193	0	32	6639	10	31	7304	533	31
5576572	Rural (not London)	6	22242	237	42	24028	267	40	24213	371	40
5603296	Rural (not London)	6	13375	113	47	13735	108	46	13841	214	46
5606641	Rural (not London)	6	22242	237	42	24028	267	40	24213	371	40
5626732	Rural (not London)	6	9098	105	48	9135	103	48	9425	189	48
5653576	Rural (not London)	6	24885	225	48	26902	263	48	27620	348	48
5724346	Rural (not London)	6	22393	237	42	24656	267	40	24802	389	39
5758201	Rural (not London)	6	9098	105	48	9135	103	48	9425	189	48
5771771	Rural (not London)	9	13964	223	46	15032	227	46	15206	276	46
5946191	Rural (not London)	6	17777	516	111	18205	519	111	18442	623	111
5953084	Rural (not London)	6	17777	516	59	18205	519	59	18442	623	58
5977241	Rural (not London)	6	11445	272	47	11650	308	47	11717	419	47
5997986	Rural (not London)	6	17777	516	59	18205	519	59	18442	623	58

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6036112	Rural (not London)	6	17777	516	59	18205	519	59	18442	623	58
6081326	Rural (not London)	6	17777	516	59	18205	519	59	18442	623	58
6615251	Rural (not London)	6	12534	84	46	12126	81	46	12206	187	46
6750418	Rural (not London)	6	2647	24	96	3171	24	96	3264	19	96
6750419	Rural (not London)	6	3232	90	48	3581	90	48	3638	66	48
6750420	Rural (not London)	6	3232	90	48	3581	90	48	3638	66	48
6750424	Rural (not London)	6	5248	188	96	6099	196	96	6439	183	96
6750426	Rural (not London)	6	5248	188	96	6099	196	96	6439	183	96
6750428	Rural (not London)	6	3800	55	48	4811	68	48	5159	55	48
6750440	Rural (not London)	6	22391	1292	112	23637	1302	112	24753	1974	112
6750441	Rural (not London)	12	26674	1439	50	28797	1421	42	28964	1837	42
6750442	Rural (not London)	12	28021	1456	49	28121	1406	43	28167	1818	42
6750444	Rural (not London)	6	7339	168	48	8197	175	48	8550	169	48
6750445	Rural (not London)	6	7301	170	64	8164	171	64	-	-	-
6750446	Rural (not London)	6	8514	213	48	9343	217	48	9646	172	48
6750447	Rural (not London)	6	8514	213	48	9343	217	48	9646	172	48
6750461	Rural (not London)	6	4239	786	80	5021	798	80	5025	706	80
6750462	Rural (not London)	5	8389	407	80	9777	419	79	10281	402	79
6750465	Rural (not London)	6	8389	407	48	9777	419	47	10281	402	47
6750466	Rural (not London)	12	18694	577	112	19485	558	112	19792	877	112
6750467	Rural (not London)	12	18694	577	112	19485	558	112	19792	877	112
6750468	Rural (not London)	12	17992	574	112	21001	557	112	21133	873	112
6750469	Rural (not London)	12	17992	574	112	21001	557	112	21133	873	112

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6750494	Rural (not London)	6	17362	1433	91	24226	1471	85	24077	1575	85
6750495	Rural (not London)	7	17362	1433	94	24226	1471	91	24077	1575	91
6750498	Rural (not London)	8	14287	651	109	12668	490	97	12461	496	110
6750549	Rural (not London)	6	2638	212	96	2786	217	96	2982	217	96
6750550	Rural (not London)	6	4522	615	80	4668	620	80	4865	620	80
6750557	Rural (not London)	6	2715	89	96	3224	90	96	3326	90	96
6750560	Rural (not London)	6	3327	129	48	3733	132	48	4130	132	48
6750562	Rural (not London)	6	2021	0	96	2356	0	96	2596	0	96
6750563	Rural (not London)	6	2021	0	48	2356	0	48	2596	0	48
6750564	Rural (not London)	6	3724	179	48	4020	183	48	4430	183	48
6750566	Rural (not London)	6	3549	171	48	3886	173	48	4295	173	48
6750567	Rural (not London)	6	3443	131	95	3871	132	95	4459	132	95
6750568	Rural (not London)	6	11119	668	96	11540	673	96	-	-	-
6750570	Rural (not London)	6	11119	668	48	11595	674	48	12364	1163	48
6750571	Rural (not London)	6	11119	668	48	11760	670	48	12478	1155	48
6750572	Rural (not London)	6	13900	826	48	14560	843	48	15018	979	48
6750574	Rural (not London)	6	13627	770	64	14537	781	64	-	-	-
6750575_1	Rural (not London)	6	12817	768	96	13392	780	96	13745	895	96
6750578	Rural (not London)	6	4594	222	48	4984	224	48	5133	222	48
6750579	Rural (not London)	6	3857	175	96	4249	180	96	4348	167	96
6750581	Rural (not London)	6	5310	222	48	5852	224	48	5952	222	48
6750582	Rural (not London)	6	5284	222	95	5823	224	95	5924	222	94
6750597	Rural (not London)	6	1826	39	64	1997	39	64	2412	39	64

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6750598	Rural (not London)	6	1826	39	64	1997	39	64	2412	39	64
6750599	Rural (not London)	6	1826	39	64	1997	39	64	2412	39	64
6750600_1	Rural (not London)	6	1747	51	96	1922	52	96	2311	52	96
6750601	Rural (not London)	6	2340	76	48	2561	77	48	2984	77	48
6750602	Rural (not London)	6	1592	51	48	1730	52	48	2111	52	48
6750603	Rural (not London)	6	1592	51	48	1730	52	48	2111	52	48
6750610	Rural (not London)	6	11522	432	63	11457	432	63	11760	534	62
6750611_1	Rural (not London)	6	11451	436	94	11395	436	94	11697	536	94
6750622_1	Rural (not London)	6	5889	506	63	8099	521	63	8303	521	62
6750623	Rural (not London)	6	5889	506	47	8099	521	47	8303	521	47
6750625	Rural (not London)	6	5889	506	32	8099	521	32	8303	521	32
6750626	Rural (not London)	6	6499	560	64	8430	584	64	8585	584	64
6750627	Rural (not London)	6	5889	506	32	8099	521	32	8303	521	32
6750680	Rural (not London)	6	8912	465	63	8567	463	64	8952	567	63
6750681	Rural (not London)	6	8835	461	63	8482	459	64	8857	559	63
6750690_3	Rural (not London)	6	1568	0	96	1791	0	96	1995	0	96
6750691	Rural (not London)	7	1553	0	96	1772	0	96	1978	0	96
6750748	Rural (not London)	6	9171	674	80	10579	679	79	11054	661	79
6750749	Rural (not London)	6	9171	674	80	10579	679	79	11054	661	79
6750805	Rural (not London)	6	7903	10	48	9026	10	48	8972	10	48
6750809	Rural (not London)	6	11522	432	46	11457	432	46	11760	534	45
6750810	Rural (not London)	6	9545	404	48	9196	411	48	9502	495	48
6750817	Rural (not London)	6	3055	16	96	3394	15	96	3481	15	96

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6750819	Rural (not London)	6	2957	0	96	3284	0	96	3365	0	96
6750828	Rural (not London)	6	14937	410	48	8937	424	48	9052	465	48
6750832	Rural (not London)	6	7819	444	47	8302	449	47	8375	501	47
6750834	Rural (not London)	6	16643	604	92	17986	657	91	18117	709	90
6750835	Rural (not London)	6	22995	637	88	24906	691	86	25045	743	85
6750883	Rural (not London)	6	3811	65	96	3982	67	96	3994	67	96
6750884	Rural (not London)	6	3811	65	96	3982	67	96	3994	67	96
6750889	Rural (not London)	6	4661	332	64	5517	335	64	5705	387	64
6750892	Rural (not London)	6	8912	465	95	8567	463	95	8952	567	94
6750893	Rural (not London)	6	8695	447	96	8248	451	96	8566	537	96
6750898	Rural (not London)	6	9095	389	80	8810	387	80	9183	488	79
6750899	Rural (not London)	6	9099	385	80	8808	378	80	9184	484	79
6750920	Rural (not London)	6	6706	224	48	7341	231	48	7439	216	48
6750921	Rural (not London)	6	6706	224	48	7341	231	48	7439	216	48
6750924	Rural (not London)	6	6395	242	48	6995	242	48	7111	239	48
6750925	Rural (not London)	6	5157	220	48	5695	224	48	5785	222	48
6750941	Rural (not London)	6	8521	574	48	8667	581	48	8882	706	48
6750942	Rural (not London)	6	8521	574	48	8667	581	48	8882	706	48
6750945	Rural (not London)	6	2822	145	48	3267	156	48	4157	640	48
6750946	Rural (not London)	6	2822	145	48	3267	156	48	4157	640	48
6750948	Rural (not London)	6	5045	196	80	5653	204	80	6958	688	80
6750954	Rural (not London)	6	9236	582	96	9451	590	96	9673	717	96
6750955	Rural (not London)	6	9236	582	96	9451	590	96	9673	717	96

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6750970	Rural (not London)	6	9527	606	94	9975	598	94	10883	1359	93
6750977	Rural (not London)	6	2715	89	96	3224	90	96	3326	90	96
6750983	Rural (not London)	6	2902	131	95	3275	134	95	3668	134	95
6750985	Rural (not London)	6	2493	151	95	2750	153	95	3111	153	95
6750986	Rural (not London)	6	2477	143	64	2741	145	64	3107	145	64
6751002	Rural (not London)	6	6984	685	48	8280	694	48	8300	604	48
6751012	Rural (not London)	6	4750	154	80	5093	153	80	5463	153	80
6751013	Rural (not London)	6	4410	147	80	4740	147	80	5108	147	80
6751053	Rural (not London)	6	5045	196	80	5653	204	80	-	-	-
6751054	Rural (not London)	6	5055	192	64	5660	199	64	-	-	-
6751057	Rural (not London)	6	3290	198	48	3368	204	48	3752	204	48
6751059	Rural (not London)	6	3290	198	48	3368	204	48	3752	204	48
6751060	Rural (not London)	6	3290	198	48	3368	204	48	3752	204	48
6751065	Rural (not London)	6	3457	2	96	4379	4	96	6156	4	96
6751066	Rural (not London)	6	2327	0	32	2423	0	32	2456	0	32
6751068	Rural (not London)	6	4364	129	48	4481	132	48	4847	132	48
6751070	Rural (not London)	6	5664	178	32	5976	186	32	7196	186	32
6751073	Rural (not London)	6	7319	187	48	8153	198	48	8574	196	48
6751074	Rural (not London)	6	7319	187	48	8153	198	48	8574	196	48
6751082	Rural (not London)	6	4392	39	48	6410	44	48	7216	44	47
6751083	Rural (not London)	6	4152	72	48	5685	86	48	6295	86	48
6751084	Rural (not London)	6	4152	72	48	5685	86	48	6295	86	48
6751091	Rural (not London)	6	4010	54	48	4566	55	48	4677	44	48

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751092	Rural (not London)	6	4010	54	48	4566	55	48	4677	44	48
6751094	Rural (not London)	6	4553	98	48	5430	106	48	5974	106	48
6751095	Rural (not London)	6	5325	188	48	6059	201	48	6452	201	48
6751099	Rural (not London)	6	3733	11	48	4451	11	48	4590	9	48
6751101	Rural (not London)	6	4309	82	96	6461	92	96	6963	455	96
6751102	Rural (not London)	6	4309	82	96	6461	92	96	6963	455	96
6751115	Rural (not London)	6	4276	142	96	4544	146	64	-	-	-
6751118	Rural (not London)	6	4762	165	96	5301	170	96	5504	131	96
6751123	Rural (not London)	6	2974	143	96	3558	146	96	3755	107	96
6751134	Rural (not London)	8	6746	275	64	7082	277	64	7222	230	64
6751135	Rural (not London)	6	6746	275	64	7082	277	64	7222	230	64
6751152	Rural (not London)	6	7150	80	96	7774	81	96	7762	81	96
6751154	Rural (not London)	6	3921	148	48	4791	152	48	4922	152	48
6751155	Rural (not London)	6	3921	148	48	4791	152	48	4922	152	48
6751156	Rural (not London)	6	2510	11	48	2962	11	48	3004	0	48
6751158	Rural (not London)	6	2510	11	48	2962	11	48	3004	0	48
6751159	Rural (not London)	6	2510	11	48	2962	11	48	3004	0	48
6751160	Rural (not London)	6	3662	159	32	4139	163	32	4233	152	32
6751161	Rural (not London)	6	3662	159	32	4139	163	32	4233	152	32
6751173	Rural (not London)	6	4806	155	64	5417	166	64	5849	160	64
6751175	Rural (not London)	6	3435	142	95	3911	144	95	4148	139	95
6751176	Rural (not London)	6	5016	162	96	5231	167	96	5687	154	96
6751181	Rural (not London)	6	4288	134	48	5385	137	48	5238	126	48

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751193	Rural (not London)	6	9731	606	94	10207	598	94	11109	1359	93
6751194	Rural (not London)	6	11378	631	94	12231	622	94	13110	1382	93
6751199	Rural (not London)	6	3868	124	95	4968	126	95	5000	124	95
6751201	Rural (not London)	6	5277	174	48	6141	185	48	6477	172	48
6751202	Rural (not London)	6	5277	174	48	6141	185	48	6477	172	48
6751219	Rural (not London)	6	13284	762	48	13364	769	48	13247	767	48
6751220	Rural (not London)	6	7562	336	47	10750	335	45	10749	320	44
6751221	Rural (not London)	6	5446	60	47	8953	62	45	9100	51	45
6751230	Rural (not London)	6	25060	737	39	27852	731	36	27038	704	37
6751259	Rural (not London)	12	16314	162	46	17177	163	45	17342	216	45
6751276	Rural (not London)	6	10983	374	48	11217	386	48	11193	471	48
6751277	Rural (not London)	6	10983	374	48	11217	386	48	11193	471	48
6751290	Rural (not London)	6	14642	1042	80	15130	986	77	15058	1352	77
6751291	Rural (not London)	6	1886	0	64	2489	0	64	2623	15	64
6751292	Rural (not London)	6	12753	1042	52	12639	986	51	12431	1337	51
6751297	Rural (not London)	18	16022	1804	63	18903	1859	45	18736	2131	45
6751300	Rural (not London)	14	10844	768	64	11441	786	64	11598	786	64
6751317	Rural (not London)	12	47912	6112	104	52490	6370	102	52997	6950	102
6751318	Rural (not London)	12	25584	2942	98	27613	3004	95	27732	3264	94
6751319	Rural (not London)	12	22328	3170	100	24877	3366	96	25265	3686	95
6751342	Rural (not London)	18	21798	3063	44	23031	3027	36	23059	3320	28
6751430	Rural (not London)	6	4731	348	94	5596	353	94	5783	405	94
6751431	Rural (not London)	6	4731	348	48	5596	353	48	5783	405	48

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751439	Rural (not London)	6	9431	389	64	9168	385	64	9547	490	63
6751440	Rural (not London)	7	12135	1854	48	13498	1881	48	13670	1815	48
6751441	Rural (not London)	6	12135	1854	48	13498	1881	48	13670	1815	48
6751442	Rural (not London)	7	12135	1854	48	13498	1881	48	13670	1815	48
6751443	Rural (not London)	6	11445	1079	64	12517	1100	64	12696	1032	64
6751444	Rural (not London)	6	11445	1079	64	12517	1100	64	12696	1032	64
6751445	Rural (not London)	6	11445	1079	64	12517	1100	64	12696	1032	64
6751456	Rural (not London)	7	3289	143	64	3661	145	64	4052	145	64
6751457	Rural (not London)	6	3289	143	95	3661	145	95	4052	145	95
6751458	Rural (not London)	6	3381	154	48	3885	167	48	4788	667	48
6751460_1	Rural (not London)	6	3339	104	95	3982	113	96	5129	713	94
6751461	Rural (not London)	6	3381	154	48	3885	167	48	4771	651	48
6751462	Rural (not London)	6	3975	126	96	5090	134	95	5125	130	95
6751464	Rural (not London)	6	3975	126	64	5090	134	64	5125	130	64
6751466	Rural (not London)	6	3975	126	96	5090	134	95	5125	130	95
6751468	Rural (not London)	6	3975	126	64	5090	134	64	5125	130	64
6751469	Rural (not London)	6	3975	126	96	5090	134	95	5125	130	95
6751473	Rural (not London)	6	6746	275	64	7082	277	64	7222	230	64
6751492	Rural (not London)	6	2598	148	96	3149	150	96	3259	150	96
6751493	Rural (not London)	6	2458	151	48	3278	149	48	3477	149	48
6751494	Rural (not London)	6	2862	135	95	3951	136	95	4146	136	95
6751495	Rural (not London)	12	6513	336	80	7141	326	80	7364	701	80
6751500	Rural (not London)	6	5842	333	79	6869	342	78	7305	723	78

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751501	Rural (not London)	6	5722	331	79	6714	338	78	7145	717	78
6751504	Rural (not London)	6	4806	155	64	5417	166	64	5849	160	64
6751505	Rural (not London)	6	4806	155	64	5417	166	64	5849	160	64
6751506	Rural (not London)	6	6096	335	79	7104	342	78	7547	723	78
6751507	Rural (not London)	6	5728	326	79	6288	330	79	6727	711	78
6751509	Rural (not London)	12	7162	284	80	7696	282	64	-	-	-
6751510	Rural (not London)	12	7162	284	80	7696	282	64	8183	602	64
6751512	Rural (not London)	12	6247	332	80	6895	322	80	7119	697	80
6751513	Rural (not London)	6	6247	332	79	6895	322	78	7119	697	78
6751514	Rural (not London)	6	6743	72	48	7360	75	48	7342	75	48
6751530	Rural (not London)	6	14260	493	64	16215	550	64	16234	548	64
6751535	Rural (not London)	6	2770	36	48	3306	36	48	3407	31	48
6751538	Rural (not London)	12	16386	1053	112	17938	1029	112	18017	1383	112
6751539	Rural (not London)	9	14352	409	96	16299	413	96	-	-	-
6751540	Rural (not London)	8	14352	409	96	16299	413	96	16426	435	96
6751541	Rural (not London)	12	21959	3112	91	23306	3087	70	23390	3345	66
6751542	Rural (not London)	12	21935	3112	47	23236	3087	32	23322	3345	32
6751544	Rural (not London)	14	10844	768	64	11441	786	64	11598	786	64
6751545	Rural (not London)	6	12370	420	47	12393	420	47	12759	522	46
6751546	Rural (not London)	6	9545	404	48	9196	411	48	9502	495	48
6751550	Rural (not London)	6	9431	389	95	9168	385	95	9547	490	94
6751551	Rural (not London)	6	9686	395	95	9447	389	95	9815	491	94
6751553	Rural (not London)	6	5066	29	48	5597	30	48	5725	19	48

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751554	Rural (not London)	6	3815	27	48	4556	26	48	4704	24	48
6751556	Rural (not London)	6	3467	47	48	4131	49	48	4245	45	48
6751557	Rural (not London)	6	4089	59	48	4883	63	48	5008	58	48
6751562	Rural (not London)	6	6425	286	96	7013	301	96	7483	609	96
6751563	Rural (not London)	6	5144	297	94	5586	306	94	6031	688	93
6751565	Rural (not London)	6	4288	134	48	5385	137	48	5238	126	48
6751567	Rural (not London)	6	6941	350	96	7561	346	96	7993	654	96
6751568	Rural (not London)	6	5604	309	94	5980	298	94	6384	673	93
6751569	Rural (not London)	6	2644	68	64	3132	71	64	3200	71	64
6751572	Rural (not London)	6	2891	215	80	2731	220	80	2879	262	80
6751573	Rural (not London)	6	2891	215	80	2731	220	80	2879	262	80
6751582	Rural (not London)	6	6984	685	48	8280	694	48	8300	604	48
6751592	Rural (not London)	6	4367	195	80	4268	199	80	4500	252	79
6751593	Rural (not London)	6	4075	194	80	3950	196	80	4178	249	80
6751598	Rural (not London)	12	4519	235	96	4271	232	96	4360	275	96
6751599	Rural (not London)	12	4440	192	96	4226	182	96	4374	233	96
6751606	Rural (not London)	12	14789	2273	107	15505	2241	106	15521	2522	90
6751607	Rural (not London)	6	14789	2273	89	15460	2222	77	15424	2522	74
6751610	Rural (not London)	6	16022	1804	88	19166	1888	77	19069	2181	77
6751611	Rural (not London)	12	16022	1804	107	19156	1888	96	18995	2172	90
6751616	Rural (not London)	18	25825	1434	93	27218	1377	92	26408	1779	81
6751617	Rural (not London)	18	25795	1434	93	27189	1377	92	26356	1779	81
6751619	Rural (not London)	18	27350	1425	92	30557	1397	77	29311	1780	80

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751621	Rural (not London)	18	24966	1425	93	27260	1397	79	26325	1774	81
6751622	Rural (not London)	18	28203	1425	92	31517	1397	77	30499	1774	79
6751625	Rural (not London)	6	4082	118	48	4489	119	48	4308	119	48
6751627	Rural (not London)	6	6197	181	45	8580	183	40	9141	176	40
6751628	Rural (not London)	6	7117	181	44	9569	183	40	9916	176	39
6751629	Rural (not London)	6	4082	118	48	4489	119	48	4308	119	48
6751666	Rural (not London)	6	17521	737	64	16893	744	64	16181	740	64
6751668	Rural (not London)	6	10842	369	46	10515	368	46	10212	366	46
6751672	Rural (not London)	6	4160	60	47	7196	62	43	7459	51	42
6751679	Rural (not London)	6	1105	0	48	1298	0	48	1313	0	48
6751680	Rural (not London)	6	1105	0	48	1298	0	48	1313	0	48
6751681	Rural (not London)	6	1105	0	48	1298	0	48	1313	0	48
14551_2	Rural (not London)	12	22328	3170	100	24877	3366	96	25265	3686	95
6750690_1	Rural (not London)	6	1568	0	96	1791	0	96	1995	0	96
6750690_2	Rural (not London)	6	1568	0	96	1791	0	96	1995	0	96
54412_2	Rural (not London)	6	18066	2634	76	20415	2636	73	20790	2612	73
2183026_1	Rural (not London)	12	11632	465	112	12772	477	112	13356	831	112
1526867_2	Rural (not London)	12	22220	3587	112	23751	4192	112	23831	4249	112
103552_2	Rural (not London)	8	24250	3726	98	29236	4237	89	29580	4230	88
751609_2	Rural (not London)	12	31673	4851	86	33886	5288	80	33825	5638	79
758932_2	Rural (not London)	12	28638	4245	92	32941	4821	82	32381	5152	83
6750622_2	Rural (not London)	6	5889	506	63	8099	521	63	8303	521	62
6750600_2	Rural (not London)	6	1747	51	96	1922	52	96	2311	52	96

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
44647_2	Rural (not London)	12	10495	1380	96	10646	1375	96	10654	1267	96
6750611_2	Rural (not London)	6	11451	436	94	11395	436	94	11697	536	94
6750575_2	Rural (not London)	6	13627	770	64	14296	786	64	14649	898	64
1560_2	Rural (not London)	6	1604	85	96	1954	88	96	-	-	-
21334_2	Rural (not London)	12	25584	2942	98	27613	3004	95	27732	3264	94
2183026_2	Rural (not London)	12	11632	465	112	12772	477	112	13356	831	112
1700497_6	Rural (not London)	6	2343	458	48	4459	465	48	4888	405	48
6751673_4	Rural (not London)	6	4475	375	47	7508	374	43	7769	361	42
6751673_2	Rural (not London)	6	4475	375	5	7508	374	5	7769	361	5
1700497_1	Rural (not London)	6	2343	458	20	4459	465	20	4888	405	20
1700497_2	Rural (not London)	6	2343	458	5	4459	465	5	4888	405	5
1700497_3	Rural (not London)	6	2343	458	10	4459	465	10	4888	405	10
6751673_1	Rural (not London)	6	4475	375	47	7508	374	20	7769	361	20
1700497_4	Rural (not London)	6	2343	458	5	4459	465	5	4888	405	5
1700497_5	Rural (not London)	4	2343	458	5	4459	465	5	4888	405	5
6751673_3	Rural (not London)	6	4475	375	47	7508	374	10	7769	361	10
6751223	Rural (not London)	6	2324	0	32	3242	0	31	3494	0	31
6751147_3	Rural (not London)	6	2707	11	48	3137	11	48	3096	9	48
6751147_1	Rural (not London)	6	2707	11	48	3137	11	10	3096	9	10
6751147_2	Rural (not London)	6	2707	11	48	3137	11	5	3096	9	5
6751665_1	Rural (not London)	6	12260	921	62	12301	914	10	-	-	10
6751665_2	Rural (not London)	6	12260	921	62	12301	914	5	-	-	5
1889347_1	Rural (not London)	6	15519	674	46	16215	673	10	16080	658	10

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
1889347_2	Rural (not London)	6	15519	674	46	16215	673	5	16080	658	5
6751665_3	Rural (not London)	6	12260	921	62	12301	914	62	-	-	-
1889347_3	Rural (not London)	6	15519	674	46	16215	673	45	16080	658	45
6750431	Rural (not London)	6	18374	852	48	19720	855	48	20836	1525	48
6750434	Rural (not London)	6	18374	852	48	19720	855	48	20836	1525	48
6750438_1	Rural (not London)	6	17739	841	80	-	-	-	-	-	-
6750438_3	Rural (not London)	6	17739	841	80	-	-	-	-	-	-
6750438_2	Rural (not London)	6	17739	841	80	-	-	-	-	-	-
6750437	Rural (not London)	6	17739	841	48	19117	850	48	20233	1521	48
6750439	Rural (not London)	6	18312	848	64	19698	856	64	20803	1528	64
120	Rural (not London)	6	7155	43	46	8078	43	45	8116	43	45
128	Rural (not London)	6	11597	82	41	11714	77	41	11785	130	40
236	Rural (not London)	6	511	0	48	1298	0	48	1276	0	48
238	Rural (not London)	6	11597	82	47	12880	77	47	12972	130	46
240	Rural (not London)	6	1916	61	48	1883	60	48	1879	60	48
248	Rural (not London)	6	12237	203	47	13529	246	47	13594	299	47
292	Rural (not London)	6	3008	111	48	3287	147	48	3311	198	48
1312	Rural (not London)	6	0	0	0	496	0	48	515	0	48
1452	Rural (not London)	6	12476	82	47	13858	77	46	13929	130	46
1454	Rural (not London)	6	10797	154	47	12769	190	47	12847	241	47
1456	Rural (not London)	6	13511	145	47	14272	143	46	14342	196	46
1458	Rural (not London)	6	12715	217	47	14164	256	46	14220	307	46
1626	Rural (not London)	6	11597	82	41	12382	77	39	12455	130	39

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
1822	Rural (not London)	6	5086	166	47	5458	207	47	5482	256	47
1824	Rural (not London)	6	6360	106	48	6192	101	48	6226	154	48
1842	Rural (not London)	6	24885	225	48	26902	263	48	27620	348	48
1844	Rural (not London)	6	24885	225	48	26902	263	48	27620	348	48
7470	Rural (not London)	6	20365	140	48	21452	148	48	20792	146	48
7538	Rural (not London)	6	9168	37	39	9217	46	35	9540	45	32
8870	Rural (not London)	6	11898	39	47	13453	41	47	13520	41	47
8894	Rural (not London)	6	10866	6	48	12491	12	48	12591	12	48
9678	Rural (not London)	6	20365	140	48	21452	148	48	20792	146	48
9714	Rural (not London)	6	20365	140	48	21452	148	48	20792	146	48
5623381	Rural (not London)	6	10279	154	44	11470	190	42	11566	241	42
5630084	Rural (not London)	6	11963	82	40	12558	77	39	12647	130	39
5737876	Rural (not London)	6	10797	154	47	12274	190	47	12329	241	47
5748034	Rural (not London)	6	11597	82	41	12382	77	39	12455	130	39
6349036	Rural (not London)	6	6918	6	48	8572	6	47	8581	6	47
6406132	Rural (not London)	6	6989	6	48	7846	6	47	7871	6	47
6510271	Rural (not London)	6	11007	6	48	12687	12	48	12783	12	48
6604352	Rural (not London)	6	20365	140	48	21452	148	48	20792	146	48
6750701	Rural (not London)	9	7800	6	48	9261	6	47	9251	6	47
6750702	Rural (not London)	6	4018	0	48	4840	6	48	4912	6	48
6750703	Rural (not London)	6	4018	0	48	4840	6	48	4912	6	48
6751266	Rural (not London)	6	3948	0	48	5568	6	48	5624	6	48
6751267	Rural (not London)	6	880	0	48	1654	0	48	1625	0	48

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751338	Rural (not London)	6	10797	154	43	12274	190	40	12329	241	40
6751339	Rural (not London)	6	10797	154	43	12274	190	40	12329	241	40
4656_1	Rural (not London)	6	3072	91	32	3628	98	32	2564	85	32
10450_1	Rural (not London)	6	3304	0	32	4144	0	32	5934	0	31
4416452_1	Rural (not London)	6	3508	38	32	4302	46	32	5781	46	32
4479011_1	Rural (not London)	6	2768	46	48	3266	47	48	3375	36	48
6750429_1	Rural (not London)	6	3650	53	48	4639	59	48	5000	48	48
6751067_1	Rural (not London)	6	4364	129	48	4481	132	48	4847	132	48
6751071_1	Rural (not London)	6	5664	178	32	5976	186	32	7196	186	32
6751078_1	Rural (not London)	6	5662	49	48	7800	58	47	8579	56	47
6750429_2	Rural (not London)	6	3650	53	5	4639	59	5	5000	48	5
6751067_2	Rural (not London)	6	4364	129	5	4481	132	5	4847	132	5
4416452_2	Rural (not London)	6	4568	57	5	5140	63	5	4095	51	5
6751071_2	Rural (not London)	6	5664	178	5	5976	186	5	7196	186	5
4656_2	Rural (not London)	6	3072	91	5	3628	98	5	2564	85	5
4479011_2	Rural (not London)	6	2768	46	5	3266	47	5	3375	36	5
6751078_2	Rural (not London)	8	5662	49	5	7800	58	5	8579	56	5
10450_2	Rural (not London)	6	3304	0	5	4144	0	5	5934	0	5
6751269	Rural (not London)	6	6918	6	64	7607	6	64	7626	6	64
6751263	Rural (not London)	6	9600	6	64	11043	12	64	10443	12	64
6751268	Rural (not London)	6	9600	6	64	11043	12	64	10443	12	64
6751710	Rural (not London)	11	-	-	-	-	-	-	21127	1444	69
6751711	Rural (not London)	11	-	-	-	-	-	-	20683	1371	75

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751712	Rural (not London)	11	-	-	-	21911	1135	80	20770	1436	80
6751713	Rural (not London)	11	-	-	-	21086	1065	80	19992	1393	80
6751714	Rural (not London)	7	-	-	-	-	-	-	20865	1444	80
6751715	Rural (not London)	10	-	-	-	-	-	-	21136	1444	75
6751716	Rural (not London)	10	-	-	-	-	-	-	20679	1371	75
6751717	Rural (not London)	10	-	-	-	-	-	-	20531	1371	75
6751720	Rural (not London)	7	17609	1153	112	18297	1119	112	18346	1454	112
6751721	Rural (not London)	9	-	-	-	-	-	-	17538	1440	77
6751722	Rural (not London)	9	-	-	-	-	-	-	20531	1371	79
6751723	Rural (not London)	9	-	-	-	-	-	-	16141	1313	78
6751735	Rural (not London)	10	-	-	-	-	-	-	11518	281	61
6751736	Rural (not London)	9	-	-	-	-	-	-	11518	281	61
6751738	Rural (not London)	9	-	-	-	-	-	-	10895	281	61
6751742	Rural (not London)	10	-	-	-	-	-	-	10895	281	61
6751743	Rural (not London)	8	-	-	-	-	-	-	11660	281	61
6751744	Rural (not London)	8	-	-	-	-	-	-	11660	281	61
6751788	Rural (not London)	7	17609	1153	112	18297	1119	112	18346	1454	112
6751789	Rural (not London)	8	17609	1153	112	18297	1119	112	18346	1454	112
7000202	Rural (not London)	6	-	-	-	-	-	-	7825	434	48
7000203	Rural (not London)	7	-	-	-	-	-	-	9312	434	47
7000210	Rural (not London)	8	-	-	-	-	-	-	6270	171	47
7000258	Rural (not London)	8	12267	661	96	14021	671	96	14653	1273	96
7000261	Rural (not London)	8	12267	661	96	14021	671	96	14653	1273	96

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
7000264	Rural (not London)	7	5808	303	96	6877	316	96	7328	620	96
7000265	Rural (not London)	7	5808	303	96	6877	316	96	7328	620	96
7000266	Rural (not London)	7	6459	357	96	7145	355	96	7325	653	96
7000267	Rural (not London)	7	6459	357	96	7145	355	96	7325	653	96
7000280	Rural (not London)	6	-	-	-	-	-	-	3407	31	64
7000281	Rural (not London)	6	-	-	-	-	-	-	3407	31	64
7000283_1	Rural (not London)	7	-	-	-	-	-	-	8183	602	64
7000284	Rural (not London)	6	-	-	-	-	-	-	8183	602	64
7000285	Rural (not London)	6	-	-	-	-	-	-	7871	609	64
7000286_1	Rural (not London)	7	-	-	-	-	-	-	7871	609	64
7000289	Rural (not London)	7	-	-	-	9557	202	48	9996	172	48
7000290	Rural (not London)	6	-	-	-	9557	202	48	9996	172	48
7000223_1	Rural (not London)	6	-	-	-	-	-	-	11098	906	63
7000223_2	Rural (not London)	6	-	-	-	-	-	-	11098	906	63
7000223_3	Rural (not London)	6	-	-	-	-	-	-	11098	906	63
7000217_1	Rural (not London)	6	-	-	-	19117	850	80	20233	1521	80
7000217_2	Rural (not London)	6	-	-	-	19117	850	80	20233	1521	80
7000216	Rural (not London)	6	-	-	-	19117	850	80	20233	1521	80
7000222	Rural (not London)	6	-	-	-	-	-	-	12075	906	62
6751797	Rural (not London)	6	-	-	-	-	-	-	4178	669	96
6751798	Rural (not London)	6	-	-	-	-	-	-	3837	374	96
6751800	Rural (not London)	6	-	-	-	-	-	-	14879	1012	61
6751801	Rural (not London)	6	-	-	-	-	-	-	14832	889	64

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751814	Rural (not London)	6	-	-	-	-	-	-	4116	566	96
6751815	Rural (not London)	6	-	-	-	-	-	-	4221	671	96
6751821	Rural (not London)	6	-	-	-	-	-	-	12469	1274	96
6751822	Rural (not London)	6	-	-	-	-	-	-	12307	1161	96
7000213	Rural (not London)	6	1105	0	48	1298	0	48	1313	0	48
7000214	Rural (not London)	6	1105	0	48	1298	0	48	1313	0	48
7000215	Rural (not London)	6	1105	0	48	1298	0	48	1313	0	48
7000287	Rural (not London)	6	-	-	-	-	-	-	4537	107	64
7000291	Rural (not London)	9	14352	409	96	16299	413	96	16303	401	96
7000292	Rural (not London)	9	-	-	-	-	-	-	16426	435	96
7000293	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000296	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000296_1	Rural (not London)	6	-	-	-	-	-	-	6958	688	80
7000298	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000300	Rural (not London)	10	-	-	-	-	-	-	-	-	-
7000303	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000304	Rural (not London)	10	-	-	-	-	-	-	-	-	-
7000305	Rural (not London)	10	-	-	-	-	-	-	-	-	-
7000307	Rural (not London)	10	-	-	-	-	-	-	-	-	-
7000308	Rural (not London)	10	-	-	-	-	-	-	-	-	-
7000309	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000310	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000311	Rural (not London)	10	-	-	-	-	-	-	-	-	-

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
7000312	Rural (not London)	10	-	-	-	-	-	-	-	-	-
7000313	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000314	Rural (not London)	6	-	-	-	-	-	-	6999	684	64
7000315	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000316	Rural (not London)	6	0	0	0	0	0	0	635	0	48
681	Rural (not London)	8	0	0	0	0	0	0	222	34	64
6751803	Rural (not London)	6	-	-	-	-	-	-	2042	84	96
691	Rural (not London)	8	0	0	0	0	0	0	180	34	64
6751806	Rural (not London)	6	-	-	-	-	-	-	2042	84	96
7000288	Rural (not London)	6	-	-	-	-	-	-	4537	107	64
7000018	Rural (not London)	10	-	-	-	-	-	-	-	-	-
7000019	Rural (not London)	10	-	-	-	-	-	-	-	-	-
7000020	Rural (not London)	10	-	-	-	-	-	-	-	-	-
7000021	Rural (not London)	7	-	-	-	-	-	-	20845	1525	80
7000022	Rural (not London)	6	-	-	-	-	-	-	10638	797	80
7000023	Rural (not London)	6	-	-	-	-	-	-	10207	727	80
7000024	Rural (not London)	6	0	0	0	0	0	0	0	0	0
7000025	Rural (not London)	6	0	0	0	0	0	0	0	0	0
7000026	Rural (not London)	6	-	-	-	-	-	-	8738	261	64
7000027	Rural (not London)	6	-	-	-	-	-	-	4345	108	64
7000028	Rural (not London)	10	-	-	-	-	-	-	-	-	-
7000029	Rural (not London)	10	-	-	-	-	-	-	-	-	-
7000030	Rural (not London)	6	-	-	-	-	-	-	4393	153	64

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
7000031	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000035	Rural (not London)	6	0	0	0	0	0	0	0	0	0
7000037	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000038	Rural (not London)	10	-	-	-	-	-	-	-	-	-
7000040	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000041	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000042	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000043	Rural (not London)	6	0	0	0	0	0	0	0	0	0
7000044	Rural (not London)	10	-	-	-	-	-	-	-	-	-
7000045	Rural (not London)	10	-	-	-	-	-	-	-	-	-
7000047	Rural (not London)	10	-	-	-	-	-	-	-	-	-
7000048	Rural (not London)	10	-	-	-	-	-	-	-	-	-
7000055	Rural (not London)	7	0	0	0	0	0	0	0	0	0
7000062	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000064	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000065	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000067	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000068	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000070	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000071	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000072	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000073	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000077	Rural (not London)	6	-	-	-	-	-	-	-	-	-

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
7000081	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000083	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000084	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000085	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000086	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000087	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000088	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000090	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000091	Rural (not London)	12	-	-	-	-	-	-	-	-	-
7000096	Rural (not London)	10	-	-	-	-	-	-	-	-	-
7000097	Rural (not London)	9	-	-	-	-	-	-	-	-	-
7000125	Rural (not London)	7	0	0	0	0	0	0	0	0	0
7000128	Rural (not London)	7	-	-	-	-	-	-	-	-	-
7000132	Rural (not London)	8	-	-	-	-	-	-	-	-	-
7000135	Rural (not London)	7	-	-	-	-	-	-	-	-	-
7000137	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000138	Rural (not London)	7	-	-	-	-	-	-	-	-	-
7000139	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000140	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000141	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000142	Rural (not London)	7	0	0	0	0	0	0	0	0	0
7000143	Rural (not London)	7	0	0	0	0	0	0	0	0	0
7000145	Rural (not London)	10	-	-	-	-	-	-	-	-	-

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
7000146	Rural (not London)	8	0	0	0	0	0	0	0	0	0
7000147	Rural (not London)	7	0	0	0	0	0	0	0	0	0
7000148	Rural (not London)	7	0	0	0	0	0	0	0	0	0
7000149	Rural (not London)	11	0	0	0	0	0	0	0	0	0
7000150	Rural (not London)	5	3381	154	48	3885	167	48	4771	651	48
7000151	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000152	Rural (not London)	6	0	0	0	0	0	0	0	0	0
7000153	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000154	Rural (not London)	6	-	-	-	-	-	-	-	-	-
115614_1	Rural (not London)	9	-	-	-	-	-	-	-	-	-
115614_2	Rural (not London)	9	-	-	-	-	-	-	-	-	-
7000039_1	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000039_2	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000039_3	Rural (not London)	6	-	-	-	-	-	-	-	-	-
6750829	Rural (not London)	6	7887	373	48	7582	382	48	-	-	-
6751000	Rural (not London)	6	5995	65	48	6552	64	48	-	-	-
6750416	Rural (not London)	6	2770	36	64	3306	36	64	-	-	-
6750504	Rural (not London)	7	10722	288	63	8479	142	48	-	-	-
6751741	Rural (not London)	9	-	-	-	-	-	-	10895	281	61
6751690	Rural (not London)	7	-	-	-	-	-	-	3326	0	48
7000103	Rural (not London)	7	-	-	-	-	-	-	-	-	-
7000104	Rural (not London)	7	-	-	-	-	-	-	-	-	-
7000108	Rural (not London)	6	-	-	-	-	-	-	-	-	-

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
7000109	Rural (not London)	7	-	-	-	-	-	-	-	-	-
7000110	Rural (not London)	9	-	-	-	-	-	-	-	-	-
7000111	Rural (not London)	7	-	-	-	-	-	-	-	-	-
7000112	Rural (not London)	7	-	-	-	-	-	-	-	-	-
7000113	Rural (not London)	7	-	-	-	-	-	-	-	-	-
7000114	Rural (not London)	7	-	-	-	-	-	-	-	-	-
7000115	Rural (not London)	7	-	-	-	-	-	-	-	-	-
7000116	Rural (not London)	7	-	-	-	-	-	-	-	-	-
7000117	Rural (not London)	7	-	-	-	-	-	-	-	-	-
7000118	Rural (not London)	7	-	-	-	-	-	-	-	-	-
7000119	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000120	Rural (not London)	7	0	0	0	0	0	0	0	0	0
7000121	Rural (not London)	7	-	-	-	-	-	-	-	-	-
7000122	Rural (not London)	7	-	-	-	-	-	-	-	-	-
7000123	Rural (not London)	9	-	-	-	-	-	-	-	-	-
7000124	Rural (not London)	9	-	-	-	-	-	-	-	-	-
44	Rural (not London)	8	933	90	48	1001	89	48	1005	89	48
126	Rural (not London)	8	2819	109	48	3043	112	48	3043	112	48
1466	Rural (not London)	8	7901	272	48	8493	318	47	8521	369	47
1468	Rural (not London)	8	4929	10	48	5301	50	48	5329	103	48
1806	Rural (not London)	6	5086	166	48	5458	207	48	5482	256	48
8842	Rural (not London)	6	7747	133	45	8321	132	44	8370	185	44
8848	Rural (not London)	6	8244	123	47	8230	120	47	8258	173	47

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6070877	Rural (not London)	8	8682	221	47	9322	223	47	9375	276	47
7000101	Rural (not London)	8	-	-	-	-	-	-	-	-	-
1804	Rural (not London)	6	6360	106	45	6192	101	45	6226	154	45
7000102	Rural (not London)	8	-	-	-	-	-	-	-	-	-
7000099	Rural (not London)	6	-	-	-	-	-	-	-	-	-
8054	Rural (not London)	7	0	0	0	1166	0	48	1185	0	48
5673751	Rural (not London)	7	880	0	48	2144	0	48	2140	0	48
5677117	Rural (not London)	7	0	0	0	1166	0	48	1185	0	48
5959981	Rural (not London)	7	880	0	48	3310	0	48	3326	0	48
6750699	Rural (not London)	7	880	0	48	2144	0	48	2140	0	48
6750698	Rural (not London)	7	880	0	48	2144	0	48	2140	0	48
6750831	Rural (not London)	6	11602	524	46	12361	533	45	12463	585	45
270	Rural (not London)	6	4784	229	95	5224	230	95	5288	230	95
7582	Rural (not London)	6	5823	313	94	6181	314	94	6222	340	94
8922	Rural (not London)	6	5780	211	96	6181	219	96	6241	245	96
3940262	Rural (not London)	6	11243	557	95	12184	606	95	12310	632	95
226	Rural (not London)	6	3391	305	95	3641	312	95	3685	338	95
798	Rural (not London)	6	8822	551	95	9593	598	95	9716	624	95
1308	Rural (not London)	6	2415	4	96	2582	4	96	2580	2	96
224	Rural (not London)	6	10596	534	95	11404	546	95	11510	572	95
3870487	Rural (not London)	6	4073	180	47	4323	182	47	4370	208	47
6750616	Rural (not London)	6	3675	180	47	3886	182	47	3929	208	47
6750617	Rural (not London)	6	3923	180	47	4143	182	47	4187	208	47

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
7000106	Rural (not London)	8	-	-	-	-	-	-	-	-	-
7000107	Rural (not London)	8	-	-	-	-	-	-	-	-	-
6317032	Rural (not London)	6	15990	256	44	16551	252	43	16628	358	43
4231421	Rural (not London)	6	15045	481	93	16302	531	92	16450	531	92
6750826	Rural (not London)	6	18260	481	92	16302	531	92	16450	531	92
6750825	Rural (not London)	6	16387	399	93	18111	447	91	18278	447	91
6750820	Rural (not London)	6	3126	0	96	3507	0	96	3589	0	96
2874	Rural (not London)	6	1616	0	96	4655	0	96	4728	0	96
3720	Rural (not London)	6	2211	0	96	3785	0	95	3827	0	95
3738	Rural (not London)	6	1616	0	96	1829	0	96	1902	0	96
4160	Rural (not London)	6	848	0	96	967	0	96	967	0	96
4162	Rural (not London)	6	0	0	0	2824	0	95	2826	0	95
4234	Rural (not London)	6	1511	0	96	1677	0	96	1687	0	96
5368	Rural (not London)	6	770	0	96	3685	0	95	3761	0	95
4623659	Rural (not London)	6	1511	0	96	4499	0	96	4511	0	96
2864	Rural (not London)	6	3058	0	96	4753	0	96	4802	0	95
4194	Rural (not London)	6	739	0	96	804	0	96	815	0	96
196	Rural (not London)	6	10275	194	95	10941	196	95	11050	196	95
1426	Rural (not London)	6	1628	0	96	2233	0	96	2266	0	96
1472	Rural (not London)	6	8064	194	93	7159	196	93	7221	196	93
2154	Rural (not London)	6	7740	205	93	9400	252	91	9492	252	91
2472	Rural (not London)	6	8647	194	93	8710	196	92	8786	196	92
5330	Rural (not London)	6	770	0	96	3685	0	96	3761	0	96

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
5332	Rural (not London)	6	2211	0	96	3785	0	96	3827	0	96
4752116	Rural (not London)	6	9372	205	91	11632	252	87	11755	252	87
200	Rural (not London)	6	613	0	96	1614	0	96	1686	0	96
198	Rural (not London)	6	8839	194	92	10843	196	90	10982	196	89
6750799	Rural (not London)	6	16603	131	45	18190	169	44	18204	169	44
6750801	Rural (not London)	8	13645	283	46	14658	292	45	14790	292	45
8122	Rural (not London)	8	7276	151	46	7650	151	45	7654	151	45
6751334	Rural (not London)	8	6369	133	46	7008	141	45	7136	141	45
6751335	Rural (not London)	8	6369	133	46	7008	141	45	7136	141	45
802	Rural (not London)	7	5422	16	47	5551	15	47	5706	68	47
5731109	Rural (not London)	7	5422	16	47	5551	15	47	5706	68	47
6751336	Rural (not London)	7	3985	84	48	4049	83	48	4102	134	47
6751337	Rural (not London)	7	3985	84	48	4049	83	48	4102	134	47
6750798	Rural (not London)	7	12044	123	47	13452	163	46	13490	163	46
6750802	Rural (not London)	8	12080	295	47	13328	310	46	13477	310	46
1076	Rural (not London)	7	5874	61	47	6866	103	46	6938	103	46
1644	Rural (not London)	8	4680	151	48	5024	153	47	5024	153	47
1672	Rural (not London)	8	4400	59	48	4693	58	48	4647	58	47
1990	Rural (not London)	7	6170	63	47	6585	60	47	6552	60	47
6554	Rural (not London)	7	6456	154	47	6917	161	46	6934	161	46
5480234	Rural (not London)	8	10855	215	47	11612	213	47	11583	213	47
3976	Rural (not London)	7	5624	141	47	6411	149	46	6543	149	46
5463709	Rural (not London)	8	10559	215	47	11887	256	47	11958	256	47

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
296	Rural (not London)	8	1794	6	48	1879	6	48	1894	6	48
122	Rural (not London)	8	10018	197	48	11102	201	47	11187	201	47
3972	Rural (not London)	7	6456	154	47	6917	161	46	6934	161	46
3974	Rural (not London)	7	5624	141	47	6411	149	46	6543	149	46
4178	Rural (not London)	8	6456	154	47	6917	161	46	6934	161	46
4180	Rural (not London)	8	0	0	0	0	0	0	0	0	0
6552	Rural (not London)	7	12080	295	47	13328	310	46	13477	310	46
5453806	Rural (not London)	8	5624	141	47	6411	149	46	6543	149	46
6750863	Rural (not London)	6	2730	115	95	2830	114	95	2861	114	95
7862	Rural (not London)	6	3217	108	95	3367	108	95	3387	108	95
6750859	Rural (not London)	6	2751	108	95	2853	108	95	2880	108	95
6750865	Rural (not London)	6	2641	135	95	2726	134	95	2759	134	95
6750868	Rural (not London)	6	2621	145	95	2709	141	95	2743	141	95
6750869	Rural (not London)	6	2528	160	95	2598	161	95	2632	161	95
6750682	Rural (not London)	6	72	0	96	76	0	96	76	0	96
6750678	Rural (not London)	6	2444	154	95	2513	159	95	2550	159	95
6751116	Rural (not London)	6	3306	119	96	3633	119	96	3632	110	96
6751110	Rural (not London)	6	3336	92	48	3735	92	48	3752	85	48
4745959	Rural (not London)	6	2588	65	48	2932	66	48	2969	58	48
6984	Rural (not London)	6	2510	50	48	2867	50	48	2904	46	48
4749037	Rural (not London)	6	2512	46	48	2920	52	48	2958	48	48
6751124	Rural (not London)	6	4043	94	48	4716	96	48	4893	89	48
7000211	Rural (not London)	6	-	-	-	-	-	-	2227	31	96

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
7000212	Rural (not London)	6	-	-	-	-	-	-	2227	31	48
1562	Rural (not London)	6	1511	83	96	1540	89	96	1607	106	96
6750455	Rural (not London)	6	1932	31	48	2193	31	48	2275	79	48
6751489	Rural (not London)	6	5490	61	95	6155	60	95	6085	60	95
6751490	Rural (not London)	6	5490	61	95	6155	60	95	6085	60	95
6750448	Rural (not London)	6	4117	104	96	4724	109	95	4892	101	95
6750449	Rural (not London)	6	4117	104	48	4724	109	48	4892	101	48
6750457	Rural (not London)	5	1578	20	48	1791	19	48	1835	19	48
6750451	Rural (not London)	5	4243	94	48	4919	94	48	5092	87	48
2803522	Rural (not London)	6	3916	92	48	4488	91	48	4651	84	48
4850	Rural (not London)	6	2067	43	64	2407	47	64	2500	44	64
6300	Rural (not London)	6	2058	68	64	2325	70	64	2398	63	64
6832	Rural (not London)	6	0	0	0	0	0	0	0	0	0
8140	Rural (not London)	6	0	0	0	0	0	0	0	0	0
9500	Rural (not London)	6	2058	68	64	2325	70	64	2398	63	64
9850	Rural (not London)	6	2067	43	64	2407	47	64	2500	44	64
2613077	Rural (not London)	6	2067	43	64	2407	47	64	2500	44	64
2615359	Rural (not London)	6	2058	68	64	2325	70	64	2398	63	64
6751472	Rural (not London)	6	6746	275	64	7120	283	64	7224	236	64
2147734	Rural (not London)	6	9078	348	95	9660	349	95	9683	336	95
9234	Rural (not London)	6	5647	242	95	5975	244	95	5987	236	95
9240	Rural (not London)	6	3431	106	96	3683	105	95	3696	100	96
7822	Rural (not London)	6	3763	133	95	4009	138	95	4039	131	95

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6826	Rural (not London)	6	661	0	48	862	0	48	924	0	48
6874	Rural (not London)	6	3807	164	48	4017	159	48	3984	157	48
6922	Rural (not London)	6	8592	354	48	9195	362	47	9236	356	47
6936	Rural (not London)	6	8245	323	48	8742	312	47	8690	306	47
7788	Rural (not London)	6	4642	189	48	4937	194	47	4970	187	47
7828	Rural (not London)	6	7935	354	45	8333	360	45	8312	354	45
9502	Rural (not London)	6	7585	321	46	7882	312	45	7769	304	46
9508	Rural (not London)	6	4436	159	47	4723	155	47	4712	149	47
6898	Rural (not London)	6	3984	185	48	4228	192	48	4251	185	48
6890	Rural (not London)	6	8450	352	48	8950	349	48	8944	340	48
6751222	Rural (not London)	4	3567	0	32	3949	0	31	3957	0	31
6751218	Rural (not London)	6	3134	0	32	3085	0	32	3273	0	32
1402	Rural (not London)	6	1266	0	96	1389	0	96	1427	0	96
1404	Rural (not London)	6	964	8	96	1133	10	96	1124	10	96
1827827	Rural (not London)	7	2230	8	96	2522	10	96	2551	10	96
1854616	Rural (not London)	7	964	8	96	1133	10	96	1124	10	96
1856537	Rural (not London)	7	1266	0	96	1389	0	96	1427	0	96
2892	Rural (not London)	8	3191	6	48	3566	6	48	3601	5	48
6018	Rural (not London)	7	964	8	96	1133	10	96	1124	10	96
1879667	Rural (not London)	7	1926	6	96	2177	6	96	2174	5	96
1883536	Rural (not London)	6	345	5	48	501	5	48	554	4	48
6751148	Rural (not London)	6	3537	11	48	4068	11	48	4153	9	48
2003462	Rural (not London)	7	3231	21	48	3809	21	48	3847	19	48

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
1566	Rural (not London)	6	880	8	96	912	8	96	883	8	96
90	Rural (not London)	6	1621	6	112	1622	6	112	1604	6	112
3378	Rural (not London)	6	4117	29	96	4715	28	96	4730	26	96
6751225	Rural (not London)	4	5424	0	48	6328	0	47	6480	0	47
6751669	Rural (not London)	4	4473	0	48	5461	0	47	5400	0	47
6751528	Rural (not London)	6	14126	495	60	16223	540	58	16148	538	58
6751531	Rural (not London)	6	14126	495	45	16223	540	43	16148	538	44
6751479	Rural (not London)	6	14126	495	45	16223	540	43	16148	538	44
6751526	Rural (not London)	6	6607	409	48	7584	423	48	7619	423	48
6751521	Rural (not London)	5	6607	409	48	7584	423	48	7619	423	48
6751523	Rural (not London)	5	6607	409	48	7584	423	48	7619	423	48
6751525	Rural (not London)	5	6607	409	48	7584	423	48	7619	423	48
6751527	Rural (not London)	5	6607	409	48	7584	423	48	7619	423	48
6750746	Rural (not London)	6	3440	90	96	3020	90	96	3079	73	96
6750747	Rural (not London)	6	3440	90	96	3020	90	96	3079	73	96
6792	Rural (not London)	8	0	0	0	475	0	64	471	0	64
6948	Rural (not London)	8	9308	185	63	16246	187	60	16142	186	61
6950	Rural (not London)	8	3824	43	64	7839	45	61	7939	45	61
7368	Rural (not London)	8	9066	193	63	10724	183	63	10785	185	63
7372	Rural (not London)	8	10296	268	57	12985	266	51	12931	264	51
7432	Rural (not London)	8	10296	268	63	13462	266	62	13398	264	62
9244	Rural (not London)	8	5244	150	63	3360	139	64	3316	141	64
9246	Rural (not London)	8	5478	138	64	8405	142	63	8202	140	63

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
796087	Rural (not London)	8	19363	461	59	23709	449	54	23716	450	54
809936	Rural (not London)	8	9066	193	63	11200	183	63	11257	185	63
6804	Rural (not London)	8	5781	18	62	5395	15	62	5216	15	62
6956	Rural (not London)	8	3530	94	64	3798	87	64	3781	91	64
7006	Rural (not London)	8	11317	118	63	12325	112	62	12223	110	62
7362	Rural (not London)	8	11894	193	54	12966	202	51	13090	202	51
8724	Rural (not London)	8	9066	193	60	10724	183	57	10785	185	57
8726	Rural (not London)	8	10296	268	63	12985	266	62	12931	264	62
8728	Rural (not London)	8	19363	461	59	23709	449	54	23716	450	54
700181	Rural (not London)	8	14845	214	61	16121	201	60	16003	203	60
729856	Rural (not London)	8	23211	311	55	25291	314	52	25313	312	52
9074	Rural (not London)	8	19363	461	59	23709	449	54	23716	450	54
9076	Rural (not London)	8	19363	461	59	23709	449	54	23716	450	54
7434	Rural (not London)	8	15426	288	61	16756	288	60	16869	289	59
7906	Rural (not London)	8	6384	165	62	6738	166	62	6888	165	62
6960	Rural (not London)	8	16077	288	60	18386	285	58	18149	281	58
6751537	Rural (not London)	12	16386	1053	112	17938	1029	112	18017	1383	112
1283266	Rural (not London)	12	20382	1050	105	20908	1011	75	20865	1444	75
8540	Rural (not London)	10	13483	422	62	14922	425	61	15152	422	61
715534	Rural (not London)	10	13483	422	64	14922	425	64	15150	422	63
739484	Rural (not London)	9	13483	422	62	14922	425	61	15152	422	61
6728	Rural (not London)	8	19876	714	35	19435	692	22	19404	679	19
6730	Rural (not London)	8	26178	867	34	26629	854	27	26609	833	28

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6732	Rural (not London)	8	23771	767	27	23555	720	14	23367	710	14
8402	Rural (not London)	8	20740	641	15	20585	587	10	20563	581	10
8414	Rural (not London)	8	23271	745	38	23849	721	21	24000	708	21
8432	Rural (not London)	8	6266	146	63	7132	150	62	7147	149	62
8434	Rural (not London)	8	7179	269	35	7296	251	9	7475	250	9
8782	Rural (not London)	8	13483	422	63	14523	405	42	14716	403	42
695491	Rural (not London)	8	2937	126	64	2841	131	64	2670	129	64
6750470	Rural (not London)	8	44015	1386	34	44505	1314	23	44635	1289	23
7940	Rural (not London)	8	4536	113	25	4597	108	9	4813	108	9
6820	Rural (not London)	8	27026	982	30	26670	935	15	26823	916	15
6751235	Rural (not London)	8	31988	881	33	32976	845	28	32896	818	29
6751234	Rural (not London)	8	30096	864	36	32992	845	32	32806	816	32
7710	Rural (not London)	7	28674	827	37	31672	820	33	31457	793	34
6751231	Rural (not London)	7	28674	827	37	31672	820	33	31457	793	34
6751233	Rural (not London)	7	28674	827	37	31672	820	33	31457	793	34
1542	Rural (not London)	6	6373	532	93	7503	538	93	7513	592	92
1544	Rural (not London)	6	4480	418	47	6831	418	46	6826	418	46
7780	Rural (not London)	6	15061	1158	94	19201	1196	91	19282	1248	91
268577	Rural (not London)	6	8857	431	95	10355	433	95	10178	485	95
270737	Rural (not London)	6	13335	848	94	17188	854	92	17005	903	92
273631	Rural (not London)	6	8696	629	95	11700	658	95	11777	656	95
2672	Rural (not London)	8	15000	2469	106	17744	2942	103	17707	2942	104
108802	Rural (not London)	8	23296	3831	98	26710	4339	92	26603	4315	93

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
111032	Rural (not London)	8	25844	3233	95	29189	3730	89	29309	3730	89
111481	Rural (not London)	8	15405	2875	105	18646	3393	102	18524	3384	102
6751543	Rural (not London)	10	10844	768	110	11441	786	109	11598	786	109
6751608	Rural (not London)	10	7895	956	110	8057	943	110	8067	932	110
6751609	Rural (not London)	10	7895	956	104	8057	943	104	8067	932	104
1572	Rural (not London)	10	6136	285	64	5926	199	56	5809	194	56
1578	Rural (not London)	9	15698	1423	43	14699	1346	41	14873	1335	38
2260	Rural (not London)	8	23296	3831	98	26710	4339	92	26603	4315	93
2262	Rural (not London)	8	25844	3233	95	29189	3730	89	29309	3730	89
137716	Rural (not London)	8	25844	3233	95	29189	3730	89	29309	3730	89
142297	Rural (not London)	8	23296	3831	98	26710	4339	92	26603	4315	93
148531	Rural (not London)	8	20137	3786	102	22475	4296	98	22567	4271	98
149057	Rural (not London)	8	20184	3194	102	22338	3688	99	22466	3688	98
138221	Rural (not London)	8	31295	4560	89	34118	5038	82	34259	4996	82
139234	Rural (not London)	8	28480	3872	92	31693	4389	85	31837	4384	85
110137	Rural (not London)	8	23797	4140	99	25465	4518	96	25531	4481	95
111931	Rural (not London)	8	19814	3346	102	22749	3849	98	23081	3849	97
102691	Rural (not London)	8	28885	4604	92	30805	4977	87	30957	4927	87
1512	Rural (not London)	7	9272	1238	109	9993	1208	109	10166	1180	109
1648	Rural (not London)	7	8858	1179	95	9596	1146	95	9782	1118	95
29762	Rural (not London)	7	12997	1564	108	13896	1522	108	13951	1486	108
174	Rural (not London)	7	9107	1287	109	10005	1255	109	10176	1226	109
352	Rural (not London)	7	11760	1564	109	12921	1537	108	13099	1509	108

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
1580	Rural (not London)	7	239	106	105	397	108	108	372	108	107
7980	Rural (not London)	5	7718	257	93	5258	243	94	5231	318	94
9618	Rural (not London)	8	13711	2877	106	17926	3434	104	17891	3426	104
1094584	Rural (not London)	8	13832	3173	106	15585	3774	104	15420	3760	104
6751288	Rural (not London)	5	7807	228	93	8424	228	92	8674	307	92
6751289	Rural (not London)	5	7807	228	64	2453	92	64	2533	167	64
6751790	Rural (not London)	5	-	-	-	-	-	-	6148	141	62
6751517	Rural (not London)	6	5490	61	64	6155	60	63	6085	60	63
6751518	Rural (not London)	6	5490	61	95	6155	60	95	6085	60	95
6751519	Rural (not London)	6	5490	61	48	6155	60	48	6085	60	48
7000219	Rural (not London)	6	-	-	-	-	-	-	6893	64	48
7000218	Rural (not London)	6	-	-	-	-	-	-	6552	64	48
6750999	Rural (not London)	6	6251	70	48	6874	74	48	6889	74	48
6751583	Rural (not London)	6	2550	65	48	3240	64	48	3345	64	48
6750978	Rural (not London)	6	2322	55	64	3006	58	64	3112	58	64
6751474	Rural (not London)	6	2048	47	64	2708	48	64	2819	48	64
6751475	Rural (not London)	6	2048	47	48	2708	48	48	2819	48	48
6751481	Rural (not London)	6	2557	47	48	3167	48	48	3265	48	48
6751484	Rural (not London)	6	2557	47	96	3167	48	96	3265	48	96
6751485	Rural (not London)	6	2557	47	48	3167	48	48	3265	48	48
6751486	Rural (not London)	6	2557	47	96	3167	48	96	3265	48	96
6750996	Rural (not London)	6	4025	262	48	5093	264	48	5221	247	48
6750997	Rural (not London)	6	4555	256	48	5846	259	48	5986	241	48

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751006	Rural (not London)	6	6857	231	48	8446	235	47	8568	218	47
6751005	Rural (not London)	6	7118	237	48	8687	239	47	8810	220	47
3012	Rural (not London)	6	181	0	80	199	0	80	199	0	80
6194	Rural (not London)	6	3838	260	80	4890	264	80	5018	247	80
6751182	Rural (not London)	5	3272	11	48	4361	11	48	4631	9	48
7458	Rural (not London)	6	8715	272	47	9528	275	47	9633	273	47
9034	Rural (not London)	7.5	8715	272	47	9528	275	47	9633	273	47
6762	Rural (not London)	6	8715	272	47	9528	275	47	9633	273	47
6750931	Rural (not London)	6	5985	76	48	6275	77	48	6314	77	48
8064	Rural (not London)	6	6065	137	47	6522	138	46	6573	138	46
8066	Rural (not London)	6	6155	121	46	6658	126	46	6706	126	46
3311621	Rural (not London)	6	6301	205	46	6787	209	46	6837	209	46
6750588	Rural (not London)	6	3165	2	48	2590	2	48	2575	2	48
6750930	Rural (not London)	5	5686	66	48	5978	70	48	6015	70	48
6751437	Rural (not London)	6	2959	0	48	2378	0	48	2366	0	48
6751432	Rural (not London)	7	2959	0	80	2378	0	80	2366	0	80
6751434	Rural (not London)	6	2959	0	48	2378	0	48	2366	0	48
6751436	Rural (not London)	7	2959	0	80	2378	0	80	2366	0	80
6751575	Rural (not London)	7	1423	0	64	1149	0	64	1163	0	64
6751597	Rural (not London)	8	1536	0	64	1230	0	64	1203	0	64
6751574	Rural (not London)	7	1423	0	64	1149	0	64	1163	0	64
8862	Rural (not London)	6	11563	29	46	11129	19	47	11178	125	47
6352597	Rural (not London)	6	11563	29	46	11129	19	47	11178	125	47

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6546376	Rural (not London)	6	11563	29	46	11129	19	47	11178	125	47
6611617	Rural (not London)	6	9188	37	43	9227	46	42	9567	45	41
7000105	Rural (not London)	7	-	-	-	-	-	-	-	-	-
6751691	Rural (not London)	7	-	-	-	-	-	-	3392	0	48
6320584	Rural (not London)	7	880	0	48	3310	0	48	-	-	-
6011836	Rural (not London)	8	9065	252	63	9298	250	63	9402	301	63
1432	Rural (not London)	8	6231	186	64	6503	184	64	6598	237	64
6067396	Rural (not London)	8	8712	264	64	8907	269	63	9040	322	63
1612	Rural (not London)	8	1947	33	64	2058	33	64	2077	33	64
1906	Rural (not London)	7	4272	149	64	4452	151	63	4515	204	63
1908	Rural (not London)	7	7108	215	61	7238	217	61	7319	268	60
6751261	Rural (not London)	8	9396	156	48	9571	161	47	9711	214	47
1360	Rural (not London)	8	14876	235	46	15675	236	46	15735	287	46
6751262	Rural (not London)	8	12461	158	47	13484	167	47	13709	220	47
366	Rural (not London)	8	11130	154	47	12244	163	47	12409	216	47
6751281	Rural (not London)	6	5223	0	48	6102	0	48	6074	0	48
6278026	Rural (not London)	6	8219	151	48	9057	151	47	9055	151	47
6751279	Rural (not London)	6	6387	151	47	6512	151	47	6589	151	47
6751278	Rural (not London)	7	5768	149	47	6237	149	47	6233	149	47
6751280	Rural (not London)	4	2446	0	48	2816	0	48	2816	0	48
6751282	Rural (not London)	5	2779	0	48	3286	0	48	3258	0	48
6750794	Rural (not London)	7	6205	41	47	6783	37	47	6797	37	47
6751275	Rural (not London)	6	7379	117	47	7910	118	46	7902	118	46

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751272	Rural (not London)	4	7379	117	48	7910	118	48	7902	118	48
6750795	Rural (not London)	6	6375	33	37	6780	35	31	6767	35	29
8874	Rural (not London)	7	5395	33	29	5306	31	21	5337	31	20
6542761	Rural (not London)	4	6435	117	46	6514	118	46	6557	118	46
6751274	Rural (not London)	3	936	0	48	1398	0	48	1347	0	48
6560846	Rural (not London)	5	9202	39	44	9227	46	42	9587	45	42
6750686	Rural (not London)	7	9126	37	42	9196	45	42	9515	45	41
6750685	Rural (not London)	4	10022	94	22	9963	87	20	9957	140	20
6750687	Rural (not London)	4	8524	108	42	9339	107	40	9126	160	40
6854	Rural (not London)	4	11113	96	32	11061	87	32	11084	140	32
7514	Rural (not London)	4	6581	41	44	5966	39	45	6005	92	45
8028	Rural (not London)	4	4526	51	46	5098	50	46	5082	50	46
8846	Rural (not London)	4	5953	43	32	6160	43	32	6201	96	32
6750684	Rural (not London)	4	1087	0	48	1094	0	48	1126	0	48
8076	Rural (not London)	4	4284	41	47	4404	43	47	4432	96	47
6750683	Rural (not London)	4	9609	108	32	10437	108	32	10256	161	32
6746	Rural (not London)	4	10487	98	32	11258	95	32	11283	148	32
728	Rural (not London)	6	7844	252	92	8543	296	91	8629	296	91
2180	Rural (not London)	6	7201	229	96	7759	234	96	7821	234	96
208	Rural (not London)	6	890	0	96	0	0	0	0	0	0
724	Rural (not London)	6	7844	252	92	8543	296	91	8629	296	91
1434	Rural (not London)	6	8093	229	93	7759	234	93	7821	234	93
2158	Rural (not London)	6	7201	229	94	7759	234	93	7821	234	93

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
4602421	Rural (not London)	6	8740	252	91	8543	296	91	8629	296	91
206	Rural (not London)	6	0	0	0	0	0	0	0	0	0
1474	Rural (not London)	6	7201	229	94	7759	234	93	7821	234	93
1294	Rural (not London)	6	9520	229	92	7759	234	93	7821	234	93
406	Rural (not London)	6	8740	252	91	8543	296	91	8629	296	91
2156	Rural (not London)	6	9520	229	92	7759	234	93	7821	234	93
6004	Rural (not London)	4	2963	43	95	3318	43	95	3298	43	95
6238	Rural (not London)	4	2844	23	95	3161	23	95	3108	23	95
725066	Rural (not London)	8	12715	296	46	13760	305	45	13867	305	45
6751638	Rural (not London)	8	11760	167	46	13102	179	46	13003	178	46
6751639	Rural (not London)	8	12133	222	46	13113	216	46	12992	215	46
592	Rural (not London)	10.7	-	-	-	-	-	-	10708	790	80
7000283	Rural (not London)	7.5	-	-	-	-	-	-	-	-	-
9490	Rural (not London)	10.7	-	-	-	-	-	-	4790	181	64
7000286	Rural (not London)	7.5	-	-	-	-	-	-	-	-	-
6751460	Rural (not London)	6	-	-	-	-	-	-	-	-	-
6120	Rural (not London)	6	-	-	-	-	-	-	-	-	-
7000131	Rural (not London)	6	-	-	-	-	-	-	-	-	-
52	Rural (not London)	6	9916	230	110	11246	220	110	11078	209	110
474	Rural (not London)	6	2254	4	112	2690	0	112	2678	0	112
912	Rural (not London)	6	0	0	0	0	0	0	0	0	0
1374	Rural (not London)	6	4282	230	111	4717	220	111	4613	209	111
7010	Rural (not London)	6	5719	336	93	8146	331	91	8195	333	90

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
7012	Rural (not London)	6	4282	230	94	4717	220	95	4613	209	95
8756	Rural (not London)	6	9756	375	110	14832	385	108	14827	389	108
8758	Rural (not London)	6	7656	224	91	8560	220	89	8401	209	89
8778	Rural (not London)	6	10001	566	94	12863	551	92	12808	542	92
6751293	Rural (not London)	6	9273	983	95	10066	918	95	10023	908	95
6751294	Rural (not London)	6	5636	0	96	6531	0	95	6465	0	95
6751295	Rural (not London)	6	3637	983	91	3537	918	92	3556	908	92
6751675	Rural (not London)	6	12013	379	110	17519	385	107	17503	389	107
24	Rural (not London)	6	5719	336	111	8146	331	111	8195	333	111
1538	Rural (not London)	6	5950	51	94	9237	50	91	9155	52	91
6751676	Rural (not London)	6	11675	389	110	17383	385	106	17353	389	106
1372	Rural (not London)	6	5719	336	93	8146	331	91	8195	333	90
1540	Rural (not London)	6	4282	230	94	4717	220	95	4613	209	95
1552	Rural (not London)	6	5719	336	93	8146	331	91	8195	333	90
1684	Rural (not London)	6	4282	230	94	4717	220	95	4613	209	95
822631	Rural (not London)	6	9989	560	90	12859	551	84	12806	544	84
1546	Rural (not London)	6	7405	614	92	10163	647	90	10223	647	90
1548	Rural (not London)	6	4622	184	111	5292	184	111	5011	234	111
9514	Rural (not London)	6	17553	1060	44	22055	1091	41	21955	1141	41
9826	Rural (not London)	6	16253	1036	93	20509	1073	90	20394	1125	90
267142	Rural (not London)	6	8846	420	95	10344	422	95	10169	476	95
269296	Rural (not London)	6	8685	618	94	11689	647	94	11768	647	94
7782	Rural (not London)	6	13301	799	94	16981	833	92	16783	885	93

Road Link	Road Type	Width (m)	2018 BC			2023 RC			2023 AD		
			Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
682	Rural (not London)	8	0	0	0	0	0	0	222	34	64
692	Rural (not London)	8	0	0	0	0	0	0	180	34	64
4545022	Rural (not London)	5	1964	0	20	1985	0	20	1997	0	20
4487984	Rural (not London)	4	445	11	48	471	14	48	475	14	48
671	Rural (not London)	10	0	0	0	0	0	0	207	34	48
6750513	Rural (not London)	5	1671	7	96	1913	7	96	1915	0	96
7000279	Rural (not London)	6	-	-	-	-	-	-	1915	0	96
6750515	Rural (not London)	6	1671	7	96	1913	7	96	-	-	-
7000278	Rural (not London)	6	-	-	-	-	-	-	1915	0	96
6751177	Rural (not London)	6	1671	7	96	1913	7	96	-	-	-

Table notes: BC= Base case (baseline scenario); RC= Reference case (without proposed development); AD = Typical day (with proposed development)

Table 1.2: Road types, widths, all traffic flows (AADT), HDV flows (AADT) and Speed (kph) for 2028 AD, 2028 BD, 2034 RC and 2034 AD scenarios

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
8	11353	615	94	12427	1335	93	12608	1633	93	11936	627	94	12208	651	93
32	34659	3200	47	34936	3367	47	34868	3474	47	35451	3225	47	35416	3230	47
34	29443	3217	49	29616	3358	49	29626	3463	49	29722	3169	49	29710	3178	49
36	32829	3064	60	33137	3207	52	33181	3308	52	33724	3027	43	33737	3054	52
40	10698	422	63	11761	714	63	11810	863	63	11386	440	63	11336	458	63
64	19944	1043	62	20300	1473	62	20472	1730	61	21014	1037	61	21000	1049	61
116	12020	457	95	12577	469	95	12588	478	95	12646	471	95	12660	468	95
144	29155	1402	48	29850	1681	46	29903	1830	46	30733	1444	46	30705	1459	46
146	30229	1534	45	30504	1827	44	30499	1976	40	31075	1582	44	31031	1600	40
148	26654	1362	51	27125	1637	50	27034	1786	50	27078	1368	51	27080	1369	51
150	19764	995	57	20371	1270	57	20354	1423	57	19942	1002	58	19907	1019	58
154	19599	732	91	20117	748	91	20125	757	91	20641	752	90	20648	753	90
156	19843	562	91	20333	578	90	20342	587	90	21077	577	89	21097	578	89
280	5534	124	92	6686	198	90	6700	198	90	6081	124	91	6092	118	91
300	9670	224	63	9893	701	63	9833	933	63	10929	212	63	10950	214	63
324	21070	1216	57	20892	1508	57	20841	1657	57	21133	1249	57	21116	1271	57
328	30096	1397	90	30757	1666	89	30764	1815	89	31392	1405	76	31397	1408	76
340	31121	1482	44	31024	1771	44	31016	1922	44	31683	1520	44	31634	1538	44
354	18737	1971	105	19282	1958	104	19334	1954	104	19946	2019	104	19932	2019	104
390	15404	809	48	15318	789	48	15271	791	48	16339	827	48	15606	811	48

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
416	9991	398	80	-	-	-	-	-	-	10712	411	80	-	-	-
546	11413	617	94	12483	1337	93	12671	1637	92	12002	631	94	12270	653	93
552	11983	678	48	11384	660	48	11338	660	48	12678	694	48	11844	676	48
592_1	10527	467	80	-	-	-	-	-	-	10963	467	80	-	-	-
598	30155	3597	63	30817	3577	62	30862	3577	62	32139	3686	61	32137	3692	61
606	12787	481	112	13809	735	112	13889	855	112	13676	498	112	13707	508	112
614	10599	414	89	11451	691	88	11534	842	87	11002	421	88	10999	433	88
636	29362	4689	89	29531	4866	88	29665	4975	88	30565	4738	87	30473	4747	87
676	9309	451	91	9871	465	90	9880	474	90	9787	467	90	9801	466	90
758	14293	31	46	14281	126	46	14290	160	46	14963	31	46	14949	34	46
898	5525	362	63	6118	423	62	6138	449	62	5817	372	62	5767	374	62
1320	21432	1173	61	21788	1627	61	21894	1874	61	22809	1156	61	22834	1171	61
1330	25602	1366	52	25888	1649	51	25919	1798	51	26122	1401	51	26137	1415	51
1332	22778	1102	55	23111	1395	54	23158	1544	54	23234	1141	55	23184	1159	55
1380	31250	3599	48	31702	3755	48	31718	3862	46	31931	3570	41	32045	3592	36
1406	3008	62	95	3677	62	94	3658	62	94	3298	66	94	3271	66	94
1482	2819	133	64	2858	336	64	2854	421	64	2941	121	64	2938	121	64
1502	20834	1023	57	21694	1312	56	21611	1463	56	21368	1042	56	21303	1058	56
1514	14802	953	93	15016	1156	93	15121	1290	93	15304	941	93	15307	952	93
1560_1	2018	90	96	-	-	-	-	-	-	2257	92	96	-	-	-
1564	2694	43	95	3245	43	95	3237	43	95	2826	45	95	2826	45	95
1576	20993	2272	48	21146	2428	48	21129	2533	48	21101	2239	47	21042	2252	49

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
1582	9165	577	58	8920	573	59	8812	575	59	8948	589	59	8912	587	59
1586	9535	413	63	9153	409	63	9085	411	63	9859	416	63	9837	416	63
1590	2536	128	64	2891	120	64	2961	120	64	2844	128	64	2886	122	64
1606	6631	224	64	6774	473	64	6778	583	64	7504	212	64	7530	214	64
1652	15251	1030	95	15836	1306	95	15867	1455	95	16029	1034	81	16033	1040	81
1678	17344	953	59	17658	1384	59	17828	1640	59	18238	941	59	18226	952	59
1696	3605	60	94	4777	60	93	4783	60	93	3897	62	94	3924	62	94
1704	2267	82	95	3336	155	94	3347	155	94	2596	82	95	2577	76	95
1706	5278	112	92	6518	186	91	6565	186	91	5575	115	92	5622	107	92
1716	5543	99	92	6710	173	91	6719	173	91	6016	105	91	6013	97	91
1862	11796	552	87	12288	568	86	12295	577	86	12446	568	86	12465	569	86
1864	9309	451	95	9871	465	95	9880	474	95	9787	467	95	9801	466	95
2322	28733	3000	93	29165	3167	93	29130	3276	93	29693	3023	92	29662	3027	92
2324	26176	3426	94	26641	3621	94	26746	3726	94	27889	3529	92	27898	3538	92
2366	10527	467	80	-	-	-	-	-	-	10963	467	80	-	-	-
2396	11667	444	63	12772	735	62	12794	884	62	12424	457	62	12387	475	62
2426	13159	631	112	13983	868	112	14010	990	112	13558	627	112	13623	635	112
2482	19140	521	58	19796	616	57	19811	650	57	19797	540	58	19785	545	57
2484	19140	521	58	19796	616	57	19811	650	57	19797	540	58	19785	545	57
2488	19140	521	58	19796	616	57	19811	650	57	19797	540	58	19785	545	57
2494	19140	521	91	19796	616	90	19811	650	90	19797	540	90	19785	545	90
2556	5714	258	62	7246	321	60	7270	349	60	5966	260	62	5962	262	62

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
3030	3999	167	48	-	-	-	-	-	-	4263	171	48	-	-	-
3212	11	11	0	159	159	0	159	159	0	11	11	0	11	11	0
3452	8090	187	42	8959	176	41	9055	176	41	9593	191	40	9590	186	40
3456	4525	150	46	4987	141	46	5070	141	46	4984	152	46	5023	146	46
4188	5645	150	46	6302	141	45	6460	141	45	6578	152	45	6611	146	45
4548	2049	39	64	2628	39	64	2624	39	64	2150	39	64	2642	39	64
4978	12615	337	44	13946	317	43	14126	317	43	14577	343	42	14613	332	42
5966	11546	613	94	12321	594	94	12348	594	94	12828	634	94	12915	631	93
5980	1994	0	96	2966	0	96	2966	0	96	2095	0	96	2065	0	96
6120_1	3348	160	48	-	-	-	-	-	-	3540	160	48	-	-	-
6122	2283	0	96	3288	0	96	3288	0	96	2409	0	96	2430	0	96
6240	9573	212	96	11043	287	96	11052	287	96	10187	218	96	10208	216	96
6246	4695	72	95	5394	72	94	5388	72	94	5075	76	94	5119	76	94
6296	11275	588	64	12113	590	64	12169	590	64	13117	609	64	13076	606	64
6968	14844	365	33	14914	358	33	14893	358	33	15336	372	33	15343	374	33
7036	4035	177	48	4522	181	48	4522	181	48	4432	181	48	4474	183	48
7770	12704	600	79	13318	602	78	13384	602	78	13925	618	78	13903	618	78
7794	11181	226	64	11783	210	64	11781	210	64	11898	229	64	12056	226	64
7812	10129	597	57	9925	595	57	9787	595	57	9994	608	57	9965	606	57
7998	14844	365	33	14914	358	33	14893	358	33	15336	372	33	15343	374	33
8096	12751	277	60	12436	252	60	12236	215	60	14062	270	59	14088	269	60
8242	5370	157	79	5895	161	79	5951	161	79	5879	163	79	5928	165	79

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
8282	11405	331	48	11522	340	48	11511	340	48	12014	329	48	12009	327	48
8284	12508	299	48	12825	308	48	12811	308	48	12956	306	48	13042	306	48
8826	9669	35	47	9573	125	47	9578	157	47	9832	39	47	9837	43	46
9230	12082	678	62	11344	678	63	11344	678	63	11849	701	62	11842	701	62
9248	12751	277	92	12436	252	92	12236	215	92	14062	270	92	14088	269	92
9250	12751	277	60	12436	252	60	12236	215	60	14062	270	59	14088	269	60
9254	12751	277	60	12436	252	60	12236	215	60	14062	270	59	14088	269	60
9374	15367	302	48	15472	302	48	15485	302	48	16199	310	48	16196	308	48
9378	15367	302	48	15472	302	48	15485	302	48	16199	310	48	16196	308	48
9394	15367	302	48	15472	302	48	15485	302	48	16199	310	48	16196	308	48
9480	8048	159	48	8663	159	47	8714	159	47	8705	161	47	8790	163	47
9490_1	4655	101	64	-	-	-	-	-	-	4955	101	64	-	-	-
9520	3962	296	64	4516	328	64	4535	346	64	4167	300	64	4128	302	63
9862	8855	144	95	9004	420	95	9099	569	95	9503	148	95	9501	148	95
9864	4034	133	64	4133	384	64	4139	496	64	4731	121	64	4758	121	64
10360	6619	92	96	6706	92	96	6706	92	96	6948	92	96	6950	92	96
10408	4672	25	32	5340	25	32	5350	25	32	4966	27	32	5450	27	31
10410	2481	0	32	3739	150	32	3739	150	32	2654	0	32	2848	0	32
10442	3115	80	96	-	-	-	-	-	-	3295	80	96	-	-	-
10452	3165	82	96	-	-	-	-	-	-	3347	82	96	-	-	-
10456	6947	10	93	7032	10	93	7031	10	93	7313	10	92	7314	10	92
14551_1	26176	3426	94	26641	3621	94	26746	3726	94	27889	3529	92	27898	3538	92

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
21334_1	28733	3000	93	29165	3167	93	29130	3276	93	29693	3023	92	29662	3027	92
24151	28733	3000	93	29165	3167	93	29130	3276	93	29693	3023	92	29662	3027	92
25681	26176	3426	94	26641	3621	94	26746	3726	94	27889	3529	92	27898	3538	92
25856	28733	3000	93	29165	3167	93	29130	3276	93	29693	3023	92	29662	3027	92
32192	14420	1640	93	14784	1631	93	14863	1631	93	15523	1692	93	15513	1692	93
37252	14453	1644	96	14823	1623	96	14880	1623	96	15488	1657	96	15494	1661	96
37484	19069	2109	96	19440	2102	96	19452	2102	96	20431	2164	96	20417	2162	96
44647_1	11064	1385	96	11131	1362	96	11156	1362	96	11585	1389	96	11579	1397	96
45436	14781	1825	96	14925	1818	96	14927	1818	96	15771	1877	96	15809	1877	96
54412_1	20812	2667	73	21183	2645	73	21225	2643	73	22115	2723	72	22099	2727	72
88271	28733	3000	93	29165	3167	93	29130	3276	93	29693	3023	92	29662	3027	92
93892	20215	2547	52	20649	2709	52	20688	2814	52	20699	2510	46	20764	2533	46
103552_1	29114	4293	89	29492	4286	88	29575	4286	88	31120	4411	86	31116	4411	85
236584	37588	6256	112	37807	6372	112	37841	6453	112	40135	6341	112	40080	6350	112
239282	41269	5902	112	41493	6055	112	41470	6139	112	43888	5958	112	43950	5963	112
289834	27362	4805	91	27714	4997	91	27616	5103	91	28683	4883	89	28626	4882	89
751609_1	35569	5355	77	35993	5580	77	35898	5702	77	37462	5446	74	37414	5448	74
758932_1	34870	4871	79	35118	5078	78	35246	5205	78	36654	4937	76	36560	4948	76
788584	9219	588	64	10039	590	64	10096	590	64	10881	609	64	10842	606	64
816271	25075	4428	95	25471	4654	95	25421	4780	95	26268	4511	94	26252	4516	94
818812	26255	4536	93	26484	4745	93	26595	4874	93	27607	4575	92	27615	4586	92
841861	2059	0	48	2073	0	48	2073	0	48	2237	0	48	2235	0	48

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
979984	33423	4797	112	-	-	-	-	-	-	35149	4888	112	-	-	-
981377	28698	4843	112	28911	5015	112	28861	5114	112	30062	4872	112	30093	4878	112
1047976	17396	1040	62	17654	1245	63	17759	1380	62	18072	1034	62	18075	1049	62
1060981	22752	1189	54	22924	1642	54	23016	1891	54	23850	1173	54	23838	1186	54
1127221	23914	630	48	24347	647	48	24322	647	48	24969	635	48	25050	633	48
1204741	23230	1063	112	23291	1278	112	23289	1398	112	24045	1054	112	23855	1065	112
1210931	23447	1139	112	22037	1369	112	22053	1489	112	24108	1168	112	23043	1178	112
1237417	24553	1053	112	24914	1268	112	24841	1388	112	25667	1043	112	25587	1053	112
1245262	21577	972	112	22028	1203	112	21986	1324	112	22935	1001	112	23154	1010	112
1286459	22152	997	74	22429	1257	74	22400	1406	74	22886	988	74	22871	1001	74
1338091	23544	3899	112	23587	3925	112	23587	3944	112	24786	3963	112	24772	3967	112
1349522	17687	489	96	17657	743	96	17584	863	96	17944	527	96	17942	537	96
1351159	20173	486	96	20141	713	96	19969	831	96	20308	471	96	20291	482	96
1361002	37860	975	96	37798	1456	96	37553	1694	96	38253	998	96	38233	1019	96
1377487	20173	486	96	20141	713	96	19969	831	96	20308	471	96	20291	482	96
1382452	17687	489	96	17657	743	96	17584	863	96	17944	527	96	17942	537	96
1480211	20263	1184	64	20868	1413	64	20795	1535	64	20387	1180	64	20408	1188	64
1483642	20124	928	64	20415	1197	64	20384	1317	64	20430	962	64	20413	972	64
1526867_1	24508	4206	112	24598	4243	112	24620	4265	112	26062	4262	112	26064	4263	112
1539082	2249	0	32	2664	0	32	2685	0	32	2588	0	32	2619	0	32
1561897	5958	0	95	6569	0	95	6569	0	95	6328	0	95	6362	0	95
1671209	25875	1120	96	27648	1610	96	27759	1853	96	27113	1131	96	27192	1148	96

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
1722631	12787	481	112	13809	735	112	13889	855	112	13676	498	112	13707	508	112
1897109	13159	631	112	13983	868	112	14010	990	112	13558	627	112	13623	635	112
2178859	13159	631	112	13983	868	112	14010	990	112	13558	627	112	13623	635	112
2183026_3	12787	481	112	13809	735	112	13889	855	112	13676	498	112	13707	508	112
2252359	6181	139	95	7103	214	94	7131	214	94	6646	144	95	6724	138	94
2254477	10265	548	112	10675	802	112	10756	922	112	10885	561	112	10914	571	112
2262959	10349	584	112	10618	822	112	10667	943	112	10557	580	112	10657	588	112
2288501	12376	675	112	12816	987	112	12869	1110	112	12810	671	112	12923	679	112
2299186	12073	641	112	12656	966	112	12761	1087	112	12811	651	112	12861	658	112
2925361	9991	398	80	-	-	-	-	-	-	10712	411	80	-	-	-
2932609	8559	176	64	-	-	-	-	-	-	9222	184	64	-	-	-
3008032	6587	339	96	6839	651	96	6916	773	96	6889	341	96	6849	345	96
3015382	7439	355	96	7522	665	96	7600	788	96	7941	355	96	7979	357	96
3017834	6121	303	96	6443	633	96	6575	753	96	6613	313	96	6543	322	96
3022741	7223	322	96	7536	649	96	7635	770	96	8050	334	96	8064	341	96
3054734	15054	677	96	15435	1315	96	15592	1557	96	16514	689	96	16578	698	96
3062141	20322	866	92	20996	898	92	21014	916	92	21598	893	92	21600	895	91
3081937	7704	315	64	-	-	-	-	-	-	8365	331	64	-	-	-
3242609	9236	274	47	9877	270	47	9877	270	47	9843	286	47	9865	286	47
3319334	5192	49	48	5270	45	48	5301	45	48	5659	51	48	5293	51	48
3327056	7649	231	48	8172	228	48	8178	228	48	8367	242	48	8385	242	48
3355447	7649	231	48	8172	228	48	8178	228	48	8367	242	48	8385	242	48

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
3549586	15404	809	48	15318	789	48	15271	791	48	16339	827	48	15606	811	48
3637927	25195	1302	85	25897	1332	84	25909	1350	84	26425	1336	84	26454	1339	84
3681151	12915	612	94	13481	628	94	13492	637	94	13630	631	94	13640	630	94
3831686	19341	1061	90	20145	1088	90	20159	1106	90	20197	1096	90	20216	1096	89
4272196	5343	159	48	6173	315	48	6173	315	48	5657	162	48	5958	166	48
4339609	9351	634	96	10509	751	96	10502	793	96	9818	644	96	9740	648	96
4449166	2481	0	32	3739	150	32	3739	150	32	2654	0	32	2848	0	32
4458109	2608	296	80	3263	328	80	3282	346	80	2730	300	80	2722	302	80
4620622	5666	322	64	6093	370	64	6083	384	64	5981	322	64	5981	324	64
4626697	5317	321	64	5874	366	64	5878	380	64	5634	332	64	5626	334	64
4657132	7895	0	95	8445	10	94	8456	12	94	8740	0	94	8749	12	94
4660181	10681	635	48	11998	752	48	11988	793	48	11192	642	48	11148	646	48
4693786	10982	643	64	11967	736	64	11961	764	64	11616	655	64	11606	657	64
4829416	4183	225	96	4692	270	96	4700	284	96	4411	231	96	4401	230	96
4923001	4759	186	96	5527	235	96	5538	252	96	5009	192	96	5007	194	96
4960687	6947	10	31	7032	10	31	7031	10	31	7313	10	31	7314	10	31
5576572	24013	196	40	24078	294	40	24068	326	40	25148	199	39	25143	203	39
5603296	14293	31	46	14281	126	46	14290	160	46	14963	31	46	14949	34	46
5606641	24013	196	40	24078	294	40	24068	326	40	25148	199	39	25143	203	39
5626732	9289	25	48	9621	120	48	9609	147	48	10008	25	48	10016	25	48
5653576	25637	191	48	25892	288	48	25902	315	48	26855	195	48	26865	195	48
5724346	23771	196	41	23832	294	40	23828	326	40	24766	199	40	24752	203	39

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
5758201	9289	25	48	9621	120	48	9609	147	48	10008	25	48	10016	25	48
5771771	16265	234	45	16802	284	45	16832	301	45	17165	242	45	17181	244	45
5946191	19140	521	111	19796	616	111	19811	650	111	19797	540	111	19785	545	111
5953084	19140	521	58	19796	616	57	19811	650	57	19797	540	58	19785	545	57
5977241	11350	236	46	11263	327	46	11264	361	46	11635	240	46	11622	247	46
5997986	19140	521	58	19796	616	57	19811	650	57	19797	540	58	19785	545	57
6036112	19140	521	58	19796	616	57	19811	650	57	19797	540	58	19785	545	57
6081326	19140	521	58	19796	616	57	19811	650	57	19797	540	58	19785	545	57
6615251	10223	70	47	10131	160	47	10130	192	47	10405	72	43	10408	76	43
6750418	3277	24	96	4054	19	96	4054	19	96	3434	24	96	3596	24	96
6750419	3686	90	48	4291	86	48	4291	86	48	3897	90	48	3936	90	48
6750420	3686	90	48	4291	86	48	4291	86	48	3897	90	48	3936	90	48
6750424	6343	198	96	7049	201	96	7049	201	96	6744	199	96	7022	203	96
6750426	6343	198	96	7049	201	96	7049	201	96	6744	199	96	7022	203	96
6750428	5071	66	48	5442	76	48	5460	76	48	5691	65	48	5559	61	48
6750440	24449	1316	112	25473	1954	112	25630	2196	112	25621	1322	112	25784	1337	112
6750441	28195	1390	48	28382	1663	48	28297	1818	48	28542	1407	48	28505	1422	48
6750442	29376	1402	47	29561	1674	47	29403	1829	47	29754	1416	46	29716	1431	46
6750444	8573	175	48	8696	171	48	8696	171	48	9216	178	48	9144	175	48
6750445	8559	176	64	-	-	-	-	-	-	9222	184	64	-	-	-
6750446	9643	219	48	10255	204	48	10247	204	48	10174	222	48	10407	219	48
6750447	9643	219	48	10255	204	48	10247	204	48	10174	222	48	10407	219	48

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6750461	5245	800	80	5362	783	80	5376	783	80	5759	804	80	5724	804	80
6750462	10560	427	79	11166	410	79	11231	410	79	11501	435	79	11519	433	79
6750465	10560	427	47	11166	410	47	11231	410	47	11501	435	47	11519	433	47
6750466	20606	555	112	21082	780	112	21001	901	112	20873	539	112	20838	547	112
6750467	20606	555	112	21082	780	112	21001	901	112	20873	539	112	20838	547	112
6750468	20180	571	112	20491	813	112	20528	934	112	21235	611	112	21198	621	112
6750469	20180	571	112	20491	813	112	20528	934	112	21235	611	112	21198	621	112
6750494	27323	1494	81	27274	1551	82	27371	1586	82	30085	1517	78	30015	1521	78
6750495	27323	1494	89	27274	1551	89	27371	1586	89	30085	1517	88	30015	1521	88
6750498	12482	494	94	12357	492	94	12338	492	93	12746	488	92	12705	488	92
6750549	2949	223	96	3111	223	96	3115	223	96	3206	225	96	3245	227	96
6750550	5023	625	80	5200	625	80	5205	625	80	5522	625	80	5540	625	80
6750557	3340	92	96	3416	90	96	3424	90	96	3762	92	96	3699	92	96
6750560	4000	134	48	4570	138	48	4629	138	48	4360	138	48	4421	139	48
6750562	2515	0	96	3103	0	96	3097	0	96	2643	0	96	2656	0	96
6750563	2515	0	48	3103	0	48	3097	0	48	2643	0	48	2656	0	48
6750564	4175	185	48	4639	189	48	4639	189	48	4559	191	48	4599	191	48
6750566	4035	177	48	4522	181	48	4522	181	48	4432	181	48	4474	183	48
6750567	4152	134	95	5297	138	95	5354	138	95	4591	139	95	4633	139	95
6750568	11923	680	96	-	-	-	-	-	-	12588	686	96	-	-	-
6750570	11983	678	48	11384	660	48	11338	660	48	12678	694	48	11844	676	48
6750571	12292	675	48	11565	656	48	11502	658	48	12951	693	48	12058	677	48

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6750572	14969	854	48	-	-	-	-	-	-	15813	868	48	-	-	-
6750574	15186	797	64	-	-	-	-	-	-	16059	816	64	-	-	-
6750575_1	13769	798	96	15650	908	96	15631	950	96	14548	809	96	14619	813	96
6750578	5221	226	48	5846	222	48	5838	224	48	5488	230	48	5481	226	48
6750579	4339	180	96	4870	177	96	4867	177	96	4577	185	96	4579	180	96
6750581	6251	226	48	6972	222	48	6972	224	48	6698	230	48	6707	226	48
6750582	6216	226	94	6917	222	94	6917	224	94	6662	226	94	6665	224	94
6750597	2049	39	64	2628	39	64	2624	39	64	2150	39	64	2642	39	64
6750598	2049	39	64	2628	39	64	2624	39	64	2150	39	64	2642	39	64
6750599	2049	39	64	2628	39	64	2624	39	64	2150	39	64	2642	39	64
6750600_1	1966	52	96	2055	52	96	2059	52	96	2077	52	96	2081	52	96
6750601	2646	77	48	2857	77	48	2864	77	48	2816	77	48	2879	77	48
6750602	1751	52	48	1863	52	48	1863	52	48	1840	52	48	1813	52	48
6750603	1751	52	48	1863	52	48	1863	52	48	1840	52	48	1813	52	48
6750610	12379	438	62	13332	528	62	13364	562	62	13299	449	62	13286	451	62
6750611_1	12305	440	94	13269	532	94	13293	566	94	13227	449	94	13214	451	93
6750622_1	8066	517	63	8627	519	63	8682	519	63	8703	540	62	8668	537	62
6750623	8066	517	47	8627	519	47	8682	519	47	8703	540	47	8668	537	47
6750625	8066	517	32	8627	519	32	8682	519	32	8703	540	32	8668	537	31
6750626	8124	582	64	8680	586	64	8721	586	64	9007	599	64	8986	595	64
6750627	8066	517	32	8627	519	32	8682	519	32	8703	540	32	8668	537	31
6750680	9102	467	63	10421	561	63	10447	595	63	9582	478	63	9568	481	63

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6750681	9024	467	63	10340	559	63	10365	593	63	9485	475	63	9473	479	63
6750690_3	1931	0	96	2502	0	96	2506	0	96	2132	0	96	2126	0	96
6750691	1875	0	96	2430	0	96	2430	0	96	2010	0	96	2010	0	96
6750748	11375	690	79	11985	675	79	12051	675	79	12399	708	79	12402	708	79
6750749	11375	690	79	11985	675	79	12051	675	79	12399	708	79	12402	708	79
6750805	9861	10	48	9885	12	48	9899	12	48	10847	12	48	10839	12	48
6750809	12379	438	45	13332	528	44	13364	562	44	13299	449	44	13286	451	44
6750810	9628	415	48	10492	510	48	10485	537	48	10188	427	48	10177	427	48
6750817	3793	15	96	4282	15	96	4287	15	96	4332	15	96	4334	16	96
6750819	3683	0	96	4171	0	96	4174	0	96	4215	0	96	4215	0	96
6750828	8788	427	48	9013	449	48	9026	464	48	9165	445	48	9157	442	48
6750832	8585	455	47	9095	479	46	9109	497	46	9069	473	46	9051	465	46
6750834	18945	670	90	19591	702	90	19609	720	90	20136	688	89	20138	689	89
6750835	26322	701	84	26995	733	84	27011	751	84	28079	724	82	28080	727	82
6750883	4156	75	96	4193	75	96	4193	75	96	4474	79	96	4474	79	96
6750884	4156	75	96	4193	75	96	4193	75	96	4474	79	96	4474	79	96
6750889	5592	341	64	6315	379	63	6330	397	63	5904	354	64	5890	357	63
6750892	9102	467	95	10421	561	94	10447	595	94	9582	478	95	9568	481	94
6750893	8636	457	96	9520	548	96	9518	575	96	9108	469	96	9097	469	96
6750898	9374	389	80	10665	484	79	10689	518	79	9862	401	80	9848	403	79
6750899	9376	384	80	10664	474	79	10688	510	79	9868	395	79	9848	395	79
6750920	7649	231	48	8172	228	48	8178	228	48	8367	242	48	8385	242	48

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6750921	7649	231	48	8172	228	48	8178	228	48	8367	242	48	8385	242	48
6750924	7349	251	48	8020	241	47	8016	243	47	7837	253	48	7848	252	47
6750925	6092	226	48	6766	220	48	6766	222	48	6527	226	48	6533	224	48
6750941	8951	594	48	10148	711	48	10138	753	48	9374	604	48	9350	607	48
6750942	8951	594	48	10148	711	48	10138	753	48	9374	604	48	9350	607	48
6750945	3348	160	48	-	-	-	-	-	-	3540	160	48	-	-	-
6750946	3348	160	48	107	0	48	107	0	48	3540	160	48	84	0	48
6750948	5775	206	80	479	0	80	507	0	80	6079	209	80	393	0	80
6750954	9602	598	96	10880	716	96	10864	758	96	9955	613	96	9995	615	96
6750955	9602	598	96	10880	716	96	10864	758	96	9955	613	96	9995	615	96
6750970	10401	604	94	11494	1326	93	11673	1626	93	10932	620	94	11285	642	94
6750977	3340	92	96	3416	90	96	3424	90	96	3762	92	96	3699	92	96
6750983	3519	134	95	4066	139	95	4121	139	95	3858	139	95	3918	143	96
6750985	3002	159	95	3513	159	95	3570	159	95	3301	161	95	3352	163	95
6750986	2985	151	64	3505	151	64	3560	151	64	3282	151	64	3335	157	64
6751002	8437	698	48	8598	681	48	8611	681	48	9217	702	48	9187	702	48
6751012	5587	161	79	6122	163	79	6174	163	79	6096	163	79	6150	167	79
6751013	5221	153	80	5739	153	79	5792	153	79	5699	153	79	5757	155	79
6751053	5775	206	80	-	-	-	-	-	-	6079	209	80	-	-	-
6751054	5792	201	64	-	-	-	-	-	-	6092	205	64	-	-	-
6751057	3510	204	48	6129	375	48	6131	375	48	3785	208	48	4627	213	48
6751059	3510	204	48	6129	375	48	6131	375	48	3785	208	48	4627	213	48

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751060	3510	204	48	6129	375	48	6131	375	48	3785	208	48	4627	213	48
6751065	4608	4	96	5284	4	96	5288	4	96	4902	6	96	5378	6	96
6751066	2481	0	32	3739	150	32	3739	150	32	2654	0	32	2848	0	32
6751068	4663	134	48	7315	309	48	7323	309	48	5038	142	48	5807	148	48
6751070	6156	190	32	8428	197	32	8424	197	32	6629	192	32	7665	199	32
6751073	8379	196	48	10197	208	48	10193	208	48	8900	200	48	9425	208	48
6751074	8379	196	48	10197	208	48	10193	208	48	8900	200	48	9425	208	48
6751082	6776	46	48	6815	42	48	6844	42	48	7198	48	47	7060	44	48
6751083	5757	86	48	5781	86	48	5796	86	48	5970	86	48	5916	86	48
6751084	5757	86	48	5781	86	48	5796	86	48	5970	86	48	5916	86	48
6751091	4646	55	48	5711	52	48	5711	52	48	4870	55	48	5047	55	48
6751092	4646	55	48	5711	52	48	5711	52	48	4870	55	48	5047	55	48
6751094	5674	108	48	6534	264	47	6531	264	47	5933	110	48	6265	115	48
6751095	6245	203	48	7106	357	48	7100	357	48	6587	205	48	6908	209	48
6751099	4597	11	48	5633	9	48	5633	9	48	4816	11	48	5000	11	48
6751101	6619	92	96	6706	92	96	6706	92	96	6948	92	96	6950	92	96
6751102	6619	92	96	6706	92	96	6706	92	96	6948	92	96	6950	92	96
6751115	4742	148	64	-	-	-	-	-	-	5093	150	64	-	-	-
6751118	5543	170	96	6034	162	96	6042	162	96	6021	170	96	6136	170	96
6751123	3816	148	96	4251	138	96	4255	138	96	4292	152	96	4385	152	96
6751134	7237	276	64	7482	266	64	7474	266	64	7591	281	64	7615	281	64
6751135	7237	276	64	7482	266	64	7474	266	64	7591	281	64	7615	281	64

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751152	7688	81	96	7832	81	96	7818	81	96	8076	81	96	8081	81	96
6751154	5347	156	48	6084	152	48	6153	152	48	6385	160	48	6383	156	48
6751155	5347	156	48	6084	152	48	6153	152	48	6385	160	48	6383	156	48
6751156	3121	11	48	3177	0	48	3195	0	48	3737	11	48	3727	11	48
6751158	3121	11	48	3177	0	48	3195	0	48	3737	11	48	3727	11	48
6751159	3121	11	48	3177	0	48	3195	0	48	3737	11	48	3727	11	48
6751160	4630	167	32	5373	152	32	5420	152	32	5207	171	32	5208	167	32
6751161	4630	167	32	5373	152	32	5420	152	32	5207	171	32	5208	167	32
6751173	5880	166	64	6500	159	64	6498	159	64	6389	168	64	6507	164	64
6751175	4444	146	95	5286	137	95	5278	137	95	4891	152	95	4880	140	95
6751176	5545	169	96	6158	161	96	6150	161	96	5833	173	96	5911	163	96
6751181	5544	137	48	5300	135	48	5318	135	48	6208	143	48	5993	143	48
6751193	10641	604	94	11614	1328	93	11799	1626	93	11187	620	94	11402	644	94
6751194	12903	635	94	13449	1353	93	13727	1653	92	13711	649	93	13562	669	93
6751199	5411	126	95	6007	143	95	6057	143	95	6016	128	95	5835	126	95
6751201	6389	185	48	7260	337	48	7262	337	48	6800	189	48	7111	193	48
6751202	6389	185	48	7260	337	48	7262	337	48	6800	189	48	7111	193	48
6751219	14278	785	48	14036	783	48	13943	783	48	15206	798	48	15206	800	48
6751220	10244	337	45	11530	317	45	11737	317	45	12285	343	44	12305	332	45
6751221	8467	62	46	9935	42	46	10171	42	46	10473	62	45	10511	51	45
6751230	28406	715	35	28629	705	35	28615	705	35	29266	725	35	29303	727	35
6751259	18880	250	44	19679	295	44	19715	312	44	19746	254	44	19746	256	44

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751276	12230	498	48	12601	589	48	12601	616	48	12648	510	48	12641	510	48
6751277	12230	498	48	12601	589	48	12601	616	48	12648	510	48	12641	510	48
6751290	16116	997	74	16492	1225	74	16465	1347	74	16865	1003	73	16847	1010	73
6751291	3039	0	64	3113	228	64	3061	350	64	3424	0	64	3422	0	64
6751292	13079	997	50	13379	997	50	13407	997	50	13441	1003	50	13422	1010	50
6751297	19604	1856	38	19691	2040	38	19658	2155	37	19951	1877	40	19884	1886	39
6751300	11842	794	64	12006	794	52	12070	781	52	12648	792	44	12706	800	53
6751317	54909	6427	101	55806	6789	101	55876	7002	101	57582	6552	101	57560	6565	101
6751318	28733	3000	93	29165	3167	93	29130	3276	93	29693	3023	92	29662	3027	92
6751319	26176	3426	94	26641	3621	94	26746	3726	94	27889	3529	92	27898	3538	92
6751342	23593	3049	21	23921	3176	21	23962	3267	21	24040	2971	20	24037	2980	20
6751430	5677	358	94	6394	396	94	6411	414	94	5993	370	94	5979	372	94
6751431	5677	358	48	6394	396	47	6411	414	47	5993	370	48	5979	372	47
6751439	9753	389	64	11035	482	63	11058	516	63	10265	399	64	10253	403	63
6751440	13657	1904	48	13879	1889	48	13886	1893	48	14838	1941	48	14834	1945	48
6751441	13657	1904	48	13879	1889	48	13886	1893	48	14838	1941	48	14834	1945	48
6751442	13657	1904	48	13879	1889	48	13886	1893	48	14838	1941	48	14834	1945	48
6751443	12686	1114	64	12920	1099	64	12928	1099	64	13852	1145	64	13846	1149	64
6751444	12686	1114	64	12920	1099	64	12928	1099	64	13852	1145	64	13846	1149	64
6751445	12686	1114	64	12920	1099	64	12928	1099	64	13852	1145	64	13846	1149	64
6751456	3936	151	64	4465	151	64	4518	151	64	4283	151	64	4345	157	64
6751457	3936	151	95	4465	151	95	4518	151	95	4283	151	95	4345	157	95

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751458	3999	167	48	-	-	-	-	-	-	4263	171	48	-	-	-
6751460_1	4164	113	96	-	-	-	-	-	-	4439	117	96	-	-	-
6751461	3999	167	48	342	4	48	348	4	48	4263	171	48	354	4	48
6751462	5533	136	95	6137	145	95	6185	145	95	6140	136	95	5944	130	95
6751464	5533	136	63	6137	145	63	6185	145	63	6140	136	63	5944	130	63
6751466	5533	136	95	6137	145	95	6185	145	95	6140	136	95	5944	130	95
6751468	5533	136	63	6137	145	63	6185	145	63	6140	136	63	5944	130	63
6751469	5533	136	95	6137	145	95	6185	145	95	6140	136	95	5944	130	95
6751473	7237	276	64	7482	266	64	7474	266	64	7591	281	64	7615	281	64
6751492	3891	156	96	4577	154	96	4652	154	96	4778	160	96	4776	158	96
6751493	4161	155	48	4892	153	48	4958	153	48	4793	159	48	4841	157	48
6751494	4688	138	95	5476	136	95	5536	136	95	5451	139	95	5494	139	95
6751495	7593	326	80	7718	675	80	7830	826	80	8162	331	80	8167	335	80
6751500	7760	348	78	7996	712	77	8103	861	77	8603	358	77	8616	371	77
6751501	7584	342	78	7815	710	78	7920	859	77	8413	354	77	8420	367	77
6751504	5880	166	64	6500	159	64	6498	159	64	6389	168	64	6507	164	64
6751505	5880	166	64	6500	159	64	6498	159	64	6389	168	64	6507	164	64
6751506	7998	350	78	8246	714	77	8352	863	77	8853	363	76	8860	372	77
6751507	6821	338	78	7058	704	78	7161	853	78	7348	348	78	7355	361	78
6751509	8082	284	64	-	-	-	-	-	-	8553	284	64	-	-	-
6751510	8082	284	64	8489	592	64	8555	713	64	8553	284	64	8635	288	64
6751512	7343	322	80	7450	673	80	7559	822	80	7912	328	80	7919	331	80

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751513	7343	322	78	7450	673	77	7559	822	77	7912	328	77	7919	331	77
6751514	7265	75	48	7404	75	48	7386	75	48	7635	75	48	7644	75	48
6751530	14892	513	64	15041	515	64	15051	515	64	16035	526	64	16027	522	64
6751535	3424	36	48	4232	31	48	4232	31	48	3579	36	48	3745	36	48
6751538	17465	1031	112	17686	1243	112	17609	1363	112	18372	1007	112	18444	1017	112
6751539	15425	409	96	-	-	-	-	-	-	16634	398	96	-	-	-
6751540	15425	409	96	15753	852	96	15940	1093	96	16634	398	96	16657	400	96
6751541	23957	3080	65	24322	3275	63	24367	3347	61	24503	3022	48	24498	3031	48
6751542	23887	3080	32	24229	3261	26	24274	3323	26	24387	3014	20	24382	3023	20
6751544	11842	794	64	12026	794	59	12087	788	54	12687	800	52	12725	800	52
6751545	13164	434	46	14427	523	46	14448	557	46	13858	438	46	13843	442	46
6751546	9628	415	48	10492	510	48	10485	537	48	10188	427	48	10177	427	48
6751550	9753	389	95	11035	482	94	11058	516	94	10265	399	94	10253	403	94
6751551	10044	399	95	11310	492	94	11338	526	94	10567	407	94	10555	409	94
6751553	5686	30	48	6846	28	48	6846	28	48	5941	30	48	6120	30	48
6751554	4700	26	48	5741	24	48	5741	24	48	4928	26	48	5131	27	48
6751556	4302	49	48	5187	45	48	5187	45	48	4511	49	48	4687	49	48
6751557	5102	63	48	6070	58	48	6070	58	48	5367	65	48	5551	64	48
6751562	7197	303	96	7468	633	96	7592	753	96	7765	313	96	7676	322	96
6751563	6020	308	94	6270	675	93	6373	824	93	6498	323	93	6509	336	93
6751565	5544	137	48	5300	135	48	5318	135	48	6208	143	48	5993	143	48
6751567	7840	346	96	8070	657	96	8150	780	96	8353	344	96	8270	350	96

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751568	6201	296	94	6483	647	93	6626	798	92	6549	300	93	6489	307	93
6751569	3196	71	64	3239	71	64	3235	71	64	3539	75	64	3490	75	64
6751572	2739	224	80	3084	250	80	3084	264	80	2861	228	80	2858	229	80
6751573	2739	224	80	3084	250	80	3084	264	80	2861	228	80	2858	229	80
6751582	8437	698	48	8598	681	48	8611	681	48	9217	702	48	9187	702	48
6751592	4615	203	80	5138	248	79	5151	265	79	4853	209	80	4841	209	80
6751593	4282	199	80	4800	245	79	4811	262	79	4498	207	80	4483	205	80
6751598	4453	232	96	4828	278	96	4819	292	96	4697	238	96	4696	239	96
6751599	4426	184	96	5187	230	96	5203	249	96	4668	190	96	4664	188	96
6751606	15973	2200	91	16252	2389	93	16229	2498	90	16146	2214	90	16174	2223	90
6751607	15875	2196	74	16153	2389	74	16130	2498	74	16045	2202	74	16074	2202	74
6751610	20001	1902	75	20099	2085	69	20155	2199	67	20417	1910	74	20347	1921	74
6751611	19908	1902	89	20003	2075	89	20061	2170	89	20309	1888	78	20242	1897	79
6751616	28813	1385	91	29552	1657	90	29591	1806	90	29925	1387	78	29959	1388	78
6751617	28782	1385	91	29521	1657	90	29564	1806	90	29878	1387	78	29903	1388	78
6751619	30598	1409	77	31413	1687	77	31587	1836	77	32546	1447	77	32532	1458	77
6751621	26979	1409	79	27655	1687	78	27752	1836	78	28377	1430	68	28361	1443	66
6751622	31771	1409	76	32196	1687	76	32236	1836	76	33351	1428	63	33315	1443	63
6751625	2689	119	48	4907	119	48	4940	119	48	3954	119	48	5298	119	48
6751627	7853	187	41	8785	176	41	8883	176	41	9215	191	39	9208	186	39
6751628	9207	187	40	10273	176	38	10446	176	37	11185	191	36	11176	186	35
6751629	2689	119	48	4907	119	48	4940	119	48	3954	119	48	5298	119	48

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751666	18489	755	64	17760	750	64	17535	752	64	18140	779	64	18189	779	64
6751668	11111	374	45	10493	374	46	10490	374	46	10861	380	45	10945	379	45
6751672	6770	62	45	7810	42	44	7909	42	44	8469	62	43	8468	51	43
6751679	1494	0	48	1482	0	48	1498	0	48	1856	0	48	1876	0	48
6751680	1494	0	48	1482	0	48	1498	0	48	1856	0	48	1876	0	48
6751681	1494	0	48	1482	0	48	1498	0	48	1856	0	48	1876	0	48
14551_2	26176	3426	94	26641	3621	94	26746	3726	94	27889	3529	92	27898	3538	92
6750690_1	1931	0	96	2502	0	96	2506	0	96	2132	0	96	2126	0	96
6750690_2	1931	0	96	2502	0	96	2506	0	96	2132	0	96	2126	0	96
54412_2	20812	2667	73	21183	2645	73	21225	2643	73	22115	2723	72	22099	2727	72
2183026_1	12787	481	112	13809	735	112	13889	855	112	13676	498	112	13707	508	112
1526867_2	24508	4206	112	24598	4243	112	24620	4265	112	26062	4262	112	26064	4263	112
103552_2	29114	4293	89	29492	4286	88	29575	4286	88	31120	4411	86	31116	4411	85
751609_2	35569	5355	77	35993	5580	77	35898	5702	77	37462	5446	74	37414	5448	74
758932_2	34870	4871	79	35118	5078	78	35246	5205	78	36654	4937	76	36560	4948	76
6750622_2	8066	517	63	8627	519	63	8682	519	63	8703	540	62	8668	537	62
6750600_2	1966	52	96	2055	52	96	2059	52	96	2077	52	96	2081	52	96
44647_2	11064	1385	96	11131	1362	96	11156	1362	96	11585	1389	96	11579	1397	96
6750611_2	12305	440	94	13269	532	94	13293	566	94	13227	449	94	13214	451	93
6750575_2	14705	797	64	16631	908	64	16613	950	64	15549	811	64	15625	814	64
1560_2	2018	90	96	-	-	-	-	-	-	2257	92	96	-	-	-
21334_2	28733	3000	93	29165	3167	93	29130	3276	93	29693	3023	92	29662	3027	92

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
2183026_2	12787	481	112	13809	735	112	13889	855	112	13676	498	112	13707	508	112
1700497_6	3643	467	48	4252	445	48	4415	446	48	4956	474	48	4925	474	48
6751673_4	7084	376	44	8122	354	43	8222	356	43	8790	383	42	8787	370	42
6751673_2	7084	376	5	8122	354	5	8222	356	5	8790	383	5	8787	370	5
1700497_1	3643	467	20	4252	445	20	4415	446	20	4956	474	20	4925	474	20
1700497_2	3643	467	5	4252	445	5	4415	446	5	4956	474	5	4925	474	5
1700497_3	3643	467	10	4252	445	10	4415	446	10	4956	474	10	4925	474	10
6751673_1	7084	376	20	8122	354	20	8222	356	20	8790	383	20	8787	370	20
1700497_4	3643	467	5	4252	445	5	4415	446	5	4956	474	5	4925	474	5
1700497_5	3643	467	5	4252	445	5	4415	446	5	4956	474	5	4925	474	5
6751673_3	7084	376	10	8122	354	10	8222	356	10	8790	383	10	8787	370	10
6751223	2971	0	32	3242	0	32	3183	0	32	3401	0	31	3401	0	31
6751147_3	3279	11	48	3772	0	48	3819	0	48	3831	11	48	3785	0	48
6751147_1	3279	11	10	3772	0	10	3819	0	10	3831	11	10	3785	0	10
6751147_2	3279	11	5	3772	0	5	3819	0	5	3831	11	5	3785	0	5
6751665_1	13322	926	10	-	-	10	12868	924	10	-	-	10	-	-	10
6751665_2	13322	926	5	-	-	5	12868	924	5	-	-	5	-	-	5
1889347_1	16722	678	10	16766	667	10	16742	669	10	17423	692	10	17387	692	10
1889347_2	16722	678	5	16766	667	5	16742	669	5	17423	692	5	17387	692	5
6751665_3	13322	926	62	-	-	-	12868	924	62	-	-	-	-	-	-
1889347_3	16722	678	45	16766	667	45	16742	669	45	17423	692	44	17387	692	44
6750431	20520	867	48	257	9	48	257	9	48	21684	880	48	275	11	48

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6750434	20520	867	48	257	9	48	257	9	48	21684	880	48	275	11	48
6750438_1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6750438_3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6750438_2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6750437	19917	859	48	20937	1497	48	21095	1739	48	21065	869	48	21349	884	48
6750439	20509	870	64	21523	1507	64	21680	1750	64	21681	875	64	21845	891	64
120	8468	43	45	8607	43	45	8607	43	45	8969	45	44	8969	45	44
128	12130	79	40	12272	126	40	12268	142	40	12616	81	39	12614	83	39
236	672	0	48	672	0	48	672	0	48	674	0	48	674	0	48
238	13199	79	47	13345	126	46	13341	142	46	13821	81	46	13832	83	46
240	2586	66	48	2592	66	48	2588	66	48	2654	68	48	2655	68	48
248	13039	172	47	13093	217	47	13098	234	47	13782	180	47	13770	182	47
292	2305	72	48	2214	119	48	2218	136	48	2413	76	48	2399	78	48
1312	544	0	48	550	0	48	546	0	48	678	0	48	691	0	48
1452	13701	79	47	13845	126	47	13840	142	47	14193	81	47	14191	83	47
1454	11660	116	47	11585	168	47	11578	185	47	12305	118	47	12304	120	47
1456	15245	145	45	15392	190	45	15390	207	45	15799	151	45	15796	153	45
1458	13711	182	47	13630	232	47	13632	249	47	14288	190	47	14272	192	47
1626	12653	79	39	12793	126	39	12792	142	39	13141	81	38	13141	83	38
1822	4573	132	47	4482	177	47	4488	194	47	4805	134	47	4795	138	47
1824	6777	105	48	6781	150	48	6777	167	48	6829	107	48	6827	109	48
1842	25637	191	48	25892	288	48	25902	315	48	26855	195	48	26865	195	48

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
1844	25637	191	48	25892	288	48	25902	315	48	26855	195	48	26865	195	48
7470	18959	44	48	19049	44	48	19053	44	48	19835	44	48	19828	46	48
7538	10253	19	41	10424	19	41	10438	19	41	10381	21	39	10331	22	39
8870	11493	31	47	11702	31	47	11728	31	47	11889	31	47	11840	31	47
8894	11079	6	48	11284	6	48	11307	6	48	11466	6	48	11416	6	48
9678	18959	44	48	19049	44	48	19053	44	48	19835	44	48	19828	46	48
9714	18959	44	48	19049	44	48	19053	44	48	19835	44	48	19828	46	48
5623381	10986	116	42	10911	168	43	10902	185	43	11629	118	41	11626	120	41
5630084	13027	79	39	13167	126	39	13166	142	39	13519	81	38	13517	83	38
5737876	11117	116	47	11039	168	47	11035	185	47	11625	118	47	11611	120	47
5748034	12653	79	39	12793	126	39	12792	142	39	13141	81	38	13141	83	38
6349036	11356	107	47	11520	107	47	11524	107	46	11672	110	46	11622	110	46
6406132	7465	6	48	7627	6	48	7637	6	48	7633	6	48	7583	6	48
6510271	11079	6	48	11284	6	48	11307	6	48	11466	6	48	11416	6	48
6604352	18959	44	48	19049	44	48	19053	44	48	19835	44	48	19828	46	48
6750701	11036	91	46	11557	89	46	11577	89	46	11576	95	46	11580	95	46
6750702	3614	0	48	3657	0	48	3670	0	48	3833	0	48	3833	0	48
6750703	3614	0	48	3657	0	48	3670	0	48	3833	0	48	3833	0	48
6751266	7506	105	47	7560	105	47	7573	105	47	7870	107	47	7870	107	47
6751267	2063	0	48	2059	0	48	2059	0	48	2146	0	48	2150	0	48
6751338	11117	116	42	11039	168	42	11035	185	42	11625	118	41	11611	120	41
6751339	11117	116	42	11039	168	42	11035	185	42	11625	118	41	11611	120	41

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
4656_1	3750	102	32	3370	246	32	3387	246	32	4069	106	32	3459	101	32
10450_1	4350	0	32	5015	0	32	5022	0	32	4592	0	32	5054	0	31
4416452_1	4424	46	32	4933	45	32	4935	46	32	4709	46	32	5193	46	32
4479011_1	3308	47	48	3570	195	48	3570	195	48	3438	47	48	3438	47	48
6750429_1	4895	59	48	5386	76	48	5403	76	48	5503	61	48	5511	59	48
6751067_1	4663	134	48	7315	309	48	7323	309	48	5038	142	48	5807	148	48
6751071_1	6156	190	32	8428	197	32	8424	197	32	6629	192	32	7665	199	32
6751078_1	8240	60	47	8347	60	47	8376	60	47	8765	62	47	8579	60	47
6750429_2	4895	59	5	5386	76	5	5403	76	5	5503	61	5	5511	59	5
6751067_2	4663	134	5	7315	309	5	7323	309	5	5038	142	5	5807	148	5
4416452_2	5303	67	5	4932	211	5	4950	211	5	5690	71	5	5086	67	5
6751071_2	6156	190	5	8428	197	5	8424	197	5	6629	192	5	7665	199	5
4656_2	3750	102	5	3370	246	5	3387	246	5	4069	106	5	3459	101	5
4479011_2	3308	47	5	3570	195	5	3570	195	5	3438	47	5	3438	47	5
6751078_2	8240	60	5	8347	60	5	8376	60	5	8765	62	5	8579	60	5
10450_2	4350	0	5	5015	0	5	5022	0	5	4592	0	5	5054	0	5
6751269	8969	89	63	9497	89	63	9518	89	63	9428	95	63	9426	95	63
6751263	13691	200	64	13776	196	64	13774	196	64	14557	204	64	14557	206	64
6751268	13691	200	64	13776	196	64	13774	196	64	14557	204	64	14557	206	64
6751710	-	-	-	23686	1297	78	23636	1446	78	24767	1025	78	24760	1028	78
6751711	-	-	-	23095	1261	74	23103	1410	73	23824	988	73	23813	1001	73
6751712	22775	1155	80	23057	1384	80	23045	1499	80	23844	1149	80	23822	1158	80

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751713	22604	1073	80	23198	1294	80	23185	1414	80	23675	1073	80	23679	1073	80
6751714	-	-	-	22611	1297	79	22561	1446	72	23152	1025	61	23150	1028	61
6751715	-	-	-	23686	1297	73	23636	1446	73	24767	1025	72	24760	1028	72
6751716	-	-	-	22992	1257	57	22956	1406	56	23809	988	71	23795	1001	71
6751717	-	-	-	22429	1257	74	22400	1406	74	22886	988	74	22871	1001	74
6751720	19866	1143	112	20247	1348	112	20296	1466	112	21061	1150	112	21041	1160	112
6751721	-	-	-	19031	1297	77	19013	1446	77	19573	1027	76	19578	1036	76
6751722	-	-	-	22261	1244	68	22371	1406	72	22816	988	70	22813	1001	70
6751723	-	-	-	17717	1228	77	17822	1391	77	18141	972	77	18133	985	77
6751735	-	-	-	12436	252	60	12236	215	60	14062	270	59	14088	269	60
6751736	-	-	-	12436	252	60	12236	215	60	14062	270	59	14088	269	60
6751738	-	-	-	11824	252	60	11626	215	60	13477	270	60	13501	269	60
6751742	-	-	-	11824	252	60	11626	215	60	13477	270	60	13501	269	60
6751743	-	-	-	12585	252	60	12387	215	60	14234	270	59	14259	269	59
6751744	-	-	-	12585	252	60	12387	215	60	14234	270	59	14259	269	59
6751788	19866	1143	112	20247	1348	112	20296	1466	112	21061	1150	112	21041	1160	112
6751789	19866	1143	112	20247	1348	112	20296	1466	112	21061	1150	112	21041	1160	112
7000202	-	-	-	8218	417	47	-	-	-	7886	403	48	7883	401	47
7000203	-	-	-	10102	427	47	-	-	-	9968	403	47	9963	407	47
7000210	-	-	-	6982	169	46	-	-	-	6707	155	46	6700	158	46
7000258	15054	677	96	15435	1315	96	15592	1557	96	16514	689	96	16578	698	96
7000261	15054	677	96	15435	1315	96	15592	1557	96	16514	689	96	16578	698	96

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
7000264	7487	322	96	7794	649	96	7887	770	96	8413	334	96	8436	341	96
7000265	7487	322	96	7794	649	96	7887	770	96	8413	334	96	8436	341	96
7000266	7567	355	96	7641	665	96	7705	788	96	8101	355	96	8142	357	96
7000267	7567	355	96	7641	665	96	7705	788	96	8101	355	96	8142	357	96
7000280	-	-	-	4232	31	64	-	-	-	3579	36	64	3745	36	64
7000281	-	-	-	4232	31	64	-	-	-	3579	36	64	3745	36	64
7000283_1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7000284	-	-	-	8489	592	64	8555	713	64	-	-	-	8635	288	64
7000285	-	-	-	8209	643	64	8314	763	64	-	-	-	8434	336	64
7000286_1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7000289	9967	204	48	10638	204	48	10630	204	48	10395	207	48	10643	204	48
7000290	9967	204	48	10638	204	48	10630	204	48	10395	207	48	10643	204	48
7000223_1	-	-	-	12008	924	62	-	-	-	12322	947	62	12204	947	62
7000223_2	-	-	-	12008	924	62	-	-	-	12322	947	62	12204	947	62
7000223_3	-	-	-	12008	924	62	-	-	-	12322	947	62	12204	947	62
7000217_1	19917	859	80	-	-	-	-	-	-	21065	869	80	-	-	-
7000217_2	19917	859	80	-	-	-	-	-	-	21065	869	80	-	-	-
7000216	19917	859	80	-	-	-	-	-	-	21065	869	80	-	-	-
7000222	-	-	-	13003	924	62	-	-	-	13297	947	62	13186	947	62
6751797	-	-	-	3631	217	96	3613	217	96	-	-	-	3494	84	96
6751798	-	-	-	3451	16	96	3433	16	96	-	-	-	3424	15	96
6751800	-	-	-	16381	1110	48	16416	1153	48	-	-	-	16376	872	48

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751801	-	-	-	17212	893	64	17246	937	64	-	-	-	16113	815	64
6751814	-	-	-	3562	102	96	3545	102	96	-	-	-	3555	82	96
6751815	-	-	-	3675	215	96	3658	215	96	-	-	-	3555	82	96
6751821	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6751822	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7000213	1494	0	48	1482	0	48	1498	0	48	1856	0	48	1876	0	48
7000214	1494	0	48	1482	0	48	1498	0	48	1856	0	48	1876	0	48
7000215	1494	0	48	1482	0	48	1498	0	48	1856	0	48	1876	0	48
7000287	-	-	-	4885	138	64	4881	138	64	-	-	-	5023	150	64
7000291	15425	409	96	15307	407	96	15253	407	96	16634	398	96	16657	400	96
7000292	-	-	-	15753	852	96	15940	1093	96	-	-	-	16657	400	96
7000293	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
7000296	-	-	-	7881	1142	80	8142	1425	80	-	-	-	6725	242	80
7000296_1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7000298	-	-	-	-	-	-	-	-	-	-	-	-	3630	68	47
7000300	-	-	-	-	-	-	-	-	-	-	-	-	4090	68	45
7000303	-	-	-	-	-	-	-	-	-	-	-	-	3302	67	47
7000304	-	-	-	-	-	-	-	-	-	-	-	-	3761	67	47
7000305	-	-	-	-	-	-	-	-	-	-	-	-	460	0	47
7000307	-	-	-	-	-	-	-	-	-	-	-	-	159	10	48
7000308	-	-	-	-	-	-	-	-	-	-	-	-	4092	68	44
7000309	-	-	-	-	-	-	-	-	-	-	-	-	600	10	46

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
7000310	-	-	-	-	-	-	-	-	-	-	-	-	608	10	44
7000311	-	-	-	-	-	-	-	-	-	-	-	-	4092	68	45
7000312	-	-	-	-	-	-	-	-	-	-	-	-	3484	58	48
7000313	-	-	-	-	-	-	-	-	-	-	-	-	3602	57	47
7000314	-	-	-	8802	397	64	8784	397	64	-	-	-	7323	222	64
7000315	-	-	-	-	-	-	-	-	-	-	-	-	3933	58	47
7000316	0	0	0	4344	1122	48	4626	1405	48	0	0	0	1203	15	48
681	0	0	0	2018	160	64	2018	160	64	0	0	0	0	0	64
6751803	-	-	-	2183	162	96	2193	162	96	-	-	-	2261	92	96
691	0	0	0	2135	160	64	2135	160	64	0	0	0	0	0	64
6751806	-	-	-	2183	162	96	2193	162	96	-	-	-	2261	92	96
7000288	-	-	-	4885	138	64	4881	138	64	-	-	-	5023	150	64
7000018	-	-	-	-	-	-	-	-	-	-	-	-	1664	28	64
7000019	-	-	-	-	-	-	-	-	-	-	-	-	12320	461	62
7000020	-	-	-	-	-	-	-	-	-	-	-	-	12170	452	62
7000021	-	-	-	769	53	80	769	53	80	-	-	-	780	56	80
7000022	-	-	-	521	47	80	521	47	80	-	-	-	528	49	80
7000023	-	-	-	248	6	80	248	6	80	-	-	-	252	7	80
7000024	0	0	0	10637	749	96	10695	869	96	0	0	0	10789	441	96
7000025	0	0	0	10031	728	96	10134	848	96	0	0	0	10298	423	96
7000026	-	-	-	8651	171	64	8649	171	64	-	-	-	9142	178	64
7000027	-	-	-	4316	60	64	4322	60	64	-	-	-	4575	62	64

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
7000028	-	-	-	-	-	-	-	-	-	-	-	-	7738	384	63
7000029	-	-	-	-	-	-	-	-	-	-	-	-	12526	479	62
7000030	-	-	-	4336	111	64	4328	111	64	-	-	-	4567	116	64
7000031	-	-	-	553	40	48	553	40	48	-	-	-	551	44	48
7000035	0	0	0	10637	749	96	10695	869	96	0	0	0	10789	441	96
7000037	-	-	-	-	-	-	-	-	-	-	-	-	10782	438	63
7000038	-	-	-	-	-	-	-	-	-	-	-	-	10782	438	63
7000040	-	-	-	485	29	48	485	29	48	-	-	-	485	30	48
7000041	-	-	-	-	-	-	-	-	-	-	-	-	10997	460	63
7000042	-	-	-	62	12	48	62	12	48	-	-	-	63	13	48
7000043	0	0	0	10031	728	96	10134	848	96	0	0	0	10298	423	96
7000044	-	-	-	-	-	-	-	-	-	-	-	-	10654	429	56
7000045	-	-	-	-	-	-	-	-	-	-	-	-	129	7	64
7000047	-	-	-	-	-	-	-	-	-	-	-	-	10785	437	63
7000048	-	-	-	-	-	-	-	-	-	-	-	-	10997	460	63
7000055	0	0	0	20668	1476	96	20829	1717	96	0	0	0	21086	863	96
7000062	-	-	-	-	-	-	-	-	-	-	-	-	881	6	48
7000064	-	-	-	-	-	-	-	-	-	-	-	-	8570	444	47
7000065	-	-	-	-	-	-	-	-	-	-	-	-	6582	388	46
7000067	-	-	-	-	-	-	-	-	-	-	-	-	8695	449	47
7000068	-	-	-	-	-	-	-	-	-	-	-	-	8695	449	47
7000070	-	-	-	-	-	-	-	-	-	-	-	-	9079	427	47

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
7000071	-	-	-	2014	197	48	2031	218	48	-	-	-	1872	56	48
7000072	-	-	-	2154	197	48	2182	218	48	-	-	-	2007	61	48
7000073	-	-	-	7598	571	48	7608	591	48	-	-	-	7691	451	48
7000077	-	-	-	4167	394	48	4213	436	48	-	-	-	3878	117	48
7000081	-	-	-	8150	554	48	8125	575	48	-	-	-	8199	420	48
7000083	-	-	-	-	-	-	-	-	-	-	-	-	1147	52	48
7000084	-	-	-	-	-	-	-	-	-	-	-	-	9079	427	47
7000085	-	-	-	16381	1110	48	16416	1153	48	-	-	-	16376	872	48
7000086	-	-	-	-	-	-	-	-	-	-	-	-	8187	420	47
7000087	-	-	-	-	-	-	-	-	-	-	-	-	7812	445	45
7000088	-	-	-	4167	394	48	4213	436	48	-	-	-	3878	117	48
7000090	-	-	-	5029	381	48	5078	423	48	-	-	-	4101	117	48
7000091	-	-	-	36161	4960	112	36214	5095	112	-	-	-	37129	4842	112
7000096	-	-	-	33747	4956	112	33788	5052	112	-	-	-	35112	4898	112
7000097	-	-	-	33747	4956	112	33788	5052	112	-	-	-	35112	4898	112
7000125	0	0	0	1989	774	80	2197	1015	80	0	0	0	1271	142	80
7000128	-	-	-	546	0	80	616	0	80	-	-	-	391	0	80
7000132	-	-	-	107	0	48	107	0	48	-	-	-	84	0	48
7000135	-	-	-	11480	662	96	11414	662	96	-	-	-	12021	678	96
7000137	-	-	-	-	-	-	-	-	-	-	-	-	6755	316	61
7000138	-	-	-	12990	1319	96	13155	1560	96	-	-	-	12794	703	96
7000139	-	-	-	-	-	-	-	-	-	-	-	-	6428	352	62

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
7000140	-	-	-	-	-	-	-	-	-	-	-	-	6359	350	62
7000141	-	-	-	-	-	-	-	-	-	-	-	-	2948	18	80
7000142	0	0	0	7666	1141	80	7899	1423	80	0	0	0	6627	238	80
7000143	0	0	0	7666	1141	80	7899	1423	80	0	0	0	6627	238	80
7000145	-	-	-	7881	1142	80	8142	1425	80	-	-	-	6725	242	80
7000146	0	0	0	5804	1162	80	6052	1444	80	0	0	0	4804	257	80
7000147	0	0	0	5804	1162	80	6052	1444	80	0	0	0	4804	257	80
7000148	0	0	0	5804	1162	80	6052	1444	80	0	0	0	4804	257	80
7000149	0	0	0	5804	1162	80	6052	1444	80	0	0	0	4804	257	80
7000150	3999	167	48	342	4	48	348	4	48	4263	171	48	354	4	48
7000151	-	-	-	-	-	-	-	-	-	-	-	-	2154	63	80
7000152	0	0	0	3957	392	80	3995	434	80	0	0	0	3667	142	80
7000153	-	-	-	-	-	-	-	-	-	-	-	-	2024	60	80
7000154	-	-	-	-	-	-	-	-	-	-	-	-	2175	63	80
115614_1	0	0	96	39	39	96	39	39	96	-	-	-	-	-	-
115614_2	0	0	96	39	39	96	39	39	96	-	-	-	-	-	-
7000039_1	-	-	-	547	40	48	547	40	48	-	-	-	548	43	48
7000039_2	-	-	-	547	40	48	547	40	48	-	-	-	548	43	48
7000039_3	-	-	-	547	40	48	547	40	48	-	-	-	548	43	48
6750829	7646	385	48	-	-	-	8236	435	47	-	-	-	-	-	-
6751000	6767	64	48	-	-	-	6968	64	48	-	-	-	-	-	-
6750416	3424	36	64	-	-	-	4232	31	64	-	-	-	-	-	-

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6750504	8862	144	48	-	-	-	-	-	-	-	-	-	-	-	-
6751741	-	-	-	11824	252	60	11626	215	60	13477	270	60	13501	269	60
6751690	-	-	-	2636	0	48	2634	0	48	2781	0	48	2795	0	48
7000103	-	-	-	8547	192	47	8557	192	47	8688	194	47	8739	194	47
7000104	-	-	-	4758	87	47	4767	87	47	4747	87	47	4801	87	47
7000108	-	-	-	3580	17	48	3575	17	48	3801	17	48	3799	18	48
7000109	-	-	-	1484	167	48	1494	167	48	1238	174	48	1242	174	48
7000110	-	-	-	1395	77	48	1405	77	48	1145	81	48	1149	81	48
7000111	-	-	-	1484	167	48	1494	167	48	1238	174	48	1242	174	48
7000112	-	-	-	2027	105	48	2025	105	48	2417	105	48	2481	105	48
7000113	-	-	-	3560	105	47	3562	105	47	3691	107	47	3691	107	47
7000114	-	-	-	3335	87	48	3341	87	48	3471	87	47	3539	87	47
7000115	-	-	-	5395	17	48	5395	17	48	5914	17	47	5978	18	47
7000116	-	-	-	2122	10	48	2120	10	48	2471	10	48	2535	10	48
7000117	-	-	-	1722	8	48	1710	8	48	2099	8	48	2163	8	48
7000118	-	-	-	3655	8	47	3655	8	47	3737	8	47	3737	8	47
7000119	-	-	-	2344	0	48	2337	0	48	2646	0	48	2711	0	48
7000120	6155	194	48	6212	192	48	6231	192	48	7009	194	48	6995	194	48
7000121	-	-	-	4717	105	47	4715	105	47	4845	107	47	4843	107	47
7000122	-	-	-	4491	87	47	4495	87	47	4622	87	46	4690	87	46
7000123	-	-	-	89	89	48	89	89	48	93	93	48	93	93	48
7000124	-	-	-	89	89	48	89	89	48	93	93	48	93	93	48

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
44	1143	180	48	1162	180	48	1162	180	48	1209	184	48	1209	184	48
126	3728	190	48	4103	190	48	4111	190	48	4033	194	48	4036	194	48
1466	8303	318	47	8591	363	47	8602	380	47	8838	329	47	8830	331	47
1468	4492	50	48	4401	95	48	4407	112	48	4722	50	48	4710	52	48
1806	4573	132	48	4482	177	48	4488	194	48	4805	134	48	4795	138	48
8842	7676	136	45	7608	181	45	7617	198	45	8168	139	44	8134	141	44
8848	8429	130	47	8419	175	47	8417	192	47	8592	130	47	8592	132	47
6070877	8817	314	47	8770	361	47	8777	378	47	9376	325	47	9343	327	47
7000101	-	-	-	9579	353	47	9575	370	47	9801	314	47	9800	316	47
1804	6777	105	45	6781	150	45	6777	167	45	6829	107	45	6827	109	45
7000102	-	-	-	10885	336	46	10890	353	46	10856	300	46	10862	302	46
7000099	-	-	-	10438	19	42	10451	19	42	10406	21	42	10356	22	42
8054	1067	0	48	1071	0	48	1067	0	48	1203	0	48	1216	0	48
5673751	1561	0	48	1565	0	48	1567	0	48	1579	0	48	1579	0	48
5677117	1067	0	48	1071	0	48	1067	0	48	1203	0	48	1216	0	48
5959981	2628	0	48	2636	0	48	2634	0	48	2781	0	48	2795	0	48
6750699	1561	0	48	1565	0	48	1567	0	48	1579	0	48	1579	0	48
6750698	1561	0	48	1565	0	48	1567	0	48	1579	0	48	1579	0	48
6750831	12927	542	44	13350	565	44	13361	583	44	13560	556	44	13560	549	44
270	5607	234	94	5764	234	94	5767	234	94	5931	242	94	5944	242	94
7582	6512	320	94	6527	330	94	6534	339	94	6847	329	94	6842	323	94
8922	6415	223	96	6822	235	96	6826	244	96	6713	227	96	6718	226	96

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
3940262	12750	616	94	12992	626	94	12997	635	94	13269	633	94	13271	630	94
226	3810	314	95	3835	330	95	3843	339	95	4004	322	95	4004	323	95
798	10032	610	95	10274	622	95	10280	631	95	10410	629	95	10415	630	95
1308	2706	2	96	2704	0	96	2704	0	96	2867	6	96	2861	0	96
224	12121	556	95	12291	564	95	12302	573	95	12776	571	95	12790	569	95
3870487	4432	182	46	4894	196	46	4899	205	46	4661	190	46	4654	187	46
6750616	3969	182	47	4429	196	46	4435	205	46	4169	190	47	4163	187	47
6750617	4241	182	47	4703	196	47	4709	205	47	4456	190	47	4451	187	47
7000106	-	-	-	6372	64	45	6358	81	45	6406	19	45	6420	21	45
7000107	-	-	-	6770	64	45	6762	81	45	6775	21	45	6796	23	45
6317032	16105	265	44	16027	356	44	16034	390	44	16760	269	43	16726	273	43
4231421	17235	540	92	17607	529	91	17604	529	91	18039	558	91	18043	548	91
6750826	17235	540	92	17607	529	91	17604	529	91	18055	558	91	18059	548	91
6750825	19178	453	91	19619	455	91	19623	455	91	20082	471	90	20096	470	90
6750820	3861	0	96	4336	0	96	4342	0	96	4421	0	96	4421	0	96
2874	4919	0	95	5174	6	95	5178	6	95	5360	0	95	5368	6	95
3720	4019	0	95	4313	4	94	4322	6	94	4495	0	94	4499	6	94
3738	1969	0	96	2223	0	96	2227	0	96	2263	0	96	2263	0	96
4160	1048	0	96	1048	0	96	1048	0	96	1118	0	96	1118	0	96
4162	2946	0	95	2946	6	95	2944	6	95	3095	0	95	3101	6	95
4234	1892	0	96	2113	0	96	2115	0	96	2158	0	96	2158	0	96
5368	3876	0	95	4132	6	94	4134	6	94	4244	0	94	4250	6	94

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
4623659	4834	0	96	5060	6	95	5061	6	95	5262	0	95	5268	6	95
2864	5067	0	95	5364	4	95	5373	6	95	5613	0	95	5619	6	95
4194	974	0	96	1188	0	96	1191	0	96	1174	0	96	1174	0	96
196	11602	199	95	11877	203	95	11881	203	95	12340	207	95	12353	211	95
1426	2249	0	96	2320	0	96	2322	0	96	2483	0	96	2483	0	96
1472	7579	199	93	7556	198	93	7560	198	93	7846	207	93	7856	205	93
2154	9827	254	90	10066	254	90	10064	254	90	10222	263	90	10224	263	90
2472	9351	199	92	9553	201	91	9558	201	91	9861	207	91	9872	207	91
5330	3876	0	96	4132	6	96	4134	6	96	4244	0	96	4250	6	96
5332	4019	0	96	4313	4	96	4322	6	96	4495	0	96	4499	6	96
4752116	12073	254	86	12394	260	86	12398	260	86	12705	263	85	12709	265	85
200	1736	0	96	1989	0	96	1993	0	96	1992	0	96	1994	0	96
198	11454	199	89	11683	205	88	11687	205	88	12089	207	87	12102	209	87
6750799	18095	178	44	18083	178	44	18060	178	44	19028	180	44	19031	180	44
6750801	16496	294	44	16646	294	44	16663	294	44	17055	302	44	17059	300	44
8122	8657	155	44	8665	155	44	8665	155	44	8808	159	44	8806	157	44
6751334	7839	139	44	7981	139	44	7998	139	44	8248	143	43	8253	143	44
6751335	7839	139	44	7981	139	44	7998	139	44	8248	143	43	8253	143	44
802	5887	8	47	6286	53	47	6312	70	47	6282	8	47	6277	10	47
5731109	5887	8	47	6286	53	47	6312	70	47	6282	8	47	6277	10	47
6751336	4096	10	48	4103	59	48	4112	76	48	4255	10	47	4256	12	47
6751337	4096	10	48	4103	59	48	4112	76	48	4255	10	47	4256	12	47

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6750798	13070	174	47	13057	174	47	13035	174	47	13731	174	47	13728	176	46
6750802	13579	308	46	13630	306	46	13651	306	46	13992	316	46	14000	316	46
1076	6421	108	47	6501	108	47	6500	108	47	6899	108	46	6895	108	46
1644	5588	157	47	5566	157	47	5568	157	47	5532	159	47	5530	159	47
1672	5024	60	47	4930	60	47	4909	60	47	5100	64	47	5100	64	47
1990	6649	66	47	6555	66	47	6536	66	47	6831	66	47	6833	68	47
6554	7219	161	46	7199	161	46	7199	161	46	7273	167	46	7273	167	46
5480234	12241	223	47	12121	223	47	12106	223	47	12363	229	47	12363	229	47
3976	6361	147	47	6432	145	47	6453	145	47	6719	149	47	6727	149	47
5463709	11997	261	47	12061	261	47	12059	261	47	12431	267	47	12427	267	47
296	1654	6	48	1660	6	48	1658	6	48	1720	6	48	1714	6	48
122	11383	207	47	11362	207	47	11360	207	47	11813	213	47	11819	213	47
3972	7219	161	46	7199	161	46	7199	161	46	7273	167	46	7273	167	46
3974	6361	147	47	6432	145	47	6453	145	47	6719	149	47	6727	149	47
4178	7219	161	46	7199	161	46	7199	161	46	7273	167	46	7273	167	46
4180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6552	13579	308	46	13630	306	46	13651	306	46	13992	316	46	14000	316	46
5453806	6361	147	47	6432	145	47	6453	145	47	6719	149	47	6727	149	47
6750863	2962	114	95	3056	114	95	3056	114	95	3136	124	95	3134	122	95
7862	3531	110	96	3600	110	96	3600	110	96	3725	110	96	3725	110	96
6750859	2987	110	95	3082	110	95	3082	110	95	3152	110	95	3152	110	95
6750865	2860	139	95	2967	139	95	2967	139	95	3015	139	95	3015	139	95

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6750868	2839	143	95	2952	143	95	2950	143	95	2996	151	95	2995	151	95
6750869	2716	163	95	2845	163	95	2845	163	95	2863	169	95	2864	169	95
6750682	76	0	96	76	0	96	76	0	96	85	0	96	86	0	96
6750678	2631	163	95	2758	163	95	2758	163	95	2774	165	95	2774	165	95
6751116	3871	119	96	3881	112	96	3877	112	96	4154	123	96	4053	123	96
6751110	3965	94	48	4152	85	48	4152	87	48	4244	96	48	4166	96	48
4745959	3083	66	48	3372	58	48	3372	58	48	3271	66	48	3272	66	48
6984	3028	52	48	3327	48	48	3325	48	48	3235	54	48	3243	54	48
4749037	3079	52	48	3369	48	48	3368	48	48	3271	52	48	3269	52	48
6751124	5061	96	48	5460	89	48	5465	89	48	5450	96	48	5659	96	48
7000211	-	-	-	2452	33	96	-	-	-	2776	33	96	2770	32	96
7000212	-	-	-	2452	33	48	-	-	-	2776	33	48	2770	32	48
1562	1801	89	96	1977	162	96	1996	162	96	1931	91	96	1937	89	96
6750455	2473	33	48	2452	33	48	2452	33	48	2776	33	48	2770	32	48
6751489	6210	60	95	6381	60	95	6379	60	95	6547	62	95	6594	62	95
6751490	6210	60	95	6381	60	95	6379	60	95	6547	62	95	6594	62	95
6750448	5020	109	95	5362	101	95	5360	101	95	5322	115	95	5526	115	95
6750449	5020	109	48	5362	101	48	5360	101	48	5322	115	48	5526	115	48
6750457	2053	19	48	2064	19	48	2063	19	48	2335	19	48	2338	20	48
6750451	5271	96	48	5649	87	48	5655	87	48	5674	102	48	5886	102	48
2803522	4817	91	48	5120	84	48	5124	84	48	5183	91	48	5363	91	48
4850	2610	47	64	2757	44	64	2757	44	64	2798	49	64	2908	49	63

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6300	2418	70	64	2611	63	64	2609	63	64	2532	74	64	2626	74	64
6832	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9500	2418	70	64	2611	63	64	2609	63	64	2532	74	64	2626	74	64
9850	2610	47	64	2757	44	64	2757	44	64	2798	49	64	2908	49	64
2613077	2610	47	64	2757	44	64	2757	44	64	2798	49	64	2908	49	63
2615359	2418	70	64	2611	63	64	2609	63	64	2532	74	64	2626	74	64
6751472	7289	283	64	7444	272	64	7434	272	64	7674	287	64	7666	287	64
2147734	9985	353	95	10084	342	95	10086	342	95	10396	359	95	10508	359	95
9234	6144	244	95	6222	238	95	6226	238	95	6397	254	95	6442	254	95
9240	3839	105	95	3859	102	95	3854	102	95	4000	107	95	4068	107	95
7822	4098	138	95	4196	131	95	4195	131	95	4262	141	95	4329	141	95
6826	963	0	48	996	0	48	1002	0	48	1042	0	48	1129	0	48
6874	4193	161	48	4185	159	48	4177	159	48	4385	161	47	4393	161	47
6922	9538	368	47	9637	362	47	9637	362	47	10017	380	47	10069	380	47
6936	9114	316	47	9131	313	47	9113	313	47	9493	320	47	9575	318	47
7788	5063	194	47	5151	187	47	5153	187	47	5280	202	47	5322	202	47
7828	8573	366	45	8644	360	45	8636	360	45	8974	376	44	8943	376	44
9502	8150	312	45	8122	308	45	8106	310	45	8450	316	45	8444	316	45
9508	4922	159	47	4933	155	47	4933	155	47	5116	157	47	5186	157	47
6898	4325	194	48	4364	187	48	4364	187	48	4488	196	48	4488	196	48
6890	9256	356	48	9339	350	48	9335	350	48	9657	362	47	9711	362	47

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751222	3955	0	32	4021	0	31	4039	0	31	4162	0	31	4189	0	31
6751218	3382	0	32	3099	0	32	2969	0	32	3428	0	32	3417	0	32
1402	1482	0	96	1540	0	96	1567	0	96	1593	0	96	1602	0	96
1404	1048	10	96	1032	10	96	1038	10	96	1108	10	96	1110	10	96
1827827	2530	10	96	2572	10	96	2605	10	96	2700	10	96	2712	10	96
1854616	1048	10	96	1032	10	96	1038	10	96	1108	10	96	1110	10	96
1856537	1482	0	96	1540	0	96	1567	0	96	1593	0	96	1602	0	96
2892	3790	6	48	3919	0	48	3935	0	48	4073	6	48	4084	0	48
6018	1048	10	96	1032	10	96	1038	10	96	1108	10	96	1110	10	96
1879667	2308	6	96	2379	0	96	2368	0	96	2481	6	96	2482	0	96
1883536	600	5	48	602	0	48	612	0	48	733	5	48	730	0	48
6751148	4384	11	48	4525	0	48	4546	0	48	4801	11	48	4807	0	48
2003462	3950	21	48	4008	10	48	4008	10	48	4322	21	48	4320	10	48
1566	965	8	96	955	8	96	949	8	96	1005	8	96	1003	8	96
90	1657	6	112	1723	6	112	1719	6	112	1663	8	112	1659	8	112
3378	4913	28	96	4975	17	96	4974	17	96	5333	28	96	5326	18	96
6751225	6428	0	47	6656	0	47	6569	0	47	7064	0	47	7056	0	47
6751669	5568	0	47	5501	0	47	5526	0	47	6188	0	47	6176	0	47
6751528	15477	504	58	15629	504	58	15611	504	58	16275	519	58	16277	515	58
6751531	15477	504	44	15629	504	44	15611	504	44	16275	519	43	16277	515	43
6751479	15477	504	44	15629	504	44	15611	504	44	16275	519	43	16277	515	43
6751526	7437	427	48	7575	429	48	7563	429	48	8394	437	48	8363	437	48

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751521	7437	427	48	7575	429	48	7563	429	48	8394	437	48	8363	437	48
6751523	7437	427	48	7575	429	48	7563	429	48	8394	437	48	8363	437	48
6751525	7437	427	48	7575	429	48	7563	429	48	8394	437	48	8363	437	48
6751527	7437	427	48	7575	429	48	7563	429	48	8394	437	48	8363	437	48
6750746	3927	90	96	3967	73	96	3959	73	96	4181	90	96	4190	90	96
6750747	3927	90	96	3967	73	96	3959	73	96	4181	90	96	4190	90	96
6792	490	0	64	498	0	64	534	0	64	649	0	64	660	0	64
6948	16679	189	60	16762	210	60	16879	245	60	17468	208	60	17419	208	60
6950	7885	46	61	8088	68	61	8263	101	61	8028	62	61	7986	62	61
7368	11346	178	63	11361	174	63	11354	172	63	12016	187	63	11981	187	63
7372	13229	271	50	13212	270	51	13124	270	51	14322	277	48	14308	277	48
7432	13719	271	61	13710	270	61	13657	270	62	14976	277	61	14970	277	61
9244	3954	133	63	3768	108	63	3623	71	63	4625	121	63	4652	121	63
9246	8796	144	63	8668	144	63	8614	144	63	9438	148	63	9436	148	63
796087	24575	449	53	24573	444	53	24479	442	53	26337	464	51	26289	464	51
809936	11837	178	63	11858	174	63	11889	172	63	12663	187	63	12641	187	63
6804	5330	17	62	5338	17	62	5363	17	62	5446	19	62	5457	21	62
6956	4133	85	64	4164	85	63	4187	81	63	4608	76	63	4623	76	63
7006	12544	114	62	12548	112	62	12543	112	62	12846	131	62	12805	131	62
7362	13465	204	50	13635	204	50	13539	204	50	14277	214	49	14252	214	49
8724	11346	178	56	11361	174	56	11354	172	56	12016	187	55	11981	187	55
8726	13229	271	62	13212	270	62	13124	270	62	14322	277	61	14308	277	61

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
8728	24575	449	53	24573	444	53	24479	442	53	26337	464	51	26289	464	51
700181	16669	195	60	16699	191	60	16719	187	60	17459	205	60	17438	207	60
729856	26009	318	51	26184	316	51	26081	316	51	27123	345	50	27057	345	50
9074	24575	449	53	24573	444	53	24479	442	53	26337	464	51	26289	464	51
9076	24575	449	53	24573	444	53	24479	442	53	26337	464	51	26289	464	51
7434	17587	286	59	17789	285	59	17722	283	59	18873	284	58	18871	284	58
7906	6732	168	62	6824	167	62	6811	167	62	7431	175	61	7441	175	61
6960	18555	291	58	18554	289	58	18491	289	58	19771	300	57	19763	300	57
6751537	17465	1031	112	17686	1243	112	17609	1363	112	18372	1007	112	18444	1017	112
1283266	22154	1021	74	22611	1297	74	22574	1446	74	23199	1027	74	23204	1036	74
8540	14926	426	61	15017	424	61	14932	424	61	15819	450	61	15759	448	61
715534	14913	425	61	14974	414	56	14881	413	55	15635	440	49	15612	438	49
739484	14926	426	61	15017	424	61	14932	424	61	15819	450	61	15759	448	61
6728	18802	659	21	18679	646	21	18503	646	21	18713	640	29	18688	640	29
6730	25893	819	17	25767	805	17	25556	801	17	25992	813	23	25911	813	23
6732	23648	708	14	23656	703	14	23624	703	14	23995	702	14	23952	702	14
8402	20656	579	10	20699	576	10	20697	576	10	20755	575	10	20755	571	10
8414	23132	700	14	23038	675	14	22854	671	12	22969	692	12	22931	692	12
8432	7024	147	62	7012	145	62	6979	145	62	7227	166	62	7171	164	62
8434	7190	245	8	7234	243	8	7162	243	8	7573	235	8	7603	235	8
8782	14322	392	36	14355	389	35	14252	389	35	14905	411	34	14882	409	35
695491	2870	135	64	2835	133	64	2802	133	64	3112	131	64	3065	129	64

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6750470	43887	1279	21	43830	1251	21	43658	1247	19	43829	1267	18	43796	1263	18
7940	4466	103	9	4539	103	10	4479	103	10	4696	103	10	4696	103	10
6820	25932	906	15	25853	879	15	25607	879	15	26224	875	15	26224	875	15
6751235	31537	824	28	31556	803	28	31616	803	28	31290	816	25	31259	818	25
6751234	31985	832	32	32262	821	32	32290	821	32	32477	833	31	32458	832	31
7710	30785	804	34	31058	792	34	31101	792	34	31356	808	34	31330	810	34
6751231	30785	804	34	31058	792	34	31101	792	34	31356	808	34	31330	810	34
6751233	30785	804	34	31058	792	34	31101	792	34	31356	808	34	31330	810	34
1542	8212	548	92	8289	581	92	8287	598	92	8781	566	91	8791	568	91
1544	7742	424	45	7728	424	45	7809	424	45	8170	438	45	8226	436	45
7780	21326	1218	89	21313	1249	89	21344	1266	89	23348	1239	88	23233	1243	88
268577	11023	439	95	11135	467	95	11132	487	95	12191	451	95	12185	453	95
270737	18765	865	91	18872	895	91	18942	913	91	20363	886	90	20411	888	90
273631	13120	670	94	13031	669	94	13064	669	94	14574	677	94	14445	677	94
2672	19220	3035	102	19290	3035	102	19296	3033	102	20806	3116	101	20773	3116	101
108802	28672	4329	90	28678	4311	90	28693	4311	90	30252	4387	87	30184	4395	87
111032	31067	3827	86	31328	3827	85	31416	3825	85	33632	3936	81	33651	3936	81
111481	20328	3384	101	20311	3384	101	20296	3384	101	21734	3453	100	21610	3461	100
6751543	11842	794	109	12035	794	109	12122	794	109	12820	815	109	12874	815	109
6751608	8346	945	110	8369	930	110	8398	930	110	8522	932	110	8573	932	110
6751609	8346	945	104	8369	930	104	8398	930	104	8522	932	104	8573	932	104
1572	5880	194	55	5723	194	56	5695	194	56	5721	198	55	5707	198	55

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
1578	15069	1344	37	15259	1327	37	15227	1323	36	15516	1352	30	15545	1346	29
2260	28672	4329	90	28678	4311	90	28693	4311	90	30252	4387	87	30184	4395	87
2262	31067	3827	86	31328	3827	85	31416	3825	85	33632	3936	81	33651	3936	81
137716	31067	3827	86	31328	3827	85	31416	3825	85	33632	3936	81	33651	3936	81
142297	28672	4329	90	28678	4311	90	28693	4311	90	30252	4387	87	30184	4395	87
148531	23696	4286	97	23793	4271	97	23803	4271	97	25084	4344	95	25046	4350	95
149057	23750	3787	96	23995	3787	96	24091	3785	96	25733	3895	94	25782	3895	93
138221	35524	5019	80	35598	4988	80	35600	4988	80	36702	5077	78	36671	5085	78
139234	31983	4495	84	32215	4490	84	32206	4489	84	33934	4621	81	34056	4621	80
110137	26608	4500	94	26695	4476	94	26693	4476	94	27448	4552	93	27458	4558	93
111931	22629	3903	98	22849	3903	98	22874	3903	97	24199	4013	96	24306	4013	96
102691	31612	4958	87	31732	4925	86	31794	4924	86	32441	5014	85	32467	5020	85
1512	10731	1210	109	10923	1183	109	10946	1182	109	11207	1218	109	11209	1218	109
1648	10373	1150	95	10563	1125	95	10594	1123	95	10814	1150	95	10818	1154	95
29762	15045	1541	108	15417	1513	107	15415	1505	107	15634	1541	107	15630	1543	107
174	10807	1259	109	11019	1232	109	11054	1232	109	11293	1268	109	11291	1268	109
352	13926	1549	108	14307	1524	108	14330	1522	108	14627	1565	108	14623	1565	108
1580	428	108	108	428	108	108	428	108	108	467	112	108	467	112	108
7980	5409	238	94	5275	260	95	5188	249	95	5613	230	94	5611	232	94
9618	18627	3484	103	18797	3506	103	18898	3539	103	19419	3560	102	19406	3558	102
1094584	16222	3815	104	16219	3810	104	16215	3806	104	17137	3852	104	17127	3852	104
6751288	8906	232	91	9002	279	91	9029	306	91	9346	241	91	9356	243	91

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751289	2594	90	64	2636	87	64	2634	87	64	2772	94	64	2772	93	64
6751790	-	-	-	6365	192	62	6392	219	62	6570	145	61	6583	148	61
6751517	6210	60	63	6381	60	63	6379	60	63	6547	62	63	6594	62	63
6751518	6210	60	95	6381	60	95	6379	60	95	6547	62	95	6594	62	95
6751519	6210	60	48	6381	60	48	6379	60	48	6547	62	48	6594	62	48
7000219	-	-	-	7309	64	47	-	-	-	7490	64	47	7521	64	47
7000218	-	-	-	6980	64	48	-	-	-	7160	64	48	7191	64	47
6750999	7124	76	48	7327	76	48	7315	76	48	7537	77	48	7572	77	47
6751583	3432	64	48	3518	64	48	3531	64	48	3858	66	48	3834	66	48
6750978	3193	62	64	3248	62	64	3257	62	64	3596	62	64	3557	62	64
6751474	2877	48	64	2950	48	64	2967	48	64	3272	50	64	3230	50	64
6751475	2877	48	48	2950	48	48	2967	48	48	3272	50	48	3230	50	48
6751481	3338	48	48	3404	48	48	3414	48	48	3739	52	48	3691	52	48
6751484	3338	48	96	3404	48	96	3414	48	96	3739	52	96	3691	52	96
6751485	3338	48	48	3404	48	48	3414	48	48	3739	52	48	3691	52	48
6751486	3338	48	96	3404	48	96	3414	48	96	3739	52	96	3691	52	96
6750996	5401	268	48	5502	251	48	5510	249	48	5846	274	48	5819	272	48
6750997	6169	262	48	6263	243	48	6273	243	48	6642	268	47	6624	268	47
6751006	8825	235	47	9006	218	47	9012	218	47	9451	235	47	9452	235	47
6751005	9088	241	47	9266	224	47	9270	224	47	9738	243	47	9740	243	47
3012	207	0	80	210	0	80	210	0	80	219	0	80	215	0	80
6194	5190	266	80	5270	249	80	5283	249	80	5620	270	79	5599	270	79

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751182	4616	11	48	4785	9	48	4844	9	48	5129	11	48	4877	11	48
7458	10016	279	47	10445	279	47	10445	281	47	10671	289	47	10697	291	47
9034	10016	279	47	10445	279	47	10445	281	47	10671	289	47	10697	291	47
6762	10016	279	47	10445	279	47	10445	281	47	10671	289	47	10697	291	47
6750931	6554	79	48	6638	81	48	6638	81	48	6950	83	48	6983	85	48
8064	6879	139	46	7058	139	46	7060	139	46	7322	143	45	7344	145	45
8066	7034	126	45	7155	126	45	7153	126	45	7491	130	45	7477	130	45
3311621	7153	213	45	7388	211	45	7390	213	45	7575	217	45	7579	217	45
6750588	2825	4	48	2751	2	48	2751	4	48	2984	4	48	2952	4	48
6750930	6243	70	48	6261	72	48	6261	72	48	6613	72	48	6585	74	48
6751437	2597	0	48	2527	0	48	2524	0	48	2748	0	48	2718	0	48
6751432	2597	0	80	2527	0	80	2524	0	80	2748	0	80	2718	0	80
6751434	2597	0	48	2527	0	48	2524	0	48	2748	0	48	2718	0	48
6751436	2597	0	80	2527	0	80	2524	0	80	2748	0	80	2718	0	80
6751575	1246	0	64	1274	0	64	1274	0	64	1304	0	64	1304	0	64
6751597	1352	0	64	1253	0	64	1249	0	64	1445	0	64	1414	0	64
6751574	1246	0	64	1274	0	64	1274	0	64	1304	0	64	1304	0	64
8862	5994	14	46	5905	59	46	5909	76	46	6327	14	46	6315	16	46
6352597	12796	33	46	12675	123	46	12670	157	46	13102	35	46	13111	39	45
6546376	9161	10	47	9066	100	47	9073	134	47	9293	12	47	9302	16	47
6611617	10267	19	44	-	-	-	-	-	-	-	-	-	-	-	-
7000105	-	-	-	3181	0	48	3177	0	48	3363	0	48	3377	0	48

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
6751691	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6320584	2628	0	48	-	-	-	-	-	-	-	-	-	-	-	-
6011836	9602	250	63	10048	299	63	10053	316	63	9974	260	63	9972	262	63
1432	7457	275	64	7692	320	64	7702	337	64	7681	283	64	7671	285	64
6067396	9538	271	63	9748	316	63	9758	333	63	9823	281	63	9813	283	63
1612	2111	25	64	2158	25	64	2158	25	64	2229	25	64	2227	23	64
1906	5348	252	63	5533	293	62	5542	310	62	5464	260	62	5448	260	62
1908	7495	230	60	7896	280	60	7906	297	60	7748	234	61	7746	236	61
6751261	9906	157	47	10181	200	47	10196	217	47	10325	161	47	10322	163	47
1360	17085	250	46	17490	299	45	17507	316	45	17726	256	45	17729	258	45
6751262	15348	261	46	15673	305	46	15703	322	46	16047	269	46	16043	269	46
366	14118	258	46	14447	303	46	14479	320	46	14878	263	46	14879	265	46
6751281	6525	0	48	6569	0	48	6569	0	48	6910	0	48	6918	0	48
6278026	9091	50	47	9110	50	47	9110	50	47	9548	50	47	9556	50	47
6751279	6307	50	48	6375	50	47	6375	50	47	6593	50	47	6591	48	47
6751278	6145	50	47	6161	48	47	6163	50	47	6475	50	47	6480	48	47
6751280	2944	0	48	2946	0	48	2946	0	48	3070	0	48	3070	0	48
6751282	3577	0	48	3615	0	48	3615	0	48	3842	0	48	3850	0	48
6750794	7140	29	47	7155	29	47	7155	29	47	7479	29	47	7479	29	47
6751275	8033	25	46	8039	25	46	8038	25	46	8461	27	46	8467	27	46
6751272	8033	25	48	8039	25	48	8038	25	48	8461	27	48	8467	27	48
6750795	7588	29	42	7597	27	42	7599	27	42	7828	29	35	7832	29	35

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
8874	5640	27	27	5638	27	27	5638	27	27	5685	29	27	5675	29	27
6542761	6131	25	46	6126	25	46	6122	25	46	6375	25	46	6375	25	46
6751274	1900	0	48	1906	0	48	1906	0	48	2084	0	48	2090	0	48
6560846	11985	19	43	12219	19	43	12243	19	43	12463	21	43	12468	22	43
6750686	11985	19	43	12244	44	43	12267	44	43	12463	21	43	12468	22	43
6750685	9456	89	22	9431	134	22	9419	149	22	9659	87	22	9657	89	22
6750687	8272	97	36	8181	142	36	8189	159	36	8648	101	35	8644	103	35
6854	9870	89	32	9841	134	32	9831	151	32	10076	89	32	10093	91	32
7514	5309	35	45	5280	80	45	5270	95	45	5226	37	46	5241	39	46
8028	4557	52	46	4557	52	46	4554	52	46	4854	52	42	4854	52	42
8846	4914	35	32	4850	80	32	4860	97	32	5166	35	26	5152	37	26
6750684	411	0	48	411	0	48	411	0	48	411	0	48	432	0	48
8076	4050	35	47	3958	80	47	3965	97	47	4246	35	37	4230	37	37
6750683	8726	101	32	8633	146	32	8640	163	32	9123	105	26	9142	107	26
6746	9479	89	32	9413	134	32	9422	149	32	10023	91	28	10009	93	28
728	8930	300	91	9151	294	91	9145	294	91	9267	310	90	9267	306	90
2180	8305	240	96	8456	234	96	8459	234	96	8772	248	96	8776	242	96
208	0	0	0	0	0	0	0	0	0	14	0	96	14	0	96
724	8930	300	91	9151	294	91	9145	294	91	9267	310	90	9267	306	90
1434	8305	240	92	8456	234	92	8459	234	92	8786	248	92	8790	242	92
2158	8305	240	92	8456	234	92	8459	234	92	8772	248	92	8776	242	92
4602421	8930	300	91	9151	294	91	9145	294	91	9283	310	90	9283	306	90

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
206	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1474	8305	240	92	8456	234	92	8459	234	92	8772	248	92	8776	242	92
1294	8305	240	92	8456	234	92	8459	234	92	8772	248	92	8776	242	92
406	8930	300	91	9151	294	91	9145	294	91	9283	310	90	9283	306	90
2156	8305	240	92	8456	234	92	8459	234	92	8772	248	92	8776	242	92
6004	3269	43	95	3352	43	95	3356	43	95	3484	43	95	3515	43	95
6238	3281	21	95	3373	21	95	3371	21	95	3419	21	95	3434	21	95
725066	14339	309	45	14507	308	44	14414	308	44	15280	313	44	15259	313	44
6751638	13458	178	46	13511	176	46	13443	176	46	13919	199	46	13845	199	46
6751639	13413	218	45	13420	216	45	13414	216	45	13857	234	45	13814	234	45
592	-	-	-	12210	796	63	12313	947	62	-	-	-	12331	462	62
7000283	-	-	-	8489	592	64	8555	713	64	-	-	-	8635	288	64
9490	-	-	-	3378	76	64	3371	76	64	-	-	-	3485	74	64
7000286	-	-	-	8209	643	64	8314	763	64	-	-	-	8434	336	64
6751460	-	-	-	5058	400	95	5117	452	95	-	-	-	4102	117	96
6120	-	-	-	107	0	48	107	0	48	-	-	-	84	0	48
7000131	-	-	-	107	0	48	107	0	48	-	-	-	84	0	48
52	11776	226	110	11788	215	110	11771	219	110	12595	222	109	12574	222	110
474	2844	0	112	2840	0	112	2844	0	112	3030	0	112	3032	0	112
912	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1374	4762	226	111	4734	215	111	4728	219	111	4836	222	111	4824	222	111
7010	8606	333	90	8631	333	90	8650	333	90	9049	362	90	8950	362	90

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
7012	4762	226	95	4734	215	95	4728	219	95	4836	222	95	4824	222	95
8756	15481	382	108	15625	407	108	15765	442	108	15924	414	108	15820	414	108
8758	8934	226	89	8948	215	89	8923	219	89	9567	222	89	9544	222	89
8778	13368	559	92	13365	548	92	13378	552	92	13885	584	91	13774	584	92
6751293	10488	926	95	10523	924	95	10475	924	95	11193	937	95	11170	936	95
6751294	7019	0	96	7052	0	96	7041	0	96	7761	0	96	7751	0	96
6751295	3477	926	92	3469	924	92	3434	924	92	3434	937	92	3413	936	92
6751675	18327	382	107	18465	407	107	18609	442	106	18959	414	106	18852	414	106
24	8606	333	111	8631	333	111	8650	333	111	9049	362	110	8950	362	110
1538	9667	50	91	9808	72	90	9940	107	90	10004	52	90	9990	52	90
6751676	18274	385	106	18450	409	106	18595	442	106	19055	416	105	18940	414	105
1372	8606	333	90	8631	333	90	8650	333	90	9049	362	90	8950	362	90
1540	4762	226	95	4734	215	95	4728	219	95	4836	222	95	4824	222	95
1552	8606	333	90	8631	333	90	8650	333	90	9049	362	90	8950	362	90
1684	4762	226	95	4734	215	95	4728	219	95	4836	222	95	4824	222	95
822631	13368	561	83	13366	548	83	13378	552	83	13877	580	82	13765	580	82
1546	11342	657	88	11224	659	88	11251	659	88	12578	682	85	12450	682	85
1548	5507	182	111	5588	212	111	5583	230	111	6088	199	111	6088	201	111
9514	24143	1109	39	24167	1136	39	24196	1156	39	26766	1128	37	26630	1130	37
9826	22351	1087	88	22353	1119	88	22371	1137	88	24758	1121	86	24630	1123	86
267142	11012	428	95	11126	458	95	11123	478	95	12180	440	95	12174	442	95
269296	13109	659	94	2320	160	64	2320	160	64	-	-	-	-	-	-

Road Link	2028 RC			2028 AD			2028 BD			2034 RC			2034 AD		
	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)	Traffic Flow (AADT)	HDV	Speed (kph)
7782	18612	841	91	2351	160	64	2351	160	64	-	-	-	-	-	-
682	0	0	0	2351	160	64	2351	160	64	-	-	-	-	-	-
692	0	0	0	2351	160	64	2351	160	64	-	-	-	-	-	-
4545022	2043	0	20	2351	160	64	2351	160	64	-	-	-	-	-	-
4487984	483	14	48	2351	160	64	2351	160	64	-	-	-	-	-	-
671	0	0	0	2351	160	64	2351	160	64	-	-	-	-	-	-
6750513	2033	7	96	2351	160	64	2351	160	64	-	-	-	-	-	-
7000279	-	-	-	2351	160	64	2351	160	64	-	-	-	-	-	-
6750515	2033	7	96	2351	160	64	2351	160	64	-	-	-	-	-	-
7000278	-	-	-	2351	160	64	2351	160	64	-	-	-	-	-	-
6751177	2033	7	96	2351	160	64	2351	160	64	-	-	-	-	-	-

Table notes: RC= Reference case (without proposed development); AD = Typical day (with proposed development; BD= Busiest day (with proposed development)

Annex 12B.2: Transport Emissions Results Tables

Table 1.1: Modelled pollutant concentrations at receptors for 2018 baseline year

Receptor	NO_2 concentration (µg/m3)			PM_{10} concentration (µg/m3)			$PM_{2.5}$ concentration (µg/m3)		
	Background	Road + Rail	Total	Background	Road + Rail	Total	Background	Road + Rail	Total
BC1	8.7	4.2	12.8	14.5	0.3	14.8	8.9	0.5	9.5
BC2	8.7	17.8	26.4	15.9	1.6	17.5	9.3	2.5	11.8
BC3	9.3	2.9	12.1	13.7	0.2	14.0	8.9	0.4	9.3
BC4	10.3	5.4	15.8	13.7	0.4	14.1	9.0	0.7	9.7
BC5	10.5	20.7	31.1	15.1	1.8	16.9	10.0	2.9	12.9
SW6	7.8	2.7	10.5	14.7	0.3	15.0	9.0	0.4	9.4
SW5	7.8	2.9	10.7	15.4	0.3	15.7	9.1	0.4	9.6
BC7	9.4	4.4	13.8	16.1	0.4	16.4	9.8	0.6	10.4
BC8	8.3	2.7	11.0	14.7	0.2	14.9	9.0	0.3	9.3
KS4	8.0	3.3	11.3	15.2	0.2	15.5	9.2	0.4	9.5
LW1	17.6	10.0	27.6	15.1	0.8	15.9	10.7	1.3	12.1
LW3	13.3	17.3	30.6	13.4	1.4	14.9	9.2	2.3	11.5
LW5	10.6	3.8	14.4	14.4	0.3	14.7	9.5	0.5	10.0
LW6	10.6	4.4	15.0	14.4	0.4	14.7	9.5	0.6	10.1
KS1	8.9	3.7	12.7	13.8	0.3	14.1	8.9	0.4	9.3
KS2	8.0	6.0	14.0	15.2	0.5	15.7	9.2	0.8	9.9
KS3	8.0	7.7	15.7	15.2	0.6	15.8	9.2	1.0	10.2
SW4	7.7	4.5	12.2	13.6	0.4	14.0	8.7	0.6	9.3

Receptor	NO_2 concentration (µg/m3)			PM_{10} concentration (µg/m3)			$PM_{2.5}$ concentration (µg/m3)		
	Background	Road + Rail	Total	Background	Road + Rail	Total	Background	Road + Rail	Total
HS3	7.7	5.2	12.8	16.0	0.4	16.4	9.3	0.7	10.0
YX1	7.8	11.5	19.3	15.9	1.0	17.0	9.3	1.7	11.0
YX3	7.7	11.5	19.2	14.5	1.0	15.5	9.0	1.5	10.6
YX7	7.7	1.8	9.5	14.5	0.1	14.6	8.9	0.2	9.1
LE3	7.7	3.1	10.8	14.7	0.3	15.0	8.9	0.4	9.4
LE9	8.8	11.4	20.2	13.8	0.6	14.4	9.2	0.9	10.1
LE10	8.8	9.2	18.0	13.8	0.7	14.5	9.2	1.2	10.4
LE11	8.0	4.2	12.2	14.0	0.3	14.4	8.8	0.5	9.4
LE14	7.8	4.4	12.2	15.4	0.4	15.8	9.2	0.6	9.8
SX12	8.0	3.2	11.1	15.3	0.2	15.5	9.3	0.4	9.7
YX4	7.6	5.3	12.9	16.0	0.4	16.4	9.3	0.7	10.0
SX1	7.7	5.2	12.9	15.2	0.4	15.6	9.2	0.7	9.8
WM2	8.4	18.0	26.5	15.8	1.7	17.5	9.5	2.7	12.1
WM6	8.6	2.7	11.3	15.3	0.2	15.5	9.4	0.3	9.7
WM7	9.0	5.2	14.2	16.5	0.4	16.8	9.7	0.6	10.3
WM8	9.3	6.5	15.7	15.9	0.5	16.4	9.6	0.7	10.3
WM4	8.8	2.8	11.6	14.2	0.2	14.5	9.1	0.3	9.5
WB8	11.0	16.0	27.1	14.6	1.5	16.1	9.7	2.4	12.0
WB9	11.0	11.3	22.3	14.6	0.9	15.6	9.7	1.5	11.2
WB10	10.5	5.8	16.3	15.7	0.4	16.1	9.8	0.6	10.4
BK2	11.7	6.7	18.5	16.0	0.5	16.5	9.8	0.8	10.6

Receptor	NO_2 concentration (µg/m3)			PM_{10} concentration (µg/m3)			$PM_{2.5}$ concentration (µg/m3)		
	Background	Road + Rail	Total	Background	Road + Rail	Total	Background	Road + Rail	Total
BK4	12.5	5.3	17.7	17.9	0.5	18.3	10.6	0.7	11.4
BK5	12.5	8.5	20.9	17.9	0.7	18.6	10.6	1.1	11.8
IP1	13.3	11.6	25.0	18.2	1.1	19.3	11.0	1.8	12.7
IP2	11.2	11.2	22.4	17.8	0.9	18.8	10.8	1.5	12.3
BK3	10.9	7.8	18.7	15.8	0.6	16.5	9.8	1.0	10.8
IP3	9.8	13.6	23.4	15.8	1.2	17.1	10.0	2.0	12.0
IP4	10.2	20.0	30.2	17.3	1.9	19.2	10.4	3.0	13.4
IP5	10.3	3.1	13.4	18.1	0.3	18.4	10.8	0.4	11.3
IP6	12.5	1.0	13.6	15.2	0.1	15.3	10.2	0.1	10.3
IP7	14.5	0.7	15.2	15.7	0.1	15.7	10.6	0.1	10.7
IP8	16.8	0.7	17.5	16.0	0.1	16.1	10.9	0.1	11.0
IP9	16.8	0.7	17.5	16.0	0.1	16.0	10.9	0.1	11.0
IP10	16.8	0.7	17.5	16.0	0.1	16.0	10.9	0.1	11.0
IP11	16.8	0.7	17.5	16.0	0.1	16.1	10.9	0.1	11.0
ND1	12.4	14.8	27.2	16.5	1.5	17.9	10.4	2.3	12.7
ND2	11.1	4.7	15.8	17.1	0.4	17.6	10.5	0.7	11.2
ND3	10.6	8.6	19.2	16.1	0.8	16.9	9.8	1.3	11.1
ND4	9.5	8.7	18.2	15.3	0.6	15.9	9.5	1.0	10.5
ND5	8.9	5.9	14.8	16.1	0.5	16.6	9.6	0.9	10.4
ND6	9.0	1.3	10.3	15.6	0.1	15.7	9.4	0.2	9.6
WM9	8.4	2.0	10.5	15.2	0.2	15.3	9.3	0.3	9.5

Receptor	NO_2 concentration (µg/m3)			PM_{10} concentration (µg/m3)			$PM_{2.5}$ concentration (µg/m3)		
	Background	Road + Rail	Total	Background	Road + Rail	Total	Background	Road + Rail	Total
ND7	8.9	6.2	15.2	16.5	0.6	17.0	9.8	0.9	10.7
FR1	8.0	3.7	11.6	16.0	0.4	16.4	9.4	0.6	10.0
FR2	8.9	6.8	15.7	14.7	0.6	15.2	9.3	0.9	10.2
FR3	8.9	2.2	11.1	14.7	0.2	14.8	9.3	0.3	9.6
FR4	7.7	3.9	11.6	16.1	0.4	16.5	9.4	0.6	10.0
FR5	7.7	2.8	10.5	15.3	0.2	15.6	9.2	0.4	9.6
FR6	7.8	2.5	10.2	16.0	0.2	16.2	9.3	0.3	9.6
IP12	12.9	0.6	13.5	15.3	0.1	15.3	10.0	0.1	10.1
IP13	13.8	0.9	14.7	15.5	0.1	15.6	10.7	0.1	10.8
IP14	12.2	17.1	29.3	15.1	1.4	16.4	10.0	2.1	12.1
IP15	11.4	13.3	24.7	15.4	1.1	16.5	9.9	1.8	11.6
WB11	11.3	7.0	18.3	14.9	0.5	15.4	9.7	0.8	10.6
WB12	11.1	5.6	16.7	14.7	0.4	15.1	9.4	0.7	10.1
WB7	10.4	5.8	16.2	15.0	0.5	15.4	9.6	0.7	10.4
WB6	11.2	4.2	15.4	14.4	0.3	14.8	9.5	0.5	10.0
WB5	11.8	10.2	21.9	14.0	0.4	14.4	9.5	0.6	10.1
WB4	11.8	4.3	16.1	14.0	0.3	14.3	9.5	0.5	9.9
WB3	10.4	4.2	14.6	14.2	0.3	14.5	9.3	0.6	9.9
WB2	10.4	5.5	15.9	14.2	0.5	14.6	9.3	0.7	10.1
SX13	8.1	2.5	10.6	15.7	0.2	15.9	9.4	0.3	9.7
SX14	8.1	3.1	11.2	16.2	0.2	16.4	9.5	0.4	9.9

Receptor	NO_2 concentration (µg/m3)			PM_{10} concentration (µg/m3)			$PM_{2.5}$ concentration (µg/m3)		
	Background	Road + Rail	Total	Background	Road + Rail	Total	Background	Road + Rail	Total
WM13	8.3	2.8	11.1	15.2	0.2	15.4	9.2	0.4	9.6
HS1	8.8	5.2	14.0	14.6	0.4	15.1	9.3	0.7	10.0
HS2	7.7	3.5	11.1	15.9	0.3	16.2	9.3	0.4	9.8
SW1	8.3	3.7	12.1	12.7	0.3	13.0	8.5	0.4	9.0
YX2	7.7	7.0	14.7	14.5	0.6	15.1	9.0	0.9	10.0
YX6	8.0	4.0	11.9	14.7	0.3	15.0	8.9	0.5	9.4
SX2	8.1	1.2	9.3	15.1	0.1	15.2	9.3	0.2	9.4
SX4	8.7	7.8	16.6	14.2	0.6	14.8	9.1	1.0	10.1
SX3	8.0	1.5	9.6	15.8	0.1	15.9	9.4	0.2	9.6
SX10	8.0	6.1	14.0	15.8	0.5	16.3	9.4	0.8	10.2
SX5	8.0	10.6	18.5	15.0	0.9	15.8	9.2	1.4	10.6
SX6	8.0	16.2	24.3	14.7	1.5	16.1	9.1	2.4	11.5
SX7	8.0	18.0	26.1	14.7	1.7	16.3	9.1	2.7	11.8
SX11	7.8	5.3	13.2	15.0	0.4	15.5	9.2	0.7	9.8
SW3	7.8	10.3	18.0	13.5	0.9	14.3	8.7	1.4	10.0
SW2	7.8	7.1	14.9	13.5	0.6	14.0	8.7	0.9	9.6
YX8	7.7	3.9	11.6	15.3	0.3	15.6	9.1	0.5	9.6
LE13	7.6	3.9	11.5	13.7	0.3	14.0	8.7	0.5	9.1
LE12	8.3	3.1	11.3	14.6	0.2	14.8	9.1	0.4	9.5
LE7	7.9	1.5	9.4	15.2	0.1	15.3	9.1	0.2	9.3
LE1	8.8	7.2	16.0	13.8	0.5	14.2	9.2	0.7	9.9

Receptor	NO_2 concentration (µg/m3)			PM_{10} concentration (µg/m3)			$PM_{2.5}$ concentration (µg/m3)		
	Background	Road + Rail	Total	Background	Road + Rail	Total	Background	Road + Rail	Total
LE8	8.8	3.5	12.3	13.8	0.2	14.0	9.2	0.4	9.6
LE6	7.7	4.6	12.4	15.1	0.4	15.5	9.1	0.6	9.7
LE5	7.7	2.8	10.6	15.1	0.2	15.4	9.1	0.4	9.4
ND8	8.4	10.0	18.4	15.7	0.9	16.6	9.4	1.5	10.9
WM1	8.0	1.5	9.5	14.7	0.1	14.8	9.1	0.2	9.3
SX8	8.0	0.5	8.5	15.3	0.0	15.4	9.2	0.1	9.3
SX9	8.0	0.7	8.6	15.3	0.1	15.4	9.2	0.1	9.3
LE4	7.7	0.4	8.1	15.1	0.0	15.1	9.1	0.1	9.1
YX5	7.8	0.4	8.2	15.4	0.0	15.4	9.1	0.0	9.2
LW2	13.3	5.4	18.6	13.4	0.4	13.9	9.2	0.7	9.9
BK1	12.4	10.7	23.1	14.7	0.8	15.4	9.7	1.2	10.9
WM10	8.8	9.1	17.9	16.1	0.8	16.9	9.5	1.3	10.8
WB1	9.8	11.9	21.7	15.9	1.1	16.9	9.9	1.7	11.6
BC6	7.8	4.6	12.4	16.0	0.4	16.3	9.3	0.6	9.9
LW4	11.7	5.4	17.1	13.8	0.4	14.3	9.4	0.7	10.1
LW7	10.6	2.1	12.6	14.4	0.2	14.5	9.5	0.3	9.8
LW8	24.7	5.6	30.3	14.3	0.5	14.7	9.8	0.7	10.6
LW9	10.6	4.4	15.0	14.4	0.4	14.7	9.5	0.6	10.1
LE2	7.9	1.6	9.5	14.8	0.1	15.0	9.0	0.2	9.2
WM5	9.5	2.6	12.2	15.7	0.2	15.9	9.4	0.3	9.7
WM11	8.6	3.7	12.3	15.3	0.3	15.5	9.4	0.4	9.8

Receptor	NO_2 concentration (µg/m3)			PM_{10} concentration (µg/m3)			$PM_{2.5}$ concentration (µg/m3)		
	Background	Road + Rail	Total	Background	Road + Rail	Total	Background	Road + Rail	Total
WM12	8.6	1.5	10.1	15.3	0.1	15.4	9.4	0.2	9.5
SX15	8.0	22.2	30.1	15.0	1.9	16.9	9.2	3.1	12.3
YX9	7.6	0.9	8.5	16.0	0.1	16.0	9.3	0.1	9.5
LE15	7.7	0.6	8.3	14.7	0.0	14.8	8.9	0.1	9.0
LE16	7.7	0.5	8.2	14.7	0.0	14.8	8.9	0.1	9.0
LE19	7.9	0.6	8.5	14.8	0.1	14.9	9.0	0.1	9.1
LE17	7.6	0.5	8.1	14.1	0.0	14.2	8.8	0.1	8.8
LE18	7.9	0.4	8.2	14.5	0.0	14.5	8.9	0.0	9.0
LE20	7.9	0.5	8.3	14.5	0.0	14.5	8.9	0.1	9.0
LE21	7.9	0.5	8.3	14.5	0.0	14.5	8.9	0.1	9.0
LE22	8.0	0.5	8.4	14.6	0.0	14.6	9.0	0.1	9.0
LE23	7.9	0.4	8.2	14.5	0.0	14.5	8.9	0.0	9.0
WM3	8.3	5.1	13.4	15.2	0.4	15.6	9.2	0.6	9.9
WM14	8.3	0.9	9.2	15.2	0.1	15.3	9.2	0.1	9.3
YX10	7.7	7.1	14.9	15.7	0.6	16.4	9.2	1.0	10.2
LE24	7.9	0.5	8.3	14.5	0.0	14.5	8.9	0.1	9.0
YX11	7.7	2.3	10.1	15.7	0.2	15.9	9.2	0.3	9.5
YX12	7.7	2.0	9.7	15.7	0.2	15.9	9.2	0.3	9.5
LE25	7.6	0.3	7.9	14.8	0.0	14.9	8.9	0.0	9.0
LE26	7.6	0.5	8.1	14.1	0.0	14.2	8.8	0.1	8.8
LE27	7.7	0.4	8.0	14.8	0.0	14.8	9.0	0.0	9.0

Receptor	NO_2 concentration (µg/m3)			PM_{10} concentration (µg/m3)			$PM_{2.5}$ concentration (µg/m3)		
	Background	Road + Rail	Total	Background	Road + Rail	Total	Background	Road + Rail	Total
LE28	7.7	0.9	8.6	14.7	0.1	14.8	8.9	0.1	9.1
LE29	7.6	0.3	7.8	14.8	0.0	14.9	8.9	0.0	9.0
LE30	7.6	0.7	8.3	13.7	0.1	13.7	8.7	0.1	8.8
LE31	7.6	0.5	8.0	13.7	0.0	13.7	8.7	0.1	8.7
LE32	7.9	0.7	8.5	15.2	0.1	15.2	9.1	0.1	9.2
LE33	7.9	1.1	9.0	15.2	0.1	15.3	9.1	0.1	9.3
LE34	8.3	0.6	8.9	14.6	0.0	14.6	9.1	0.1	9.2
LE35	8.8	1.1	9.9	13.8	0.1	13.8	9.2	0.1	9.3
LE36	8.3	1.8	10.1	14.6	0.1	14.7	9.1	0.2	9.3
LE37	8.3	1.8	10.1	14.6	0.1	14.7	9.1	0.2	9.3
LE38	8.3	2.2	10.5	14.6	0.2	14.8	9.1	0.3	9.4
LE39	7.7	1.4	9.1	14.1	0.1	14.2	8.8	0.2	9.0
LE40	8.3	0.7	9.0	14.6	0.1	14.6	9.1	0.1	9.2
LE52	7.9	1.4	9.3	15.2	0.1	15.3	9.1	0.2	9.3
LE53	7.9	0.5	8.4	14.5	0.0	14.5	8.9	0.1	9.0
LE54	7.9	0.4	8.2	14.5	0.0	14.5	8.9	0.0	9.0
YX13	7.8	7.5	15.3	15.9	0.7	16.6	9.3	1.1	10.4
YX14	7.7	0.4	8.2	15.7	0.0	15.8	9.2	0.1	9.3
YX15	7.8	5.0	12.8	15.2	0.4	15.6	9.1	0.7	9.8
YX16	7.8	5.2	13.0	15.9	0.5	16.4	9.3	0.7	10.0
YX17	7.8	0.7	8.6	15.2	0.1	15.2	9.1	0.1	9.2

Receptor	NO_2 concentration (µg/m3)			PM_{10} concentration (µg/m3)			$PM_{2.5}$ concentration (µg/m3)		
	Background	Road + Rail	Total	Background	Road + Rail	Total	Background	Road + Rail	Total
LE55	7.8	1.3	9.1	14.7	0.1	14.8	8.9	0.2	9.1
LE56	8.0	2.7	10.6	14.6	0.2	14.8	9.0	0.3	9.3
YX18	7.7	3.3	11.0	14.5	0.3	14.8	9.0	0.4	9.5
YX19	8.0	2.3	10.3	14.7	0.2	14.8	8.9	0.3	9.2
YX20	7.7	6.4	14.1	15.1	0.6	15.7	9.1	0.9	10.0
SX16	8.7	3.1	11.8	14.2	0.2	14.4	9.1	0.4	9.5
SX18	8.0	0.4	8.4	15.8	0.0	15.9	9.3	0.1	9.4
SX17	8.7	0.7	9.4	14.2	0.1	14.2	9.1	0.1	9.2
SX19	8.2	0.4	8.6	15.8	0.0	15.8	9.3	0.1	9.4
WM15	8.9	1.8	10.6	15.6	0.1	15.8	9.5	0.2	9.7
WM16	8.7	0.6	9.2	14.2	0.0	14.2	9.1	0.1	9.1
WM17	8.9	0.7	9.6	14.6	0.1	14.7	9.2	0.1	9.3
BK6	10.9	3.4	14.3	14.9	0.3	15.2	9.4	0.4	9.9
BK7	10.8	2.6	13.4	17.7	0.2	17.9	10.4	0.3	10.7
LE46	7.9	1.4	9.2	15.2	0.1	15.3	9.1	0.2	9.3
BK8	11.1	3.9	15.0	17.5	0.3	17.9	10.5	0.5	11.0
LE57	7.8	3.2	10.9	14.4	0.2	14.6	8.9	0.4	9.3
LE42	7.6	0.4	8.0	14.1	0.0	14.2	8.8	0.1	8.8

Table 1.2: Modelled NO_2 concentrations at receptors for 2023 assessment year

Receptor	2023 Background (μg/m³)	2023RC Road + Rail (μg/m3)	2023RC Total (μg/m3)	2023AD Road + Rail (μg/m3)	2023AD Total (μg/m3)	Magnitude of Change (μg/m3)	Magnitude of Change Descriptor	Effect Descriptor
BC1	7.3	2.9	10.3	3.0	10.3	>0.0	Imperceptible	Negligible
BC2	7.3	12.9	20.2	13.0	20.3	0.1	Imperceptible	Negligible
BC3	7.9	2.0	9.9	2.0	10.0	>0.0	Imperceptible	Negligible
BC4	8.9	3.8	12.7	3.8	12.8	0.1	Imperceptible	Negligible
BC5	9.0	9.0	18.0	9.1	18.1	0.1	Imperceptible	Negligible
SW6	6.6	1.6	8.2	1.7	8.3	0.1	Imperceptible	Negligible
SW5	6.6	1.7	8.3	1.8	8.4	0.1	Imperceptible	Negligible
BC7	8.1	2.9	10.9	2.9	11.0	>0.0	Imperceptible	Negligible
BC8	7.1	2.1	9.2	2.1	9.2	>0.0	Imperceptible	Negligible
KS4	6.8	2.4	9.2	2.5	9.3	0.1	Imperceptible	Negligible
LW1	15.0	6.8	21.9	6.9	22.0	0.1	Imperceptible	Negligible
LW3	11.2	13.6	24.8	13.7	24.9	0.2	Imperceptible	Negligible
LW5	8.9	2.7	11.7	2.8	11.7	0.1	Imperceptible	Negligible
LW6	8.9	3.4	12.3	3.4	12.3	<0.0	Imperceptible	Negligible
KS1	7.5	2.6	10.1	2.6	10.1	>0.0	Imperceptible	Negligible
KS2	6.8	3.9	10.7	4.0	10.8	0.1	Imperceptible	Negligible
KS3	6.8	4.9	11.7	5.1	11.9	0.2	Imperceptible	Negligible
SW4	6.5	2.8	9.3	2.9	9.4	0.1	Imperceptible	Negligible
HS3	6.5	3.5	10.0	3.6	10.0	0.1	Imperceptible	Negligible
YX1	6.5	8.0	14.5	8.3	14.8	0.3	Imperceptible	Negligible

Receptor	2023 Background (µg/m³)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX3	6.5	7.7	14.2	8.4	14.9	0.7	Very Low	Negligible
YX7	6.5	1.3	7.8	1.8	8.2	0.4	Very Low	Negligible
LE3	6.5	2.3	8.8	2.8	9.4	0.6	Very Low	Negligible
LE9	7.5	9.9	17.4	10.5	18.0	0.6	Very Low	Negligible
LE10	7.5	6.9	14.4	7.2	14.7	0.3	Imperceptible	Negligible
LE11	6.7	3.3	10.0	3.4	10.1	0.1	Imperceptible	Negligible
LE14	6.6	6.1	12.7	6.3	12.9	0.2	Imperceptible	Negligible
SX12	6.7	2.4	9.1	2.4	9.2	0.1	Imperceptible	Negligible
YX4	6.4	3.6	10.0	3.8	10.2	0.2	Imperceptible	Negligible
SX1	6.5	3.5	10.0	3.8	10.2	0.2	Imperceptible	Negligible
WM2	7.1	12.9	20.0	13.8	20.8	0.8	Low	Negligible
WM6	7.2	1.9	9.1	2.0	9.2	0.1	Imperceptible	Negligible
WM7	7.5	3.8	11.3	3.9	11.4	0.1	Imperceptible	Negligible
WM8	7.8	4.6	12.3	4.7	12.5	0.1	Imperceptible	Negligible
WM4	7.4	2.2	9.6	2.2	9.6	>0.0	Imperceptible	Negligible
WB8	9.2	10.8	20.0	10.9	20.1	0.1	Imperceptible	Negligible
WB9	9.2	7.9	17.1	7.8	17.0	<0.0	Imperceptible	Negligible
WB10	8.8	4.3	13.1	4.3	13.1	>0.0	Imperceptible	Negligible
BK2	10.1	4.7	14.8	4.7	14.7	<0.0	Imperceptible	Negligible
BK4	10.6	3.6	14.1	3.3	13.9	-0.3	Imperceptible	Negligible
BK5	10.6	5.4	16.0	5.4	16.0	>0.0	Imperceptible	Negligible

Receptor	2023 Background (µg/m^3)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
IP1	11.4	7.7	19.1	7.6	19.0	-0.1	Imperceptible	Negligible
IP2	9.3	7.5	16.8	7.4	16.7	<0.0	Imperceptible	Negligible
BK3	9.3	5.1	14.4	5.1	14.4	>0.0	Imperceptible	Negligible
IP3	8.2	8.8	17.0	8.8	17.0	>0.0	Imperceptible	Negligible
IP4	8.4	13.1	21.6	13.1	21.6	>0.0	Imperceptible	Negligible
IP5	8.6	2.0	10.6	2.0	10.6	0.0	Imperceptible	Negligible
IP6	10.5	0.7	11.1	0.7	11.1	0.0	Imperceptible	Negligible
IP7	12.3	0.5	12.7	0.5	12.7	0.0	Imperceptible	Negligible
IP8	14.3	0.5	14.8	0.5	14.8	0.0	Imperceptible	Negligible
IP9	14.3	0.5	14.8	0.5	14.8	0.0	Imperceptible	Negligible
IP10	14.3	0.5	14.8	0.5	14.8	0.0	Imperceptible	Negligible
IP11	14.3	0.5	14.8	0.5	14.8	<0.0	Imperceptible	Negligible
ND1	10.8	9.5	20.3	9.5	20.3	>0.0	Imperceptible	Negligible
ND2	9.5	2.9	12.4	2.9	12.4	>0.0	Imperceptible	Negligible
ND3	8.7	5.5	14.2	5.5	14.2	>0.0	Imperceptible	Negligible
ND4	8.0	6.9	14.8	7.0	15.0	0.1	Imperceptible	Negligible
ND5	7.6	4.9	12.4	5.0	12.6	0.1	Imperceptible	Negligible
ND6	7.6	0.9	8.6	0.9	8.6	0.0	Imperceptible	Negligible
WM9	7.1	1.6	8.7	1.6	8.8	0.1	Imperceptible	Negligible
ND7	7.5	4.1	11.6	4.1	11.6	0.1	Imperceptible	Negligible
FR1	6.7	2.4	9.2	2.4	9.2	>0.0	Imperceptible	Negligible

Receptor	2023 Background (µg/m^3)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
FR2	7.6	4.8	12.4	4.8	12.3	<0.0	Imperceptible	Negligible
FR3	7.6	1.6	9.2	1.7	9.2	>0.0	Imperceptible	Negligible
FR4	6.5	2.4	8.9	2.5	9.0	0.1	Imperceptible	Negligible
FR5	6.5	1.9	8.4	2.0	8.5	0.1	Imperceptible	Negligible
FR6	6.6	1.9	8.4	1.9	8.5	0.1	Imperceptible	Negligible
IP12	10.9	0.4	11.3	0.4	11.3	0.0	Imperceptible	Negligible
IP13	11.8	0.6	12.4	0.6	12.4	0.0	Imperceptible	Negligible
IP14	10.4	12.9	23.3	12.9	23.2	-0.1	Imperceptible	Negligible
IP15	9.7	9.3	19.0	9.3	19.0	<0.0	Imperceptible	Negligible
WB11	9.6	5.0	14.6	5.0	14.6	<0.0	Imperceptible	Negligible
WB12	9.3	4.1	13.4	4.0	13.3	-0.1	Imperceptible	Negligible
WB7	8.8	5.0	13.7	5.0	13.7	>0.0	Imperceptible	Negligible
WB6	9.3	4.3	13.6	4.4	13.7	0.1	Imperceptible	Negligible
WB5	9.8	9.3	19.1	9.3	19.1	0.1	Imperceptible	Negligible
WB4	9.8	3.9	13.7	4.1	13.9	0.2	Imperceptible	Negligible
WB3	8.7	4.2	12.9	4.0	12.6	-0.3	Imperceptible	Negligible
WB2	8.7	6.4	15.1	4.5	13.1	-2.0	Medium	Minorbeneficial
SX13	6.8	2.0	8.8	2.1	8.9	0.1	Imperceptible	Negligible
SX14	6.9	2.4	9.2	2.5	9.3	0.1	Imperceptible	Negligible
WM13	7.0	2.1	9.1	2.1	9.1	>0.0	Imperceptible	Negligible
HS1	7.5	3.7	11.2	3.8	11.3	>0.0	Imperceptible	Negligible

Receptor	2023 Background (µg/m³)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
HS2	6.5	2.5	8.9	2.5	9.0	>0.0	Imperceptible	Negligible
SW1	7.1	2.6	9.7	2.7	9.7	>0.0	Imperceptible	Negligible
YX2	6.5	4.7	11.3	5.2	11.7	0.4	Very Low	Negligible
YX6	6.7	2.9	9.6	3.7	10.4	0.8	Low	Negligible
SX2	6.8	0.9	7.7	0.9	7.8	>0.0	Imperceptible	Negligible
SX4	7.3	6.2	13.5	6.6	13.9	0.4	Very Low	Negligible
SX3	6.7	1.1	7.8	1.2	7.9	0.1	Imperceptible	Negligible
SX10	6.7	4.6	11.2	4.9	11.6	0.3	Imperceptible	Negligible
SX5	6.7	7.4	14.1	7.9	14.6	0.6	Very Low	Negligible
SX6	6.7	11.7	18.4	12.3	19.1	0.7	Very Low	Negligible
SX7	6.7	13.0	19.8	13.7	20.5	0.7	Very Low	Negligible
SX11	6.6	4.0	10.6	4.1	10.7	0.2	Imperceptible	Negligible
SW3	6.5	6.6	13.1	6.9	13.4	0.2	Imperceptible	Negligible
SW2	6.5	4.7	11.2	5.0	11.5	0.3	Imperceptible	Negligible
YX8	6.5	2.8	9.3	3.2	9.7	0.4	Very Low	Negligible
LE13	6.4	4.1	10.5	4.5	10.9	0.4	Very Low	Negligible
LE12	7.0	2.8	9.8	3.1	10.1	0.3	Imperceptible	Negligible
LE7	6.6	1.2	7.9	1.6	8.2	0.3	Imperceptible	Negligible
LE1	7.5	5.2	12.7	5.5	13.0	0.3	Imperceptible	Negligible
LE8	7.5	2.9	10.3	3.1	10.5	0.2	Imperceptible	Negligible
LE6	6.5	3.4	9.9	4.2	10.7	0.8	Low	Negligible

Receptor	2023 Background (µg/m^3)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE5	6.5	2.1	8.6	2.5	9.0	0.4	Very Low	Negligible
ND8	7.1	6.7	13.8	6.8	13.9	0.1	Imperceptible	Negligible
WM1	6.7	1.0	7.8	1.1	7.8	0.1	Imperceptible	Negligible
SX8	6.7	0.4	7.1	0.4	7.1	>0.0	Imperceptible	Negligible
SX9	6.7	0.5	7.2	0.5	7.2	>0.0	Imperceptible	Negligible
LE4	6.5	0.3	6.8	0.3	6.8	>0.0	Imperceptible	Negligible
YX5	6.5	0.3	6.8	0.3	6.8	>0.0	Imperceptible	Negligible
LW2	11.2	3.7	14.9	3.8	15.0	>0.0	Imperceptible	Negligible
BK1	10.6	7.6	18.2	8.7	19.3	1.1	Low	Negligible
WM10	7.5	6.8	14.2	6.9	14.3	0.1	Imperceptible	Negligible
WB1	8.3	7.8	16.0	7.5	15.8	-0.2	Imperceptible	Negligible
BC6	6.6	3.3	10.0	3.4	10.1	0.1	Imperceptible	Negligible
LW4	9.8	3.8	13.6	3.9	13.7	0.1	Imperceptible	Negligible
LW7	8.9	1.6	10.5	1.6	10.5	<0.0	Imperceptible	Negligible
LW8	21.3	4.0	25.4	4.2	25.5	0.2	Imperceptible	Negligible
LW9	8.9	3.1	12.0	3.1	12.0	>0.0	Imperceptible	Negligible
LE2	6.7	1.1	7.8	1.2	7.9	0.1	Imperceptible	Negligible
WM5	8.1	1.9	10.0	2.0	10.1	>0.0	Imperceptible	Negligible
WM11	7.2	2.6	9.9	2.7	9.9	0.1	Imperceptible	Negligible
WM12	7.2	1.1	8.3	1.1	8.3	0.1	Imperceptible	Negligible
SX15	6.7	15.8	22.5	17.0	23.7	1.2	Low	Negligible

Receptor	2023 Background (µg/m³)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX9	6.4	0.6	7.1	0.7	7.1	>0.0	Imperceptible	Negligible
LE15	6.5	0.4	6.9	0.5	7.0	>0.0	Imperceptible	Negligible
LE16	6.5	0.3	6.9	0.4	6.9	>0.0	Imperceptible	Negligible
LE19	6.7	0.5	7.1	0.5	7.2	>0.0	Imperceptible	Negligible
LE17	6.4	0.4	6.8	0.4	6.8	>0.0	Imperceptible	Negligible
LE18	6.6	0.3	6.9	0.3	6.9	>0.0	Imperceptible	Negligible
LE20	6.6	0.4	7.0	0.4	7.0	>0.0	Imperceptible	Negligible
LE21	6.6	0.4	7.0	0.4	7.0	>0.0	Imperceptible	Negligible
LE22	6.7	0.4	7.1	0.4	7.1	>0.0	Imperceptible	Negligible
LE23	6.6	0.3	6.9	0.3	6.9	>0.0	Imperceptible	Negligible
WM3	7.0	3.8	10.8	3.8	10.8	0.0	Imperceptible	Negligible
WM14	7.0	0.6	7.6	0.6	7.6	>0.0	Imperceptible	Negligible
YX10	6.5	4.9	11.4	5.0	11.5	0.1	Imperceptible	Negligible
LE24	6.6	0.4	7.0	0.4	7.0	>0.0	Imperceptible	Negligible
YX11	6.5	1.6	8.1	1.6	8.1	0.1	Imperceptible	Negligible
YX12	6.5	1.4	7.9	1.4	7.9	0.1	Imperceptible	Negligible
LE25	6.4	0.2	6.6	0.2	6.6	>0.0	Imperceptible	Negligible
LE26	6.4	0.4	6.8	0.4	6.8	>0.0	Imperceptible	Negligible
LE27	6.5	0.3	6.7	0.3	6.7	>0.0	Imperceptible	Negligible
LE28	6.5	0.7	7.2	0.8	7.3	0.1	Imperceptible	Negligible
LE29	6.4	0.2	6.6	0.2	6.6	>0.0	Imperceptible	Negligible

Receptor	2023 Background (µg/m^3)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE30	6.4	0.7	7.1	0.8	7.2	0.1	Imperceptible	Negligible
LE31	6.4	0.4	6.8	0.4	6.8	>0.0	Imperceptible	Negligible
LE32	6.6	0.6	7.2	0.7	7.3	0.1	Imperceptible	Negligible
LE33	6.6	0.9	7.6	1.2	7.8	0.2	Imperceptible	Negligible
LE34	7.0	0.5	7.5	0.5	7.5	>0.0	Imperceptible	Negligible
LE35	7.5	0.8	8.3	0.8	8.3	>0.0	Imperceptible	Negligible
LE36	7.0	1.6	8.6	1.8	8.8	0.2	Imperceptible	Negligible
LE37	7.0	1.7	8.7	1.8	8.8	0.1	Imperceptible	Negligible
LE38	7.0	2.0	9.0	2.2	9.2	0.3	Imperceptible	Negligible
LE39	6.6	1.3	7.9	1.4	8.0	0.1	Imperceptible	Negligible
LE40	7.0	0.6	7.6	0.6	7.6	>0.0	Imperceptible	Negligible
LE52	6.6	1.2	7.8	1.5	8.1	0.3	Imperceptible	Negligible
LE53	6.6	0.4	7.0	0.4	7.0	>0.0	Imperceptible	Negligible
LE54	6.6	0.3	6.9	0.3	6.9	>0.0	Imperceptible	Negligible
YX13	6.5	5.2	11.7	5.3	11.8	0.1	Imperceptible	Negligible
YX14	6.5	0.3	6.8	0.3	6.8	>0.0	Imperceptible	Negligible
YX15	6.6	3.4	9.9	3.5	10.0	0.1	Imperceptible	Negligible
YX16	6.5	3.6	10.1	3.7	10.2	0.2	Imperceptible	Negligible
YX17	6.6	0.5	7.1	0.5	7.1	>0.0	Imperceptible	Negligible
LE55	6.5	1.1	7.6	1.1	7.6	>0.0	Imperceptible	Negligible
LE56	6.7	2.2	8.9	2.3	9.0	0.1	Imperceptible	Negligible

Receptor	2023 Background (µg/m^3)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX18	6.5	2.3	8.8	2.5	9.0	0.3	Imperceptible	Negligible
YX19	6.7	1.7	8.3	2.1	8.8	0.4	Very Low	Negligible
YX20	6.5	4.4	10.9	4.6	11.1	0.2	Imperceptible	Negligible
SX16	7.3	2.5	9.8	2.6	9.9	0.1	Imperceptible	Negligible
SX18	6.7	0.3	7.0	0.3	7.0	>0.0	Imperceptible	Negligible
SX17	7.3	0.5	7.8	0.5	7.9	>0.0	Imperceptible	Negligible
SX19	6.9	0.3	7.2	0.3	7.2	>0.0	Imperceptible	Negligible
WM15	7.4	1.3	8.7	1.3	8.7	>0.0	Imperceptible	Negligible
WM16	7.3	0.4	7.7	0.4	7.7	>0.0	Imperceptible	Negligible
WM17	7.4	0.5	7.9	0.5	7.9	0.0	Imperceptible	Negligible
BK6	9.3	2.4	11.7	1.8	11.0	-0.6	Very Low	Negligible
BK7	9.3	1.6	11.0	1.6	11.0	0.0	Imperceptible	Negligible
LE46	6.6	1.1	7.8	1.4	8.1	0.3	Imperceptible	Negligible
BK8	9.5	2.5	12.1	2.5	12.1	0.0	Imperceptible	Negligible
LE57	6.5	2.1	8.6	3.3	9.8	1.1	Low	Negligible
LE42	6.4	0.3	6.7	0.3	6.8	>0.0	Imperceptible	Negligible

Table 1.3: Modelled PM_{10} concentrations at receptors for 2023 assessment year

Receptor	2023 Background (µg/m^3)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
BC1	13.6	0.3	13.9	0.3	14.0	>0.0	Imperceptible	Negligible
BC2	15.1	1.4	16.5	1.4	16.5	>0.0	Imperceptible	Negligible
BC3	12.9	0.2	13.1	0.2	13.1	>0.0	Imperceptible	Negligible
BC4	12.9	0.4	13.3	0.4	13.3	>0.0	Imperceptible	Negligible
BC5	14.3	1.0	15.3	1.0	15.3	>0.0	Imperceptible	Negligible
SW6	13.9	0.2	14.1	0.2	14.1	>0.0	Imperceptible	Negligible
SW5	14.6	0.2	14.8	0.2	14.8	>0.0	Imperceptible	Negligible
BC7	15.3	0.3	15.6	0.3	15.6	>0.0	Imperceptible	Negligible
BC8	13.9	0.2	14.1	0.2	14.1	>0.0	Imperceptible	Negligible
KS4	14.4	0.2	14.6	0.2	14.6	>0.0	Imperceptible	Negligible
LW1	14.2	0.7	15.0	0.7	15.0	>0.0	Imperceptible	Negligible
LW3	12.6	1.4	14.0	1.4	14.0	>0.0	Imperceptible	Negligible
LW5	13.6	0.3	13.8	0.3	13.8	>0.0	Imperceptible	Negligible
LW6	13.6	0.3	13.9	0.3	13.9	<0.0	Imperceptible	Negligible
KS1	13.0	0.2	13.2	0.2	13.2	>0.0	Imperceptible	Negligible
KS2	14.4	0.4	14.8	0.4	14.8	>0.0	Imperceptible	Negligible
KS3	14.4	0.5	14.9	0.6	14.9	>0.0	Imperceptible	Negligible
SW4	12.8	0.3	13.1	0.3	13.1	>0.0	Imperceptible	Negligible
HS3	15.2	0.4	15.6	0.4	15.6	>0.0	Imperceptible	Negligible
YX1	15.1	1.0	16.1	1.7	16.8	0.7	Very Low	Negligible

Receptor	2023 Background (µg/m³)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX3	13.7	0.9	14.6	1.0	14.7	0.1	Imperceptible	Negligible
YX7	13.7	0.1	13.8	0.2	13.9	0.1	Imperceptible	Negligible
LE3	13.9	0.3	14.2	0.4	14.3	0.1	Imperceptible	Negligible
LE9	12.9	0.6	13.6	0.7	13.6	0.1	Imperceptible	Negligible
LE10	12.9	0.7	13.6	0.8	13.7	>0.0	Imperceptible	Negligible
LE11	13.2	0.3	13.5	0.3	13.5	>0.0	Imperceptible	Negligible
LE14	14.6	0.6	15.2	0.7	15.2	>0.0	Imperceptible	Negligible
SX12	14.4	0.2	14.7	0.2	14.7	>0.0	Imperceptible	Negligible
YX4	15.1	0.4	15.5	0.4	15.6	0.1	Imperceptible	Negligible
SX1	14.4	0.4	14.7	0.4	14.8	0.1	Imperceptible	Negligible
WM2	15.0	1.5	16.5	1.8	16.7	0.2	Imperceptible	Negligible
WM6	14.4	0.2	14.6	0.2	14.6	>0.0	Imperceptible	Negligible
WM7	15.7	0.3	16.0	0.3	16.0	>0.0	Imperceptible	Negligible
WM8	15.1	0.4	15.5	0.4	15.5	>0.0	Imperceptible	Negligible
WM4	13.4	0.2	13.6	0.2	13.6	>0.0	Imperceptible	Negligible
WB8	13.8	1.3	15.1	1.3	15.1	0.1	Imperceptible	Negligible
WB9	13.8	0.8	14.6	0.8	14.6	>0.0	Imperceptible	Negligible
WB10	14.8	0.4	15.2	0.4	15.2	>0.0	Imperceptible	Negligible
BK2	15.2	0.4	15.6	0.4	15.6	>0.0	Imperceptible	Negligible
BK4	17.1	0.4	17.5	0.4	17.5	<0.0	Imperceptible	Negligible
BK5	17.1	0.6	17.7	0.6	17.7	>0.0	Imperceptible	Negligible

Receptor	2023 Background (µg/m³)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
IP1	17.4	1.0	18.5	1.0	18.5	>0.0	Imperceptible	Negligible
IP2	17.0	0.8	17.9	0.9	17.9	>0.0	Imperceptible	Negligible
BK3	15.0	0.6	15.6	0.6	15.6	>0.0	Imperceptible	Negligible
IP3	15.0	1.1	16.1	1.2	16.1	>0.0	Imperceptible	Negligible
IP4	16.5	1.7	18.2	1.7	18.3	>0.0	Imperceptible	Negligible
IP5	17.3	0.3	17.5	0.3	17.5	>0.0	Imperceptible	Negligible
IP6	14.3	0.1	14.4	0.1	14.4	>0.0	Imperceptible	Negligible
IP7	14.8	0.1	14.9	0.1	14.9	>0.0	Imperceptible	Negligible
IP8	15.1	0.1	15.2	0.1	15.2	>0.0	Imperceptible	Negligible
IP9	15.1	0.1	15.2	0.1	15.2	>0.0	Imperceptible	Negligible
IP10	15.1	0.1	15.2	0.1	15.2	>0.0	Imperceptible	Negligible
IP11	15.1	0.1	15.2	0.1	15.2	>0.0	Imperceptible	Negligible
ND1	15.6	1.4	17.0	1.4	17.0	>0.0	Imperceptible	Negligible
ND2	16.2	0.4	16.7	0.4	16.7	>0.0	Imperceptible	Negligible
ND3	15.3	0.7	16.0	0.7	16.0	<0.0	Imperceptible	Negligible
ND4	14.4	0.7	15.1	0.7	15.1	>0.0	Imperceptible	Negligible
ND5	15.3	0.6	15.8	0.6	15.9	>0.0	Imperceptible	Negligible
ND6	14.7	0.1	14.8	0.1	14.8	>0.0	Imperceptible	Negligible
WM9	14.3	0.2	14.5	0.2	14.5	>0.0	Imperceptible	Negligible
ND7	15.6	0.5	16.2	0.6	16.2	>0.0	Imperceptible	Negligible
FR1	15.2	0.4	15.5	0.3	15.5	<0.0	Imperceptible	Negligible

Receptor	2023 Background (µg/m^3)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
FR2	13.8	0.6	14.4	0.5	14.4	<0.0	Imperceptible	Negligible
FR3	13.8	0.2	14.0	0.2	14.0	>0.0	Imperceptible	Negligible
FR4	15.3	0.3	15.6	0.3	15.6	>0.0	Imperceptible	Negligible
FR5	14.5	0.2	14.7	0.2	14.7	>0.0	Imperceptible	Negligible
FR6	15.2	0.2	15.4	0.2	15.4	>0.0	Imperceptible	Negligible
IP12	14.4	0.0	14.5	0.1	14.5	>0.0	Imperceptible	Negligible
IP13	14.7	0.1	14.7	0.1	14.8	>0.0	Imperceptible	Negligible
IP14	14.3	1.3	15.5	1.3	15.5	<0.0	Imperceptible	Negligible
IP15	14.5	1.0	15.5	1.0	15.5	<0.0	Imperceptible	Negligible
WB11	14.0	0.5	14.5	0.5	14.5	>0.0	Imperceptible	Negligible
WB12	13.8	0.4	14.2	0.4	14.2	<0.0	Imperceptible	Negligible
WB7	14.1	0.5	14.6	0.5	14.6	>0.0	Imperceptible	Negligible
WB6	13.6	0.4	14.0	0.4	14.0	>0.0	Imperceptible	Negligible
WB5	13.1	0.5	13.6	0.5	13.6	>0.0	Imperceptible	Negligible
WB4	13.1	0.3	13.5	0.4	13.5	>0.0	Imperceptible	Negligible
WB3	13.3	0.4	13.7	0.3	13.7	<0.0	Imperceptible	Negligible
WB2	13.3	0.5	13.8	0.4	13.8	<0.0	Imperceptible	Negligible
SX13	14.9	0.2	15.1	0.2	15.1	>0.0	Imperceptible	Negligible
SX14	15.3	0.2	15.6	0.3	15.6	>0.0	Imperceptible	Negligible
WM13	14.4	0.2	14.6	0.2	14.6	>0.0	Imperceptible	Negligible
HS1	13.8	0.4	14.2	0.4	14.2	>0.0	Imperceptible	Negligible

Receptor	2023 Background (µg/m³)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
HS2	15.1	0.3	15.4	0.3	15.4	>0.0	Imperceptible	Negligible
SW1	11.9	0.2	12.1	0.2	12.1	>0.0	Imperceptible	Negligible
YX2	13.7	0.5	14.2	0.6	14.3	0.1	Imperceptible	Negligible
YX6	13.8	0.3	14.1	0.5	14.3	0.2	Imperceptible	Negligible
SX2	14.2	0.1	14.3	0.1	14.3	>0.0	Imperceptible	Negligible
SX4	13.3	0.6	13.9	0.7	14.0	>0.0	Imperceptible	Negligible
SX3	14.9	0.1	15.1	0.1	15.1	>0.0	Imperceptible	Negligible
SX10	15.0	0.5	15.5	0.6	15.5	>0.0	Imperceptible	Negligible
SX5	14.1	0.8	14.9	0.9	15.0	0.1	Imperceptible	Negligible
SX6	13.8	1.4	15.2	1.6	15.4	0.2	Imperceptible	Negligible
SX7	13.8	1.5	15.4	1.8	15.6	0.2	Imperceptible	Negligible
SX11	14.2	0.4	14.6	0.4	14.6	>0.0	Imperceptible	Negligible
SW3	12.6	0.8	13.4	0.8	13.4	>0.0	Imperceptible	Negligible
SW2	12.6	0.5	13.2	0.6	13.2	>0.0	Imperceptible	Negligible
YX8	14.5	0.3	14.8	0.3	14.8	>0.0	Imperceptible	Negligible
LE13	12.8	0.4	13.2	0.5	13.3	0.1	Imperceptible	Negligible
LE12	13.7	0.3	14.0	0.3	14.1	>0.0	Imperceptible	Negligible
LE7	14.3	0.1	14.4	0.2	14.5	0.1	Imperceptible	Negligible
LE1	12.9	0.4	13.3	0.5	13.4	>0.0	Imperceptible	Negligible
LE8	12.9	0.3	13.2	0.3	13.2	>0.0	Imperceptible	Negligible
LE6	14.3	0.4	14.7	0.5	14.8	0.2	Imperceptible	Negligible

Receptor	2023 Background (µg/m^3)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE5	14.3	0.2	14.5	0.3	14.6	0.1	Imperceptible	Negligible
ND8	14.8	0.9	15.7	0.9	15.7	<0.0	Imperceptible	Negligible
WM1	13.8	0.1	13.9	0.1	13.9	>0.0	Imperceptible	Negligible
SX8	14.5	0.0	14.5	0.0	14.6	>0.0	Imperceptible	Negligible
SX9	14.5	0.0	14.6	0.1	14.6	>0.0	Imperceptible	Negligible
LE4	14.3	0.0	14.3	0.0	14.3	>0.0	Imperceptible	Negligible
YX5	14.5	0.0	14.6	0.0	14.6	>0.0	Imperceptible	Negligible
LW2	12.6	0.4	13.0	0.4	13.0	>0.0	Imperceptible	Negligible
BK1	13.8	0.7	14.5	0.8	14.7	0.2	Imperceptible	Negligible
WM10	15.3	0.8	16.1	0.8	16.1	>0.0	Imperceptible	Negligible
WB1	15.0	0.9	15.9	0.9	15.9	<0.0	Imperceptible	Negligible
BC6	15.1	0.4	15.5	0.4	15.5	>0.0	Imperceptible	Negligible
LW4	13.0	0.4	13.4	0.4	13.4	>0.0	Imperceptible	Negligible
LW7	13.6	0.2	13.7	0.2	13.7	<0.0	Imperceptible	Negligible
LW8	13.4	0.4	13.8	0.4	13.8	>0.0	Imperceptible	Negligible
LW9	13.6	0.3	13.9	0.3	13.9	>0.0	Imperceptible	Negligible
LE2	14.0	0.1	14.1	0.1	14.1	>0.0	Imperceptible	Negligible
WM5	14.8	0.2	15.0	0.2	15.0	>0.0	Imperceptible	Negligible
WM11	14.4	0.2	14.7	0.3	14.7	>0.0	Imperceptible	Negligible
WM12	14.4	0.1	14.5	0.1	14.5	>0.0	Imperceptible	Negligible
SX15	14.1	1.8	15.9	2.1	16.2	0.3	Imperceptible	Negligible

Receptor	2023 Background ($\mu g/m^3$)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX9	15.1	0.1	15.2	0.1	15.2	>0.0	Imperceptible	Negligible
LE15	13.9	0.0	13.9	0.1	14.0	>0.0	Imperceptible	Negligible
LE16	13.9	0.0	13.9	0.0	13.9	>0.0	Imperceptible	Negligible
LE19	14.0	0.0	14.1	0.1	14.1	>0.0	Imperceptible	Negligible
LE17	13.3	0.0	13.3	0.0	13.3	>0.0	Imperceptible	Negligible
LE18	13.7	0.0	13.7	0.0	13.7	>0.0	Imperceptible	Negligible
LE20	13.7	0.0	13.7	0.0	13.7	>0.0	Imperceptible	Negligible
LE21	13.7	0.0	13.7	0.0	13.7	>0.0	Imperceptible	Negligible
LE22	13.7	0.0	13.8	0.0	13.8	>0.0	Imperceptible	Negligible
LE23	13.7	0.0	13.7	0.0	13.7	>0.0	Imperceptible	Negligible
WM3	14.4	0.4	14.7	0.4	14.7	>0.0	Imperceptible	Negligible
WM14	14.4	0.1	14.4	0.1	14.4	>0.0	Imperceptible	Negligible
YX10	14.9	0.6	15.5	0.6	15.5	>0.0	Imperceptible	Negligible
LE24	13.7	0.0	13.7	0.0	13.7	>0.0	Imperceptible	Negligible
YX11	14.9	0.2	15.1	0.2	15.1	>0.0	Imperceptible	Negligible
YX12	14.9	0.2	15.1	0.2	15.1	>0.0	Imperceptible	Negligible
LE25	14.0	0.0	14.0	0.0	14.0	>0.0	Imperceptible	Negligible
LE26	13.3	0.0	13.3	0.0	13.3	>0.0	Imperceptible	Negligible
LE27	13.9	0.0	14.0	0.0	14.0	>0.0	Imperceptible	Negligible
LE28	13.9	0.1	14.0	0.1	14.0	>0.0	Imperceptible	Negligible
LE29	14.0	0.0	14.0	0.0	14.0	>0.0	Imperceptible	Negligible

Receptor	2023 Background (µg/m^3)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE30	12.8	0.1	12.9	0.1	12.9	>0.0	Imperceptible	Negligible
LE31	12.8	0.0	12.9	0.0	12.9	>0.0	Imperceptible	Negligible
LE32	14.3	0.1	14.4	0.1	14.4	>0.0	Imperceptible	Negligible
LE33	14.3	0.1	14.4	0.1	14.5	0.1	Imperceptible	Negligible
LE34	13.7	0.0	13.8	0.1	13.8	>0.0	Imperceptible	Negligible
LE35	12.9	0.1	13.0	0.1	13.0	>0.0	Imperceptible	Negligible
LE36	13.7	0.2	13.9	0.2	13.9	>0.0	Imperceptible	Negligible
LE37	13.7	0.2	13.9	0.2	13.9	>0.0	Imperceptible	Negligible
LE38	13.7	0.2	13.9	0.2	14.0	>0.0	Imperceptible	Negligible
LE39	13.3	0.1	13.4	0.2	13.5	>0.0	Imperceptible	Negligible
LE40	13.7	0.1	13.8	0.1	13.8	>0.0	Imperceptible	Negligible
LE52	14.3	0.1	14.4	0.2	14.5	0.1	Imperceptible	Negligible
LE53	13.7	0.0	13.7	0.0	13.7	>0.0	Imperceptible	Negligible
LE54	13.7	0.0	13.7	0.0	13.7	>0.0	Imperceptible	Negligible
YX13	15.1	0.6	15.7	0.6	15.7	>0.0	Imperceptible	Negligible
YX14	14.9	0.0	14.9	0.0	14.9	>0.0	Imperceptible	Negligible
YX15	14.3	0.4	14.7	0.4	14.8	>0.0	Imperceptible	Negligible
YX16	15.1	0.4	15.5	0.7	15.8	0.3	Imperceptible	Negligible
YX17	14.3	0.1	14.4	0.1	14.4	>0.0	Imperceptible	Negligible
LE55	13.9	0.1	14.0	0.1	14.0	>0.0	Imperceptible	Negligible
LE56	13.7	0.2	14.0	0.2	14.0	>0.0	Imperceptible	Negligible

Receptor	2023 Background (µg/m^3)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX18	13.7	0.2	14.0	0.3	14.0	0.1	Imperceptible	Negligible
YX19	13.8	0.2	14.0	0.3	14.1	0.1	Imperceptible	Negligible
YX20	14.3	0.5	14.8	0.9	15.2	0.4	Very Low	Negligible
SX16	13.3	0.2	13.6	0.3	13.6	>0.0	Imperceptible	Negligible
SX18	15.0	0.0	15.0	0.0	15.0	>0.0	Imperceptible	Negligible
SX17	13.3	0.1	13.4	0.1	13.4	>0.0	Imperceptible	Negligible
SX19	15.0	0.0	15.0	0.0	15.0	>0.0	Imperceptible	Negligible
WM15	14.8	0.1	14.9	0.1	14.9	>0.0	Imperceptible	Negligible
WM16	13.3	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
WM17	13.8	0.0	13.8	0.0	13.8	>0.0	Imperceptible	Negligible
BK6	14.1	0.3	14.4	0.2	14.3	-0.1	Imperceptible	Negligible
BK7	16.8	0.2	17.0	0.2	17.0	>0.0	Imperceptible	Negligible
LE46	14.3	0.1	14.4	0.2	14.5	0.1	Imperceptible	Negligible
BK8	16.7	0.3	17.0	0.3	17.0	>0.0	Imperceptible	Negligible
LE57	13.6	0.2	13.8	0.4	13.9	0.1	Imperceptible	Negligible
LE42	13.3	0.0	13.3	0.0	13.3	>0.0	Imperceptible	Negligible

Table notes: RC= Reference case (without proposed development); AD = Typical day (with proposed development

Table 1.4: Modelled $PM_{2.5}$ concentrations at receptors for 2023 assessment year

Receptor	2023 Background (µg/m³)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
BC1	8.3	0.5	8.8	0.5	8.8	>0.0	Imperceptible	Negligible
BC2	8.6	2.4	11.0	2.4	11.1	>0.0	Imperceptible	Negligible
BC3	8.2	0.4	8.6	0.4	8.6	>0.0	Imperceptible	Negligible
BC4	8.3	0.7	9.0	0.7	9.0	>0.0	Imperceptible	Negligible
BC5	9.3	1.7	11.0	1.7	11.1	>0.0	Imperceptible	Negligible
SW6	8.3	0.4	8.6	0.4	8.7	>0.0	Imperceptible	Negligible
SW5	8.4	0.4	8.8	0.4	8.8	>0.0	Imperceptible	Negligible
BC7	9.1	0.5	9.6	0.5	9.6	>0.0	Imperceptible	Negligible
BC8	8.3	0.3	8.6	0.3	8.6	>0.0	Imperceptible	Negligible
KS4	8.4	0.4	8.8	0.4	8.8	>0.0	Imperceptible	Negligible
LW1	10.0	1.2	11.2	1.2	11.3	>0.0	Imperceptible	Negligible
LW3	8.5	2.3	10.8	2.4	10.9	>0.0	Imperceptible	Negligible
LW5	8.8	0.5	9.3	0.5	9.3	>0.0	Imperceptible	Negligible
LW6	8.8	0.6	9.4	0.6	9.4	<0.0	Imperceptible	Negligible
KS1	8.2	0.4	8.5	0.4	8.5	>0.0	Imperceptible	Negligible
KS2	8.4	0.7	9.1	0.7	9.2	>0.0	Imperceptible	Negligible
KS3	8.4	0.9	9.3	0.9	9.4	>0.0	Imperceptible	Negligible
SW4	8.0	0.6	8.6	0.6	8.6	>0.0	Imperceptible	Negligible
HS3	8.6	0.6	9.2	0.7	9.3	>0.0	Imperceptible	Negligible
YX1	8.6	1.6	10.2	1.0	9.6	-0.6	Low	Negligible

Receptor	2023 Background (µg/m^3)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX3	8.3	1.5	9.8	1.7	10.0	0.2	Imperceptible	Negligible
YX7	8.2	0.2	8.4	0.4	8.6	0.1	Imperceptible	Negligible
LE3	8.2	0.4	8.7	0.6	8.9	0.2	Imperceptible	Negligible
LE9	8.5	1.0	9.5	1.1	9.6	0.1	Imperceptible	Negligible
LE10	8.5	1.2	9.7	1.3	9.7	0.1	Imperceptible	Negligible
LE11	8.1	0.6	8.7	0.6	8.7	>0.0	Imperceptible	Negligible
LE14	8.5	1.1	9.6	1.1	9.6	>0.0	Imperceptible	Negligible
SX12	8.6	0.4	9.0	0.4	9.0	>0.0	Imperceptible	Negligible
YX4	8.6	0.6	9.3	0.7	9.4	0.1	Imperceptible	Negligible
SX1	8.5	0.6	9.1	0.8	9.2	0.1	Imperceptible	Negligible
WM2	8.8	2.6	11.4	3.0	11.8	0.4	Very Low	Negligible
WM6	8.7	0.3	9.0	0.3	9.0	>0.0	Imperceptible	Negligible
WM7	9.0	0.5	9.6	0.6	9.6	0.1	Imperceptible	Negligible
WM8	8.9	0.7	9.6	0.8	9.7	0.1	Imperceptible	Negligible
WM4	8.4	0.4	8.8	0.4	8.8	>0.0	Imperceptible	Negligible
WB8	9.0	2.2	11.2	2.3	11.3	0.1	Imperceptible	Negligible
WB9	9.0	1.4	10.4	1.4	10.4	>0.0	Imperceptible	Negligible
WB10	9.1	0.6	9.7	0.6	9.7	>0.0	Imperceptible	Negligible
BK2	9.1	0.7	9.8	0.7	9.9	>0.0	Imperceptible	Negligible
BK4	10.0	0.7	10.7	0.7	10.6	<0.0	Imperceptible	Negligible
BK5	10.0	1.0	11.0	1.1	11.0	>0.0	Imperceptible	Negligible

Receptor	2023 Background (µg/m^3)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
IP1	10.3	1.8	12.0	1.8	12.1	>0.0	Imperceptible	Negligible
IP2	10.1	1.4	11.5	1.5	11.5	>0.0	Imperceptible	Negligible
BK3	9.1	1.0	10.1	1.0	10.1	>0.0	Imperceptible	Negligible
IP3	9.3	1.9	11.2	2.0	11.3	0.1	Imperceptible	Negligible
IP4	9.7	2.9	12.6	3.0	12.7	0.1	Imperceptible	Negligible
IP5	10.1	0.4	10.6	0.4	10.6	>0.0	Imperceptible	Negligible
IP6	9.5	0.1	9.6	0.1	9.6	>0.0	Imperceptible	Negligible
IP7	9.9	0.1	10.0	0.1	10.0	>0.0	Imperceptible	Negligible
IP8	10.1	0.1	10.2	0.1	10.2	>0.0	Imperceptible	Negligible
IP9	10.1	0.1	10.2	0.1	10.2	>0.0	Imperceptible	Negligible
IP10	10.1	0.1	10.2	0.1	10.2	>0.0	Imperceptible	Negligible
IP11	10.1	0.1	10.2	0.1	10.2	>0.0	Imperceptible	Negligible
ND1	9.7	2.4	12.0	2.4	12.0	>0.0	Imperceptible	Negligible
ND2	9.7	0.7	10.4	0.7	10.4	>0.0	Imperceptible	Negligible
ND3	9.1	1.2	10.3	1.2	10.2	<0.0	Imperceptible	Negligible
ND4	8.8	1.1	9.9	1.2	9.9	>0.0	Imperceptible	Negligible
ND5	8.9	1.0	9.9	1.0	9.9	>0.0	Imperceptible	Negligible
ND6	8.7	0.2	8.9	0.2	8.9	>0.0	Imperceptible	Negligible
WM9	8.6	0.3	8.8	0.3	8.8	>0.0	Imperceptible	Negligible
ND7	9.1	0.9	10.0	0.9	10.0	>0.0	Imperceptible	Negligible
FR1	8.7	0.6	9.3	0.6	9.2	<0.0	Imperceptible	Negligible

Receptor	2023 Background (µg/m^3)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
FR2	8.6	0.9	9.5	0.9	9.5	<0.0	Imperceptible	Negligible
FR3	8.6	0.3	8.9	0.3	8.9	>0.0	Imperceptible	Negligible
FR4	8.7	0.6	9.3	0.6	9.3	>0.0	Imperceptible	Negligible
FR5	8.5	0.4	8.9	0.4	8.9	>0.0	Imperceptible	Negligible
FR6	8.6	0.3	8.9	0.3	8.9	>0.0	Imperceptible	Negligible
IP12	9.3	0.1	9.4	0.1	9.4	>0.0	Imperceptible	Negligible
IP13	10.0	0.1	10.1	0.1	10.1	>0.0	Imperceptible	Negligible
IP14	9.3	2.1	11.4	2.1	11.4	<0.0	Imperceptible	Negligible
IP15	9.2	1.7	10.9	1.7	10.8	<0.0	Imperceptible	Negligible
WB11	9.0	0.8	9.8	0.8	9.9	>0.0	Imperceptible	Negligible
WB12	8.7	0.7	9.4	0.7	9.4	<0.0	Imperceptible	Negligible
WB7	8.9	0.9	9.8	0.9	9.8	>0.0	Imperceptible	Negligible
WB6	8.8	0.7	9.5	0.7	9.5	>0.0	Imperceptible	Negligible
WB5	8.8	0.8	9.6	0.8	9.6	>0.0	Imperceptible	Negligible
WB4	8.8	0.6	9.3	0.6	9.4	>0.0	Imperceptible	Negligible
WB3	8.6	0.6	9.2	0.6	9.2	<0.0	Imperceptible	Negligible
WB2	8.6	0.8	9.4	0.7	9.3	<0.0	Imperceptible	Negligible
SX13	8.7	0.3	9.0	0.3	9.0	>0.0	Imperceptible	Negligible
SX14	8.8	0.4	9.2	0.4	9.3	>0.0	Imperceptible	Negligible
WM13	8.5	0.4	8.9	0.4	8.9	>0.0	Imperceptible	Negligible
HS1	8.6	0.7	9.3	0.7	9.3	>0.0	Imperceptible	Negligible

Receptor	2023 Background ($\mu g/m^3$)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
HS2	8.6	0.4	9.1	0.5	9.1	>0.0	Imperceptible	Negligible
SW1	7.9	0.4	8.3	0.4	8.3	>0.0	Imperceptible	Negligible
YX2	8.3	0.9	9.2	1.0	9.3	0.1	Imperceptible	Negligible
YX6	8.2	0.5	8.8	0.8	9.0	0.3	Very Low	Negligible
SX2	8.6	0.2	8.7	0.2	8.7	>0.0	Imperceptible	Negligible
SX4	8.4	1.1	9.5	1.1	9.5	0.1	Imperceptible	Negligible
SX3	8.7	0.2	8.9	0.2	8.9	>0.0	Imperceptible	Negligible
SX10	8.7	0.8	9.5	0.9	9.6	0.1	Imperceptible	Negligible
SX5	8.5	1.4	9.8	1.6	10.0	0.2	Imperceptible	Negligible
SX6	8.4	2.3	10.7	2.7	11.1	0.3	Very Low	Negligible
SX7	8.4	2.6	11.0	3.0	11.4	0.4	Very Low	Negligible
SX11	8.5	0.7	9.2	0.7	9.2	>0.0	Imperceptible	Negligible
SW3	8.0	1.3	9.2	1.4	9.3	0.1	Imperceptible	Negligible
SW2	8.0	0.9	8.9	1.0	8.9	0.1	Imperceptible	Negligible
YX8	8.4	0.5	8.9	0.6	9.0	0.1	Imperceptible	Negligible
LE13	8.0	0.6	8.6	0.8	8.8	0.2	Imperceptible	Negligible
LE12	8.4	0.5	8.8	0.5	8.9	>0.0	Imperceptible	Negligible
LE7	8.4	0.2	8.6	0.3	8.8	0.1	Imperceptible	Negligible
LE1	8.5	0.7	9.2	0.7	9.2	>0.0	Imperceptible	Negligible
LE8	8.5	0.4	8.9	0.5	8.9	>0.0	Imperceptible	Negligible
LE6	8.4	0.6	9.0	0.9	9.3	0.3	Very Low	Negligible

Receptor	2023 Background (µg/m³)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE5	8.4	0.4	8.8	0.6	8.9	0.2	Imperceptible	Negligible
ND8	8.7	1.5	10.2	1.5	10.2	<0.0	Imperceptible	Negligible
WM1	8.4	0.2	8.6	0.2	8.6	>0.0	Imperceptible	Negligible
SX8	8.5	0.1	8.6	0.1	8.6	>0.0	Imperceptible	Negligible
SX9	8.5	0.1	8.6	0.1	8.6	>0.0	Imperceptible	Negligible
LE4	8.4	0.1	8.4	0.1	8.4	>0.0	Imperceptible	Negligible
YX5	8.4	0.1	8.5	0.1	8.5	>0.0	Imperceptible	Negligible
LW2	8.5	0.7	9.1	0.7	9.2	>0.0	Imperceptible	Negligible
BK1	9.0	1.1	10.1	1.4	10.4	0.3	Very Low	Negligible
WM10	8.8	1.4	10.2	1.4	10.2	>0.0	Imperceptible	Negligible
WB1	9.2	1.5	10.7	1.5	10.7	<0.0	Imperceptible	Negligible
BC6	8.6	0.6	9.2	0.7	9.3	>0.0	Imperceptible	Negligible
LW4	8.7	0.7	9.4	0.7	9.4	>0.0	Imperceptible	Negligible
LW7	8.8	0.3	9.1	0.3	9.1	<0.0	Imperceptible	Negligible
LW8	9.1	0.7	9.8	0.7	9.8	>0.0	Imperceptible	Negligible
LW9	8.8	0.5	9.4	0.6	9.4	>0.0	Imperceptible	Negligible
LE2	8.3	0.2	8.5	0.2	8.6	>0.0	Imperceptible	Negligible
WM5	8.7	0.3	9.0	0.3	9.0	>0.0	Imperceptible	Negligible
WM11	8.7	0.4	9.1	0.4	9.1	>0.0	Imperceptible	Negligible
WM12	8.7	0.2	8.8	0.2	8.8	>0.0	Imperceptible	Negligible
SX15	8.5	3.0	11.5	3.5	11.9	0.4	Very Low	Negligible

Receptor	2023 Background (µg/m³)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX9	8.6	0.1	8.8	0.1	8.8	>0.0	Imperceptible	Negligible
LE15	8.2	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
LE16	8.2	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
LE19	8.3	0.1	8.4	0.1	8.4	>0.0	Imperceptible	Negligible
LE17	8.1	0.1	8.2	0.1	8.2	>0.0	Imperceptible	Negligible
LE18	8.2	0.0	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
LE20	8.2	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
LE21	8.2	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
LE22	8.3	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
LE23	8.2	0.0	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
WM3	8.5	0.6	9.2	0.6	9.2	>0.0	Imperceptible	Negligible
WM14	8.5	0.1	8.6	0.1	8.6	>0.0	Imperceptible	Negligible
YX10	8.5	1.0	9.5	1.0	9.5	>0.0	Imperceptible	Negligible
LE24	8.2	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
YX11	8.5	0.3	8.8	0.3	8.8	>0.0	Imperceptible	Negligible
YX12	8.5	0.3	8.8	0.3	8.8	>0.0	Imperceptible	Negligible
LE25	8.2	0.0	8.3	0.0	8.3	>0.0	Imperceptible	Negligible
LE26	8.1	0.1	8.2	0.1	8.2	>0.0	Imperceptible	Negligible
LE27	8.3	0.0	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
LE28	8.2	0.1	8.4	0.2	8.4	>0.0	Imperceptible	Negligible
LE29	8.2	0.0	8.3	0.0	8.3	>0.0	Imperceptible	Negligible

Receptor	2023 Background (µg/m³)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE30	8.0	0.1	8.1	0.1	8.1	>0.0	Imperceptible	Negligible
LE31	8.0	0.1	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
LE32	8.4	0.1	8.5	0.1	8.6	>0.0	Imperceptible	Negligible
LE33	8.4	0.1	8.6	0.2	8.7	0.1	Imperceptible	Negligible
LE34	8.4	0.1	8.5	0.1	8.5	>0.0	Imperceptible	Negligible
LE35	8.5	0.1	8.6	0.1	8.6	>0.0	Imperceptible	Negligible
LE36	8.4	0.3	8.6	0.3	8.7	>0.0	Imperceptible	Negligible
LE37	8.4	0.3	8.6	0.3	8.7	0.1	Imperceptible	Negligible
LE38	8.4	0.3	8.7	0.4	8.8	0.1	Imperceptible	Negligible
LE39	8.1	0.2	8.3	0.3	8.4	>0.0	Imperceptible	Negligible
LE40	8.4	0.1	8.5	0.1	8.5	>0.0	Imperceptible	Negligible
LE52	8.4	0.2	8.6	0.3	8.7	0.1	Imperceptible	Negligible
LE53	8.2	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
LE54	8.2	0.0	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
YX13	8.6	1.0	9.6	1.1	9.7	>0.0	Imperceptible	Negligible
YX14	8.5	0.1	8.6	0.1	8.6	>0.0	Imperceptible	Negligible
YX15	8.4	0.7	9.1	0.7	9.1	>0.0	Imperceptible	Negligible
YX16	8.6	0.7	9.3	0.5	9.1	-0.2	Imperceptible	Negligible
YX17	8.4	0.1	8.5	0.1	8.5	>0.0	Imperceptible	Negligible
LE55	8.2	0.2	8.4	0.2	8.4	>0.0	Imperceptible	Negligible
LE56	8.3	0.4	8.6	0.4	8.7	>0.0	Imperceptible	Negligible

Receptor	2023 Background ($\mu g/m^3$)	2023RC Road + Rail (µg/m3)	2023RC Total (µg/m3)	2023AD Road + Rail (µg/m3)	2023AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX18	8.3	0.4	8.8	0.5	8.8	0.1	Imperceptible	Negligible
YX19	8.2	0.3	8.5	0.4	8.7	0.1	Imperceptible	Negligible
YX20	8.4	0.9	9.3	0.6	9.0	-0.3	Very Low	Negligible
SX16	8.4	0.4	8.8	0.4	8.8	>0.0	Imperceptible	Negligible
SX18	8.6	0.1	8.7	0.1	8.7	>0.0	Imperceptible	Negligible
SX17	8.4	0.1	8.5	0.1	8.5	>0.0	Imperceptible	Negligible
SX19	8.6	0.1	8.7	0.1	8.7	>0.0	Imperceptible	Negligible
WM15	8.8	0.2	9.0	0.2	9.0	>0.0	Imperceptible	Negligible
WM16	8.4	0.1	8.4	0.1	8.4	>0.0	Imperceptible	Negligible
WM17	8.5	0.1	8.6	0.1	8.6	>0.0	Imperceptible	Negligible
BK6	8.7	0.4	9.2	0.3	9.1	-0.1	Imperceptible	Negligible
BK7	9.7	0.3	10.0	0.3	10.0	>0.0	Imperceptible	Negligible
LE46	8.4	0.2	8.6	0.3	8.7	0.1	Imperceptible	Negligible
BK8	9.8	0.5	10.3	0.5	10.3	>0.0	Imperceptible	Negligible
LE57	8.2	0.4	8.6	0.6	8.8	0.2	Imperceptible	Negligible
LE42	8.1	0.1	8.1	0.1	8.2	>0.0	Imperceptible	Negligible

Table 1.5: Modelled NO_2 concentrations at receptors for 2028 average day assessment year

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
BC1	6.6	2.0	8.7	2.1	8.7	0.1	Imperceptible	Negligible
BC2	6.6	9.1	15.6	9.3	15.8	0.2	Imperceptible	Negligible
BC3	7.2	1.4	8.6	1.4	8.7	0.1	Imperceptible	Negligible
BC4	8.2	2.6	10.8	2.7	10.9	0.1	Imperceptible	Negligible
BC5	8.1	5.8	14.0	6.0	14.1	0.2	Imperceptible	Negligible
SW6	6.0	1.1	7.0	1.3	7.3	0.3	Imperceptible	Negligible
SW5	5.9	1.1	7.1	1.4	7.3	0.3	Imperceptible	Negligible
BC7	7.3	2.0	9.3	2.0	9.4	>0.0	Imperceptible	Negligible
BC8	6.4	1.5	7.9	1.7	8.1	0.2	Imperceptible	Negligible
KS4	6.1	1.8	7.9	2.0	8.1	0.2	Imperceptible	Negligible
LW1	13.6	3.8	17.3	3.9	17.5	0.2	Imperceptible	Negligible
LW3	10.1	8.7	18.7	8.7	18.8	0.1	Imperceptible	Negligible
LW5	8.0	1.9	9.9	2.0	10.0	0.1	Imperceptible	Negligible
LW6	8.0	2.4	10.5	2.5	10.5	>0.0	Imperceptible	Negligible
KS1	6.7	1.8	8.5	1.8	8.5	0.1	Imperceptible	Negligible
KS2	6.1	2.8	8.9	3.0	9.1	0.2	Imperceptible	Negligible
KS3	6.1	3.4	9.5	3.7	9.8	0.3	Imperceptible	Negligible
SW4	5.9	1.9	7.8	2.2	8.1	0.3	Imperceptible	Negligible
HS3	5.8	2.3	8.2	2.6	8.5	0.3	Imperceptible	Negligible
YX1	5.9	5.5	11.4	6.4	12.3	0.9	Low	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX3	5.9	5.2	11.1	5.2	11.0	<0.0	Imperceptible	Negligible
YX7	5.8	0.9	6.7	0.4	6.2	-0.5	Very Low	Negligible
LE3	5.9	1.5	7.4	2.3	8.2	0.7	Very Low	Negligible
LE9	6.7	7.1	13.8	8.8	15.5	1.7	Low	Negligible
LE10	6.7	4.7	11.4	5.7	12.4	1.0	Low	Negligible
LE11	6.0	2.2	8.2	2.7	8.7	0.5	Very Low	Negligible
LE14	5.9	4.2	10.1	4.4	10.3	0.3	Imperceptible	Negligible
SX12	6.0	1.6	7.6	1.8	7.8	0.1	Imperceptible	Negligible
YX4	5.8	2.4	8.2	2.4	8.2	<0.0	Imperceptible	Negligible
SX1	5.8	2.4	8.2	2.6	8.4	0.2	Imperceptible	Negligible
WM2	6.3	9.0	15.3	9.5	15.8	0.5	Very Low	Negligible
WM6	6.5	1.3	7.8	1.4	7.8	0.1	Imperceptible	Negligible
WM7	6.7	2.5	9.2	2.7	9.4	0.2	Imperceptible	Negligible
WM8	6.9	3.1	10.0	3.3	10.2	0.2	Imperceptible	Negligible
WM4	6.6	1.5	8.1	1.6	8.2	0.1	Imperceptible	Negligible
WB8	8.2	7.4	15.6	7.5	15.7	0.1	Imperceptible	Negligible
WB9	8.2	5.2	13.4	5.3	13.4	>0.0	Imperceptible	Negligible
WB10	7.8	2.9	10.7	2.9	10.7	0.1	Imperceptible	Negligible
BK2	9.0	3.2	12.2	3.2	12.2	>0.0	Imperceptible	Negligible
BK4	9.4	2.4	11.8	2.3	11.7	-0.1	Imperceptible	Negligible
BK5	9.4	3.7	13.1	3.7	13.2	0.1	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
IP1	10.3	5.2	15.5	5.2	15.5	>0.0	Imperceptible	Negligible
IP2	8.2	5.0	13.2	5.0	13.2	>0.0	Imperceptible	Negligible
BK3	8.4	3.4	11.8	3.4	11.8	>0.0	Imperceptible	Negligible
IP3	7.2	5.9	13.1	6.0	13.2	0.1	Imperceptible	Negligible
IP4	7.4	8.9	16.3	9.0	16.4	0.1	Imperceptible	Negligible
IP5	7.6	1.3	8.9	1.3	8.9	>0.0	Imperceptible	Negligible
IP6	9.3	0.4	9.7	0.5	9.7	>0.0	Imperceptible	Negligible
IP7	10.9	0.3	11.2	0.3	11.2	0.0	Imperceptible	Negligible
IP8	12.8	0.3	13.1	0.3	13.1	>0.0	Imperceptible	Negligible
IP9	12.8	0.3	13.1	0.3	13.1	0.0	Imperceptible	Negligible
IP10	12.8	0.3	13.1	0.3	13.1	0.0	Imperceptible	Negligible
IP11	12.8	0.3	13.1	0.3	13.1	0.0	Imperceptible	Negligible
ND1	9.9	6.2	16.1	6.2	16.1	>0.0	Imperceptible	Negligible
ND2	8.7	1.9	10.6	1.9	10.6	>0.0	Imperceptible	Negligible
ND3	7.6	3.7	11.3	3.7	11.3	>0.0	Imperceptible	Negligible
ND4	7.1	4.5	11.6	4.7	11.8	0.3	Imperceptible	Negligible
ND5	6.8	3.2	10.0	3.4	10.2	0.2	Imperceptible	Negligible
ND6	6.9	0.6	7.5	0.6	7.5	>0.0	Imperceptible	Negligible
WM9	6.4	1.2	7.7	1.4	7.9	0.2	Imperceptible	Negligible
ND7	6.8	2.7	9.4	2.7	9.5	0.1	Imperceptible	Negligible
FR1	6.1	1.6	7.7	1.7	7.7	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
FR2	6.8	3.2	10.0	3.2	10.1	0.1	Imperceptible	Negligible
FR3	6.8	1.1	7.9	1.1	8.0	>0.0	Imperceptible	Negligible
FR4	5.9	1.7	7.6	1.7	7.6	0.1	Imperceptible	Negligible
FR5	5.9	1.3	7.2	1.4	7.2	0.1	Imperceptible	Negligible
FR6	5.9	1.3	7.2	1.4	7.3	0.1	Imperceptible	Negligible
IP12	9.7	0.3	10.0	0.3	10.0	0.0	Imperceptible	Negligible
IP13	10.5	0.4	10.9	0.4	10.9	0.0	Imperceptible	Negligible
IP14	9.2	8.3	17.5	8.4	17.6	0.1	Imperceptible	Negligible
IP15	8.6	6.4	15.0	6.5	15.1	0.1	Imperceptible	Negligible
WB11	8.5	3.2	11.7	3.5	12.0	0.3	Imperceptible	Negligible
WB12	8.2	2.1	10.3	2.9	11.1	0.8	Low	Negligible
WB7	7.8	3.1	10.9	3.4	11.2	0.3	Imperceptible	Negligible
WB6	8.2	2.7	10.9	3.1	11.3	0.4	Very Low	Negligible
WB5	8.7	6.7	15.4	7.0	15.7	0.3	Imperceptible	Negligible
WB4	8.7	2.5	11.1	2.6	11.3	0.2	Imperceptible	Negligible
WB3	7.7	2.9	10.6	2.7	10.4	-0.2	Imperceptible	Negligible
WB2	7.7	4.7	12.4	3.2	10.9	-1.5	Low	Negligible
SX13	6.1	1.4	7.5	1.5	7.6	0.2	Imperceptible	Negligible
SX14	6.2	1.7	7.8	1.8	7.9	0.1	Imperceptible	Negligible
WM13	6.3	1.4	7.6	1.4	7.7	>0.0	Imperceptible	Negligible
HS1	6.8	2.6	9.3	2.7	9.5	0.2	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
HS2	5.8	1.7	7.5	1.9	7.7	0.2	Imperceptible	Negligible
SW1	6.4	1.8	8.2	1.8	8.2	>0.0	Imperceptible	Negligible
YX2	5.9	3.2	9.1	3.3	9.1	0.1	Imperceptible	Negligible
YX6	6.0	1.9	7.9	2.1	8.1	0.2	Imperceptible	Negligible
SX2	6.1	0.6	6.7	0.7	6.8	>0.0	Imperceptible	Negligible
SX4	6.6	4.2	10.8	4.5	11.1	0.3	Imperceptible	Negligible
SX3	6.0	0.8	6.8	0.8	6.8	>0.0	Imperceptible	Negligible
SX10	6.0	3.2	9.2	3.3	9.3	0.1	Imperceptible	Negligible
SX5	6.0	5.0	11.0	0.6	6.6	-4.5	High	Moderate beneficial
SX6	6.0	8.1	14.1	0.6	6.7	-7.5	High	Moderate beneficial
SX7	6.0	9.0	15.1	0.7	6.8	-8.3	High	Moderate beneficial
SX11	5.9	2.7	8.6	2.8	8.7	0.1	Imperceptible	Negligible
SW3	5.9	4.5	10.3	5.0	10.9	0.6	Very Low	Negligible
SW2	5.9	3.1	9.0	3.5	9.4	0.4	Very Low	Negligible
YX8	5.8	1.9	7.7	2.1	7.9	0.2	Imperceptible	Negligible
LE13	5.8	2.8	8.6	2.9	8.7	0.1	Imperceptible	Negligible
LE12	6.3	1.9	8.2	2.0	8.3	0.2	Imperceptible	Negligible
LE7	6.0	0.8	6.8	1.1	7.1	0.2	Imperceptible	Negligible
LE1	6.7	3.7	10.4	5.6	12.3	1.9	Low	Negligible
LE8	6.7	2.0	8.7	2.4	9.1	0.4	Very Low	Negligible
LE6	5.9	2.3	8.2	0.4	6.3	-1.9	Low	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE5	5.9	1.4	7.3	0.4	6.2	-1.0	Low	Negligible
ND8	6.4	4.5	10.8	4.6	10.9	0.1	Imperceptible	Negligible
WM1	6.0	0.7	6.7	0.4	6.4	-0.3	Imperceptible	Negligible
SX8	6.0	0.3	6.3	1.0	7.0	0.8	Low	Negligible
SX9	6.0	0.3	6.3	0.9	7.0	0.6	Very Low	Negligible
LE4	5.9	0.2	6.0	0.3	6.1	0.1	Imperceptible	Negligible
YX5	5.9	0.2	6.1	0.3	6.2	0.1	Imperceptible	Negligible
LW2	10.1	2.4	12.4	2.4	12.4	>0.0	Imperceptible	Negligible
BK1	9.5	5.2	14.6	6.0	15.5	0.9	Low	Negligible
WM10	6.7	4.7	11.4	5.0	11.7	0.3	Imperceptible	Negligible
WB1	7.4	5.5	12.9	5.4	12.7	-0.1	Imperceptible	Negligible
BC6	6.0	2.2	8.2	2.5	8.5	0.3	Imperceptible	Negligible
LW4	8.7	2.5	11.3	2.6	11.4	0.1	Imperceptible	Negligible
LW7	8.0	1.2	9.3	1.3	9.3	>0.0	Imperceptible	Negligible
LW8	19.4	2.8	22.2	2.1	21.5	-0.7	Very Low	Negligible
LW9	8.0	2.2	10.2	2.3	10.3	0.1	Imperceptible	Negligible
LE2	6.0	0.7	6.8	1.2	7.2	0.4	Very Low	Negligible
WM5	7.3	1.3	8.6	1.4	8.7	0.1	Imperceptible	Negligible
WM11	6.5	1.8	8.3	2.0	8.5	0.2	Imperceptible	Negligible
WM12	6.5	0.7	7.2	0.8	7.3	0.1	Imperceptible	Negligible
SX15	6.0	10.9	16.9	0.5	6.5	-10.4	High	Moderate beneficial

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX9	5.8	0.4	6.2	0.5	6.3	>0.0	Imperceptible	Negligible
LE15	5.9	0.3	6.1	0.4	6.2	0.1	Imperceptible	Negligible
LE16	5.9	0.2	6.1	0.3	6.2	0.1	Imperceptible	Negligible
LE19	6.0	0.3	6.3	0.4	6.4	0.1	Imperceptible	Negligible
LE17	5.8	0.2	6.1	0.3	6.1	0.1	Imperceptible	Negligible
LE18	6.0	0.2	6.2	0.2	6.2	>0.0	Imperceptible	Negligible
LE20	6.0	0.3	6.2	0.3	6.3	>0.0	Imperceptible	Negligible
LE21	6.0	0.3	6.2	0.3	6.3	>0.0	Imperceptible	Negligible
LE22	6.0	0.3	6.3	0.3	6.3	>0.0	Imperceptible	Negligible
LE23	6.0	0.2	6.2	0.2	6.2	>0.0	Imperceptible	Negligible
WM3	6.3	2.5	8.7	2.5	8.8	0.1	Imperceptible	Negligible
WM14	6.3	0.4	6.7	0.5	6.7	>0.0	Imperceptible	Negligible
YX10	5.9	3.4	9.2	3.8	9.7	0.5	Very Low	Negligible
LE24	6.0	0.3	6.2	0.3	6.3	>0.0	Imperceptible	Negligible
YX11	5.9	1.1	6.9	1.3	7.1	0.2	Imperceptible	Negligible
YX12	5.9	0.9	6.8	1.1	7.0	0.2	Imperceptible	Negligible
LE25	5.8	0.1	5.9	0.2	5.9	>0.0	Imperceptible	Negligible
LE26	5.8	0.2	6.0	0.3	6.1	0.1	Imperceptible	Negligible
LE27	5.8	0.2	6.0	0.2	6.0	>0.0	Imperceptible	Negligible
LE28	5.9	0.4	6.3	0.7	6.6	0.3	Imperceptible	Negligible
LE29	5.8	0.1	5.9	0.2	5.9	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE30	5.8	0.5	6.3	0.5	6.3	0.1	Imperceptible	Negligible
LE31	5.8	0.3	6.1	0.3	6.1	0.1	Imperceptible	Negligible
LE32	6.0	0.4	6.4	0.5	6.5	0.1	Imperceptible	Negligible
LE33	6.0	0.6	6.6	0.8	6.8	0.2	Imperceptible	Negligible
LE34	6.3	0.3	6.7	0.5	6.8	0.1	Imperceptible	Negligible
LE35	6.7	0.5	7.3	0.7	7.4	0.1	Imperceptible	Negligible
LE36	6.3	1.1	7.4	2.1	8.4	1.0	Low	Negligible
LE37	6.3	1.2	7.5	2.8	9.1	1.6	Low	Negligible
LE38	6.3	1.3	7.6	3.0	9.3	1.7	Low	Negligible
LE39	5.9	0.9	6.8	1.2	7.1	0.3	Imperceptible	Negligible
LE40	6.3	0.4	6.7	0.6	6.9	0.2	Imperceptible	Negligible
LE52	6.0	0.8	6.8	1.0	6.9	0.2	Imperceptible	Negligible
LE53	6.0	0.3	6.2	0.3	6.3	>0.0	Imperceptible	Negligible
LE54	6.0	0.2	6.2	0.2	6.2	0.1	Imperceptible	Negligible
YX13	5.9	3.5	9.4	4.0	9.9	0.5	Very Low	Negligible
YX14	5.9	0.2	6.1	0.2	6.1	>0.0	Imperceptible	Negligible
YX15	5.9	2.3	8.2	2.6	8.5	0.3	Imperceptible	Negligible
YX16	5.9	2.4	8.3	2.8	8.7	0.4	Very Low	Negligible
YX17	5.9	0.3	6.3	0.4	6.3	0.1	Imperceptible	Negligible
LE55	5.9	0.7	6.6	0.8	6.7	0.1	Imperceptible	Negligible
LE56	6.0	1.6	7.6	1.7	7.8	0.2	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX18	5.9	1.5	7.4	1.3	7.2	-0.2	Imperceptible	Negligible
YX19	6.0	1.1	7.1	1.2	7.2	0.1	Imperceptible	Negligible
YX20	5.8	3.0	8.8	3.5	9.3	0.5	Very Low	Negligible
SX16	6.6	1.7	8.2	1.8	8.4	0.2	Imperceptible	Negligible
SX18	6.0	0.2	6.2	0.3	6.3	0.1	Imperceptible	Negligible
SX17	6.6	0.4	6.9	0.7	7.3	0.3	Imperceptible	Negligible
SX19	6.2	0.2	6.4	0.4	6.5	0.1	Imperceptible	Negligible
WM15	6.6	0.8	7.5	1.0	7.6	0.1	Imperceptible	Negligible
WM16	6.5	0.3	6.8	0.4	6.9	0.1	Imperceptible	Negligible
WM17	6.7	0.3	7.0	0.5	7.2	0.2	Imperceptible	Negligible
BK6	8.3	1.6	9.9	1.2	9.5	-0.4	Very Low	Negligible
BK7	8.4	1.1	9.5	1.1	9.5	>0.0	Imperceptible	Negligible
LE46	6.0	0.8	6.8	1.0	7.0	0.2	Imperceptible	Negligible
BK8	8.6	1.7	10.2	1.7	10.2	0.0	Imperceptible	Negligible
LE57	5.9	1.5	7.3	2.3	8.2	0.9	Low	Negligible
LE42	5.8	0.2	6.0	0.3	6.1	0.1	Imperceptible	Negligible

Table notes: RC= Reference case (without proposed development); AD = Typical day (with proposed development

Table 1.6: Modelled PM_{10} concentrations at receptors for 2028 average day assessment year

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
BC1	13.3	0.3	13.6	0.3	13.6	>0.0	Imperceptible	Negligible
BC2	14.8	1.4	16.2	1.5	16.3	>0.0	Imperceptible	Negligible
BC3	12.6	0.2	12.8	0.2	12.8	>0.0	Imperceptible	Negligible
BC4	12.5	0.4	12.9	0.4	13.0	>0.0	Imperceptible	Negligible
BC5	13.9	1.0	14.9	1.0	14.9	>0.0	Imperceptible	Negligible
SW6	13.6	0.2	13.8	0.2	13.8	>0.0	Imperceptible	Negligible
SW5	14.3	0.2	14.5	0.3	14.5	>0.0	Imperceptible	Negligible
BC7	15.0	0.3	15.2	0.3	15.3	>0.0	Imperceptible	Negligible
BC8	13.6	0.2	13.8	0.2	13.8	>0.0	Imperceptible	Negligible
KS4	14.0	0.2	14.3	0.3	14.3	>0.0	Imperceptible	Negligible
LW1	13.9	0.6	14.5	0.6	14.5	>0.0	Imperceptible	Negligible
LW3	12.3	1.3	13.6	1.3	13.6	>0.0	Imperceptible	Negligible
LW5	13.3	0.3	13.5	0.3	13.6	>0.0	Imperceptible	Negligible
LW6	13.3	0.4	13.6	0.4	13.6	>0.0	Imperceptible	Negligible
KS1	12.7	0.2	12.9	0.2	12.9	>0.0	Imperceptible	Negligible
KS2	14.0	0.4	14.5	0.5	14.5	>0.0	Imperceptible	Negligible
KS3	14.0	0.5	14.6	0.6	14.6	0.1	Imperceptible	Negligible
SW4	12.5	0.3	12.8	0.4	12.9	>0.0	Imperceptible	Negligible
HS3	14.9	0.4	15.2	0.4	15.3	>0.0	Imperceptible	Negligible
YX1	14.8	1.0	15.8	1.1	15.9	0.1	Imperceptible	Negligible

Receptor	2028 Background (µg/m^3)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX3	13.4	0.9	14.3	0.8	14.3	<0.0	Imperceptible	Negligible
YX7	13.4	0.1	13.5	0.1	13.4	-0.1	Imperceptible	Negligible
LE3	13.6	0.3	13.8	0.4	14.0	0.1	Imperceptible	Negligible
LE9	12.6	0.6	13.2	0.7	13.3	0.1	Imperceptible	Negligible
LE10	12.6	0.7	13.3	0.9	13.5	0.1	Imperceptible	Negligible
LE11	12.9	0.3	13.2	0.4	13.3	0.1	Imperceptible	Negligible
LE14	14.3	0.6	14.9	0.7	15.0	>0.0	Imperceptible	Negligible
SX12	14.1	0.2	14.3	0.2	14.4	>0.0	Imperceptible	Negligible
YX4	14.8	0.4	15.2	0.4	15.2	<0.0	Imperceptible	Negligible
SX1	14.1	0.4	14.4	0.4	14.5	0.1	Imperceptible	Negligible
WM2	14.7	1.6	16.2	1.8	16.4	0.2	Imperceptible	Negligible
WM6	14.1	0.2	14.3	0.2	14.3	>0.0	Imperceptible	Negligible
WM7	15.4	0.3	15.7	0.3	15.7	>0.0	Imperceptible	Negligible
WM8	14.8	0.4	15.2	0.4	15.2	>0.0	Imperceptible	Negligible
WM4	13.1	0.2	13.3	0.2	13.3	>0.0	Imperceptible	Negligible
WB8	13.5	1.3	14.8	1.3	14.8	0.1	Imperceptible	Negligible
WB9	13.5	0.8	14.3	0.8	14.3	>0.0	Imperceptible	Negligible
WB10	14.5	0.3	14.9	0.4	14.9	>0.0	Imperceptible	Negligible
BK2	14.9	0.4	15.3	0.4	15.3	>0.0	Imperceptible	Negligible
BK4	16.8	0.4	17.2	0.4	17.2	<0.0	Imperceptible	Negligible
BK5	16.8	0.6	17.4	0.6	17.4	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m^3)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
IP1	17.2	1.0	18.2	1.0	18.3	>0.0	Imperceptible	Negligible
IP2	16.7	0.8	17.5	0.8	17.6	>0.0	Imperceptible	Negligible
BK3	14.7	0.6	15.3	0.6	15.3	>0.0	Imperceptible	Negligible
IP3	14.7	1.1	15.8	1.1	15.8	>0.0	Imperceptible	Negligible
IP4	16.2	1.7	17.9	1.7	17.9	>0.0	Imperceptible	Negligible
IP5	17.0	0.3	17.2	0.3	17.2	>0.0	Imperceptible	Negligible
IP6	14.0	0.1	14.1	0.1	14.1	>0.0	Imperceptible	Negligible
IP7	14.5	0.1	14.6	0.1	14.6	>0.0	Imperceptible	Negligible
IP8	14.8	0.1	14.8	0.1	14.8	>0.0	Imperceptible	Negligible
IP9	14.8	0.1	14.8	0.1	14.8	>0.0	Imperceptible	Negligible
IP10	14.8	0.1	14.8	0.1	14.8	>0.0	Imperceptible	Negligible
IP11	14.8	0.1	14.8	0.1	14.8	>0.0	Imperceptible	Negligible
ND1	15.3	1.3	16.6	1.4	16.7	>0.0	Imperceptible	Negligible
ND2	15.9	0.4	16.3	0.4	16.3	>0.0	Imperceptible	Negligible
ND3	15.0	0.7	15.6	0.7	15.6	>0.0	Imperceptible	Negligible
ND4	14.1	0.7	14.8	0.7	14.8	>0.0	Imperceptible	Negligible
ND5	14.9	0.6	15.5	0.6	15.5	>0.0	Imperceptible	Negligible
ND6	14.4	0.1	14.5	0.1	14.5	>0.0	Imperceptible	Negligible
WM9	14.0	0.2	14.2	0.2	14.2	>0.0	Imperceptible	Negligible
ND7	15.3	0.5	15.8	0.5	15.9	>0.0	Imperceptible	Negligible
FR1	14.8	0.3	15.2	0.4	15.2	>0.0	Imperceptible	Negligible

Receptor	2028 Background ($\mu g/m^3$)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
FR2	13.5	0.5	14.1	0.6	14.1	>0.0	Imperceptible	Negligible
FR3	13.5	0.2	13.7	0.2	13.7	>0.0	Imperceptible	Negligible
FR4	15.0	0.3	15.3	0.3	15.3	>0.0	Imperceptible	Negligible
FR5	14.2	0.2	14.4	0.2	14.4	>0.0	Imperceptible	Negligible
FR6	14.9	0.2	15.0	0.2	15.1	>0.0	Imperceptible	Negligible
IP12	14.1	0.0	14.2	0.1	14.2	>0.0	Imperceptible	Negligible
IP13	14.4	0.1	14.4	0.1	14.5	>0.0	Imperceptible	Negligible
IP14	14.0	1.2	15.1	1.2	15.2	>0.0	Imperceptible	Negligible
IP15	14.2	1.0	15.2	1.0	15.3	>0.0	Imperceptible	Negligible
WB11	13.7	0.4	14.1	0.5	14.2	0.1	Imperceptible	Negligible
WB12	13.5	0.3	13.8	0.4	14.0	0.1	Imperceptible	Negligible
WB7	13.9	0.5	14.3	0.5	14.4	>0.0	Imperceptible	Negligible
WB6	13.3	0.4	13.7	0.5	13.8	0.1	Imperceptible	Negligible
WB5	12.9	0.4	13.3	0.5	13.3	>0.0	Imperceptible	Negligible
WB4	12.9	0.3	13.2	0.3	13.2	>0.0	Imperceptible	Negligible
WB3	13.0	0.3	13.4	0.3	13.4	>0.0	Imperceptible	Negligible
WB2	13.0	0.5	13.5	0.4	13.5	<0.0	Imperceptible	Negligible
SX13	14.6	0.2	14.8	0.2	14.8	>0.0	Imperceptible	Negligible
SX14	15.0	0.3	15.3	0.3	15.3	>0.0	Imperceptible	Negligible
WM13	14.0	0.2	14.2	0.2	14.3	>0.0	Imperceptible	Negligible
HS1	13.5	0.4	13.9	0.4	13.9	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
HS2	14.8	0.3	15.1	0.3	15.1	>0.0	Imperceptible	Negligible
SW1	11.6	0.2	11.8	0.3	11.8	>0.0	Imperceptible	Negligible
YX2	13.4	0.5	13.9	0.5	13.9	>0.0	Imperceptible	Negligible
YX6	13.5	0.3	13.8	0.4	13.9	0.1	Imperceptible	Negligible
SX2	13.9	0.1	14.0	0.1	14.0	>0.0	Imperceptible	Negligible
SX4	13.0	0.6	13.6	0.7	13.7	>0.0	Imperceptible	Negligible
SX3	14.6	0.1	14.8	0.1	14.8	>0.0	Imperceptible	Negligible
SX10	14.7	0.5	15.2	0.5	15.2	>0.0	Imperceptible	Negligible
SX5	13.8	0.8	14.6	0.1	13.9	-0.7	Very Low	Negligible
SX6	13.5	1.4	14.9	0.1	13.6	-1.3	Low	Negligible
SX7	13.5	1.6	15.1	0.1	13.6	-1.4	Low	Negligible
SX11	13.9	0.4	14.3	0.4	14.3	>0.0	Imperceptible	Negligible
SW3	12.3	0.8	13.1	0.9	13.2	0.1	Imperceptible	Negligible
SW2	12.3	0.5	12.8	0.6	12.9	0.1	Imperceptible	Negligible
YX8	14.2	0.3	14.5	0.3	14.5	>0.0	Imperceptible	Negligible
LE13	12.5	0.4	12.9	0.4	12.9	>0.0	Imperceptible	Negligible
LE12	13.4	0.3	13.7	0.3	13.7	>0.0	Imperceptible	Negligible
LE7	14.0	0.1	14.1	0.1	14.2	>0.0	Imperceptible	Negligible
LE1	12.6	0.4	13.0	0.6	13.2	0.2	Imperceptible	Negligible
LE8	12.6	0.3	12.9	0.3	12.9	>0.0	Imperceptible	Negligible
LE6	14.0	0.4	14.3	0.1	14.0	-0.3	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE5	14.0	0.2	14.2	0.1	14.0	-0.2	Imperceptible	Negligible
ND8	14.5	0.9	15.4	0.9	15.4	>0.0	Imperceptible	Negligible
WM1	13.5	0.1	13.6	0.1	13.6	-0.1	Imperceptible	Negligible
SX8	14.2	0.0	14.2	0.2	14.4	0.1	Imperceptible	Negligible
SX9	14.2	0.0	14.3	0.1	14.3	0.1	Imperceptible	Negligible
LE4	14.0	0.0	14.0	0.0	14.0	>0.0	Imperceptible	Negligible
YX5	14.2	0.0	14.3	0.1	14.3	>0.0	Imperceptible	Negligible
LW2	12.3	0.4	12.7	0.4	12.7	>0.0	Imperceptible	Negligible
BK1	13.5	0.7	14.2	0.8	14.3	0.2	Imperceptible	Negligible
WM10	14.9	0.8	15.8	0.9	15.8	0.1	Imperceptible	Negligible
WB1	14.7	0.9	15.7	0.9	15.7	<0.0	Imperceptible	Negligible
BC6	14.8	0.4	15.2	0.4	15.2	>0.0	Imperceptible	Negligible
LW4	12.7	0.4	13.1	0.4	13.1	>0.0	Imperceptible	Negligible
LW7	13.3	0.2	13.4	0.2	13.4	>0.0	Imperceptible	Negligible
LW8	13.1	0.4	13.5	0.3	13.4	-0.1	Imperceptible	Negligible
LW9	13.3	0.3	13.6	0.4	13.6	>0.0	Imperceptible	Negligible
LE2	13.7	0.1	13.8	0.2	13.9	0.1	Imperceptible	Negligible
WM5	14.5	0.2	14.7	0.2	14.7	>0.0	Imperceptible	Negligible
WM11	14.1	0.2	14.4	0.3	14.4	>0.0	Imperceptible	Negligible
WM12	14.1	0.1	14.2	0.1	14.2	>0.0	Imperceptible	Negligible
SX15	13.8	1.8	15.6	0.1	13.9	-1.7	Low	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX9	14.8	0.1	14.9	0.1	14.9	>0.0	Imperceptible	Negligible
LE15	13.6	0.0	13.6	0.1	13.7	>0.0	Imperceptible	Negligible
LE16	13.6	0.0	13.6	0.0	13.6	>0.0	Imperceptible	Negligible
LE19	13.7	0.0	13.7	0.1	13.8	>0.0	Imperceptible	Negligible
LE17	13.0	0.0	13.0	0.0	13.0	>0.0	Imperceptible	Negligible
LE18	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
LE20	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
LE21	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
LE22	13.4	0.0	13.5	0.0	13.5	>0.0	Imperceptible	Negligible
LE23	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
WM3	14.0	0.4	14.4	0.4	14.4	>0.0	Imperceptible	Negligible
WM14	14.0	0.1	14.1	0.1	14.1	>0.0	Imperceptible	Negligible
YX10	14.6	0.6	15.2	0.7	15.3	0.1	Imperceptible	Negligible
LE24	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
YX11	14.6	0.2	14.8	0.2	14.8	>0.0	Imperceptible	Negligible
YX12	14.6	0.2	14.7	0.2	14.8	>0.0	Imperceptible	Negligible
LE25	13.7	0.0	13.7	0.0	13.7	>0.0	Imperceptible	Negligible
LE26	13.0	0.0	13.0	0.0	13.0	>0.0	Imperceptible	Negligible
LE27	13.6	0.0	13.7	0.0	13.7	>0.0	Imperceptible	Negligible
LE28	13.6	0.1	13.7	0.1	13.7	0.1	Imperceptible	Negligible
LE29	13.7	0.0	13.7	0.0	13.7	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE30	12.5	0.1	12.6	0.1	12.6	>0.0	Imperceptible	Negligible
LE31	12.5	0.0	12.6	0.0	12.6	>0.0	Imperceptible	Negligible
LE32	14.0	0.1	14.1	0.1	14.1	>0.0	Imperceptible	Negligible
LE33	14.0	0.1	14.1	0.1	14.1	>0.0	Imperceptible	Negligible
LE34	13.4	0.0	13.5	0.1	13.5	>0.0	Imperceptible	Negligible
LE35	12.6	0.1	12.7	0.1	12.7	>0.0	Imperceptible	Negligible
LE36	13.4	0.2	13.6	0.2	13.6	>0.0	Imperceptible	Negligible
LE37	13.4	0.2	13.6	0.2	13.6	>0.0	Imperceptible	Negligible
LE38	13.4	0.2	13.6	0.2	13.6	>0.0	Imperceptible	Negligible
LE39	13.0	0.1	13.1	0.1	13.1	>0.0	Imperceptible	Negligible
LE40	13.4	0.1	13.5	0.1	13.5	>0.0	Imperceptible	Negligible
LE52	14.0	0.1	14.1	0.1	14.2	>0.0	Imperceptible	Negligible
LE53	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
LE54	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
YX13	14.8	0.6	15.4	0.7	15.5	0.1	Imperceptible	Negligible
YX14	14.6	0.0	14.6	0.0	14.6	>0.0	Imperceptible	Negligible
YX15	14.0	0.4	14.4	0.5	14.5	0.1	Imperceptible	Negligible
YX16	14.8	0.4	15.2	0.5	15.3	0.1	Imperceptible	Negligible
YX17	14.0	0.1	14.1	0.1	14.1	>0.0	Imperceptible	Negligible
LE55	13.6	0.1	13.7	0.1	13.7	>0.0	Imperceptible	Negligible
LE56	13.4	0.2	13.7	0.3	13.7	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m^3)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX18	13.4	0.2	13.6	0.2	13.6	<0.0	Imperceptible	Negligible
YX19	13.5	0.2	13.7	0.2	13.7	>0.0	Imperceptible	Negligible
YX20	14.0	0.5	14.5	0.6	14.6	0.1	Imperceptible	Negligible
SX16	13.0	0.2	13.2	0.3	13.2	>0.0	Imperceptible	Negligible
SX18	14.7	0.0	14.7	0.0	14.7	>0.0	Imperceptible	Negligible
SX17	13.0	0.1	13.1	0.1	13.1	>0.0	Imperceptible	Negligible
SX19	14.6	0.0	14.7	0.0	14.7	>0.0	Imperceptible	Negligible
WM15	14.5	0.1	14.6	0.1	14.6	>0.0	Imperceptible	Negligible
WM16	13.1	0.0	13.1	0.0	13.1	>0.0	Imperceptible	Negligible
WM17	13.5	0.0	13.5	0.0	13.5	>0.0	Imperceptible	Negligible
BK6	13.8	0.2	14.1	0.2	14.0	-0.1	Imperceptible	Negligible
BK7	16.6	0.2	16.7	0.2	16.8	>0.0	Imperceptible	Negligible
LE46	14.0	0.1	14.1	0.1	14.2	>0.0	Imperceptible	Negligible
BK8	16.4	0.3	16.7	0.3	16.7	>0.0	Imperceptible	Negligible
LE57	13.3	0.2	13.5	0.4	13.6	0.1	Imperceptible	Negligible
LE42	13.0	0.0	13.0	0.0	13.0	>0.0	Imperceptible	Negligible

Table notes: RC= Reference case (without proposed development); AD = Typical day (with proposed development

Table 1.7: Modelled $PM_{2.5}$ concentrations at receptors for 2028 average day assessment year

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
BC1	8.0	0.5	8.5	0.6	8.5	>0.0	Imperceptible	Negligible
BC2	8.4	2.5	10.9	2.6	10.9	0.1	Imperceptible	Negligible
BC3	7.9	0.4	8.3	0.4	8.3	>0.0	Imperceptible	Negligible
BC4	8.1	0.7	8.7	0.7	8.8	>0.0	Imperceptible	Negligible
BC5	9.0	1.7	10.7	1.7	10.7	>0.0	Imperceptible	Negligible
SW6	8.0	0.4	8.4	0.4	8.4	0.1	Imperceptible	Negligible
SW5	8.2	0.4	8.6	0.5	8.6	0.1	Imperceptible	Negligible
BC7	8.8	0.5	9.3	0.5	9.4	>0.0	Imperceptible	Negligible
BC8	8.0	0.3	8.3	0.4	8.4	>0.0	Imperceptible	Negligible
KS4	8.2	0.4	8.6	0.5	8.6	>0.0	Imperceptible	Negligible
LW1	9.8	1.0	10.7	1.0	10.8	0.1	Imperceptible	Negligible
LW3	8.2	2.2	10.4	2.2	10.4	>0.0	Imperceptible	Negligible
LW5	8.6	0.5	9.1	0.5	9.1	>0.0	Imperceptible	Negligible
LW6	8.6	0.6	9.2	0.6	9.2	>0.0	Imperceptible	Negligible
KS1	7.9	0.4	8.3	0.4	8.3	>0.0	Imperceptible	Negligible
KS2	8.2	0.7	8.9	0.8	9.0	0.1	Imperceptible	Negligible
KS3	8.2	0.9	9.1	1.0	9.2	0.1	Imperceptible	Negligible
SW4	7.7	0.6	8.3	0.7	8.4	0.1	Imperceptible	Negligible
HS3	8.3	0.6	9.0	0.7	9.1	0.1	Imperceptible	Negligible
YX1	8.3	1.7	10.0	1.9	10.2	0.2	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX3	8.1	1.5	9.6	1.5	9.5	<0.0	Imperceptible	Negligible
YX7	7.9	0.2	8.2	0.1	8.1	-0.1	Imperceptible	Negligible
LE3	8.0	0.4	8.4	0.7	8.7	0.2	Imperceptible	Negligible
LE9	8.2	1.0	9.2	1.1	9.3	0.1	Imperceptible	Negligible
LE10	8.2	1.2	9.4	1.5	9.7	0.3	Very Low	Negligible
LE11	7.9	0.6	8.4	0.7	8.6	0.1	Imperceptible	Negligible
LE14	8.2	1.1	9.3	1.2	9.4	0.1	Imperceptible	Negligible
SX12	8.3	0.4	8.7	0.4	8.7	>0.0	Imperceptible	Negligible
YX4	8.4	0.6	9.0	0.6	9.0	<0.0	Imperceptible	Negligible
SX1	8.2	0.6	8.8	0.8	9.0	0.1	Imperceptible	Negligible
WM2	8.5	2.7	11.2	3.0	11.5	0.3	Very Low	Negligible
WM6	8.4	0.3	8.7	0.3	8.7	>0.0	Imperceptible	Negligible
WM7	8.8	0.5	9.3	0.6	9.4	0.1	Imperceptible	Negligible
WM8	8.7	0.7	9.4	0.7	9.4	0.1	Imperceptible	Negligible
WM4	8.2	0.4	8.5	0.4	8.6	>0.0	Imperceptible	Negligible
WB8	8.8	2.2	11.0	2.3	11.1	0.1	Imperceptible	Negligible
WB9	8.8	1.4	10.1	1.4	10.2	>0.0	Imperceptible	Negligible
WB10	8.8	0.6	9.4	0.6	9.4	>0.0	Imperceptible	Negligible
BK2	8.9	0.7	9.6	0.7	9.6	>0.0	Imperceptible	Negligible
BK4	9.7	0.7	10.4	0.7	10.4	<0.0	Imperceptible	Negligible
BK5	9.7	1.0	10.7	1.1	10.8	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
IP1	10.1	1.8	11.8	1.8	11.9	>0.0	Imperceptible	Negligible
IP2	9.8	1.4	11.3	1.5	11.3	>0.0	Imperceptible	Negligible
BK3	8.9	1.0	9.9	1.0	9.9	>0.0	Imperceptible	Negligible
IP3	9.0	1.9	11.0	2.0	11.0	0.1	Imperceptible	Negligible
IP4	9.5	2.9	12.4	3.0	12.5	0.1	Imperceptible	Negligible
IP5	9.9	0.5	10.3	0.5	10.3	>0.0	Imperceptible	Negligible
IP6	9.2	0.2	9.4	0.2	9.4	>0.0	Imperceptible	Negligible
IP7	9.6	0.1	9.7	0.1	9.7	>0.0	Imperceptible	Negligible
IP8	9.8	0.1	9.9	0.1	9.9	>0.0	Imperceptible	Negligible
IP9	9.8	0.1	9.9	0.1	9.9	>0.0	Imperceptible	Negligible
IP10	9.8	0.1	9.9	0.1	9.9	>0.0	Imperceptible	Negligible
IP11	9.8	0.1	9.9	0.1	9.9	>0.0	Imperceptible	Negligible
ND1	9.4	2.4	11.7	2.4	11.8	>0.0	Imperceptible	Negligible
ND2	9.5	0.7	10.2	0.7	10.2	>0.0	Imperceptible	Negligible
ND3	8.8	1.2	10.0	1.2	10.0	>0.0	Imperceptible	Negligible
ND4	8.5	1.1	9.6	1.2	9.7	0.1	Imperceptible	Negligible
ND5	8.6	1.0	9.6	1.0	9.6	0.1	Imperceptible	Negligible
ND6	8.4	0.2	8.6	0.2	8.6	>0.0	Imperceptible	Negligible
WM9	8.3	0.3	8.6	0.4	8.6	>0.0	Imperceptible	Negligible
ND7	8.8	0.9	9.8	0.9	9.8	>0.0	Imperceptible	Negligible
FR1	8.4	0.6	9.0	0.6	9.0	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
FR2	8.3	0.9	9.3	0.9	9.3	>0.0	Imperceptible	Negligible
FR3	8.3	0.3	8.6	0.3	8.6	>0.0	Imperceptible	Negligible
FR4	8.4	0.6	9.0	0.6	9.0	>0.0	Imperceptible	Negligible
FR5	8.2	0.4	8.6	0.4	8.6	>0.0	Imperceptible	Negligible
FR6	8.3	0.3	8.6	0.3	8.7	>0.0	Imperceptible	Negligible
IP12	9.1	0.1	9.2	0.1	9.2	>0.0	Imperceptible	Negligible
IP13	9.7	0.1	9.8	0.1	9.8	>0.0	Imperceptible	Negligible
IP14	9.0	2.0	11.0	2.0	11.0	>0.0	Imperceptible	Negligible
IP15	8.9	1.7	10.6	1.8	10.7	>0.0	Imperceptible	Negligible
WB11	8.8	0.7	9.5	0.8	9.6	0.1	Imperceptible	Negligible
WB12	8.5	0.5	9.0	0.7	9.2	0.2	Imperceptible	Negligible
WB7	8.7	0.8	9.5	0.9	9.6	0.1	Imperceptible	Negligible
WB6	8.5	0.7	9.2	0.8	9.3	0.1	Imperceptible	Negligible
WB5	8.5	0.7	9.3	0.8	9.3	0.1	Imperceptible	Negligible
WB4	8.5	0.5	9.0	0.5	9.1	>0.0	Imperceptible	Negligible
WB3	8.4	0.6	9.0	0.6	9.0	>0.0	Imperceptible	Negligible
WB2	8.4	0.8	9.2	0.7	9.1	<0.0	Imperceptible	Negligible
SX13	8.4	0.3	8.8	0.4	8.8	>0.0	Imperceptible	Negligible
SX14	8.6	0.4	9.0	0.5	9.0	>0.0	Imperceptible	Negligible
WM13	8.3	0.3	8.6	0.4	8.6	>0.0	Imperceptible	Negligible
HS1	8.3	0.7	9.0	0.7	9.1	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
HS2	8.4	0.5	8.8	0.5	8.9	>0.0	Imperceptible	Negligible
SW1	7.6	0.4	8.0	0.4	8.0	>0.0	Imperceptible	Negligible
YX2	8.1	0.9	9.0	0.9	9.0	>0.0	Imperceptible	Negligible
YX6	8.0	0.5	8.5	0.6	8.6	0.1	Imperceptible	Negligible
SX2	8.3	0.2	8.5	0.2	8.5	>0.0	Imperceptible	Negligible
SX4	8.1	1.1	9.2	1.1	9.3	0.1	Imperceptible	Negligible
SX3	8.4	0.2	8.6	0.2	8.6	>0.0	Imperceptible	Negligible
SX10	8.4	0.9	9.3	0.9	9.3	>0.0	Imperceptible	Negligible
SX5	8.2	1.4	9.6	0.2	8.4	-1.2	Low	Negligible
SX6	8.2	2.4	10.5	0.2	8.3	-2.2	Medium	Minorbeneficial
SX7	8.2	2.7	10.8	0.2	8.4	-2.5	High	Moderate beneficial
SX11	8.2	0.7	8.9	0.7	8.9	>0.0	Imperceptible	Negligible
SW3	7.7	1.3	9.0	1.5	9.2	0.2	Imperceptible	Negligible
SW2	7.7	0.9	8.6	1.0	8.7	0.1	Imperceptible	Negligible
YX8	8.1	0.5	8.7	0.5	8.7	>0.0	Imperceptible	Negligible
LE13	7.7	0.6	8.4	0.7	8.4	>0.0	Imperceptible	Negligible
LE12	8.1	0.5	8.6	0.5	8.6	>0.0	Imperceptible	Negligible
LE7	8.2	0.2	8.4	0.2	8.4	>0.0	Imperceptible	Negligible
LE1	8.2	0.7	8.9	1.0	9.3	0.3	Very Low	Negligible
LE8	8.2	0.4	8.6	0.5	8.7	0.1	Imperceptible	Negligible
LE6	8.1	0.7	8.8	0.1	8.2	-0.5	Low	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE5	8.1	0.4	8.5	0.1	8.2	-0.3	Very Low	Negligible
ND8	8.5	1.5	9.9	1.5	10.0	>0.0	Imperceptible	Negligible
WM1	8.2	0.2	8.3	0.1	8.2	-0.1	Imperceptible	Negligible
SX8	8.3	0.1	8.3	0.3	8.5	0.2	Imperceptible	Negligible
SX9	8.3	0.1	8.3	0.3	8.5	0.2	Imperceptible	Negligible
LE4	8.1	0.1	8.2	0.1	8.2	>0.0	Imperceptible	Negligible
YX5	8.2	0.1	8.2	0.1	8.3	>0.0	Imperceptible	Negligible
LW2	8.2	0.6	8.8	0.6	8.9	>0.0	Imperceptible	Negligible
BK1	8.8	1.1	9.9	1.4	10.2	0.3	Very Low	Negligible
WM10	8.6	1.4	10.0	1.5	10.1	0.1	Imperceptible	Negligible
WB1	9.0	1.6	10.6	1.6	10.5	<0.0	Imperceptible	Negligible
BC6	8.3	0.6	8.9	0.7	9.0	0.1	Imperceptible	Negligible
LW4	8.5	0.6	9.1	0.7	9.1	>0.0	Imperceptible	Negligible
LW7	8.6	0.3	8.9	0.3	8.9	>0.0	Imperceptible	Negligible
LW8	8.8	0.7	9.6	0.5	9.4	-0.2	Imperceptible	Negligible
LW9	8.6	0.6	9.2	0.6	9.2	>0.0	Imperceptible	Negligible
LE2	8.1	0.2	8.3	0.3	8.4	0.1	Imperceptible	Negligible
WM5	8.5	0.3	8.8	0.3	8.8	>0.0	Imperceptible	Negligible
WM11	8.4	0.4	8.8	0.5	8.9	>0.0	Imperceptible	Negligible
WM12	8.4	0.2	8.6	0.2	8.6	>0.0	Imperceptible	Negligible
SX15	8.2	3.1	11.3	0.1	8.3	-3.0	High	Moderate beneficial

Receptor	2028 Background (µg/m^3)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX9	8.4	0.1	8.5	0.1	8.5	>0.0	Imperceptible	Negligible
LE15	8.0	0.1	8.1	0.1	8.1	>0.0	Imperceptible	Negligible
LE16	8.0	0.1	8.0	0.1	8.1	>0.0	Imperceptible	Negligible
LE19	8.1	0.1	8.2	0.1	8.2	>0.0	Imperceptible	Negligible
LE17	7.8	0.1	7.9	0.1	7.9	>0.0	Imperceptible	Negligible
LE18	8.0	0.1	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
LE20	8.0	0.1	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
LE21	8.0	0.1	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
LE22	8.0	0.1	8.1	0.1	8.1	>0.0	Imperceptible	Negligible
LE23	8.0	0.1	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
WM3	8.3	0.6	8.9	0.6	8.9	>0.0	Imperceptible	Negligible
WM14	8.3	0.1	8.4	0.1	8.4	>0.0	Imperceptible	Negligible
YX10	8.3	1.0	9.3	1.2	9.4	0.1	Imperceptible	Negligible
LE24	8.0	0.1	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
YX11	8.3	0.3	8.6	0.4	8.6	0.1	Imperceptible	Negligible
YX12	8.3	0.3	8.5	0.3	8.6	0.1	Imperceptible	Negligible
LE25	8.0	0.0	8.0	0.0	8.0	>0.0	Imperceptible	Negligible
LE26	7.8	0.1	7.9	0.1	7.9	>0.0	Imperceptible	Negligible
LE27	8.0	0.0	8.0	0.1	8.1	>0.0	Imperceptible	Negligible
LE28	8.0	0.1	8.1	0.2	8.2	0.1	Imperceptible	Negligible
LE29	8.0	0.0	8.0	0.0	8.0	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE30	7.7	0.1	7.8	0.1	7.8	>0.0	Imperceptible	Negligible
LE31	7.7	0.1	7.8	0.1	7.8	>0.0	Imperceptible	Negligible
LE32	8.2	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
LE33	8.2	0.2	8.3	0.2	8.3	>0.0	Imperceptible	Negligible
LE34	8.1	0.1	8.2	0.1	8.2	>0.0	Imperceptible	Negligible
LE35	8.2	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
LE36	8.1	0.3	8.4	0.3	8.4	>0.0	Imperceptible	Negligible
LE37	8.1	0.3	8.4	0.3	8.4	>0.0	Imperceptible	Negligible
LE38	8.1	0.3	8.4	0.3	8.5	>0.0	Imperceptible	Negligible
LE39	7.9	0.2	8.1	0.2	8.1	>0.0	Imperceptible	Negligible
LE40	8.1	0.1	8.2	0.1	8.2	>0.0	Imperceptible	Negligible
LE52	8.2	0.2	8.4	0.2	8.4	>0.0	Imperceptible	Negligible
LE53	8.0	0.1	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
LE54	8.0	0.0	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
YX13	8.3	1.1	9.4	1.2	9.5	0.1	Imperceptible	Negligible
YX14	8.3	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
YX15	8.2	0.7	8.8	0.8	8.9	0.1	Imperceptible	Negligible
YX16	8.3	0.7	9.1	0.8	9.2	0.1	Imperceptible	Negligible
YX17	8.2	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
LE55	8.0	0.2	8.2	0.2	8.2	>0.0	Imperceptible	Negligible
LE56	8.0	0.4	8.4	0.4	8.5	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028AD Road + Rail (µg/m3)	2028AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX18	8.1	0.4	8.5	0.4	8.4	-0.1	Imperceptible	Negligible
YX19	8.0	0.3	8.3	0.4	8.3	0.1	Imperceptible	Negligible
YX20	8.2	0.9	9.1	1.0	9.2	0.1	Imperceptible	Negligible
SX16	8.1	0.4	8.6	0.4	8.6	>0.0	Imperceptible	Negligible
SX18	8.3	0.1	8.4	0.1	8.4	>0.0	Imperceptible	Negligible
SX17	8.1	0.1	8.2	0.1	8.2	>0.0	Imperceptible	Negligible
SX19	8.4	0.1	8.4	0.1	8.4	>0.0	Imperceptible	Negligible
WM15	8.6	0.2	8.7	0.2	8.8	>0.0	Imperceptible	Negligible
WM16	8.1	0.1	8.2	0.1	8.2	>0.0	Imperceptible	Negligible
WM17	8.2	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
BK6	8.5	0.4	8.9	0.3	8.8	-0.1	Imperceptible	Negligible
BK7	9.5	0.3	9.8	0.3	9.8	>0.0	Imperceptible	Negligible
LE46	8.2	0.2	8.3	0.2	8.4	>0.0	Imperceptible	Negligible
BK8	9.5	0.5	10.0	0.5	10.0	>0.0	Imperceptible	Negligible
LE57	8.0	0.4	8.4	0.6	8.6	0.2	Imperceptible	Negligible
LE42	7.8	0.1	7.9	0.1	7.9	>0.0	Imperceptible	Negligible

Table notes: RC= Reference case (without proposed development); AD = Typical day (with proposed development

Table 1.8: Modelled NO_2 concentrations at receptors for 2028 busiest day assessment year

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
BC1	6.6	2.0	8.7	2.1	8.7	0.1	Imperceptible	Negligible
BC2	6.6	9.1	15.6	9.3	15.8	0.2	Imperceptible	Negligible
BC3	7.2	1.4	8.6	1.4	8.7	0.1	Imperceptible	Negligible
BC4	8.2	2.6	10.8	2.7	10.9	0.1	Imperceptible	Negligible
BC5	8.1	5.8	14.0	6.0	14.1	0.2	Imperceptible	Negligible
SW6	6.0	1.1	7.0	1.3	7.3	0.3	Imperceptible	Negligible
SW5	5.9	1.1	7.1	1.4	7.3	0.3	Imperceptible	Negligible
BC7	7.3	2.0	9.3	2.0	9.4	>0.0	Imperceptible	Negligible
BC8	6.4	1.5	7.9	1.7	8.1	0.2	Imperceptible	Negligible
KS4	6.1	1.8	7.9	2.0	8.1	0.2	Imperceptible	Negligible
LW1	13.6	3.8	17.3	3.9	17.5	0.2	Imperceptible	Negligible
LW3	10.1	8.7	18.7	8.7	18.8	0.1	Imperceptible	Negligible
LW5	8.0	1.9	9.9	2.0	10.0	0.1	Imperceptible	Negligible
LW6	8.0	2.4	10.5	2.5	10.5	>0.0	Imperceptible	Negligible
KS1	6.7	1.8	8.5	1.8	8.5	0.1	Imperceptible	Negligible
KS2	6.1	2.8	8.9	3.0	9.1	0.3	Imperceptible	Negligible
KS3	6.1	3.4	9.5	3.7	9.8	0.3	Imperceptible	Negligible
SW4	5.9	1.9	7.8	2.2	8.1	0.3	Imperceptible	Negligible
HS3	5.8	2.3	8.2	2.6	8.5	0.3	Imperceptible	Negligible
YX1	5.9	5.5	11.4	6.4	12.3	0.9	Low	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX3	5.9	5.2	11.1	5.1	11.0	-0.1	Imperceptible	Negligible
YX7	5.8	0.9	6.7	0.4	6.2	-0.5	Very Low	Negligible
LE3	5.9	1.5	7.4	2.3	8.2	0.7	Very Low	Negligible
LE9	6.7	7.1	13.8	8.8	15.5	1.8	Low	Negligible
LE10	6.7	4.7	11.4	5.7	12.4	1.0	Low	Negligible
LE11	6.0	2.2	8.2	2.7	8.7	0.5	Very Low	Negligible
LE14	5.9	4.2	10.1	4.4	10.3	0.3	Imperceptible	Negligible
SX12	6.0	1.6	7.6	1.8	7.8	0.1	Imperceptible	Negligible
YX4	5.8	2.4	8.2	2.4	8.1	-0.1	Imperceptible	Negligible
SX1	5.8	2.4	8.2	2.6	8.4	0.2	Imperceptible	Negligible
WM2	6.3	9.0	15.3	9.5	15.9	0.6	Very Low	Negligible
WM6	6.5	1.3	7.8	1.4	7.8	0.1	Imperceptible	Negligible
WM7	6.7	2.5	9.2	2.7	9.4	0.2	Imperceptible	Negligible
WM8	6.9	3.1	10.0	3.3	10.2	0.2	Imperceptible	Negligible
WM4	6.6	1.5	8.1	1.6	8.2	0.1	Imperceptible	Negligible
WB8	8.2	7.4	15.6	7.5	15.7	0.1	Imperceptible	Negligible
WB9	8.2	5.2	13.4	5.2	13.4	<0.0	Imperceptible	Negligible
WB10	7.8	2.9	10.7	2.9	10.7	>0.0	Imperceptible	Negligible
BK2	9.0	3.2	12.2	3.2	12.2	>0.0	Imperceptible	Negligible
BK4	9.4	2.4	11.8	2.3	11.7	-0.1	Imperceptible	Negligible
BK5	9.4	3.7	13.1	3.7	13.2	0.1	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
IP1	10.3	5.2	15.5	5.2	15.5	>0.0	Imperceptible	Negligible
IP2	8.2	5.0	13.2	5.0	13.2	>0.0	Imperceptible	Negligible
BK3	8.4	3.4	11.8	3.4	11.8	>0.0	Imperceptible	Negligible
IP3	7.2	5.9	13.1	6.0	13.2	0.1	Imperceptible	Negligible
IP4	7.4	8.9	16.3	9.0	16.4	0.1	Imperceptible	Negligible
IP5	7.6	1.3	8.9	1.3	8.9	>0.0	Imperceptible	Negligible
IP6	9.3	0.4	9.7	0.5	9.7	>0.0	Imperceptible	Negligible
IP7	10.9	0.3	11.2	0.3	11.2	0.0	Imperceptible	Negligible
IP8	12.8	0.3	13.1	0.3	13.1	>0.0	Imperceptible	Negligible
IP9	12.8	0.3	13.1	0.3	13.1	0.0	Imperceptible	Negligible
IP10	12.8	0.3	13.1	0.3	13.1	0.0	Imperceptible	Negligible
IP11	12.8	0.3	13.1	0.3	13.1	0.0	Imperceptible	Negligible
ND1	9.9	6.2	16.1	6.2	16.1	>0.0	Imperceptible	Negligible
ND2	8.7	1.9	10.6	1.9	10.6	>0.0	Imperceptible	Negligible
ND3	7.6	3.7	11.3	3.7	11.3	0.1	Imperceptible	Negligible
ND4	7.1	4.5	11.6	4.8	11.9	0.3	Imperceptible	Negligible
ND5	6.8	3.2	10.0	3.4	10.2	0.2	Imperceptible	Negligible
ND6	6.9	0.6	7.5	0.6	7.5	>0.0	Imperceptible	Negligible
WM9	6.4	1.2	7.7	1.5	7.9	0.2	Imperceptible	Negligible
ND7	6.8	2.7	9.4	2.7	9.5	0.1	Imperceptible	Negligible
FR1	6.1	1.6	7.7	1.7	7.7	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
FR2	6.8	3.2	10.0	3.2	10.1	0.1	Imperceptible	Negligible
FR3	6.8	1.1	7.9	1.1	8.0	>0.0	Imperceptible	Negligible
FR4	5.9	1.7	7.6	1.7	7.6	0.1	Imperceptible	Negligible
FR5	5.9	1.3	7.2	1.4	7.2	0.1	Imperceptible	Negligible
FR6	5.9	1.3	7.2	1.4	7.3	0.1	Imperceptible	Negligible
IP12	9.7	0.3	10.0	0.3	10.0	0.0	Imperceptible	Negligible
IP13	10.5	0.4	10.9	0.4	10.9	0.0	Imperceptible	Negligible
IP14	9.2	8.3	17.5	8.4	17.6	0.1	Imperceptible	Negligible
IP15	8.6	6.4	15.0	6.5	15.1	0.1	Imperceptible	Negligible
WB11	8.5	3.2	11.7	3.5	12.0	0.3	Imperceptible	Negligible
WB12	8.2	2.1	10.3	2.9	11.1	0.8	Low	Negligible
WB7	7.8	3.1	10.9	3.5	11.3	0.3	Imperceptible	Negligible
WB6	8.2	2.7	10.9	3.2	11.4	0.5	Very Low	Negligible
WB5	8.7	6.7	15.4	7.1	15.7	0.4	Very Low	Negligible
WB4	8.7	2.5	11.1	2.6	11.3	0.2	Imperceptible	Negligible
WB3	7.7	2.9	10.6	3.0	10.7	0.1	Imperceptible	Negligible
WB2	7.7	4.7	12.4	4.7	12.4	0.1	Imperceptible	Negligible
SX13	6.1	1.4	7.5	1.5	7.6	0.2	Imperceptible	Negligible
SX14	6.2	1.7	7.8	1.8	7.9	0.1	Imperceptible	Negligible
WM13	6.3	1.4	7.6	1.4	7.7	>0.0	Imperceptible	Negligible
HS1	6.8	2.6	9.3	2.7	9.5	0.2	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
HS2	5.8	1.7	7.5	1.9	7.7	0.2	Imperceptible	Negligible
SW1	6.4	1.8	8.2	1.9	8.3	>0.0	Imperceptible	Negligible
YX2	5.9	3.2	9.1	3.3	9.1	0.1	Imperceptible	Negligible
YX6	6.0	1.9	7.9	2.1	8.1	0.2	Imperceptible	Negligible
SX2	6.1	0.6	6.7	0.7	6.8	>0.0	Imperceptible	Negligible
SX4	6.6	4.2	10.8	4.6	11.1	0.3	Imperceptible	Negligible
SX3	6.0	0.8	6.8	0.8	6.8	>0.0	Imperceptible	Negligible
SX10	6.0	3.2	9.2	3.3	9.3	0.1	Imperceptible	Negligible
SX5	6.0	5.0	11.0	0.6	6.6	-4.5	High	Moderate beneficial
SX6	6.0	8.1	14.1	0.7	6.7	-7.4	High	Moderate beneficial
SX7	6.0	9.0	15.1	0.7	6.8	-8.3	High	Moderate beneficial
SX11	5.9	2.7	8.6	2.8	8.7	0.1	Imperceptible	Negligible
SW3	5.9	4.5	10.3	5.1	10.9	0.6	Very Low	Negligible
SW2	5.9	3.1	9.0	3.5	9.4	0.4	Very Low	Negligible
YX8	5.8	1.9	7.7	2.1	7.9	0.2	Imperceptible	Negligible
LE13	5.8	2.8	8.6	2.9	8.7	0.1	Imperceptible	Negligible
LE12	6.3	1.9	8.2	2.0	8.3	0.2	Imperceptible	Negligible
LE7	6.0	0.8	6.8	1.1	7.1	0.2	Imperceptible	Negligible
LE1	6.7	3.7	10.4	5.6	12.3	1.9	Low	Negligible
LE8	6.7	2.0	8.7	2.4	9.1	0.4	Very Low	Negligible
LE6	5.9	2.3	8.2	0.4	6.3	-1.9	Low	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE5	5.9	1.4	7.3	0.4	6.2	-1.0	Low	Negligible
ND8	6.4	4.5	10.8	4.6	10.9	0.1	Imperceptible	Negligible
WM1	6.0	0.7	6.7	0.4	6.4	-0.3	Imperceptible	Negligible
SX8	6.0	0.3	6.3	1.0	7.0	0.8	Low	Negligible
SX9	6.0	0.3	6.3	0.9	7.0	0.6	Very Low	Negligible
LE4	5.9	0.2	6.0	0.3	6.1	0.1	Imperceptible	Negligible
YX5	5.9	0.2	6.1	0.3	6.2	0.1	Imperceptible	Negligible
LW2	10.1	2.4	12.4	2.4	12.5	>0.0	Imperceptible	Negligible
BK1	9.5	5.2	14.6	6.0	15.4	0.8	Low	Negligible
WM10	6.7	4.7	11.4	5.1	11.7	0.4	Very Low	Negligible
WB1	7.4	5.5	12.9	5.3	12.7	-0.2	Imperceptible	Negligible
BC6	6.0	2.2	8.2	2.5	8.5	0.3	Imperceptible	Negligible
LW4	8.7	2.5	11.3	2.6	11.4	0.1	Imperceptible	Negligible
LW7	8.0	1.2	9.3	1.3	9.3	>0.0	Imperceptible	Negligible
LW8	19.4	2.8	22.2	2.1	21.5	-0.7	Very Low	Negligible
LW9	8.0	2.2	10.2	2.3	10.3	0.1	Imperceptible	Negligible
LE2	6.0	0.7	6.8	1.2	7.2	0.4	Very Low	Negligible
WM5	7.3	1.3	8.6	1.4	8.7	0.1	Imperceptible	Negligible
WM11	6.5	1.8	8.3	2.0	8.5	0.2	Imperceptible	Negligible
WM12	6.5	0.7	7.2	0.8	7.2	>0.0	Imperceptible	Negligible
SX15	6.0	10.9	16.9	0.5	6.5	-10.4	High	Moderate beneficial

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX9	5.8	0.4	6.2	0.5	6.3	0.1	Imperceptible	Negligible
LE15	5.9	0.3	6.1	0.4	6.2	0.1	Imperceptible	Negligible
LE16	5.9	0.2	6.1	0.3	6.2	0.1	Imperceptible	Negligible
LE19	6.0	0.3	6.3	0.4	6.4	0.1	Imperceptible	Negligible
LE17	5.8	0.2	6.1	0.3	6.1	0.1	Imperceptible	Negligible
LE18	6.0	0.2	6.2	0.2	6.2	>0.0	Imperceptible	Negligible
LE20	6.0	0.3	6.2	0.3	6.3	>0.0	Imperceptible	Negligible
LE21	6.0	0.3	6.2	0.3	6.3	>0.0	Imperceptible	Negligible
LE22	6.0	0.3	6.3	0.3	6.3	>0.0	Imperceptible	Negligible
LE23	6.0	0.2	6.2	0.2	6.2	>0.0	Imperceptible	Negligible
WM3	6.3	2.5	8.7	2.5	8.8	0.1	Imperceptible	Negligible
WM14	6.3	0.4	6.7	0.5	6.7	>0.0	Imperceptible	Negligible
YX10	5.9	3.4	9.2	3.9	9.7	0.5	Very Low	Negligible
LE24	6.0	0.3	6.2	0.3	6.3	>0.0	Imperceptible	Negligible
YX11	5.9	1.1	6.9	1.3	7.1	0.2	Imperceptible	Negligible
YX12	5.9	0.9	6.8	1.1	7.0	0.2	Imperceptible	Negligible
LE25	5.8	0.1	5.9	0.2	5.9	>0.0	Imperceptible	Negligible
LE26	5.8	0.2	6.0	0.3	6.1	0.1	Imperceptible	Negligible
LE27	5.8	0.2	6.0	0.2	6.0	>0.0	Imperceptible	Negligible
LE28	5.9	0.4	6.3	0.7	6.6	0.3	Imperceptible	Negligible
LE29	5.8	0.1	5.9	0.2	5.9	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE30	5.8	0.5	6.3	0.5	6.3	0.1	Imperceptible	Negligible
LE31	5.8	0.3	6.1	0.3	6.1	0.1	Imperceptible	Negligible
LE32	6.0	0.4	6.4	0.5	6.5	0.1	Imperceptible	Negligible
LE33	6.0	0.6	6.6	0.8	6.8	0.2	Imperceptible	Negligible
LE34	6.3	0.3	6.7	0.5	6.8	0.1	Imperceptible	Negligible
LE35	6.7	0.5	7.3	0.7	7.4	0.1	Imperceptible	Negligible
LE36	6.3	1.1	7.4	2.1	8.4	1.0	Low	Negligible
LE37	6.3	1.2	7.5	2.8	9.1	1.6	Low	Negligible
LE38	6.3	1.3	7.6	3.0	9.3	1.7	Low	Negligible
LE39	5.9	0.9	6.8	1.2	7.1	0.3	Imperceptible	Negligible
LE40	6.3	0.4	6.7	0.6	6.9	0.2	Imperceptible	Negligible
LE52	6.0	0.8	6.8	1.0	6.9	0.2	Imperceptible	Negligible
LE53	6.0	0.3	6.2	0.3	6.3	>0.0	Imperceptible	Negligible
LE54	6.0	0.2	6.2	0.2	6.2	0.1	Imperceptible	Negligible
YX13	5.9	3.5	9.4	4.0	9.9	0.5	Very Low	Negligible
YX14	5.9	0.2	6.1	0.2	6.1	>0.0	Imperceptible	Negligible
YX15	5.9	2.3	8.2	2.6	8.5	0.3	Imperceptible	Negligible
YX16	5.9	2.4	8.3	2.9	8.7	0.4	Very Low	Negligible
YX17	5.9	0.3	6.3	0.4	6.3	0.1	Imperceptible	Negligible
LE55	5.9	0.7	6.6	0.8	6.7	0.1	Imperceptible	Negligible
LE56	6.0	1.6	7.6	1.7	7.8	0.2	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX18	5.9	1.5	7.4	1.3	7.2	-0.2	Imperceptible	Negligible
YX19	6.0	1.1	7.1	1.2	7.2	0.1	Imperceptible	Negligible
YX20	5.8	3.0	8.8	3.5	9.3	0.5	Very Low	Negligible
SX16	6.6	1.7	8.2	1.8	8.4	0.2	Imperceptible	Negligible
SX18	6.0	0.2	6.2	0.3	6.3	0.1	Imperceptible	Negligible
SX17	6.6	0.4	6.9	0.7	7.3	0.3	Imperceptible	Negligible
SX19	6.2	0.2	6.4	0.4	6.5	0.1	Imperceptible	Negligible
WM15	6.6	0.8	7.5	1.0	7.6	0.1	Imperceptible	Negligible
WM16	6.5	0.3	6.8	0.4	6.9	0.1	Imperceptible	Negligible
WM17	6.7	0.3	7.0	0.5	7.2	0.2	Imperceptible	Negligible
BK6	8.3	1.6	9.9	1.2	9.5	-0.4	Very Low	Negligible
BK7	8.4	1.1	9.5	1.1	9.5	>0.0	Imperceptible	Negligible
LE46	6.0	0.8	6.8	1.0	7.0	0.2	Imperceptible	Negligible
BK8	8.6	1.7	10.2	1.7	10.2	0.0	Imperceptible	Negligible
LE57	5.9	1.5	7.3	2.3	8.2	0.9	Low	Negligible
LE42	5.8	0.2	6.0	0.3	6.1	0.1	Imperceptible	Negligible

Table notes: RC= Reference case (without proposed development); BD = Busiest day (with proposed development

Table 1.9: Modelled PM_{10} concentrations at receptors for 2028 busiest day assessment year

Receptor	2028 Background (µg/m^3)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
BC1	13.3	0.3	13.6	0.3	13.6	>0.0	Imperceptible	Negligible
BC2	14.8	1.4	16.2	1.5	16.3	>0.0	Imperceptible	Negligible
BC3	12.6	0.2	12.8	0.2	12.8	>0.0	Imperceptible	Negligible
BC4	12.5	0.4	12.9	0.4	13.0	>0.0	Imperceptible	Negligible
BC5	13.9	1.0	14.9	1.0	14.9	>0.0	Imperceptible	Negligible
SW6	13.6	0.2	13.8	0.3	13.9	>0.0	Imperceptible	Negligible
SW5	14.3	0.2	14.5	0.3	14.5	>0.0	Imperceptible	Negligible
BC7	15.0	0.3	15.2	0.3	15.3	>0.0	Imperceptible	Negligible
BC8	13.6	0.2	13.8	0.2	13.8	>0.0	Imperceptible	Negligible
KS4	14.0	0.2	14.3	0.3	14.3	>0.0	Imperceptible	Negligible
LW1	13.9	0.6	14.5	0.6	14.5	>0.0	Imperceptible	Negligible
LW3	12.3	1.3	13.6	1.3	13.6	>0.0	Imperceptible	Negligible
LW5	13.3	0.3	13.5	0.3	13.6	>0.0	Imperceptible	Negligible
LW6	13.3	0.4	13.6	0.4	13.6	>0.0	Imperceptible	Negligible
KS1	12.7	0.2	12.9	0.2	12.9	>0.0	Imperceptible	Negligible
KS2	14.0	0.4	14.5	0.5	14.5	>0.0	Imperceptible	Negligible
KS3	14.0	0.5	14.6	0.6	14.6	0.1	Imperceptible	Negligible
SW4	12.5	0.3	12.8	0.4	12.9	0.1	Imperceptible	Negligible
HS3	14.9	0.4	15.2	0.4	15.3	0.1	Imperceptible	Negligible
YX1	14.8	1.0	15.8	1.1	15.9	0.1	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX3	13.4	0.9	14.3	0.8	14.3	<0.0	Imperceptible	Negligible
YX7	13.4	0.1	13.5	0.1	13.4	-0.1	Imperceptible	Negligible
LE3	13.6	0.3	13.8	0.4	14.0	0.1	Imperceptible	Negligible
LE9	12.6	0.6	13.2	0.7	13.3	0.1	Imperceptible	Negligible
LE10	12.6	0.7	13.3	0.9	13.5	0.1	Imperceptible	Negligible
LE11	12.9	0.3	13.2	0.4	13.3	0.1	Imperceptible	Negligible
LE14	14.3	0.6	14.9	0.7	15.0	>0.0	Imperceptible	Negligible
SX12	14.1	0.2	14.3	0.2	14.4	>0.0	Imperceptible	Negligible
YX4	14.8	0.4	15.2	0.4	15.2	<0.0	Imperceptible	Negligible
SX1	14.1	0.4	14.4	0.5	14.5	0.1	Imperceptible	Negligible
WM2	14.7	1.6	16.2	1.8	16.5	0.3	Imperceptible	Negligible
WM6	14.1	0.2	14.3	0.2	14.3	>0.0	Imperceptible	Negligible
WM7	15.4	0.3	15.7	0.3	15.7	>0.0	Imperceptible	Negligible
WM8	14.8	0.4	15.2	0.4	15.2	0.1	Imperceptible	Negligible
WM4	13.1	0.2	13.3	0.2	13.3	>0.0	Imperceptible	Negligible
WB8	13.5	1.3	14.8	1.4	14.9	0.1	Imperceptible	Negligible
WB9	13.5	0.8	14.3	0.8	14.3	>0.0	Imperceptible	Negligible
WB10	14.5	0.3	14.9	0.4	14.9	>0.0	Imperceptible	Negligible
BK2	14.9	0.4	15.3	0.4	15.3	>0.0	Imperceptible	Negligible
BK4	16.8	0.4	17.2	0.4	17.2	<0.0	Imperceptible	Negligible
BK5	16.8	0.6	17.4	0.6	17.4	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m^3)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
IP1	17.2	1.0	18.2	1.0	18.3	>0.0	Imperceptible	Negligible
IP2	16.7	0.8	17.5	0.8	17.6	>0.0	Imperceptible	Negligible
BK3	14.7	0.6	15.3	0.6	15.3	>0.0	Imperceptible	Negligible
IP3	14.7	1.1	15.8	1.2	15.8	>0.0	Imperceptible	Negligible
IP4	16.2	1.7	17.9	1.7	18.0	0.1	Imperceptible	Negligible
IP5	17.0	0.3	17.2	0.3	17.2	>0.0	Imperceptible	Negligible
IP6	14.0	0.1	14.1	0.1	14.1	>0.0	Imperceptible	Negligible
IP7	14.5	0.1	14.6	0.1	14.6	>0.0	Imperceptible	Negligible
IP8	14.8	0.1	14.8	0.1	14.8	>0.0	Imperceptible	Negligible
IP9	14.8	0.1	14.8	0.1	14.8	>0.0	Imperceptible	Negligible
IP10	14.8	0.1	14.8	0.1	14.8	>0.0	Imperceptible	Negligible
IP11	14.8	0.1	14.8	0.1	14.8	>0.0	Imperceptible	Negligible
ND1	15.3	1.3	16.6	1.4	16.7	>0.0	Imperceptible	Negligible
ND2	15.9	0.4	16.3	0.4	16.3	>0.0	Imperceptible	Negligible
ND3	15.0	0.7	15.6	0.7	15.6	>0.0	Imperceptible	Negligible
ND4	14.1	0.7	14.8	0.7	14.8	>0.0	Imperceptible	Negligible
ND5	14.9	0.6	15.5	0.6	15.5	>0.0	Imperceptible	Negligible
ND6	14.4	0.1	14.5	0.1	14.5	>0.0	Imperceptible	Negligible
WM9	14.0	0.2	14.2	0.2	14.2	>0.0	Imperceptible	Negligible
ND7	15.3	0.5	15.8	0.5	15.9	>0.0	Imperceptible	Negligible
FR1	14.8	0.3	15.2	0.4	15.2	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
FR2	13.5	0.5	14.1	0.6	14.1	>0.0	Imperceptible	Negligible
FR3	13.5	0.2	13.7	0.2	13.7	>0.0	Imperceptible	Negligible
FR4	15.0	0.3	15.3	0.3	15.3	>0.0	Imperceptible	Negligible
FR5	14.2	0.2	14.4	0.2	14.4	>0.0	Imperceptible	Negligible
FR6	14.9	0.2	15.0	0.2	15.1	>0.0	Imperceptible	Negligible
IP12	14.1	0.0	14.2	0.1	14.2	>0.0	Imperceptible	Negligible
IP13	14.4	0.1	14.4	0.1	14.5	>0.0	Imperceptible	Negligible
IP14	14.0	1.2	15.1	1.2	15.2	>0.0	Imperceptible	Negligible
IP15	14.2	1.0	15.2	1.0	15.3	>0.0	Imperceptible	Negligible
WB11	13.7	0.4	14.1	0.5	14.2	0.1	Imperceptible	Negligible
WB12	13.5	0.3	13.8	0.4	14.0	0.1	Imperceptible	Negligible
WB7	13.9	0.5	14.3	0.5	14.4	0.1	Imperceptible	Negligible
WB6	13.3	0.4	13.7	0.5	13.8	0.1	Imperceptible	Negligible
WB5	12.9	0.4	13.3	0.5	13.4	0.1	Imperceptible	Negligible
WB4	12.9	0.3	13.2	0.3	13.2	>0.0	Imperceptible	Negligible
WB3	13.0	0.3	13.4	0.3	13.4	>0.0	Imperceptible	Negligible
WB2	13.0	0.5	13.5	0.5	13.5	>0.0	Imperceptible	Negligible
SX13	14.6	0.2	14.8	0.2	14.8	>0.0	Imperceptible	Negligible
SX14	15.0	0.3	15.3	0.3	15.3	>0.0	Imperceptible	Negligible
WM13	14.0	0.2	14.2	0.2	14.3	>0.0	Imperceptible	Negligible
HS1	13.5	0.4	13.9	0.4	13.9	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m^3)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
HS2	14.8	0.3	15.1	0.3	15.1	>0.0	Imperceptible	Negligible
SW1	11.6	0.2	11.8	0.3	11.8	>0.0	Imperceptible	Negligible
YX2	13.4	0.5	13.9	0.5	13.9	>0.0	Imperceptible	Negligible
YX6	13.5	0.3	13.8	0.4	13.9	0.1	Imperceptible	Negligible
SX2	13.9	0.1	14.0	0.1	14.0	>0.0	Imperceptible	Negligible
SX4	13.0	0.6	13.6	0.7	13.7	>0.0	Imperceptible	Negligible
SX3	14.6	0.1	14.8	0.1	14.8	>0.0	Imperceptible	Negligible
SX10	14.7	0.5	15.2	0.5	15.2	>0.0	Imperceptible	Negligible
SX5	13.8	0.8	14.6	0.1	13.9	-0.7	Very Low	Negligible
SX6	13.5	1.4	14.9	0.1	13.6	-1.3	Low	Negligible
SX7	13.5	1.6	15.1	0.1	13.6	-1.4	Low	Negligible
SX11	13.9	0.4	14.3	0.4	14.3	>0.0	Imperceptible	Negligible
SW3	12.3	0.8	13.1	0.9	13.2	0.1	Imperceptible	Negligible
SW2	12.3	0.5	12.8	0.6	12.9	0.1	Imperceptible	Negligible
YX8	14.2	0.3	14.5	0.3	14.5	>0.0	Imperceptible	Negligible
LE13	12.5	0.4	12.9	0.4	12.9	>0.0	Imperceptible	Negligible
LE12	13.4	0.3	13.7	0.3	13.7	>0.0	Imperceptible	Negligible
LE7	14.0	0.1	14.1	0.1	14.2	>0.0	Imperceptible	Negligible
LE1	12.6	0.4	13.0	0.6	13.2	0.2	Imperceptible	Negligible
LE8	12.6	0.3	12.9	0.3	12.9	>0.0	Imperceptible	Negligible
LE6	14.0	0.4	14.3	0.1	14.0	-0.3	Imperceptible	Negligible

Receptor	2028 Background (µg/m^3)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE5	14.0	0.2	14.2	0.1	14.0	-0.2	Imperceptible	Negligible
ND8	14.5	0.9	15.4	0.9	15.4	>0.0	Imperceptible	Negligible
WM1	13.5	0.1	13.6	0.1	13.6	-0.1	Imperceptible	Negligible
SX8	14.2	0.0	14.2	0.2	14.4	0.1	Imperceptible	Negligible
SX9	14.2	0.0	14.3	0.2	14.4	0.1	Imperceptible	Negligible
LE4	14.0	0.0	14.0	0.1	14.0	>0.0	Imperceptible	Negligible
YX5	14.2	0.0	14.3	0.1	14.3	>0.0	Imperceptible	Negligible
LW2	12.3	0.4	12.7	0.4	12.7	>0.0	Imperceptible	Negligible
BK1	13.5	0.7	14.2	0.8	14.3	0.2	Imperceptible	Negligible
WM10	14.9	0.8	15.8	0.9	15.8	0.1	Imperceptible	Negligible
WB1	14.7	0.9	15.7	0.9	15.7	<0.0	Imperceptible	Negligible
BC6	14.8	0.4	15.2	0.4	15.2	>0.0	Imperceptible	Negligible
LW4	12.7	0.4	13.1	0.4	13.1	>0.0	Imperceptible	Negligible
LW7	13.3	0.2	13.4	0.2	13.4	>0.0	Imperceptible	Negligible
LW8	13.1	0.4	13.5	0.3	13.4	-0.1	Imperceptible	Negligible
LW9	13.3	0.3	13.6	0.4	13.6	>0.0	Imperceptible	Negligible
LE2	13.7	0.1	13.8	0.2	13.9	0.1	Imperceptible	Negligible
WM5	14.5	0.2	14.7	0.2	14.7	>0.0	Imperceptible	Negligible
WM11	14.1	0.2	14.4	0.3	14.4	>0.0	Imperceptible	Negligible
WM12	14.1	0.1	14.2	0.1	14.2	>0.0	Imperceptible	Negligible
SX15	13.8	1.8	15.6	0.1	13.9	-1.7	Low	Negligible

Receptor	2028 Background (μg/m^3)	2028RC Road + Rail (μg/m3)	2028RC Total (μg/m3)	2028BD Road + Rail (μg/m3)	2028BD Total (μg/m3)	Magnitude of Change (μg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX9	14.8	0.1	14.9	0.1	14.9	>0.0	Imperceptible	Negligible
LE15	13.6	0.0	13.6	0.1	13.7	>0.0	Imperceptible	Negligible
LE16	13.6	0.0	13.6	0.0	13.6	>0.0	Imperceptible	Negligible
LE19	13.7	0.0	13.7	0.1	13.8	>0.0	Imperceptible	Negligible
LE17	13.0	0.0	13.0	0.0	13.0	>0.0	Imperceptible	Negligible
LE18	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
LE20	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
LE21	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
LE22	13.4	0.0	13.5	0.0	13.5	>0.0	Imperceptible	Negligible
LE23	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
WM3	14.0	0.4	14.4	0.4	14.4	>0.0	Imperceptible	Negligible
WM14	14.0	0.1	14.1	0.1	14.1	>0.0	Imperceptible	Negligible
YX10	14.6	0.6	15.2	0.7	15.3	0.1	Imperceptible	Negligible
LE24	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
YX11	14.6	0.2	14.8	0.2	14.8	>0.0	Imperceptible	Negligible
YX12	14.6	0.2	14.7	0.2	14.8	>0.0	Imperceptible	Negligible
LE25	13.7	0.0	13.7	0.0	13.7	>0.0	Imperceptible	Negligible
LE26	13.0	0.0	13.0	0.0	13.0	>0.0	Imperceptible	Negligible
LE27	13.6	0.0	13.7	0.0	13.7	>0.0	Imperceptible	Negligible
LE28	13.6	0.1	13.7	0.1	13.7	0.1	Imperceptible	Negligible
LE29	13.7	0.0	13.7	0.0	13.7	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE30	12.5	0.1	12.6	0.1	12.6	>0.0	Imperceptible	Negligible
LE31	12.5	0.0	12.6	0.0	12.6	>0.0	Imperceptible	Negligible
LE32	14.0	0.1	14.1	0.1	14.1	>0.0	Imperceptible	Negligible
LE33	14.0	0.1	14.1	0.1	14.1	>0.0	Imperceptible	Negligible
LE34	13.4	0.0	13.5	0.1	13.5	>0.0	Imperceptible	Negligible
LE35	12.6	0.1	12.7	0.1	12.7	>0.0	Imperceptible	Negligible
LE36	13.4	0.2	13.6	0.2	13.6	>0.0	Imperceptible	Negligible
LE37	13.4	0.2	13.6	0.2	13.6	>0.0	Imperceptible	Negligible
LE38	13.4	0.2	13.6	0.2	13.6	>0.0	Imperceptible	Negligible
LE39	13.0	0.1	13.1	0.1	13.1	>0.0	Imperceptible	Negligible
LE40	13.4	0.1	13.5	0.1	13.5	>0.0	Imperceptible	Negligible
LE52	14.0	0.1	14.1	0.1	14.2	>0.0	Imperceptible	Negligible
LE53	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
LE54	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
YX13	14.8	0.6	15.4	0.7	15.5	0.1	Imperceptible	Negligible
YX14	14.6	0.0	14.6	0.0	14.6	>0.0	Imperceptible	Negligible
YX15	14.0	0.4	14.4	0.5	14.5	0.1	Imperceptible	Negligible
YX16	14.8	0.4	15.2	0.5	15.3	0.1	Imperceptible	Negligible
YX17	14.0	0.1	14.1	0.1	14.1	>0.0	Imperceptible	Negligible
LE55	13.6	0.1	13.7	0.1	13.7	>0.0	Imperceptible	Negligible
LE56	13.4	0.2	13.7	0.3	13.7	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m^3)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX18	13.4	0.2	13.6	0.2	13.6	<0.0	Imperceptible	Negligible
YX19	13.5	0.2	13.7	0.2	13.7	>0.0	Imperceptible	Negligible
YX20	14.0	0.5	14.5	0.6	14.6	0.1	Imperceptible	Negligible
SX16	13.0	0.2	13.2	0.3	13.3	>0.0	Imperceptible	Negligible
SX18	14.7	0.0	14.7	0.0	14.7	>0.0	Imperceptible	Negligible
SX17	13.0	0.1	13.1	0.1	13.1	>0.0	Imperceptible	Negligible
SX19	14.6	0.0	14.7	0.0	14.7	>0.0	Imperceptible	Negligible
WM15	14.5	0.1	14.6	0.1	14.6	>0.0	Imperceptible	Negligible
WM16	13.1	0.0	13.1	0.0	13.1	>0.0	Imperceptible	Negligible
WM17	13.5	0.0	13.5	0.0	13.6	>0.0	Imperceptible	Negligible
BK6	13.8	0.2	14.1	0.2	14.0	<0.0	Imperceptible	Negligible
BK7	16.6	0.2	16.7	0.2	16.8	>0.0	Imperceptible	Negligible
LE46	14.0	0.1	14.1	0.1	14.2	>0.0	Imperceptible	Negligible
BK8	16.4	0.3	16.7	0.3	16.7	>0.0	Imperceptible	Negligible
LE57	13.3	0.2	13.5	0.4	13.6	0.1	Imperceptible	Negligible
LE42	13.0	0.0	13.0	0.0	13.0	>0.0	Imperceptible	Negligible

Table notes: RC= Reference case (without proposed development); BD = Busiest day (with proposed development

Table 1.10: Modelled $PM_{2.5}$ concentrations at receptors for 2028 busiest day assessment year

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
BC1	8.0	0.5	8.5	0.6	8.5	>0.0	Imperceptible	Negligible
BC2	8.4	2.5	10.9	2.6	10.9	0.1	Imperceptible	Negligible
BC3	7.9	0.4	8.3	0.4	8.3	>0.0	Imperceptible	Negligible
BC4	8.1	0.7	8.7	0.7	8.8	>0.0	Imperceptible	Negligible
BC5	9.0	1.7	10.7	1.7	10.7	0.1	Imperceptible	Negligible
SW6	8.0	0.4	8.4	0.4	8.4	0.1	Imperceptible	Negligible
SW5	8.2	0.4	8.6	0.5	8.6	0.1	Imperceptible	Negligible
BC7	8.8	0.5	9.3	0.5	9.4	>0.0	Imperceptible	Negligible
BC8	8.0	0.3	8.3	0.4	8.4	>0.0	Imperceptible	Negligible
KS4	8.2	0.4	8.6	0.5	8.6	0.1	Imperceptible	Negligible
LW1	9.8	1.0	10.7	1.0	10.8	0.1	Imperceptible	Negligible
LW3	8.2	2.2	10.4	2.2	10.4	>0.0	Imperceptible	Negligible
LW5	8.6	0.5	9.1	0.5	9.1	>0.0	Imperceptible	Negligible
LW6	8.6	0.6	9.2	0.6	9.2	>0.0	Imperceptible	Negligible
KS1	7.9	0.4	8.3	0.4	8.3	>0.0	Imperceptible	Negligible
KS2	8.2	0.7	8.9	0.8	9.0	0.1	Imperceptible	Negligible
KS3	8.2	0.9	9.1	1.0	9.2	0.1	Imperceptible	Negligible
SW4	7.7	0.6	8.3	0.7	8.4	0.1	Imperceptible	Negligible
HS3	8.3	0.6	9.0	0.7	9.1	0.1	Imperceptible	Negligible
YX1	8.3	1.7	10.0	1.9	10.2	0.2	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX3	8.1	1.5	9.6	1.5	9.5	<0.0	Imperceptible	Negligible
YX7	7.9	0.2	8.2	0.1	8.1	-0.1	Imperceptible	Negligible
LE3	8.0	0.4	8.4	0.7	8.7	0.2	Imperceptible	Negligible
LE9	8.2	1.0	9.2	1.1	9.3	0.1	Imperceptible	Negligible
LE10	8.2	1.2	9.4	1.5	9.7	0.3	Very Low	Negligible
LE11	7.9	0.6	8.4	0.7	8.6	0.1	Imperceptible	Negligible
LE14	8.2	1.1	9.3	1.2	9.4	0.1	Imperceptible	Negligible
SX12	8.3	0.4	8.7	0.4	8.7	>0.0	Imperceptible	Negligible
YX4	8.4	0.6	9.0	0.6	9.0	<0.0	Imperceptible	Negligible
SX1	8.2	0.6	8.8	0.8	9.0	0.2	Imperceptible	Negligible
WM2	8.5	2.7	11.2	3.1	11.6	0.5	Low	Negligible
WM6	8.4	0.3	8.7	0.3	8.7	>0.0	Imperceptible	Negligible
WM7	8.8	0.5	9.3	0.6	9.4	0.1	Imperceptible	Negligible
WM8	8.7	0.7	9.4	0.8	9.4	0.1	Imperceptible	Negligible
WM4	8.2	0.4	8.5	0.4	8.6	>0.0	Imperceptible	Negligible
WB8	8.8	2.2	11.0	2.3	11.1	0.1	Imperceptible	Negligible
WB9	8.8	1.4	10.1	1.4	10.2	0.1	Imperceptible	Negligible
WB10	8.8	0.6	9.4	0.6	9.5	>0.0	Imperceptible	Negligible
BK2	8.9	0.7	9.6	0.7	9.6	>0.0	Imperceptible	Negligible
BK4	9.7	0.7	10.4	0.7	10.4	<0.0	Imperceptible	Negligible
BK5	9.7	1.0	10.7	1.1	10.8	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
IP1	10.1	1.8	11.8	1.8	11.9	>0.0	Imperceptible	Negligible
IP2	9.8	1.4	11.3	1.5	11.3	>0.0	Imperceptible	Negligible
BK3	8.9	1.0	9.9	1.0	9.9	>0.0	Imperceptible	Negligible
IP3	9.0	1.9	11.0	2.0	11.0	0.1	Imperceptible	Negligible
IP4	9.5	2.9	12.4	3.0	12.5	0.1	Imperceptible	Negligible
IP5	9.9	0.5	10.3	0.5	10.3	>0.0	Imperceptible	Negligible
IP6	9.2	0.2	9.4	0.2	9.4	>0.0	Imperceptible	Negligible
IP7	9.6	0.1	9.7	0.1	9.7	>0.0	Imperceptible	Negligible
IP8	9.8	0.1	9.9	0.1	9.9	>0.0	Imperceptible	Negligible
IP9	9.8	0.1	9.9	0.1	9.9	>0.0	Imperceptible	Negligible
IP10	9.8	0.1	9.9	0.1	9.9	>0.0	Imperceptible	Negligible
IP11	9.8	0.1	9.9	0.1	10.0	>0.0	Imperceptible	Negligible
ND1	9.4	2.4	11.7	2.4	11.8	>0.0	Imperceptible	Negligible
ND2	9.5	0.7	10.2	0.7	10.2	>0.0	Imperceptible	Negligible
ND3	8.8	1.2	10.0	1.2	10.0	>0.0	Imperceptible	Negligible
ND4	8.5	1.1	9.6	1.2	9.7	0.1	Imperceptible	Negligible
ND5	8.6	1.0	9.6	1.0	9.6	0.1	Imperceptible	Negligible
ND6	8.4	0.2	8.6	0.2	8.6	>0.0	Imperceptible	Negligible
WM9	8.3	0.3	8.6	0.4	8.7	>0.0	Imperceptible	Negligible
ND7	8.8	0.9	9.8	0.9	9.8	>0.0	Imperceptible	Negligible
FR1	8.4	0.6	9.0	0.6	9.0	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
FR2	8.3	0.9	9.3	1.0	9.3	>0.0	Imperceptible	Negligible
FR3	8.3	0.3	8.6	0.3	8.6	>0.0	Imperceptible	Negligible
FR4	8.4	0.6	9.0	0.6	9.0	>0.0	Imperceptible	Negligible
FR5	8.2	0.4	8.6	0.4	8.6	>0.0	Imperceptible	Negligible
FR6	8.3	0.3	8.6	0.3	8.7	>0.0	Imperceptible	Negligible
IP12	9.1	0.1	9.2	0.1	9.2	>0.0	Imperceptible	Negligible
IP13	9.7	0.1	9.8	0.1	9.8	>0.0	Imperceptible	Negligible
IP14	9.0	2.0	11.0	2.0	11.0	>0.0	Imperceptible	Negligible
IP15	8.9	1.7	10.6	1.8	10.7	>0.0	Imperceptible	Negligible
WB11	8.8	0.7	9.5	0.8	9.6	0.1	Imperceptible	Negligible
WB12	8.5	0.5	9.0	0.7	9.2	0.2	Imperceptible	Negligible
WB7	8.7	0.8	9.5	0.9	9.6	0.1	Imperceptible	Negligible
WB6	8.5	0.7	9.2	0.8	9.3	0.1	Imperceptible	Negligible
WB5	8.5	0.7	9.3	0.8	9.3	0.1	Imperceptible	Negligible
WB4	8.5	0.5	9.0	0.5	9.1	>0.0	Imperceptible	Negligible
WB3	8.4	0.6	9.0	0.6	9.0	>0.0	Imperceptible	Negligible
WB2	8.4	0.8	9.2	0.8	9.2	>0.0	Imperceptible	Negligible
SX13	8.4	0.3	8.8	0.4	8.8	>0.0	Imperceptible	Negligible
SX14	8.6	0.4	9.0	0.5	9.0	>0.0	Imperceptible	Negligible
WM13	8.3	0.3	8.6	0.4	8.6	>0.0	Imperceptible	Negligible
HS1	8.3	0.7	9.0	0.7	9.1	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
HS2	8.4	0.5	8.8	0.5	8.9	>0.0	Imperceptible	Negligible
SW1	7.6	0.4	8.0	0.4	8.0	>0.0	Imperceptible	Negligible
YX2	8.1	0.9	9.0	0.9	9.0	>0.0	Imperceptible	Negligible
YX6	8.0	0.5	8.5	0.6	8.6	0.1	Imperceptible	Negligible
SX2	8.3	0.2	8.5	0.2	8.5	>0.0	Imperceptible	Negligible
SX4	8.1	1.1	9.2	1.1	9.3	0.1	Imperceptible	Negligible
SX3	8.4	0.2	8.6	0.2	8.6	>0.0	Imperceptible	Negligible
SX10	8.4	0.9	9.3	0.9	9.3	>0.0	Imperceptible	Negligible
SX5	8.2	1.4	9.6	0.2	8.4	-1.2	Low	Negligible
SX6	8.2	2.4	10.5	0.2	8.3	-2.2	Medium	Minorbeneficial
SX7	8.2	2.7	10.8	0.2	8.4	-2.5	High	Moderate beneficial
SX11	8.2	0.7	8.9	0.7	8.9	>0.0	Imperceptible	Negligible
SW3	7.7	1.3	9.0	1.5	9.2	0.2	Imperceptible	Negligible
SW2	7.7	0.9	8.6	1.0	8.7	0.1	Imperceptible	Negligible
YX8	8.1	0.5	8.7	0.5	8.7	>0.0	Imperceptible	Negligible
LE13	7.7	0.6	8.4	0.7	8.4	>0.0	Imperceptible	Negligible
LE12	8.1	0.5	8.6	0.5	8.6	>0.0	Imperceptible	Negligible
LE7	8.2	0.2	8.4	0.2	8.4	>0.0	Imperceptible	Negligible
LE1	8.2	0.7	8.9	1.0	9.3	0.3	Very Low	Negligible
LE8	8.2	0.4	8.6	0.5	8.7	0.1	Imperceptible	Negligible
LE6	8.1	0.7	8.8	0.1	8.2	-0.5	Low	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE5	8.1	0.4	8.5	0.1	8.2	-0.3	Very Low	Negligible
ND8	8.5	1.5	9.9	1.5	10.0	>0.0	Imperceptible	Negligible
WM1	8.2	0.2	8.3	0.1	8.3	-0.1	Imperceptible	Negligible
SX8	8.3	0.1	8.3	0.3	8.5	0.2	Imperceptible	Negligible
SX9	8.3	0.1	8.3	0.3	8.5	0.2	Imperceptible	Negligible
LE4	8.1	0.1	8.2	0.1	8.2	>0.0	Imperceptible	Negligible
YX5	8.2	0.1	8.2	0.1	8.3	0.1	Imperceptible	Negligible
LW2	8.2	0.6	8.8	0.6	8.9	>0.0	Imperceptible	Negligible
BK1	8.8	1.1	9.9	1.4	10.2	0.3	Very Low	Negligible
WM10	8.6	1.4	10.0	1.5	10.1	0.1	Imperceptible	Negligible
WB1	9.0	1.6	10.6	1.6	10.5	<0.0	Imperceptible	Negligible
BC6	8.3	0.6	8.9	0.7	9.0	0.1	Imperceptible	Negligible
LW4	8.5	0.6	9.1	0.7	9.2	>0.0	Imperceptible	Negligible
LW7	8.6	0.3	8.9	0.3	8.9	>0.0	Imperceptible	Negligible
LW8	8.8	0.7	9.6	0.5	9.4	-0.2	Imperceptible	Negligible
LW9	8.6	0.6	9.2	0.6	9.2	>0.0	Imperceptible	Negligible
LE2	8.1	0.2	8.3	0.3	8.4	0.1	Imperceptible	Negligible
WM5	8.5	0.3	8.8	0.3	8.8	>0.0	Imperceptible	Negligible
WM11	8.4	0.4	8.8	0.5	8.9	0.1	Imperceptible	Negligible
WM12	8.4	0.2	8.6	0.2	8.6	>0.0	Imperceptible	Negligible
SX15	8.2	3.1	11.3	0.1	8.3	-3.0	High	Moderate beneficial

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX9	8.4	0.1	8.5	0.2	8.5	>0.0	Imperceptible	Negligible
LE15	8.0	0.1	8.1	0.1	8.1	>0.0	Imperceptible	Negligible
LE16	8.0	0.1	8.0	0.1	8.1	>0.0	Imperceptible	Negligible
LE19	8.1	0.1	8.2	0.1	8.2	>0.0	Imperceptible	Negligible
LE17	7.8	0.1	7.9	0.1	7.9	>0.0	Imperceptible	Negligible
LE18	8.0	0.1	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
LE20	8.0	0.1	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
LE21	8.0	0.1	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
LE22	8.0	0.1	8.1	0.1	8.1	>0.0	Imperceptible	Negligible
LE23	8.0	0.1	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
WM3	8.3	0.6	8.9	0.6	8.9	>0.0	Imperceptible	Negligible
WM14	8.3	0.1	8.4	0.1	8.4	>0.0	Imperceptible	Negligible
YX10	8.3	1.0	9.3	1.2	9.4	0.2	Imperceptible	Negligible
LE24	8.0	0.1	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
YX11	8.3	0.3	8.6	0.4	8.6	0.1	Imperceptible	Negligible
YX12	8.3	0.3	8.5	0.3	8.6	0.1	Imperceptible	Negligible
LE25	8.0	0.0	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
LE26	7.8	0.1	7.9	0.1	7.9	>0.0	Imperceptible	Negligible
LE27	8.0	0.0	8.0	0.1	8.1	>0.0	Imperceptible	Negligible
LE28	8.0	0.1	8.1	0.2	8.2	0.1	Imperceptible	Negligible
LE29	8.0	0.0	8.0	0.0	8.0	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m^3)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE30	7.7	0.1	7.8	0.1	7.8	>0.0	Imperceptible	Negligible
LE31	7.7	0.1	7.8	0.1	7.8	>0.0	Imperceptible	Negligible
LE32	8.2	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
LE33	8.2	0.2	8.3	0.2	8.3	>0.0	Imperceptible	Negligible
LE34	8.1	0.1	8.2	0.1	8.2	>0.0	Imperceptible	Negligible
LE35	8.2	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
LE36	8.1	0.3	8.4	0.3	8.4	>0.0	Imperceptible	Negligible
LE37	8.1	0.3	8.4	0.3	8.4	>0.0	Imperceptible	Negligible
LE38	8.1	0.3	8.4	0.3	8.5	>0.0	Imperceptible	Negligible
LE39	7.9	0.2	8.1	0.2	8.1	>0.0	Imperceptible	Negligible
LE40	8.1	0.1	8.2	0.1	8.2	>0.0	Imperceptible	Negligible
LE52	8.2	0.2	8.4	0.2	8.4	>0.0	Imperceptible	Negligible
LE53	8.0	0.1	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
LE54	8.0	0.0	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
YX13	8.3	1.1	9.4	1.2	9.6	0.2	Imperceptible	Negligible
YX14	8.3	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
YX15	8.2	0.7	8.8	0.8	8.9	0.1	Imperceptible	Negligible
YX16	8.3	0.7	9.1	0.8	9.2	0.1	Imperceptible	Negligible
YX17	8.2	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
LE55	8.0	0.2	8.2	0.2	8.2	>0.0	Imperceptible	Negligible
LE56	8.0	0.4	8.4	0.4	8.5	>0.0	Imperceptible	Negligible

Receptor	2028 Background (µg/m³)	2028RC Road + Rail (µg/m3)	2028RC Total (µg/m3)	2028BD Road + Rail (µg/m3)	2028BD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX18	8.1	0.4	8.5	0.4	8.4	-0.1	Imperceptible	Negligible
YX19	8.0	0.3	8.3	0.4	8.3	0.1	Imperceptible	Negligible
YX20	8.2	0.9	9.1	1.0	9.2	0.1	Imperceptible	Negligible
SX16	8.1	0.4	8.6	0.4	8.6	>0.0	Imperceptible	Negligible
SX18	8.3	0.1	8.4	0.1	8.4	>0.0	Imperceptible	Negligible
SX17	8.1	0.1	8.2	0.1	8.2	>0.0	Imperceptible	Negligible
SX19	8.4	0.1	8.4	0.1	8.4	>0.0	Imperceptible	Negligible
WM15	8.6	0.2	8.7	0.2	8.8	>0.0	Imperceptible	Negligible
WM16	8.1	0.1	8.2	0.1	8.2	>0.0	Imperceptible	Negligible
WM17	8.2	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
BK6	8.5	0.4	8.9	0.3	8.8	-0.1	Imperceptible	Negligible
BK7	9.5	0.3	9.8	0.3	9.8	>0.0	Imperceptible	Negligible
LE46	8.2	0.2	8.3	0.2	8.4	>0.0	Imperceptible	Negligible
BK8	9.5	0.5	10.0	0.5	10.0	>0.0	Imperceptible	Negligible
LE57	8.0	0.4	8.4	0.6	8.6	0.2	Imperceptible	Negligible
LE42	7.8	0.1	7.9	0.1	7.9	>0.0	Imperceptible	Negligible

Table notes: RC= Reference case (without proposed development); BD = Busiest day (with proposed development

Table 1.11: Modelled NO_2 concentrations at receptors for 2034 assessment year

Receptor	2030 Background (µg/m³)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
BC1	6.5	1.9	8.4	1.9	8.4	0.0	Imperceptible	Negligible
BC2	6.4	8.4	14.8	8.4	14.8	0.0	Imperceptible	Negligible
BC3	7.1	1.3	8.3	1.3	8.3	0.0	Imperceptible	Negligible
BC4	8.0	2.4	10.4	2.4	10.4	0.0	Imperceptible	Negligible
BC5	7.9	5.3	13.2	5.3	13.2	0.0	Imperceptible	Negligible
SW6	5.8	1.0	6.8	1.0	6.8	0.0	Imperceptible	Negligible
SW5	5.8	1.0	6.9	1.0	6.8	<0.0	Imperceptible	Negligible
BC7	7.2	1.8	9.0	1.8	9.0	0.0	Imperceptible	Negligible
BC8	6.3	1.5	7.8	1.5	7.8	>0.0	Imperceptible	Negligible
KS4	6.0	1.8	7.8	1.8	7.8	>0.0	Imperceptible	Negligible
LW1	13.2	3.5	16.6	3.5	16.6	0.0	Imperceptible	Negligible
LW3	9.8	7.9	17.6	7.9	17.7	>0.0	Imperceptible	Negligible
LW5	7.8	1.7	9.6	1.7	9.6	0.0	Imperceptible	Negligible
LW6	7.8	2.3	10.1	2.3	10.1	0.0	Imperceptible	Negligible
KS1	6.5	1.6	8.1	1.6	8.1	>0.0	Imperceptible	Negligible
KS2	6.0	2.6	8.6	2.6	8.6	0.0	Imperceptible	Negligible
KS3	6.0	3.1	9.1	3.1	9.1	0.0	Imperceptible	Negligible
SW4	5.7	1.8	7.5	1.8	7.5	<0.0	Imperceptible	Negligible
HS3	5.7	2.1	7.8	2.2	7.8	>0.0	Imperceptible	Negligible
YX1	5.7	5.1	10.8	5.5	11.3	0.5	Very Low	Negligible

Receptor	2030 Background (µg/m³)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX3	5.7	4.8	10.5	4.6	10.3	-0.2	Imperceptible	Negligible
YX7	5.7	0.8	6.5	0.3	6.0	-0.5	Very Low	Negligible
LE3	5.7	1.4	7.1	1.7	7.4	0.3	Imperceptible	Negligible
LE9	6.6	6.6	13.1	6.5	13.1	-0.1	Imperceptible	Negligible
LE10	6.6	4.3	10.8	4.5	11.1	0.2	Imperceptible	Negligible
LE11	5.9	2.0	7.9	2.1	7.9	0.1	Imperceptible	Negligible
LE14	5.8	3.8	9.6	3.9	9.6	0.1	Imperceptible	Negligible
SX12	5.9	1.5	7.4	1.6	7.4	>0.0	Imperceptible	Negligible
YX4	5.7	2.2	7.9	2.2	7.8	-0.1	Imperceptible	Negligible
SX1	5.7	2.2	7.9	2.3	8.0	>0.0	Imperceptible	Negligible
WM2	6.2	8.3	14.5	8.4	14.5	>0.0	Imperceptible	Negligible
WM6	6.3	1.2	7.5	1.2	7.5	0.0	Imperceptible	Negligible
WM7	6.5	2.3	8.8	2.3	8.8	>0.0	Imperceptible	Negligible
WM8	6.7	2.8	9.5	2.8	9.5	0.0	Imperceptible	Negligible
WM4	6.5	1.5	8.0	1.5	8.0	0.0	Imperceptible	Negligible
WB8	7.9	6.6	14.6	6.6	14.6	0.0	Imperceptible	Negligible
WB9	7.9	4.7	12.6	4.7	12.6	>0.0	Imperceptible	Negligible
WB10	7.6	2.6	10.2	2.6	10.2	0.0	Imperceptible	Negligible
BK2	8.8	2.9	11.7	2.9	11.7	0.0	Imperceptible	Negligible
BK4	9.1	2.2	11.4	2.1	11.2	-0.1	Imperceptible	Negligible
BK5	9.1	3.6	12.7	3.5	12.6	-0.1	Imperceptible	Negligible

Receptor	2030 Background (µg/m³)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
IP1	10.0	4.8	14.8	4.8	14.8	0.0	Imperceptible	Negligible
IP2	7.9	4.7	12.6	4.7	12.6	0.0	Imperceptible	Negligible
BK3	8.1	3.2	11.3	3.2	11.3	0.0	Imperceptible	Negligible
IP3	7.0	5.4	12.4	5.4	12.4	0.0	Imperceptible	Negligible
IP4	7.2	8.1	15.3	8.1	15.2	<0.0	Imperceptible	Negligible
IP5	7.4	1.2	8.6	1.2	8.6	0.0	Imperceptible	Negligible
IP6	9.0	0.4	9.4	0.4	9.4	0.0	Imperceptible	Negligible
IP7	10.6	0.3	10.9	0.3	10.9	0.0	Imperceptible	Negligible
IP8	12.4	0.3	12.7	0.3	12.7	0.0	Imperceptible	Negligible
IP9	12.4	0.3	12.7	0.3	12.7	0.0	Imperceptible	Negligible
IP10	12.4	0.3	12.7	0.3	12.7	0.0	Imperceptible	Negligible
IP11	12.4	0.3	12.7	0.3	12.7	0.0	Imperceptible	Negligible
ND1	9.7	5.6	15.3	5.6	15.3	<0.0	Imperceptible	Negligible
ND2	8.5	1.7	10.2	1.7	10.2	<0.0	Imperceptible	Negligible
ND3	7.4	3.4	10.8	3.4	10.8	0.0	Imperceptible	Negligible
ND4	6.9	4.2	11.1	4.2	11.1	<0.0	Imperceptible	Negligible
ND5	6.6	3.0	9.7	3.0	9.7	<0.0	Imperceptible	Negligible
ND6	6.7	0.6	7.3	0.6	7.3	0.0	Imperceptible	Negligible
WM9	6.3	1.3	7.6	1.3	7.6	0.0	Imperceptible	Negligible
ND7	6.6	2.5	9.1	2.5	9.1	<0.0	Imperceptible	Negligible
FR1	5.9	1.6	7.5	1.6	7.5	<0.0	Imperceptible	Negligible

Receptor	2030 Background (µg/m³)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
FR2	6.7	3.0	9.7	3.0	9.7	<0.0	Imperceptible	Negligible
FR3	6.7	1.1	7.7	1.1	7.7	<0.0	Imperceptible	Negligible
FR4	5.8	1.6	7.4	1.6	7.4	>0.0	Imperceptible	Negligible
FR5	5.7	1.2	7.0	1.2	7.0	>0.0	Imperceptible	Negligible
FR6	5.8	1.2	7.0	1.2	7.0	>0.0	Imperceptible	Negligible
IP12	9.4	0.3	9.6	0.3	9.6	0.0	Imperceptible	Negligible
IP13	10.2	0.4	10.6	0.4	10.6	0.0	Imperceptible	Negligible
IP14	9.0	7.5	16.4	7.4	16.4	<0.0	Imperceptible	Negligible
IP15	8.4	5.8	14.2	5.8	14.2	>0.0	Imperceptible	Negligible
WB11	8.3	3.0	11.3	3.2	11.4	0.1	Imperceptible	Negligible
WB12	8.0	2.2	10.2	2.6	10.6	0.4	Very Low	Negligible
WB7	7.6	3.2	10.7	3.2	10.7	0.0	Imperceptible	Negligible
WB6	8.0	2.8	10.8	2.8	10.8	0.0	Imperceptible	Negligible
WB5	8.4	6.9	15.3	6.8	15.2	-0.1	Imperceptible	Negligible
WB4	8.4	2.5	10.9	2.4	10.8	<0.0	Imperceptible	Negligible
WB3	7.5	2.6	10.0	2.5	10.0	<0.0	Imperceptible	Negligible
WB2	7.5	2.9	10.4	2.9	10.3	<0.0	Imperceptible	Negligible
SX13	6.0	1.4	7.3	1.4	7.3	>0.0	Imperceptible	Negligible
SX14	6.0	1.5	7.5	1.6	7.6	>0.0	Imperceptible	Negligible
WM13	6.1	1.3	7.4	1.3	7.4	0.0	Imperceptible	Negligible
HS1	6.6	2.4	9.0	2.4	9.1	>0.0	Imperceptible	Negligible

Receptor	2030 Background (µg/m^3)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
HS2	5.7	1.6	7.3	1.6	7.3	0.0	Imperceptible	Negligible
SW1	6.3	1.7	8.0	1.7	8.0	0.0	Imperceptible	Negligible
YX2	5.7	3.0	8.7	2.9	8.6	-0.1	Imperceptible	Negligible
YX6	5.8	1.8	7.6	1.7	7.5	-0.2	Imperceptible	Negligible
SX2	6.0	0.6	6.6	0.6	6.6	<0.0	Imperceptible	Negligible
SX4	6.4	4.0	10.4	3.9	10.3	-0.1	Imperceptible	Negligible
SX3	5.9	0.7	6.6	0.7	6.6	0.0	Imperceptible	Negligible
SX10	5.8	3.0	8.8	3.0	8.9	>0.0	Imperceptible	Negligible
SX5	5.9	4.6	10.5	0.5	6.4	-4.1	High	Moderate beneficial
SX6	5.9	7.5	13.4	0.6	6.5	-6.9	High	Moderate beneficial
SX7	5.9	8.4	14.3	0.9	6.8	-7.5	High	Moderate beneficial
SX11	5.8	2.5	8.3	2.5	8.3	<0.0	Imperceptible	Negligible
SW3	5.7	4.1	9.8	4.1	9.8	<0.0	Imperceptible	Negligible
SW2	5.7	2.9	8.6	2.8	8.6	<0.0	Imperceptible	Negligible
YX8	5.7	1.8	7.5	1.8	7.5	>0.0	Imperceptible	Negligible
LE13	5.7	2.6	8.3	2.6	8.3	<0.0	Imperceptible	Negligible
LE12	6.2	1.7	7.8	1.7	7.8	<0.0	Imperceptible	Negligible
LE7	5.9	0.8	6.6	0.8	6.7	>0.0	Imperceptible	Negligible
LE1	6.6	3.5	10.1	3.8	10.4	0.3	Imperceptible	Negligible
LE8	6.6	1.9	8.5	2.0	8.5	>0.0	Imperceptible	Negligible

Receptor	2030 Background (µg/m³)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE6	5.7	2.1	7.8	0.3	6.0	-1.8	Low	Negligible
LE5	5.7	1.3	7.0	0.3	6.0	-1.0	Low	Negligible
ND8	6.2	4.3	10.5	4.3	10.5	0.0	Imperceptible	Negligible
WM1	5.9	0.7	6.6	0.4	6.3	-0.2	Imperceptible	Negligible
SX8	5.9	0.2	6.1	0.9	6.8	0.7	Very Low	Negligible
SX9	5.9	0.3	6.2	0.8	6.7	0.6	Very Low	Negligible
LE4	5.7	0.2	5.9	0.2	5.9	>0.0	Imperceptible	Negligible
YX5	5.7	0.2	5.9	0.2	6.0	0.1	Imperceptible	Negligible
LW2	9.8	2.1	11.9	2.1	11.9	0.0	Imperceptible	Negligible
BK1	9.2	5.5	14.7	5.5	14.7	0.0	Imperceptible	Negligible
WM10	6.5	4.8	11.3	4.7	11.3	<0.0	Imperceptible	Negligible
WB1	7.2	4.8	12.0	4.8	12.0	>0.0	Imperceptible	Negligible
BC6	5.9	2.0	7.9	2.0	7.9	0.0	Imperceptible	Negligible
LW4	8.5	2.4	10.8	2.4	10.8	0.0	Imperceptible	Negligible
LW7	7.8	1.2	9.0	1.2	9.0	0.0	Imperceptible	Negligible
LW8	18.7	1.9	20.6	1.8	20.6	<0.0	Imperceptible	Negligible
LW9	7.8	2.0	9.8	2.0	9.8	0.0	Imperceptible	Negligible
LE2	5.9	0.7	6.6	0.8	6.7	0.1	Imperceptible	Negligible
WM5	7.1	1.3	8.4	1.3	8.4	0.0	Imperceptible	Negligible
WM11	6.3	1.7	8.0	1.7	8.0	0.0	Imperceptible	Negligible
WM12	6.3	0.7	7.0	0.7	7.0	0.0	Imperceptible	Negligible

Receptor	2030 Background (µg/m^3)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
SX15	5.9	10.1	15.9	0.5	6.3	-9.6	High	Moderate beneficial
YX9	5.7	0.4	6.1	0.4	6.1	>0.0	Imperceptible	Negligible
LE15	5.7	0.3	6.0	0.3	6.0	>0.0	Imperceptible	Negligible
LE16	5.7	0.2	5.9	0.2	5.9	>0.0	Imperceptible	Negligible
LE19	5.9	0.3	6.2	0.3	6.2	>0.0	Imperceptible	Negligible
LE17	5.7	0.2	5.9	0.2	5.9	>0.0	Imperceptible	Negligible
LE18	5.8	0.2	6.0	0.2	6.0	>0.0	Imperceptible	Negligible
LE20	5.8	0.2	6.1	0.2	6.1	0.0	Imperceptible	Negligible
LE21	5.8	0.2	6.1	0.2	6.1	0.0	Imperceptible	Negligible
LE22	5.9	0.2	6.1	0.2	6.1	0.0	Imperceptible	Negligible
LE23	5.8	0.2	6.0	0.2	6.0	0.0	Imperceptible	Negligible
WM3	6.1	2.3	8.4	2.3	8.4	0.0	Imperceptible	Negligible
WM14	6.1	0.4	6.5	0.4	6.5	0.0	Imperceptible	Negligible
YX10	5.7	3.1	8.8	3.1	8.8	>0.0	Imperceptible	Negligible
LE24	5.8	0.2	6.1	0.2	6.1	0.0	Imperceptible	Negligible
YX11	5.7	1.0	6.7	1.0	6.7	>0.0	Imperceptible	Negligible
YX12	5.7	0.9	6.6	0.9	6.6	0.0	Imperceptible	Negligible
LE25	5.6	0.1	5.8	0.1	5.8	>0.0	Imperceptible	Negligible
LE26	5.7	0.2	5.9	0.2	5.9	>0.0	Imperceptible	Negligible
LE27	5.7	0.2	5.8	0.2	5.8	>0.0	Imperceptible	Negligible
LE28	5.7	0.4	6.1	0.5	6.2	0.1	Imperceptible	Negligible

Receptor	2030 Background (µg/m^3)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE29	5.6	0.1	5.7	0.1	5.7	0.0	Imperceptible	Negligible
LE30	5.7	0.4	6.1	0.4	6.1	0.0	Imperceptible	Negligible
LE31	5.7	0.2	5.9	0.2	5.9	0.0	Imperceptible	Negligible
LE32	5.9	0.3	6.2	0.4	6.2	>0.0	Imperceptible	Negligible
LE33	5.9	0.6	6.4	0.6	6.5	>0.0	Imperceptible	Negligible
LE34	6.2	0.3	6.5	0.3	6.5	>0.0	Imperceptible	Negligible
LE35	6.6	0.5	7.0	0.5	7.1	>0.0	Imperceptible	Negligible
LE36	6.2	1.0	7.1	1.0	7.1	<0.0	Imperceptible	Negligible
LE37	6.2	1.1	7.2	1.1	7.2	0.0	Imperceptible	Negligible
LE38	6.2	1.2	7.4	1.2	7.4	0.0	Imperceptible	Negligible
LE39	5.8	0.8	6.6	0.8	6.6	0.0	Imperceptible	Negligible
LE40	6.2	0.4	6.5	0.4	6.5	>0.0	Imperceptible	Negligible
LE52	5.9	0.7	6.6	0.8	6.6	>0.0	Imperceptible	Negligible
LE53	5.8	0.2	6.1	0.3	6.1	>0.0	Imperceptible	Negligible
LE54	5.8	0.2	6.0	0.2	6.0	0.0	Imperceptible	Negligible
YX13	5.7	3.3	9.0	3.3	9.0	>0.0	Imperceptible	Negligible
YX14	5.7	0.2	5.9	0.2	5.9	>0.0	Imperceptible	Negligible
YX15	5.8	2.1	7.9	2.1	7.9	>0.0	Imperceptible	Negligible
YX16	5.7	2.3	8.0	2.4	8.2	0.2	Imperceptible	Negligible
YX17	5.8	0.3	6.1	0.3	6.1	0.0	Imperceptible	Negligible
LE55	5.7	0.7	6.5	0.7	6.4	<0.0	Imperceptible	Negligible

Receptor	2030 Background ($\mu g/m^3$)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE56	5.9	1.5	7.4	1.5	7.4	<0.0	Imperceptible	Negligible
YX18	5.7	1.4	7.1	1.2	6.9	-0.2	Imperceptible	Negligible
YX19	5.8	1.0	6.9	1.0	6.8	-0.1	Imperceptible	Negligible
YX20	5.7	2.8	8.5	3.0	8.7	0.2	Imperceptible	Negligible
SX16	6.4	1.6	8.0	1.5	7.9	-0.1	Imperceptible	Negligible
SX18	5.9	0.2	6.1	0.2	6.1	0.0	Imperceptible	Negligible
SX17	6.4	0.3	6.8	0.3	6.7	<0.0	Imperceptible	Negligible
SX19	6.0	0.2	6.2	0.2	6.2	0.0	Imperceptible	Negligible
WM15	6.5	0.8	7.3	0.8	7.3	0.0	Imperceptible	Negligible
WM16	6.3	0.3	6.6	0.3	6.6	0.0	Imperceptible	Negligible
WM17	6.5	0.3	6.8	0.3	6.8	0.0	Imperceptible	Negligible
BK6	8.1	1.5	9.5	1.1	9.2	-0.4	Very Low	Negligible
BK7	8.2	1.0	9.2	1.0	9.2	0.0	Imperceptible	Negligible
LE46	5.9	0.7	6.6	0.7	6.6	>0.0	Imperceptible	Negligible
BK8	8.3	1.6	9.9	1.6	9.9	0.0	Imperceptible	Negligible
LE57	5.7	1.4	7.1	2.1	7.8	0.7	Very Low	Negligible
LE42	5.7	0.2	5.9	0.2	5.9	>0.0	Imperceptible	Negligible

Table notes: RC= Reference case (without proposed development); AD = Typical day (with proposed development)

Table 1.12: Modelled PM_{10} concentrations at receptors for 2034 assessment year

Receptor	2030 Background (µg/m³)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
BC1	13.3	0.3	13.6	0.3	13.6	>0.0	Imperceptible	Negligible
BC2	14.8	1.5	16.3	1.5	16.3	>0.0	Imperceptible	Negligible
BC3	12.6	0.2	12.8	0.2	12.8	>0.0	Imperceptible	Negligible
BC4	12.5	0.4	12.9	0.4	12.9	<0.0	Imperceptible	Negligible
BC5	13.9	1.0	14.9	1.0	14.9	<0.0	Imperceptible	Negligible
SW6	13.6	0.2	13.8	0.2	13.8	<0.0	Imperceptible	Negligible
SW5	14.3	0.2	14.5	0.2	14.5	<0.0	Imperceptible	Negligible
BC7	14.9	0.3	15.2	0.3	15.2	<0.0	Imperceptible	Negligible
BC8	13.6	0.2	13.8	0.2	13.8	>0.0	Imperceptible	Negligible
KS4	14.0	0.3	14.3	0.3	14.3	>0.0	Imperceptible	Negligible
LW1	13.9	0.6	14.5	0.6	14.5	>0.0	Imperceptible	Negligible
LW3	12.3	1.3	13.6	1.3	13.6	>0.0	Imperceptible	Negligible
LW5	13.2	0.3	13.5	0.3	13.5	>0.0	Imperceptible	Negligible
LW6	13.2	0.4	13.6	0.4	13.6	<0.0	Imperceptible	Negligible
KS1	12.6	0.2	12.9	0.2	12.9	>0.0	Imperceptible	Negligible
KS2	14.0	0.5	14.5	0.5	14.5	<0.0	Imperceptible	Negligible
KS3	14.0	0.6	14.6	0.6	14.6	<0.0	Imperceptible	Negligible
SW4	12.5	0.3	12.8	0.3	12.8	<0.0	Imperceptible	Negligible
HS3	14.9	0.4	15.3	0.4	15.3	>0.0	Imperceptible	Negligible
YX1	14.8	1.0	15.8	1.0	15.9	>0.0	Imperceptible	Negligible

Receptor	2030 Background (µg/m^3)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX3	13.4	0.9	14.3	0.9	14.3	<0.0	Imperceptible	Negligible
YX7	13.4	0.1	13.5	0.1	13.4	-0.1	Imperceptible	Negligible
LE3	13.6	0.3	13.9	0.3	13.9	>0.0	Imperceptible	Negligible
LE9	12.6	0.7	13.3	0.7	13.3	<0.0	Imperceptible	Negligible
LE10	12.6	0.8	13.4	0.8	13.4	>0.0	Imperceptible	Negligible
LE11	12.9	0.3	13.2	0.4	13.3	>0.0	Imperceptible	Negligible
LE14	14.3	0.7	15.0	0.7	15.0	>0.0	Imperceptible	Negligible
SX12	14.1	0.2	14.4	0.3	14.4	>0.0	Imperceptible	Negligible
YX4	14.8	0.4	15.2	0.4	15.2	<0.0	Imperceptible	Negligible
SX1	14.1	0.4	14.4	0.4	14.5	>0.0	Imperceptible	Negligible
WM2	14.7	1.6	16.3	1.6	16.3	>0.0	Imperceptible	Negligible
WM6	14.1	0.2	14.3	0.2	14.3	>0.0	Imperceptible	Negligible
WM7	15.4	0.3	15.7	0.3	15.7	>0.0	Imperceptible	Negligible
WM8	14.8	0.4	15.2	0.4	15.2	>0.0	Imperceptible	Negligible
WM4	13.1	0.3	13.3	0.3	13.3	<0.0	Imperceptible	Negligible
WB8	13.5	1.3	14.8	1.3	14.8	>0.0	Imperceptible	Negligible
WB9	13.5	0.8	14.4	0.8	14.4	>0.0	Imperceptible	Negligible
WB10	14.6	0.3	14.9	0.3	14.9	>0.0	Imperceptible	Negligible
BK2	14.9	0.4	15.3	0.4	15.3	<0.0	Imperceptible	Negligible
BK4	16.8	0.4	17.2	0.4	17.2	<0.0	Imperceptible	Negligible
BK5	16.8	0.7	17.4	0.6	17.4	<0.0	Imperceptible	Negligible

Receptor	2030 Background (µg/m³)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
IP1	17.3	1.1	18.3	1.1	18.3	<0.0	Imperceptible	Negligible
IP2	16.7	0.9	17.6	0.9	17.6	>0.0	Imperceptible	Negligible
BK3	14.8	0.6	15.3	0.6	15.3	<0.0	Imperceptible	Negligible
IP3	14.7	1.2	15.9	1.2	15.9	>0.0	Imperceptible	Negligible
IP4	16.2	1.7	18.0	1.7	18.0	<0.0	Imperceptible	Negligible
IP5	17.0	0.3	17.2	0.3	17.2	<0.0	Imperceptible	Negligible
IP6	14.0	0.1	14.1	0.1	14.1	<0.0	Imperceptible	Negligible
IP7	14.5	0.1	14.6	0.1	14.6	<0.0	Imperceptible	Negligible
IP8	14.8	0.1	14.9	0.1	14.9	<0.0	Imperceptible	Negligible
IP9	14.8	0.1	14.8	0.1	14.8	<0.0	Imperceptible	Negligible
IP10	14.8	0.1	14.8	0.1	14.8	<0.0	Imperceptible	Negligible
IP11	14.8	0.1	14.9	0.1	14.9	<0.0	Imperceptible	Negligible
ND1	15.3	1.4	16.7	1.4	16.7	>0.0	Imperceptible	Negligible
ND2	15.9	0.4	16.3	0.4	16.3	>0.0	Imperceptible	Negligible
ND3	15.0	0.7	15.7	0.7	15.7	>0.0	Imperceptible	Negligible
ND4	14.1	0.7	14.8	0.7	14.8	<0.0	Imperceptible	Negligible
ND5	14.9	0.6	15.5	0.6	15.5	<0.0	Imperceptible	Negligible
ND6	14.4	0.1	14.5	0.1	14.5	<0.0	Imperceptible	Negligible
WM9	14.0	0.2	14.2	0.2	14.2	<0.0	Imperceptible	Negligible
ND7	15.3	0.6	15.9	0.6	15.9	<0.0	Imperceptible	Negligible
FR1	14.9	0.4	15.2	0.4	15.2	<0.0	Imperceptible	Negligible

Receptor	2030 Background (µg/m^3)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
FR2	13.5	0.6	14.1	0.6	14.1	<0.0	Imperceptible	Negligible
FR3	13.5	0.2	13.7	0.2	13.7	<0.0	Imperceptible	Negligible
FR4	15.0	0.4	15.4	0.4	15.4	>0.0	Imperceptible	Negligible
FR5	14.2	0.2	14.4	0.2	14.4	>0.0	Imperceptible	Negligible
FR6	14.9	0.2	15.1	0.2	15.1	>0.0	Imperceptible	Negligible
IP12	14.1	0.1	14.2	0.1	14.2	<0.0	Imperceptible	Negligible
IP13	14.4	0.1	14.5	0.1	14.5	<0.0	Imperceptible	Negligible
IP14	14.0	1.2	15.2	1.2	15.2	<0.0	Imperceptible	Negligible
IP15	14.2	1.0	15.3	1.0	15.3	>0.0	Imperceptible	Negligible
WB11	13.7	0.5	14.2	0.5	14.2	>0.0	Imperceptible	Negligible
WB12	13.6	0.4	13.9	0.4	14.0	0.1	Imperceptible	Negligible
WB7	13.9	0.5	14.4	0.5	14.4	<0.0	Imperceptible	Negligible
WB6	13.3	0.5	13.8	0.5	13.8	>0.0	Imperceptible	Negligible
WB5	12.9	0.5	13.4	0.5	13.4	<0.0	Imperceptible	Negligible
WB4	12.9	0.3	13.2	0.3	13.2	<0.0	Imperceptible	Negligible
WB3	13.1	0.4	13.4	0.4	13.4	<0.0	Imperceptible	Negligible
WB2	13.1	0.5	13.5	0.4	13.5	<0.0	Imperceptible	Negligible
SX13	14.6	0.2	14.8	0.2	14.8	>0.0	Imperceptible	Negligible
SX14	15.0	0.3	15.3	0.3	15.3	>0.0	Imperceptible	Negligible
WM13	14.1	0.2	14.3	0.2	14.3	<0.0	Imperceptible	Negligible
HS1	13.5	0.4	13.9	0.4	13.9	>0.0	Imperceptible	Negligible

Receptor	2030 Background (µg/m³)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
HS2	14.8	0.3	15.1	0.3	15.1	<0.0	Imperceptible	Negligible
SW1	11.6	0.3	11.9	0.3	11.9	<0.0	Imperceptible	Negligible
YX2	13.4	0.6	14.0	0.5	13.9	<0.0	Imperceptible	Negligible
YX6	13.5	0.3	13.8	0.3	13.8	<0.0	Imperceptible	Negligible
SX2	13.9	0.1	14.0	0.1	14.0	<0.0	Imperceptible	Negligible
SX4	13.0	0.7	13.7	0.7	13.7	<0.0	Imperceptible	Negligible
SX3	14.6	0.1	14.8	0.1	14.8	<0.0	Imperceptible	Negligible
SX10	14.7	0.5	15.2	0.5	15.2	>0.0	Imperceptible	Negligible
SX5	13.8	0.8	14.7	0.1	13.9	-0.8	Low	Negligible
SX6	13.5	1.5	15.0	0.1	13.6	-1.3	Low	Negligible
SX7	13.5	1.6	15.2	0.2	13.7	-1.5	Low	Negligible
SX11	13.9	0.4	14.4	0.4	14.4	<0.0	Imperceptible	Negligible
SW3	12.3	0.8	13.1	0.8	13.1	<0.0	Imperceptible	Negligible
SW2	12.3	0.5	12.9	0.5	12.9	<0.0	Imperceptible	Negligible
YX8	14.2	0.3	14.5	0.3	14.5	>0.0	Imperceptible	Negligible
LE13	12.5	0.4	12.9	0.4	12.9	>0.0	Imperceptible	Negligible
LE12	13.4	0.3	13.7	0.3	13.7	<0.0	Imperceptible	Negligible
LE7	14.0	0.1	14.2	0.1	14.2	>0.0	Imperceptible	Negligible
LE1	12.6	0.5	13.1	0.5	13.1	>0.0	Imperceptible	Negligible
LE8	12.6	0.3	12.9	0.3	12.9	>0.0	Imperceptible	Negligible
LE6	14.0	0.4	14.4	0.1	14.0	-0.3	Imperceptible	Negligible

Receptor	2030 Background (µg/m^3)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE5	14.0	0.2	14.2	0.1	14.0	-0.2	Imperceptible	Negligible
ND8	14.5	0.9	15.4	0.9	15.4	>0.0	Imperceptible	Negligible
WM1	13.5	0.1	13.6	0.1	13.6	<0.0	Imperceptible	Negligible
SX8	14.2	0.0	14.3	0.2	14.4	0.1	Imperceptible	Negligible
SX9	14.2	0.1	14.3	0.1	14.3	0.1	Imperceptible	Negligible
LE4	14.0	0.0	14.0	0.0	14.0	>0.0	Imperceptible	Negligible
YX5	14.2	0.0	14.3	0.0	14.3	>0.0	Imperceptible	Negligible
LW2	12.3	0.4	12.7	0.4	12.7	>0.0	Imperceptible	Negligible
BK1	13.5	0.8	14.3	0.8	14.3	>0.0	Imperceptible	Negligible
WM10	15.0	0.9	15.9	0.9	15.9	<0.0	Imperceptible	Negligible
WB1	14.8	0.9	15.7	0.9	15.7	>0.0	Imperceptible	Negligible
BC6	14.8	0.4	15.2	0.4	15.2	<0.0	Imperceptible	Negligible
LW4	12.7	0.4	13.1	0.4	13.1	>0.0	Imperceptible	Negligible
LW7	13.2	0.2	13.5	0.2	13.5	>0.0	Imperceptible	Negligible
LW8	13.1	0.3	13.4	0.3	13.4	<0.0	Imperceptible	Negligible
LW9	13.2	0.4	13.6	0.4	13.6	<0.0	Imperceptible	Negligible
LE2	13.7	0.1	13.8	0.1	13.8	>0.0	Imperceptible	Negligible
WM5	14.6	0.2	14.8	0.2	14.8	>0.0	Imperceptible	Negligible
WM11	14.1	0.3	14.4	0.3	14.4	<0.0	Imperceptible	Negligible
WM12	14.1	0.1	14.2	0.1	14.2	<0.0	Imperceptible	Negligible
SX15	13.8	1.9	15.7	0.1	13.9	-1.8	Low	Negligible

Receptor	2030 Background (µg/m³)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX9	14.8	0.1	14.9	0.1	14.9	>0.0	Imperceptible	Negligible
LE15	13.6	0.0	13.6	0.1	13.7	>0.0	Imperceptible	Negligible
LE16	13.6	0.0	13.6	0.0	13.6	>0.0	Imperceptible	Negligible
LE19	13.7	0.0	13.8	0.1	13.8	>0.0	Imperceptible	Negligible
LE17	13.0	0.0	13.0	0.0	13.0	>0.0	Imperceptible	Negligible
LE18	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
LE20	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
LE21	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
LE22	13.4	0.0	13.5	0.0	13.5	>0.0	Imperceptible	Negligible
LE23	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
WM3	14.1	0.4	14.4	0.4	14.4	<0.0	Imperceptible	Negligible
WM14	14.1	0.1	14.1	0.1	14.1	<0.0	Imperceptible	Negligible
YX10	14.6	0.6	15.2	0.6	15.2	>0.0	Imperceptible	Negligible
LE24	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
YX11	14.6	0.2	14.8	0.2	14.8	>0.0	Imperceptible	Negligible
YX12	14.6	0.2	14.8	0.2	14.8	>0.0	Imperceptible	Negligible
LE25	13.7	0.0	13.7	0.0	13.7	>0.0	Imperceptible	Negligible
LE26	13.0	0.0	13.0	0.0	13.0	>0.0	Imperceptible	Negligible
LE27	13.6	0.0	13.7	0.0	13.7	>0.0	Imperceptible	Negligible
LE28	13.6	0.1	13.7	0.1	13.7	>0.0	Imperceptible	Negligible
LE29	13.7	0.0	13.7	0.0	13.7	>0.0	Imperceptible	Negligible

Receptor	2030 Background (μg/m^3)	2034RC Road + Rail (μg/m3)	2034RC Total (μg/m3)	2034AD Road + Rail (μg/m3)	2034AD Total (μg/m3)	Magnitude of Change (μg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE30	12.5	0.1	12.6	0.1	12.6	>0.0	Imperceptible	Negligible
LE31	12.5	0.0	12.6	0.0	12.6	>0.0	Imperceptible	Negligible
LE32	14.0	0.1	14.1	0.1	14.1	>0.0	Imperceptible	Negligible
LE33	14.0	0.1	14.1	0.1	14.1	>0.0	Imperceptible	Negligible
LE34	13.4	0.1	13.5	0.1	13.5	>0.0	Imperceptible	Negligible
LE35	12.6	0.1	12.7	0.1	12.7	>0.0	Imperceptible	Negligible
LE36	13.4	0.2	13.6	0.2	13.6	<0.0	Imperceptible	Negligible
LE37	13.4	0.2	13.6	0.2	13.6	>0.0	Imperceptible	Negligible
LE38	13.4	0.2	13.6	0.2	13.6	<0.0	Imperceptible	Negligible
LE39	13.0	0.1	13.1	0.1	13.1	>0.0	Imperceptible	Negligible
LE40	13.4	0.1	13.5	0.1	13.5	>0.0	Imperceptible	Negligible
LE52	14.0	0.1	14.1	0.1	14.2	>0.0	Imperceptible	Negligible
LE53	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
LE54	13.4	0.0	13.4	0.0	13.4	>0.0	Imperceptible	Negligible
YX13	14.8	0.6	15.5	0.6	15.5	>0.0	Imperceptible	Negligible
YX14	14.6	0.0	14.6	0.0	14.6	>0.0	Imperceptible	Negligible
YX15	14.0	0.4	14.5	0.4	14.5	>0.0	Imperceptible	Negligible
YX16	14.8	0.4	15.2	0.5	15.3	>0.0	Imperceptible	Negligible
YX17	14.0	0.1	14.1	0.1	14.1	>0.0	Imperceptible	Negligible
LE55	13.6	0.1	13.7	0.1	13.7	<0.0	Imperceptible	Negligible
LE56	13.4	0.3	13.7	0.2	13.7	<0.0	Imperceptible	Negligible

Receptor	2030 Background (µg/m^3)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX18	13.4	0.3	13.7	0.2	13.6	<0.0	Imperceptible	Negligible
YX19	13.5	0.2	13.7	0.2	13.7	<0.0	Imperceptible	Negligible
YX20	14.0	0.5	14.6	0.6	14.6	>0.0	Imperceptible	Negligible
SX16	13.0	0.3	13.3	0.3	13.3	<0.0	Imperceptible	Negligible
SX18	14.7	0.0	14.7	0.0	14.7	<0.0	Imperceptible	Negligible
SX17	13.0	0.1	13.1	0.1	13.1	<0.0	Imperceptible	Negligible
SX19	14.7	0.0	14.7	0.0	14.7	<0.0	Imperceptible	Negligible
WM15	14.6	0.1	14.7	0.1	14.7	>0.0	Imperceptible	Negligible
WM16	13.1	0.0	13.1	0.0	13.1	<0.0	Imperceptible	Negligible
WM17	13.5	0.0	13.6	0.0	13.6	<0.0	Imperceptible	Negligible
BK6	13.8	0.3	14.1	0.2	14.0	-0.1	Imperceptible	Negligible
BK7	16.6	0.2	16.8	0.2	16.8	<0.0	Imperceptible	Negligible
LE46	14.0	0.1	14.1	0.1	14.1	>0.0	Imperceptible	Negligible
BK8	16.4	0.3	16.7	0.3	16.7	<0.0	Imperceptible	Negligible
LE57	13.3	0.2	13.5	0.4	13.6	0.1	Imperceptible	Negligible
LE42	13.0	0.0	13.0	0.0	13.0	>0.0	Imperceptible	Negligible

Table notes: RC= Reference case (without proposed development); AD = Typical day (with proposed development)

Table 1.13: Modelled $PM_{2.5}$ concentrations at receptors for 2034 assessment year

Receptor	2030 Background (µg/m³)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
BC1	8.0	0.6	8.6	0.6	8.6	>0.0	Imperceptible	Negligible
BC2	8.4	2.6	11.0	2.6	11.0	>0.0	Imperceptible	Negligible
BC3	7.9	0.4	8.3	0.4	8.3	>0.0	Imperceptible	Negligible
BC4	8.0	0.7	8.8	0.7	8.8	<0.0	Imperceptible	Negligible
BC5	9.0	1.7	10.7	1.7	10.7	<0.0	Imperceptible	Negligible
SW6	8.0	0.4	8.4	0.4	8.4	<0.0	Imperceptible	Negligible
SW5	8.2	0.4	8.6	0.4	8.6	<0.0	Imperceptible	Negligible
BC7	8.8	0.5	9.3	0.5	9.3	<0.0	Imperceptible	Negligible
BC8	8.0	0.4	8.4	0.4	8.4	<0.0	Imperceptible	Negligible
KS4	8.2	0.5	8.6	0.5	8.6	>0.0	Imperceptible	Negligible
LW1	9.7	1.0	10.8	1.0	10.8	>0.0	Imperceptible	Negligible
LW3	8.2	2.3	10.5	2.3	10.5	>0.0	Imperceptible	Negligible
LW5	8.6	0.5	9.1	0.5	9.1	>0.0	Imperceptible	Negligible
LW6	8.6	0.7	9.3	0.7	9.3	<0.0	Imperceptible	Negligible
KS1	7.9	0.4	8.3	0.4	8.3	>0.0	Imperceptible	Negligible
KS2	8.2	0.8	8.9	0.8	8.9	<0.0	Imperceptible	Negligible
KS3	8.2	1.0	9.1	1.0	9.1	<0.0	Imperceptible	Negligible
SW4	7.8	0.6	8.4	0.6	8.4	<0.0	Imperceptible	Negligible
HS3	8.4	0.6	9.0	0.6	9.0	>0.0	Imperceptible	Negligible
YX1	8.3	1.7	10.1	1.8	10.1	0.1	Imperceptible	Negligible

Receptor	2030 Background (µg/m³)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX3	8.1	1.5	9.6	1.5	9.6	-0.1	Imperceptible	Negligible
YX7	7.9	0.3	8.2	0.1	8.0	-0.2	Imperceptible	Negligible
LE3	8.0	0.5	8.5	0.5	8.5	0.1	Imperceptible	Negligible
LE9	8.2	1.1	9.3	1.1	9.3	<0.0	Imperceptible	Negligible
LE10	8.2	1.3	9.5	1.4	9.6	0.1	Imperceptible	Negligible
LE11	7.9	0.6	8.5	0.6	8.5	>0.0	Imperceptible	Negligible
LE14	8.2	1.1	9.4	1.2	9.4	>0.0	Imperceptible	Negligible
SX12	8.3	0.4	8.8	0.4	8.8	>0.0	Imperceptible	Negligible
YX4	8.4	0.7	9.1	0.7	9.0	<0.0	Imperceptible	Negligible
SX1	8.2	0.7	8.9	0.7	8.9	>0.0	Imperceptible	Negligible
WM2	8.5	2.8	11.3	2.8	11.4	>0.0	Imperceptible	Negligible
WM6	8.4	0.3	8.7	0.3	8.7	>0.0	Imperceptible	Negligible
WM7	8.8	0.5	9.4	0.5	9.4	>0.0	Imperceptible	Negligible
WM8	8.7	0.7	9.4	0.7	9.4	>0.0	Imperceptible	Negligible
WM4	8.2	0.4	8.6	0.4	8.6	<0.0	Imperceptible	Negligible
WB8	8.8	2.3	11.0	2.3	11.0	>0.0	Imperceptible	Negligible
WB9	8.8	1.4	10.2	1.4	10.2	>0.0	Imperceptible	Negligible
WB10	8.8	0.6	9.4	0.6	9.4	>0.0	Imperceptible	Negligible
BK2	8.9	0.7	9.6	0.7	9.6	<0.0	Imperceptible	Negligible
BK4	9.7	0.7	10.4	0.7	10.4	<0.0	Imperceptible	Negligible
BK5	9.7	1.1	10.8	1.1	10.8	<0.0	Imperceptible	Negligible

Receptor	2030 Background (µg/m³)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
IP1	10.1	1.9	11.9	1.8	11.9	<0.0	Imperceptible	Negligible
IP2	9.8	1.5	11.3	1.5	11.3	>0.0	Imperceptible	Negligible
BK3	8.9	1.0	10.0	1.0	10.0	<0.0	Imperceptible	Negligible
IP3	9.0	2.0	11.1	2.0	11.1	>0.0	Imperceptible	Negligible
IP4	9.5	3.0	12.5	3.0	12.5	>0.0	Imperceptible	Negligible
IP5	9.9	0.5	10.4	0.5	10.4	<0.0	Imperceptible	Negligible
IP6	9.2	0.2	9.4	0.2	9.4	<0.0	Imperceptible	Negligible
IP7	9.7	0.1	9.8	0.1	9.8	<0.0	Imperceptible	Negligible
IP8	9.8	0.1	10.0	0.1	10.0	<0.0	Imperceptible	Negligible
IP9	9.8	0.1	9.9	0.1	9.9	<0.0	Imperceptible	Negligible
IP10	9.8	0.1	9.9	0.1	9.9	<0.0	Imperceptible	Negligible
IP11	9.8	0.1	10.0	0.1	10.0	<0.0	Imperceptible	Negligible
ND1	9.4	2.4	11.8	2.4	11.8	>0.0	Imperceptible	Negligible
ND2	9.5	0.7	10.2	0.7	10.2	>0.0	Imperceptible	Negligible
ND3	8.8	1.2	10.0	1.2	10.0	>0.0	Imperceptible	Negligible
ND4	8.5	1.2	9.7	1.2	9.7	<0.0	Imperceptible	Negligible
ND5	8.6	1.1	9.6	1.1	9.6	<0.0	Imperceptible	Negligible
ND6	8.4	0.2	8.6	0.2	8.6	<0.0	Imperceptible	Negligible
WM9	8.3	0.4	8.7	0.4	8.7	<0.0	Imperceptible	Negligible
ND7	8.8	1.0	9.8	1.0	9.8	>0.0	Imperceptible	Negligible
FR1	8.4	0.7	9.1	0.6	9.1	<0.0	Imperceptible	Negligible

Receptor	2030 Background (µg/m³)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
FR2	8.3	1.0	9.3	1.0	9.3	<0.0	Imperceptible	Negligible
FR3	8.3	0.3	8.6	0.3	8.6	<0.0	Imperceptible	Negligible
FR4	8.4	0.6	9.1	0.6	9.1	>0.0	Imperceptible	Negligible
FR5	8.2	0.4	8.6	0.4	8.6	>0.0	Imperceptible	Negligible
FR6	8.4	0.3	8.7	0.3	8.7	>0.0	Imperceptible	Negligible
IP12	9.1	0.1	9.2	0.1	9.2	<0.0	Imperceptible	Negligible
IP13	9.7	0.1	9.9	0.1	9.9	<0.0	Imperceptible	Negligible
IP14	9.0	2.0	11.1	2.0	11.1	<0.0	Imperceptible	Negligible
IP15	8.9	1.8	10.7	1.8	10.7	>0.0	Imperceptible	Negligible
WB11	8.8	0.8	9.6	0.8	9.6	>0.0	Imperceptible	Negligible
WB12	8.5	0.6	9.2	0.8	9.3	0.1	Imperceptible	Negligible
WB7	8.7	0.9	9.7	0.9	9.7	>0.0	Imperceptible	Negligible
WB6	8.5	0.8	9.4	0.8	9.4	>0.0	Imperceptible	Negligible
WB5	8.6	0.9	9.4	0.9	9.4	<0.0	Imperceptible	Negligible
WB4	8.6	0.6	9.1	0.6	9.1	<0.0	Imperceptible	Negligible
WB3	8.4	0.6	9.0	0.6	9.0	<0.0	Imperceptible	Negligible
WB2	8.4	0.8	9.2	0.8	9.2	<0.0	Imperceptible	Negligible
SX13	8.4	0.4	8.8	0.4	8.8	>0.0	Imperceptible	Negligible
SX14	8.6	0.5	9.0	0.5	9.0	>0.0	Imperceptible	Negligible
WM13	8.3	0.4	8.6	0.4	8.6	<0.0	Imperceptible	Negligible
HS1	8.4	0.7	9.1	0.7	9.1	>0.0	Imperceptible	Negligible

Receptor	2030 Background (µg/m³)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
HS2	8.4	0.5	8.9	0.5	8.9	<0.0	Imperceptible	Negligible
SW1	7.6	0.5	8.1	0.5	8.1	<0.0	Imperceptible	Negligible
YX2	8.1	0.9	9.0	0.9	9.0	<0.0	Imperceptible	Negligible
YX6	8.0	0.6	8.5	0.5	8.5	-0.1	Imperceptible	Negligible
SX2	8.3	0.2	8.5	0.2	8.5	<0.0	Imperceptible	Negligible
SX4	8.1	1.2	9.3	1.1	9.3	<0.0	Imperceptible	Negligible
SX3	8.4	0.2	8.6	0.2	8.6	<0.0	Imperceptible	Negligible
SX10	8.4	0.9	9.4	0.9	9.4	>0.0	Imperceptible	Negligible
SX5	8.2	1.5	9.7	0.2	8.4	-1.3	Low	Negligible
SX6	8.2	2.5	10.7	0.2	8.3	-2.3	Medium	Minorbeneficial
SX7	8.2	2.8	11.0	0.3	8.4	-2.6	High	Moderate beneficial
SX11	8.2	0.8	9.0	0.8	9.0	<0.0	Imperceptible	Negligible
SW3	7.7	1.3	9.1	1.3	9.1	<0.0	Imperceptible	Negligible
SW2	7.7	0.9	8.6	0.9	8.6	<0.0	Imperceptible	Negligible
YX8	8.2	0.5	8.7	0.5	8.7	>0.0	Imperceptible	Negligible
LE13	7.7	0.7	8.4	0.7	8.4	>0.0	Imperceptible	Negligible
LE12	8.1	0.5	8.6	0.5	8.6	<0.0	Imperceptible	Negligible
LE7	8.2	0.2	8.4	0.2	8.4	>0.0	Imperceptible	Negligible
LE1	8.2	0.8	9.0	0.8	9.1	0.1	Imperceptible	Negligible
LE8	8.2	0.5	8.7	0.5	8.7	>0.0	Imperceptible	Negligible
LE6	8.1	0.7	8.8	0.1	8.2	-0.6	Low	Negligible

Receptor	2030 Background (µg/m³)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE5	8.1	0.4	8.5	0.1	8.2	-0.3	Very Low	Negligible
ND8	8.5	1.6	10.1	1.6	10.1	>0.0	Imperceptible	Negligible
WM1	8.2	0.2	8.4	0.1	8.3	-0.1	Imperceptible	Negligible
SX8	8.3	0.1	8.3	0.3	8.5	0.2	Imperceptible	Negligible
SX9	8.3	0.1	8.4	0.2	8.5	0.2	Imperceptible	Negligible
LE4	8.1	0.1	8.2	0.1	8.2	>0.0	Imperceptible	Negligible
YX5	8.2	0.1	8.2	0.1	8.2	>0.0	Imperceptible	Negligible
LW2	8.2	0.6	8.8	0.6	8.8	>0.0	Imperceptible	Negligible
BK1	8.8	1.4	10.2	1.4	10.2	>0.0	Imperceptible	Negligible
WM10	8.6	1.6	10.2	1.6	10.2	<0.0	Imperceptible	Negligible
WB1	9.0	1.6	10.6	1.6	10.6	>0.0	Imperceptible	Negligible
BC6	8.3	0.7	9.0	0.7	9.0	<0.0	Imperceptible	Negligible
LW4	8.5	0.7	9.1	0.7	9.1	>0.0	Imperceptible	Negligible
LW7	8.6	0.3	8.9	0.3	8.9	>0.0	Imperceptible	Negligible
LW8	8.8	0.5	9.4	0.5	9.4	<0.0	Imperceptible	Negligible
LW9	8.6	0.6	9.2	0.6	9.2	<0.0	Imperceptible	Negligible
LE2	8.1	0.2	8.3	0.2	8.3	>0.0	Imperceptible	Negligible
WM5	8.5	0.3	8.8	0.3	8.8	>0.0	Imperceptible	Negligible
WM11	8.4	0.5	8.9	0.5	8.9	<0.0	Imperceptible	Negligible
WM12	8.4	0.2	8.6	0.2	8.6	<0.0	Imperceptible	Negligible
SX15	8.2	3.3	11.5	0.1	8.3	-3.1	High	Moderate beneficial

Receptor	2030 Background (µg/m³)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX9	8.4	0.1	8.5	0.1	8.5	>0.0	Imperceptible	Negligible
LE15	8.0	0.1	8.1	0.1	8.1	>0.0	Imperceptible	Negligible
LE16	8.0	0.1	8.1	0.1	8.1	>0.0	Imperceptible	Negligible
LE19	8.1	0.1	8.2	0.1	8.2	>0.0	Imperceptible	Negligible
LE17	7.8	0.1	7.9	0.1	7.9	>0.0	Imperceptible	Negligible
LE18	8.0	0.1	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
LE20	8.0	0.1	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
LE21	8.0	0.1	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
LE22	8.0	0.1	8.1	0.1	8.1	>0.0	Imperceptible	Negligible
LE23	8.0	0.1	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
WM3	8.3	0.7	8.9	0.7	8.9	<0.0	Imperceptible	Negligible
WM14	8.3	0.1	8.4	0.1	8.4	<0.0	Imperceptible	Negligible
YX10	8.3	1.1	9.3	1.1	9.3	>0.0	Imperceptible	Negligible
LE24	8.0	0.1	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
YX11	8.3	0.3	8.6	0.3	8.6	>0.0	Imperceptible	Negligible
YX12	8.3	0.3	8.6	0.3	8.6	>0.0	Imperceptible	Negligible
LE25	8.0	0.0	8.0	0.0	8.0	>0.0	Imperceptible	Negligible
LE26	7.8	0.1	7.9	0.1	7.9	>0.0	Imperceptible	Negligible
LE27	8.0	0.1	8.1	0.1	8.1	>0.0	Imperceptible	Negligible
LE28	8.0	0.1	8.1	0.2	8.2	>0.0	Imperceptible	Negligible
LE29	8.0	0.0	8.0	0.0	8.0	>0.0	Imperceptible	Negligible

Receptor	2030 Background (µg/m³)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
LE30	7.7	0.1	7.8	0.1	7.8	>0.0	Imperceptible	Negligible
LE31	7.7	0.1	7.8	0.1	7.8	>0.0	Imperceptible	Negligible
LE32	8.2	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
LE33	8.2	0.2	8.3	0.2	8.3	>0.0	Imperceptible	Negligible
LE34	8.1	0.1	8.2	0.1	8.2	>0.0	Imperceptible	Negligible
LE35	8.2	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
LE36	8.1	0.3	8.4	0.3	8.4	<0.0	Imperceptible	Negligible
LE37	8.1	0.3	8.4	0.3	8.4	>0.0	Imperceptible	Negligible
LE38	8.1	0.3	8.5	0.3	8.5	<0.0	Imperceptible	Negligible
LE39	7.9	0.2	8.1	0.2	8.1	>0.0	Imperceptible	Negligible
LE40	8.1	0.1	8.2	0.1	8.2	>0.0	Imperceptible	Negligible
LE52	8.2	0.2	8.4	0.2	8.4	>0.0	Imperceptible	Negligible
LE53	8.0	0.1	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
LE54	8.0	0.1	8.0	0.1	8.0	>0.0	Imperceptible	Negligible
YX13	8.3	1.1	9.5	1.1	9.5	>0.0	Imperceptible	Negligible
YX14	8.3	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
YX15	8.2	0.7	8.9	0.7	8.9	>0.0	Imperceptible	Negligible
YX16	8.3	0.8	9.1	0.8	9.1	>0.0	Imperceptible	Negligible
YX17	8.2	0.1	8.3	0.1	8.3	>0.0	Imperceptible	Negligible
LE55	8.0	0.2	8.2	0.2	8.2	<0.0	Imperceptible	Negligible
LE56	8.0	0.4	8.5	0.4	8.5	<0.0	Imperceptible	Negligible

Receptor	2030 Background (µg/m³)	2034RC Road + Rail (µg/m3)	2034RC Total (µg/m3)	2034AD Road + Rail (µg/m3)	2034AD Total (µg/m3)	Magnitude of Change (µg/m3)	Magnitude of Change Descriptor	Effect Descriptor
YX18	8.1	0.4	8.5	0.4	8.5	-0.1	Imperceptible	Negligible
YX19	8.0	0.3	8.3	0.3	8.3	<0.0	Imperceptible	Negligible
YX20	8.2	0.9	9.1	1.0	9.1	>0.0	Imperceptible	Negligible
SX16	8.1	0.5	8.6	0.4	8.6	<0.0	Imperceptible	Negligible
SX18	8.4	0.1	8.4	0.1	8.4	<0.0	Imperceptible	Negligible
SX17	8.1	0.1	8.2	0.1	8.2	<0.0	Imperceptible	Negligible
SX19	8.4	0.1	8.4	0.1	8.4	<0.0	Imperceptible	Negligible
WM15	8.6	0.2	8.8	0.2	8.8	>0.0	Imperceptible	Negligible
WM16	8.2	0.1	8.2	0.1	8.2	<0.0	Imperceptible	Negligible
WM17	8.3	0.1	8.4	0.1	8.4	<0.0	Imperceptible	Negligible
BK6	8.5	0.4	8.9	0.3	8.8	-0.1	Imperceptible	Negligible
BK7	9.5	0.3	9.8	0.3	9.8	<0.0	Imperceptible	Negligible
LE46	8.2	0.2	8.4	0.2	8.4	>0.0	Imperceptible	Negligible
BK8	9.5	0.5	10.0	0.5	10.0	<0.0	Imperceptible	Negligible
LE57	8.0	0.4	8.4	0.6	8.6	0.2	Imperceptible	Negligible
LE42	7.8	0.1	7.9	0.1	7.9	>0.0	Imperceptible	Negligible

Table notes: RC= Reference case (without proposed development); AD = Typical day (with proposed development

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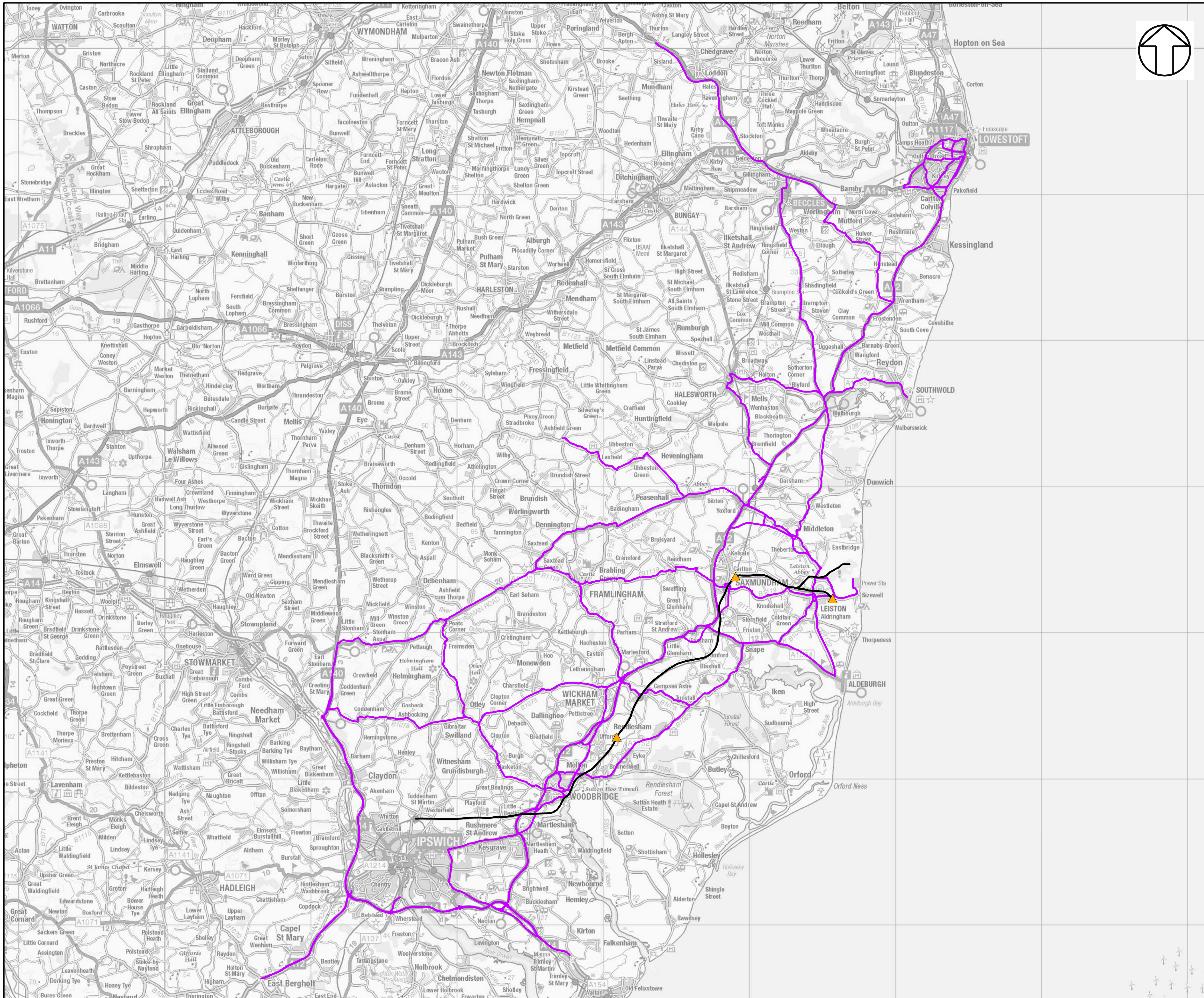
FIGURES



NOTES

KEY

- RAIL STATIONARY SOURCES
- RAIL NETWORK
- ROAD NETWORK

NOT PROTECTIVELY MARKED

SZC

DOCUMENT:
SIZEWELL C
ENVIRONMENTAL STATEMENT
VOLUME 2
APPENDIX 12B
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DRAWING TITLE:
LOCAL ROAD AND RAIL NETWORK

DRAWING NO:
FIGURE 12B.1

DATE:	DRAWN:	SCALE :
JAN 2020	J.W.	1:250,000 @A3

SCALE BAR
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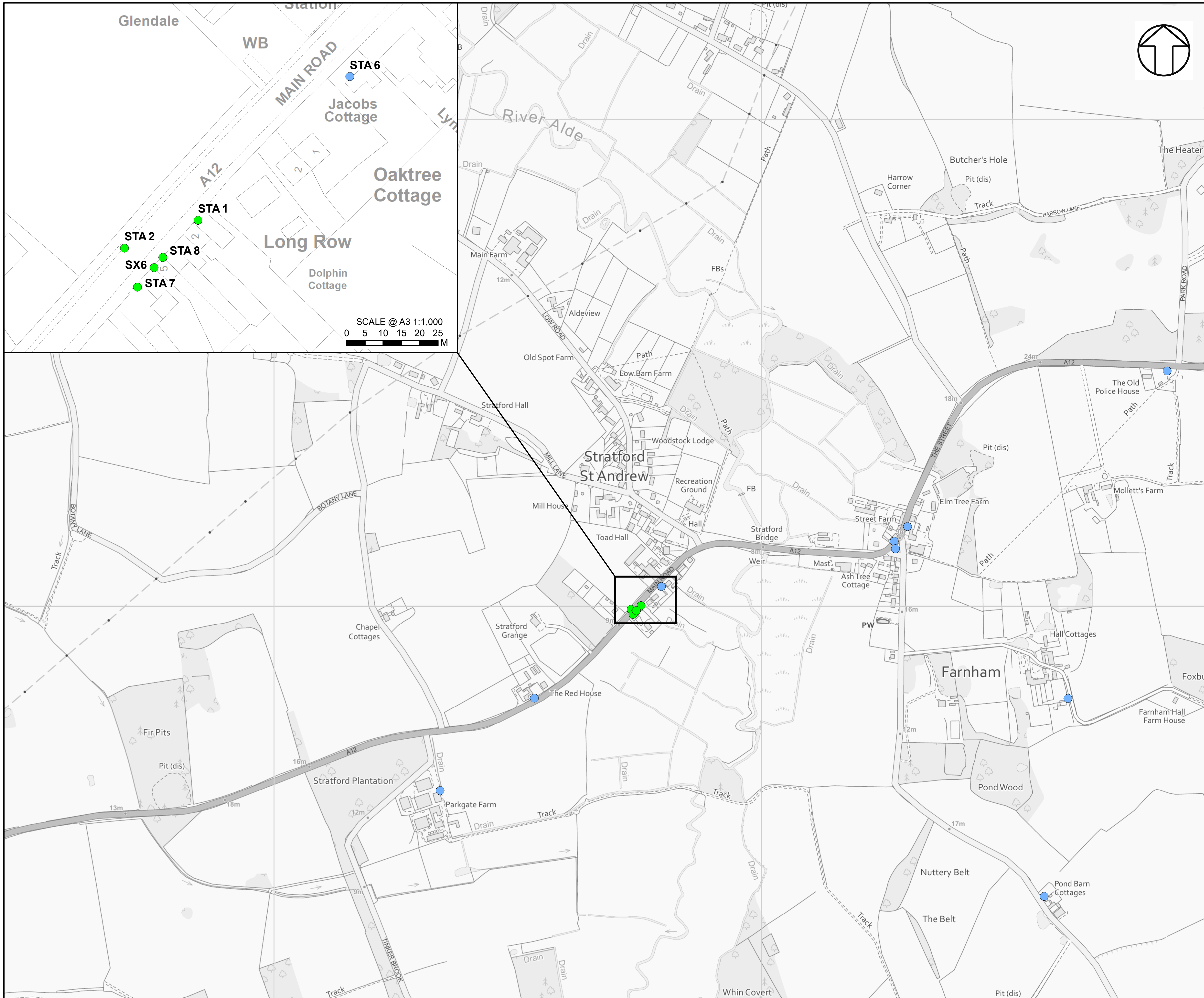
KM



NOTES

KEY

- SIZEWELL C DOMAIN
- STRATFORD ST ANDREW AIR QUALITY MANAGEMENT AREA DOMAIN

NOT PROTECTIVELY MARKED

edf ENERGY SZC CGN

DOCUMENT:
SIZEWELL C
ENVIRONMENTAL STATEMENT
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DRAWING TITLE:
STRATFORD ST ANDREW AQMA DOMAIN

DRAWING NO:
FIGURE 12B.2

DATE:	DRAWN:	SCALE :
JAN 2020	J.W.	1:7,500 @A3

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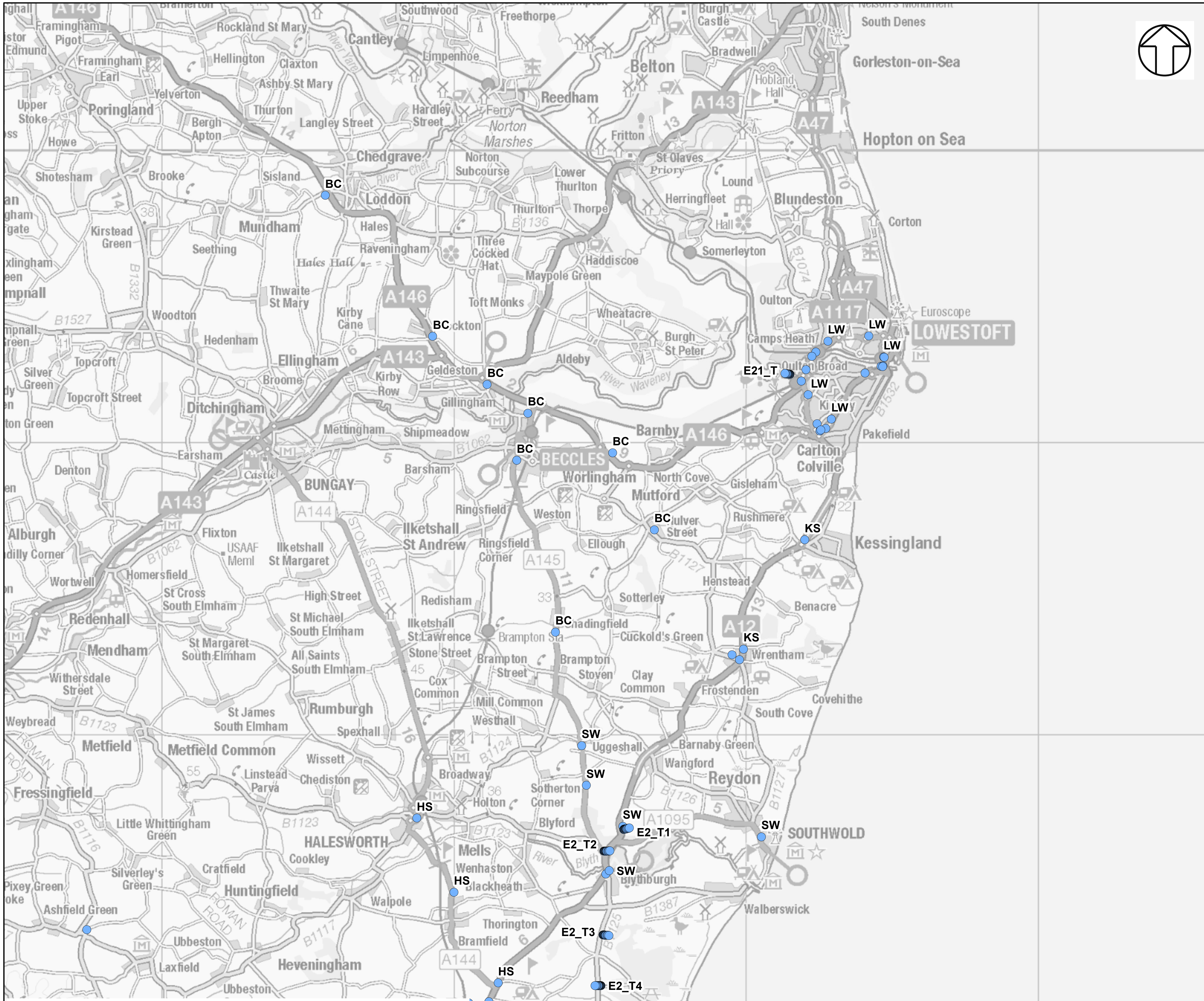

NOTES

KEY

SIZEWELL C DOMAIN

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DOCUMENT:
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DRAWING TITLE:
SIZEWELL C DOMAIN (NORTH)

DRAWING NO:
FIGURE 12B.3

DATE:	DRAWN:	SCALE :
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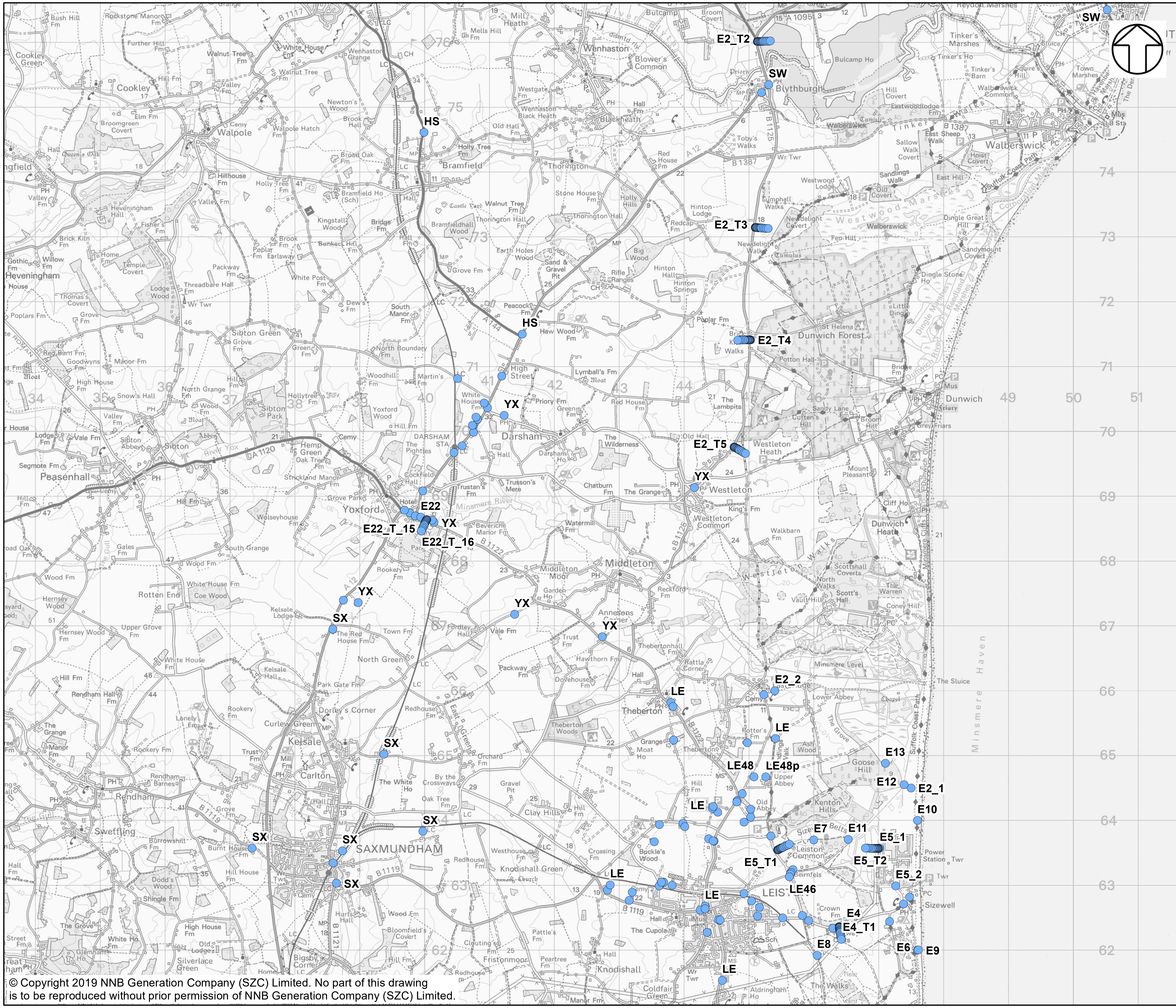

NOTES

KEY

SIZEWELL C DOMAIN

NOT PROTECTIVELY MARKED

SZC
EDF ENERGY
CGN

DOCUMENT:
SIZEWELL C
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DRAWING TITLE:
SIZEWELL C DOMAIN (CENTRE)

DRAWING NO:
FIGURE 12B.4

DATE:	DRAWN:	SCALE :
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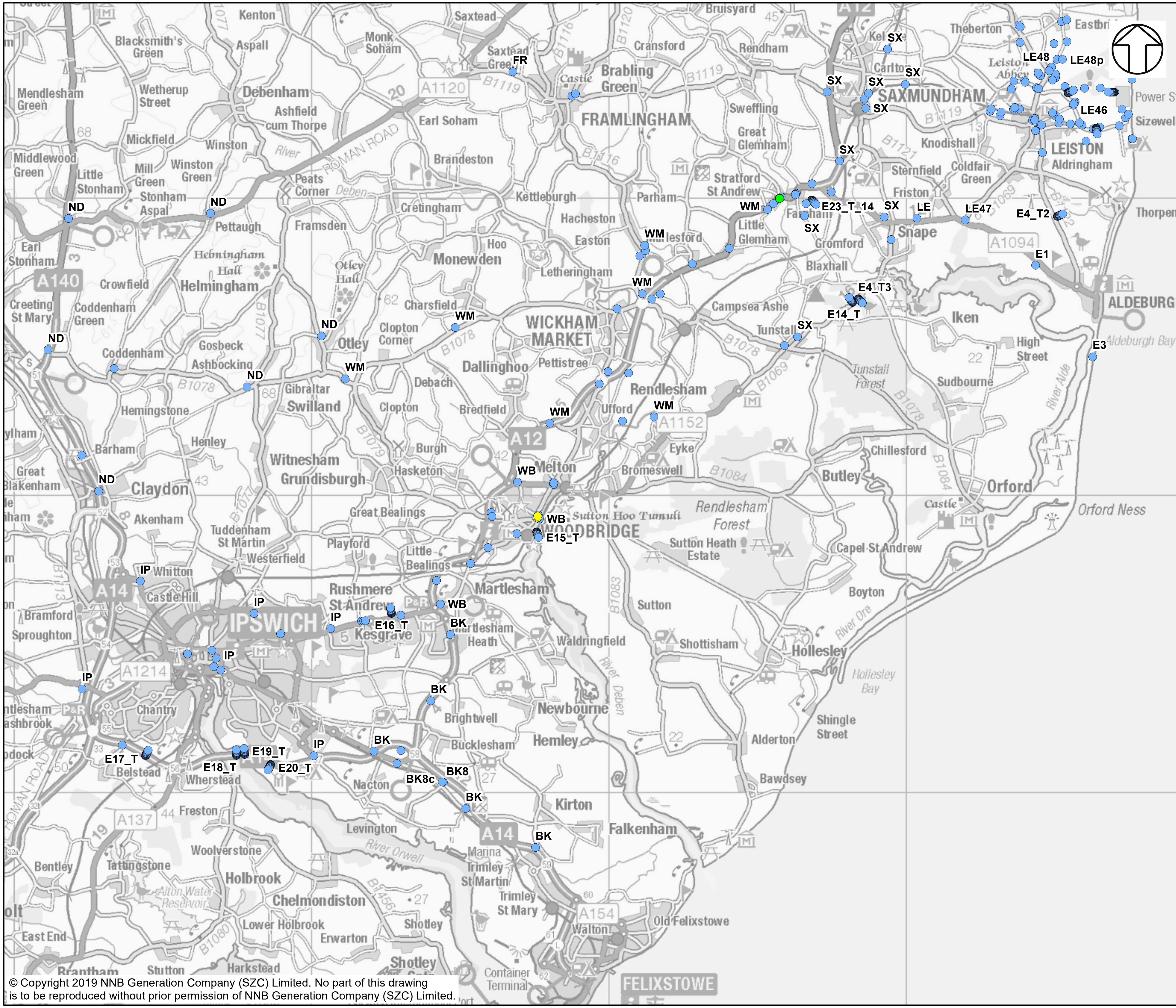

NOTES

KEY

- SIZEWELL C DOMAIN
- STRATFORD ST ANDREW AIR QUALITY MANAGEMENT AREA DOMAIN
- WOODBRIDGE AIR QUALITY MANAGEMENT AREA DOMAIN

NOT PROTECTIVELY MARKED

DOCUMENT:
SIZEWELL C
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DRAWING TITLE:
SIZEWELL C DOMAIN (SOUTH)

DRAWING NO:
FIGURE 12B.5

DATE:	DRAWN:	SCALE :
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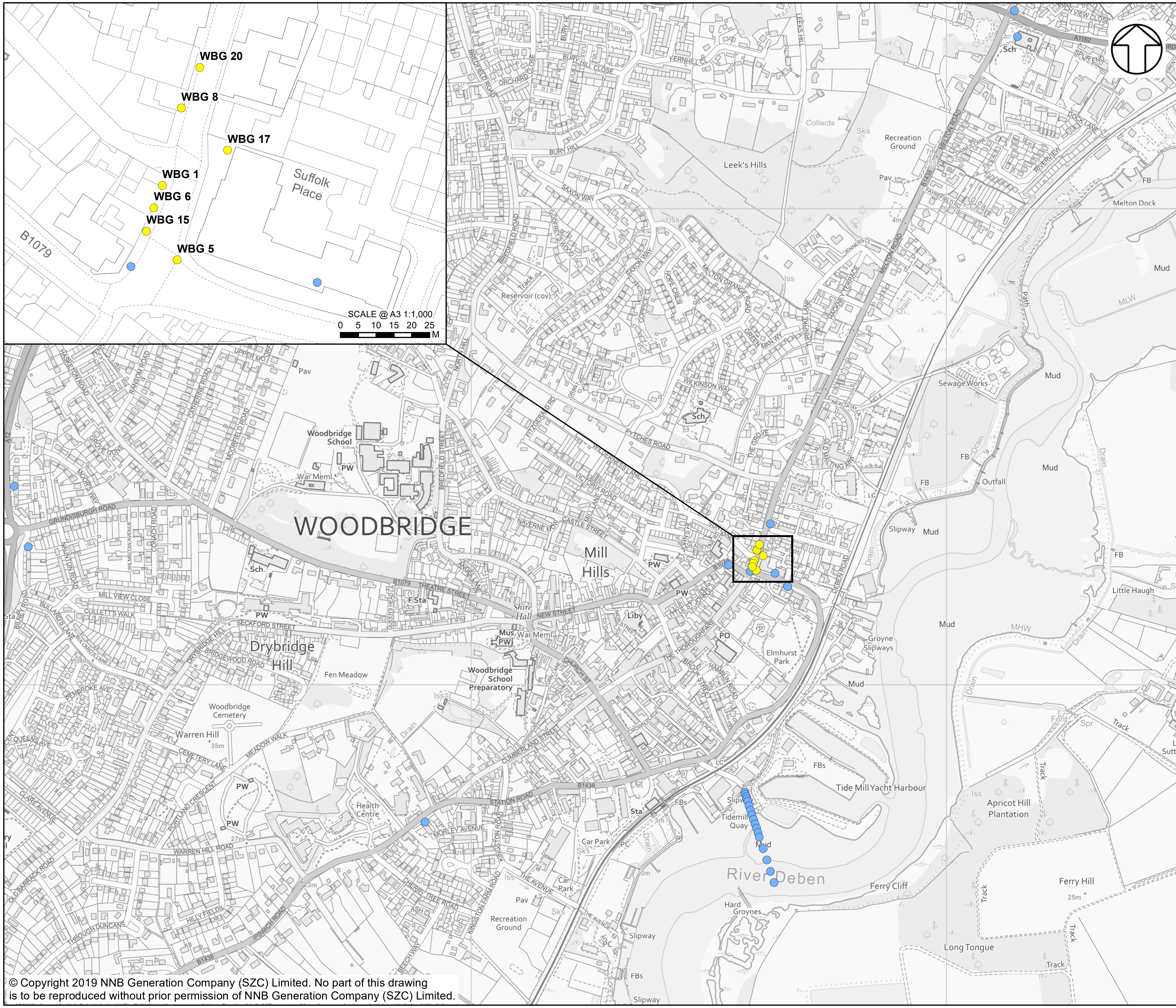

NOTES

KEY

- SIZEWELL C DOMAIN
- WOODBRIDGE AIR QUALITY MANAGEMENT AREA DOMAIN

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DOCUMENT:
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DRAWING TITLE:
WOODBRIDGE AQMA DOMAIN

DRAWING NO:
FIGURE 12B.6

DATE:	DRAWN:	SCALE :
JAN 2020	J.W.	1:7,500 @A3

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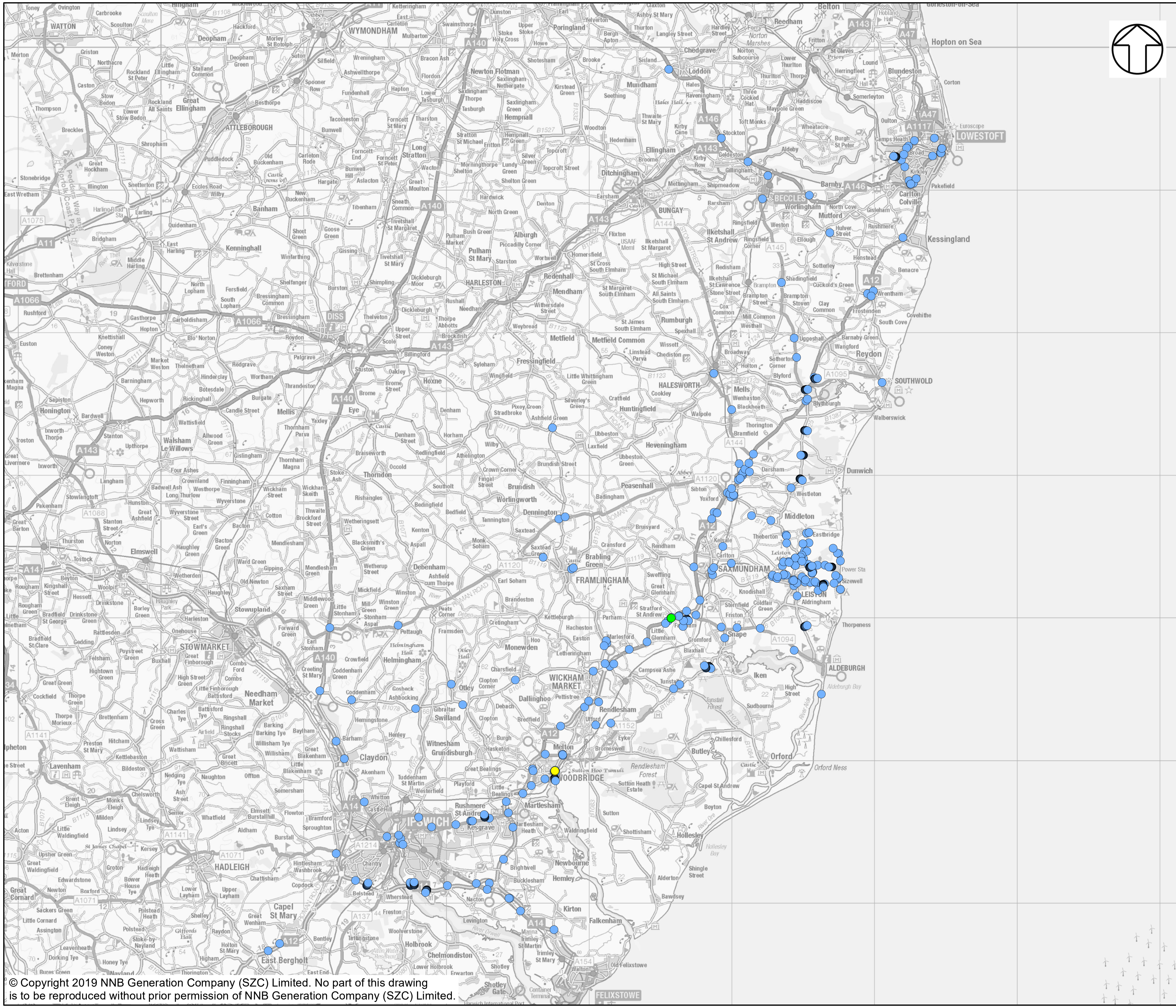

NOTES

KEY

- SIZEWELL C DOMAIN
- STRATFORD ST ANDREW AIR QUALITY MANAGEMENT AREA DOMAIN
- WOODBRIDGE AIR QUALITY MANAGEMENT AREA DOMAIN

NOT PROTECTIVELY MARKED

DOCUMENT:
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ENVIRONMENTAL STATEMENT
VOLUME 2
APPENDIX 12B
TRANSPORT EMMISSIONS ASSESSMENT

DRAWING TITLE:
AIR QUALITY REPRESENTATIVE RECEPTORS

DRAWING NO:
FIGURE 12B.7

DATE:	DRAWN:	SCALE :
JAN 2020	J.W.	1:250,000 @A3

SCALE BAR
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