



**Project:**

**40 Caversham Road, Reading**

**Air Quality Impact Assessment**

**Client:**

**Mandale Construction North Ltd**

**Date:**

**13/03/2025**

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## EXECUTIVE SUMMARY

Envirosolution were commissioned by Mandale Construction North Ltd to undertake an Air Quality Impact Assessment in support of a proposed residential development at 40 Caversham Rd, Reading RG1 7EB.

The proposal comprises change of use by way of a 'prior approval' application to form 31 apartments over 4 floors.

Due to the scale of the development, there is the potential for the development to expose future site users to poor air quality, as well as to cause impacts at nearby sensitive receptors because of the construction and operational phases. Therefore, an Air Quality Assessment is required to determine baseline conditions at the site, assess site suitability for the proposed end-use and assess the potential impacts as a result of the proposed development.

Potential construction phase air quality impacts from fugitive dust emissions were assessed as a result of demolition and construction activities. It is considered that the use of good practice control measures would provide suitable mitigation for a development of this size and nature and reduce potential impacts to an acceptable level.

Dispersion modelling was undertaken in order to predict annual mean pollutant concentrations across the application site and to predict impacts as a result of additional road vehicle exhaust emissions associated with the proposed development. Results were subsequently verified using local monitoring results provided by Reading Borough Council (RBC).

The dispersion modelling results indicated that annual mean pollutant concentrations across the application site were below the relevant air quality objectives at proposed sensitive locations.

Additionally, the assessment concluded that impacts on pollutant levels as a result of operational phase pollutant emissions were predicted to be **not significant** at all sensitive locations in the vicinity of the site, as a result of negligible impact at discrete sensitive receptor locations. The use of robust assumptions, where necessary, was considered to provide sufficient results confidence for an assessment of this nature.

Based on the assessment results the site is considered suitable for the proposed end use and complies with the RBC Local Plan and NPPF.

## **1. INTRODUCTION**

### **1.1 Background**

Envirosolution has been commissioned by Mandale Construction North Ltd to undertake an Air Quality Impact Assessment in support of a proposal, comprising change of use by way of a 'prior approval' application to form 31 apartments over 4 floors, hereinafter referred to as the "Proposed Development".

### **1.2 Site Location and Assessment Context**

The application site is located at 40 Caversham Rd, Reading RG1 7EB, UK at approximate National Grid Reference (NGR) 471165, 173740.

The application site is located within Reading Air Quality Management Area (AQMA) which has been declared due to exceedances of the Annual NO<sub>2</sub> Air Quality Objectives (AQOs). Subsequently, the Proposed Development has the potential to introduce future site users into an area of existing poor air quality.

Additionally, due to the scale of the Proposed Development, there is potential to cause impacts upon existing NO<sub>2</sub> and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) concentrations as a result of additional road vehicle exhaust emission generated during operation. Fugitive dust impacts may also arise as a result of emission generated during construction.

An Air Quality Assessment has therefore been produced to quantify annual mean NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations across the site to consider suitability for the proposed end-use, and to assess potential impacts as a result of the development. The assessment will be undertaken in accordance with the requirements of the National Planning Policy Framework (NPPF), and the RBC Local Planning Policy.

Reference should be made to Figure 1 within Appendix A for a location plan.

### **1.3 Limitations**

This report has been produced in accordance with Envirosolution standard terms of engagement. Envirosolution has prepared this report solely for the use of the Client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from Envirosolution; a charge may be levied against such approval.

2. LEGISLATION, GUIDANCE AND POLICY

The following legislation, guidance and policy will be considered and adhered to during the preparation of the Air Quality Assessment:

- European Union (EU) Directive 2008/50/EC;
- The National Planning Policy Framework (NPPF), updated on 12<sup>th</sup> December 2024;
- The National Planning Practice Guidance (NPPG), relevant chapters produced on 1<sup>st</sup> November 2019;
- Section 82 of the Environment Act (1995) (Part IV), updated 9<sup>th</sup> November 2021;
- Air Quality Strategy: Framework for local authority delivery, April 2023;
- The Air Quality Standards (Amendment) Regulations (2016);
- Local Air Quality Management Technical Guidance 2022 LAQM.(TG22), DEFRA, 2022;
- Guidance on the Assessment of Dust from Demolition and Construction, Institute of Air Quality Management (IAQM), January 2024;
- Land-Use Planning and Development Control: Planning for Air Quality, Environmental Protection UK (EPUK) and Institute of Air Quality Management (IAQM), January 2017;
- Environmental Improvement Plan 2023, DEFRA, February 2023;
- Reading Borough Local Plan , November 2019.

2.1 UK Legislation and Guidance

The Air Quality Standards (Amendment) Regulations (2016) came into force on 31st December 2016. These Regulations amend the Air Quality Standards Regulations 2010 and transpose the EU Directive 2008/50/EC into UK law. Air Quality Limit Values (AQLVs) were published in these regulations for 7 pollutants, as well as Target Values for an additional 6 pollutants. It should be taken into consideration that the AQLV for PM<sub>2.5</sub> stated in the Air Quality Standards Regulations (2010) was amended in the Environment (Miscellaneous Amendments) (EU Exit) Regulations (2020).

Part IV of the Environment Act (2021) requires the UK government to produce a national Air Quality Strategy (AQS) which contains standards, objectives and measures for improving ambient air quality. The most recent AQS was produced by DEFRA and published on 28<sup>th</sup> April 2023. The AQS sets out Air Quality Objectives (AQOs) that are maximum ambient pollutant concentrations that are not to be exceeded either without exception or with a permitted number of exceedances over a specified timescale. These are generally in line with the AQLVs, although the requirements for compliance vary slightly.

The Environmental Improvement Plan, released in January 2023, outlines both long-term and interim objectives aimed at minimising public exposure to PM<sub>2.5</sub>. Following this, the 2040 concentration goal was established within the Environmental Targets (Fine Particulate Matter) Regulations (2023).

Table 1 presents the AQOs for pollutants considered within this assessment.

Table 1: Air Quality Objectives

| Pollutant       | Air Quality Objectives |                                                           |
|-----------------|------------------------|-----------------------------------------------------------|
|                 | Concentration (µg/m³)  | Averaging Periods                                         |
| NO <sub>2</sub> | 40                     | Annual mean                                               |
|                 | 200                    | 1-hour mean; not to be exceeded more than 18 times a year |

| Pollutant         | Air Quality Objectives                     |                                                            |
|-------------------|--------------------------------------------|------------------------------------------------------------|
|                   | Concentration ( $\mu\text{g}/\text{m}^3$ ) | Averaging Periods                                          |
| PM <sub>10</sub>  | 40                                         | Annual mean                                                |
|                   | 50                                         | 24-hour mean; not to be exceeded more than 35 times a year |
| PM <sub>2.5</sub> | 25 (12*)                                   | Annual mean                                                |

\* Interim Target to be achieved by end of January 2028.

Table 2 summarises the advice provided in LAQM(TG22) on where the AQOs for pollutants considered within this report apply.

**Table 2: Examples of Where the Air Quality Objectives Apply**

| Averaging Periods | Objectives Should Apply At                                                                                                                                                                                                                                                                                                                                                                                                              | Objectives Should Not Apply At                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Annual mean       | All locations where members of the public might be regularly exposed: building façades of residential properties, schools, hospitals, care homes etc.                                                                                                                                                                                                                                                                                   | Building façades of offices or other places of work where members of the public do not have regular access: hotels, unless people live there as their permanent residence; gardens of residential properties; kerbside sites (as opposed to locations at the building façade); or any other location where public exposure is expected to be short term. |
| 24-hour mean      | All locations where the annual mean objective would apply, together with hotels and gardens of residential properties.                                                                                                                                                                                                                                                                                                                  | Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term.                                                                                                                                                                                                               |
| 1-hour mean       | All locations where the annual mean and 24-hour mean objectives apply; kerbside sites (for example, pavements of busy shopping streets); those parts of car parks, bus stations and railway stations etc. which are not fully enclosed, where members of the public might reasonably be expected to spend one hour or more; any outdoor locations where members of the public might reasonably be expected to spend one hour or longer. | Kerbside sites where the public would not be expected to have regular access.                                                                                                                                                                                                                                                                            |

The results of the dispersion modelling assessment will also be compared against the relevant AQOs detailed in Table 1 to determine significance.

## 2.2 Local Air Quality Management

Under Section 82 of the Environment Act (2021) (Part IV), Local Authorities (LAs) are required to periodically review and assess air quality within their area of administration under the system of Local Air Quality Management (LAQM). This review and assessment of air quality involves considering present and likely future air quality against the AQOs. If it is predicted that levels at sensitive locations where members of the public are regularly present for the relevant averaging period are likely to be exceeded, the LA is required to declare an AQMA. For each AQMA the LA is required to produce an Air Quality Action Plan (AQAP), the objective of which is to reduce pollutant concentrations in pursuit of the AQOs.

### **2.3 Local Planning Policy**

A review of the local policy indicated the following policy in relation to air quality that is relevant to this assessment:

#### **EN15: AIR QUALITY**

Development should have regard to the need to improve air quality and reduce the effects of poor air quality.

i. Development that would detrimentally affect air quality will not be permitted unless the effect is to be mitigated.

The following criteria should be taken into account:

- Whether the proposal, including when combined with the cumulative effect of other developments already permitted, would worsen air quality;
- Whether the development is within, or accessed via, an Air Quality Management Area;
- Whether it can be demonstrated that a local worsening in air quality that would not detrimentally affect human health or the environment would be offset by an overall improvement in air quality, for instance through reduction in the need to travel.

ii. Where a development would introduce sensitive uses (such as residential, schools and nurseries, hospitals, care facilities) into, or intensify such uses within, an Air Quality Management Area, detrimental effects on that use will be mitigated. Mitigation measures should be detailed in any planning application. If there are significant detrimental effects that cannot be mitigated, the application should be refused.

iii. Where required, planning obligations will be used to secure contributions to measures to tackle poor air quality or for air quality monitoring.

Reference has been made to these policies during the undertaking of this Air Quality Assessment.

### 3. METHODOLOGY

#### 3.1 Construction Phase Assessment

There is the potential for fugitive dust emissions to occur as a result of construction phase activities. These have been assessed in accordance with the methodology outlined within the Institute of Air Quality Management (IAQM) document 'Guidance on the Assessment of Dust from Demolition and Construction'.

Reference should be made to Appendix E for details of the relevant IAQM construction phase assessment criteria, which were utilised in conjunction with site specific information.

Activities on the proposed construction site have been divided into the following types to reflect their different potential impacts. These are:

- Demolition
- Earthworks
- Construction
- Trackout

The potential for dust emissions was assessed for each activity that is likely to take place and considered three separate dust effects:

- Annoyance due to dust soiling
- Harm to ecological receptors
- The risk of health effects due to a significant increase in exposure to PM<sub>10</sub> and PM<sub>2.5</sub>

A desktop survey will be undertaken to identify human and ecological receptors within the relevant assessment buffers specified by the IAQM guidance. Should sensitive receptors not be present within the relevant distances then negligible impacts would be expected and further assessment is not necessary.

Following the identification of sensitive receptors, a site is then allocated a risk category which is assigned to each activity, based on the scale and nature of the works, as well as the sensitivity of the area to dust impacts.

The assigned magnitude and sensitivity will then determine the overall risk and appropriate mitigation measures to be employed during construction phase activities.

#### 3.2 Operational Phase Assessment

##### 3.2.1 Road Vehicle Exhaust Impact Assessment

The Proposed Development has potential to cause impacts upon existing pollution levels at nearby sensitive receptors as a result of additional road vehicle exhaust emissions (NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>) generated during the operational phase.

Impacts have been defined by predicting pollutant concentrations at sensitive locations with and without the Proposed Development in place using dispersion modelling and the following assessment scenarios:

- 2023 as baseline year for verification against latest ratified data;

- Opening year do-minimum (DM) (predicted traffic flows in 2027 should the proposals not proceed);
- Opening year do-something (DS) (predicted traffic flows in 2027 should the proposals be completed, with the addition of traffic generated by the Proposed Development).

In light of expected emission improvements to the national vehicle fleet guided by government policy, it would be unrealistic not to assume a reduction to vehicle emission factors in future years, given the anticipated development year of 2027.

The 2027 scenario assumes an emission drop off based on assumptions provided by the Emission Factor Toolkit (Eft v12.0) supported by the uptake of low emission vehicles and government incentives and targets concerning fleet proportions by 2030. The results of this scenario will form the basis of this report.

Sensitivity analysis has also been undertaken to assess associated road vehicle exhaust emissions impacts based on the use of 2027 traffic data with 2023 and emission factors obtained from the Eft v12.0 produced by DEFRA.

The sensitivity analysis assumes that vehicle emission factors will not improve in line with current predictions and future emission factors will remain consistent with those predicted for the baseline year of 2023. This has been undertaken to consider a worst-case scenario and does not form the basis of impact significance.

Reference should be made to Appendix B for full assessment input details, Appendix C for details of the full assessment results and Appendix D for sensitivity analysis.

### 3.2.2 EPUK and IAQM Impact Significant Criteria

Receptors potentially sensitive to changes in pollutant concentrations were identified within the assessment extents. LAQM.TG(22) provides the following examples of where annual mean AQOs should apply:

- Residential properties;
- Schools;
- Hospitals;
- Care homes.

The sensitivity impact significance of each receptor was defined in accordance with the criteria shown in Table 3. These are based upon the guidance provided within the EPUK and IAQM guidance.

**Table 3: EPUK and IAQM Assessment Significance Criteria**

| Long Term Average Concentration | % Change in Concentration Relative to AQO |            |             |             |
|---------------------------------|-------------------------------------------|------------|-------------|-------------|
|                                 | 1                                         | 2-5        | 6-10        | >10         |
| 75% or less of AQO              | Negligible                                | Negligible | Slight      | Moderate    |
| 76 - 94% of AQO                 | Negligible                                | Slight     | Moderate    | Moderate    |
| 95 - 102% of AQO                | Slight                                    | Moderate   | Moderate    | Substantial |
| 103 - 109% of AQO               | Moderate                                  | Moderate   | Substantial | Substantial |

The criteria shown in Table 3 is adapted from the EPUK and IAQM guidance with sensitivity descriptors included to allow comparisons of various air quality impacts. It should be noted that changes of 0%, i.e. less than 0.5%, will be described as negligible in accordance with the EPUK and IAQM guidance.

Following the prediction of impacts at discrete receptor locations utilising the criteria in Table 3 the EPUK and IAQM guidance states that this framework is to be used as a starting point to make a judgement on significance of effect but other influences might need to be accounted for. Whilst impacts might be determined as 'slight', 'moderate' or 'substantial' at individual receptors, overall effect might not necessarily be deemed as significant in some circumstances. The following factors may provide some assistance in determining the overall significance of a development:

- Number of properties affected by significant air quality impacts and a judgement on the overall balance;
- Where new exposure is introduced into an existing area of poor air quality, then the number of people exposed to levels above the objective will be relevant;
- The percentage change in concentration relative to the objective and the descriptions of the impacts at the receptors;
- Whether or not an exceedance of an objective is predicted to arise or be removed in the study area due to a substantial increase or decrease;
- The extent to which an objective is exceeded e.g. an annual mean NO<sub>2</sub> concentration of 41µg/m<sup>3</sup> should attract less significance than an annual mean of 51µg/m<sup>3</sup>.

These factors were considered and an overall significance determined for the impact of operational phase road traffic emissions. It should be noted that the determination of significance relies on professional judgement and reasoning should be provided as far as practicable. This has been considered throughout the assessment when defining predicted impacts.

Full details of data used for the modelling assessment are presented in Appendix B of this report.

### 3.2.3 Future Exposure

The Proposed Development is located within from Reading AQMA. Subsequently, the proposals have potential to introduce new receptors into an area of elevated NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations.

Detailed dispersion modelling was therefore undertaken to quantify annual mean pollutant concentrations across the site and determine suitability for the proposed use. The following modelling scenarios were utilised during the assessment:

- 2023 as baseline year for verification against latest ratified data;
- 2027 do-minimum (DM) (predicted traffic flows in 2027 should the proposals be completed, without the addition of traffic generated by the Proposed Development)
- 2027 do-something (DS) (predicted traffic flows in 2027 should the proposals be completed, with the addition of traffic generated by the Proposed Development)

The results of the dispersion modelling assessment will also be compared against the relevant AQOs detailed in Table 1 to determine significance. Full details of data used for the modelling assessment are presented in Appendix B of this report.

## 4. BASELINE

Existing air quality conditions in the vicinity of the application site were identified in order to provide a baseline for assessment. These are detailed in the following sections.

### 4.1 Local Air Quality Management

As required by the Environment Act (2021), Reading Borough Council has undertaken a review and assessment of air quality within their area of administration. This process has indicated that annual mean concentrations of Annual NO<sub>2</sub> are above the AQO within their administration. As such, AQMAs have been declared, the closest being described as:

- Reading AQMA

The application site is located within the AQMA. As such there is the potential for the Proposed Development to introduce future site users into an area of elevated Annual NO<sub>2</sub>, and cause air quality impacts during the construction and operational phases. This has been considered within this report.

RBC has concluded that concentrations of all other pollutants considered within the AQS are currently below the relevant AQOs and as such no further AQMAs have been designated.

### 4.2 Air Quality Monitoring

Monitoring of pollutant concentrations is undertaken by RBC using monitoring methods throughout their areas of administration. A review of most recent Air Quality Monitoring Data indicated that there are currently no automatic analysers and 4 diffusion tubes located within the vicinity of the Proposed Development, presented in Table 4.

**Table 4: Monitoring Results**

| ID      | Site Name               | Type     | NGR (m) |        | Distance to Site (m) | Annual Mean Concentration (µg/m <sup>3</sup> ) |      |      |
|---------|-------------------------|----------|---------|--------|----------------------|------------------------------------------------|------|------|
|         |                         |          | X       | Y      |                      | 2021                                           | 2022 | 2023 |
| WOK 505 | Church Road             | Roadside | 474444  | 172062 | 3683.54              | 29.2                                           | 28.9 | 27.3 |
| WOK 882 | Sign Whitley Wd Ln      | Roadside | 472299  | 168677 | 5189.09              | 23.8                                           | 24.9 | 23.9 |
| WOK 836 | 349 Old Whitley Wood Ln | Roadside | 472346  | 168684 | 5192.75              | 18.7                                           | 21.5 | 18.9 |
| WOK 841 | Lane End Villas         | Kerbside | 473130  | 168783 | 5332.85              | 23.0                                           | 24.4 | 20.6 |

As indicated in Table 4, there were no exceedances of annual mean AQOs at the monitoring locations in recent years.

Reference should be made to Figure 2 within Appendix A for a graphical representation of the monitoring locations.

### 4.3 Background Pollutant Concentrations

The total concentration of a pollutant consists of explicit local emission sources (such as roads and industrial sources) and the background component. The background component consists of indeterminate sources which are transported into an area from further away by meteorological conditions. Background pollutant concentrations are therefore the ambient level of pollution that is not affected by local sources of pollution.

It is not usually practical to obtain a true representation of background levels in urban areas due to corruption by local sources; background levels used in assessments may contain a mixture of both sources.

Predictions of background pollutant concentrations on a 1km by 1km grid basis have been produced by DEFRA for the entire of the UK to assist LAs in their Review and Assessment of air quality. The Proposed Development site is located across grid square:

- NGR: 471500, 173500

Data for this location was downloaded from the DEFRA website. For the purpose of this assessment, background concentrations are summarised in Table 5 for the base year (2023) and the predicted development opening year (2027).

**Table 5: Predicted Background Pollutant Concentrations**

| Pollutant         | Predicted Background Concentration ( $\mu\text{g}/\text{m}^3$ ) |           |
|-------------------|-----------------------------------------------------------------|-----------|
|                   | 2023                                                            | 2027      |
| NO <sub>x</sub>   | 20.56824                                                        | 18.03242  |
| NO <sub>2</sub>   | 15.04816                                                        | 13.38139  |
| PM <sub>10</sub>  | 13.032678                                                       | 12.685792 |
| PM <sub>2.5</sub> | 7.969577                                                        | 7.644437  |

As indicated in Table 5, background concentrations of all pollutants are below the relevant AQOs detailed in Table 1.

### 4.4 Sensitive Receptors

A sensitive receptor is defined as any location which may be affected by changes in air quality as a result of a development. These have been defined for construction dust impacts in the following Sections.

#### 4.4.1 Construction Phase Sensitive Receptors

There are no nationally or European designated ecological receptors within 50m of the Site boundary, or within 50m from a route used by construction vehicles on the public highway (up to 250m from the Site entrance(s)). Therefore, the risk of dust effects at a nationally or European designated ecological receptor site from construction impacts have not been considered further in this assessment.

Human receptors sensitive to potential dust impacts during demolition and construction were identified from a desk-top study of the area up to 250m from the Proposed Development boundary. These are summarised in Table 6.

**Table 6: Construction Phase Dust Sensitive Receptors**

| Distance from Site Boundary (m) | Approximate Number of Human Receptors |
|---------------------------------|---------------------------------------|
| Less than 20                    | 10 - 100                              |
| 20 - 50m                        | More than 100                         |
| 50 - 100m                       | More than 100                         |
| 100 - 250m                      | More than 100                         |

Reference should be made to Figure 3 within Appendix A for a graphical representation of construction phase dust buffer zones.

Receptors sensitive to potential dust impacts from trackout were identified from a desk-top study of the area up to 50m from the road network within 250m of the site access route. These are summarised in Table 7. The exact construction vehicle access routes were not available for the purpose of this assessment as they will depend on sourcing of materials. This is likely to be decided by the contractor. However, it was assumed that construction traffic would access the Proposed Development via Caversham Road, to ensure a worst-case trackout assessment is undertaken.

**Table 7: Trackout Dust Sensitive Receptors**

| Distance from Trackout Routes (m) | Approximate Number of Human Receptors |
|-----------------------------------|---------------------------------------|
| Less than 20                      | 10 - 100                              |
| 20 - 50m                          | More than 100                         |

Reference should be made to Figure 4 within Appendix A for a graphical representation of trackout dust buffer zones. A number of additional factors have been considered when determining the sensitivity of the surrounding area. These are summarised in Table 8.

**Table 8: Additional Area Sensitivity Factors**

| Guidance                                                                                                                                                      | Comment                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Whether there is any history of dust generating activities in the area                                                                                        | The site is located in a residential area. There is likely to have been a history of dust generating activities due to commuting and development processes in the locality.                                                                                                |
| The likelihood of concurrent dust generating activity on nearby sites.                                                                                        | A review of the RBC Planning Portal indicated that there are planning applications within 500m of the Proposed Development. As such, there is potential for concurrent dust generation to occur should the construction phases of the aforementioned developments overlap. |
| Pre-existing screening between the source and the receptors                                                                                                   | There is no pre-existing screening between the source and the receptors.                                                                                                                                                                                                   |
| Conclusions drawn from analysing local meteorological data which accurately represent the area: and if relevant the season during which works will take place | The wind direction is predominantly from the South of the development. As such, properties to the North of the site would be most affected by dust emissions.                                                                                                              |

| Guidance                                                                                             | Comment                                                                                                            |
|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Conclusions drawn from local topography                                                              | The topography of the area appears to be predominantly flat. As such, there are no constraints to dust dispersion. |
| Duration of the potential impact, as a receptor may become more sensitive over time                  | Currently the duration of the construction phase is unknown.                                                       |
| Any known specific receptor sensitivities which go beyond the classifications given in the document. | No specific receptor sensitivities identified during the baseline.                                                 |

#### 4.4.2 Operational Phase Sensitive Receptors

A desk-top study was undertaken in order to identify any sensitive receptor locations in the vicinity of the site that require specific consideration during the assessment and are summarised Table 9.

**Table 9: Existing Sensitive Human Receptors**

| Sensitive Receptor |                                                  | NGR (m)    |            | Height (m) |
|--------------------|--------------------------------------------------|------------|------------|------------|
|                    |                                                  | X          | Y          |            |
| R1                 | 6 Vachel Rd, Reading, Tanfields RG1 1NX, UK      | 471155.392 | 173646.517 | 1.5        |
| R2                 | 12a Howard St, Reading RG1 7XS, UK               | 471022.81  | 173301.186 | 1.5        |
| R3                 | 44 Howard St, Reading RG1 7XS, UK                | 471037.359 | 173219.523 | 1.5        |
| R4                 | Capital Point, 60 Temple Pl, Reading RG1 6QL, UK | 471318.651 | 172739.707 | 1.5        |
| R5                 | Capital Point, Temple Pl, Reading RG1 6QJ, UK    | 471345.546 | 172655.657 | 1.5        |
| R6                 | 28 Queens Rd, Reading RG1 4AU, UK                | 471938.2   | 173204.481 | 1.5        |
| R7                 | 52 Queens Rd, Reading RG1 4AU, UK                | 472020.875 | 173196.753 | 1.5        |
| R8                 | Queens Wharf, 47 Queens Rd, Reading RG1 4QE, UK  | 472173.272 | 173256.864 | 1.5        |
| R9                 | Barkham Mews, Reading RG1 4BX, UK                | 472275.457 | 173255.421 | 1.5        |
| R10                | 108 Queens Rd, Reading RG1 4DG, UK               | 472322.63  | 173266.434 | 1.5        |
| R11                | Charles Place, 246 Kings Rd, Reading RG1 4NZ, UK | 472604.998 | 173242.754 | 1.5        |
| R12                | 282 Kings Rd, Reading RG1 4HP, UK                | 472731.808 | 173225.209 | 1.5        |
| R13                | 229A London Rd, Reading RG1 3NY, UK              | 473218.69  | 173237.855 | 1.5        |
| R14                | 251 London Rd, Reading RG1 3NY, UK               | 473279.4   | 173269.204 | 1.5        |
| R15                | 150 London Rd, Reading RG1 3PA, UK               | 473461.662 | 173324.995 | 1.5        |
| R16                | 339 London Rd, Reading RG1 3NZ, UK               | 473500.995 | 173363.826 | 1.5        |
| R17                | 405 London Rd, Reading RG1 3PE, UK               | 473689.542 | 173426.724 | 1.5        |

| Sensitive Receptor |                                           | NGR (m)    |            | Height (m) |
|--------------------|-------------------------------------------|------------|------------|------------|
|                    |                                           | X          | Y          |            |
| R18                | 18-20 Wokingham Rd, Reading RG6 1JQ, UK   | 473233.816 | 173142.855 | 1.5        |
| R19                | 56 Wokingham Rd, Reading RG6 1JJ, UK      | 473519.41  | 173041.29  | 1.5        |
| R20                | 21 Wokingham Rd, Reading RG6 1LE, UK      | 473560.601 | 173052.673 | 1.5        |
| R21                | 114 Wokingham Rd, Reading RG6 1JL, UK     | 473785.664 | 172884.176 | 1.5        |
| R22                | 81 Wokingham Rd, Reading RG6 1LH, UK      | 473957.421 | 172730.6   | 1.5        |
| R23                | 135A Wokingham Rd, Reading RG6 1LW, UK    | 474085.465 | 172548.252 | 1.5        |
| R24                | 55 St Peter's Rd, Reading RG6 1PA, UK     | 474184.917 | 172530.01  | 1.5        |
| R25                | 52 St Peter's Rd, Reading RG6 1PD, UK     | 474243.407 | 172456.111 | 1.5        |
| R26                | 128 St Peter's Rd, Reading RG6 1PH, UK    | 474452.524 | 172310.773 | 1.5        |
| R27                | 53 Church Rd, Earley, Reading RG6 1EY, UK | 474511.036 | 172283.263 | 1.5        |

Receptors modelled at 1.5m to represent the average UK “breathing height” above ground level. Reference should be made to Figure 6 within Appendix A for a graphical representation of operational phase emission sensitive human receptor locations.

## 5. ASSESSMENT

### 5.1 Construction Phase Assessment

#### 5.1.1 Step 1 – Screening

The undertaking of activities such as excavation, ground works, cutting, construction, concrete batching and storage of materials has the potential to result in fugitive dust emissions throughout the construction phase. Vehicle movements both on-site and on the local road network also have the potential to result in the re-suspension of dust from haul road and highway surfaces.

The desk-study detailed in Section 4.4 identified a number of receptors with a high classification of sensitivity within 250m of the site boundary, and within 50m of the anticipated trackout routes. As such, a detailed assessment of potential dust impacts was required, and summarised in the below sections.

Reference should be made to Appendix E for details of the relevant IAQM construction phase assessment criteria, which were utilised in conjunction with site specific information.

### 5.1.2 Step 2A – Magnitude

The scale and nature of the works was determined to assess the magnitude of dust arising from each construction phase activity. The determination of magnitude was based upon the criteria detailed in Appendix E, with the outcome of Step 2A summarised below in Table 10.

#### Demolition

Demolition was required for this project but no detailed description was given. The volume of buildings to be demolished is therefore likely to be less than 12,000m<sup>3</sup>. As such, the magnitude of potential emissions related to earthworks activities is considered Small.

#### Earthworks

Earthworks was not required for this project, and thus, it is not anticipated that air quality impacts would arise as a result of earthwork activities.

#### Construction

Construction was required for this project but no detailed description was given. Given the scale of the Proposed Development the total building and infrastructure volume is less than 12,000m<sup>3</sup>. As such, the magnitude of potential dust emissions related to construction activities is considered Small.

#### Trackout

Information on the number of HDV trips to be generated during the construction phase of the Proposed Development was not available at the time of assessment. Similarly, the surface material and unpaved road length was not known at this stage of the project. Based on the site area, it is anticipated that the unpaved road length is likely to be less than 50m. The magnitude of potential dust emissions from trackout is therefore considered Small.

**Table 10: Dust Emission Magnitude**

| Magnitude of Activities |              |          |
|-------------------------|--------------|----------|
| Demolition              | Construction | Trackout |
| Small                   | Small        | Small    |

### 5.1.3 Step 2B – Sensitivity

The next step (Step 2B) is to determine the sensitivity of the surrounding area, based on general principles such as amenity and aesthetics, as well as human exposure sensitivity.

#### Dust Soiling

As shown in Section 4.4.1, the desktop study indicated approximately more than 100 sensitive receptors within 250m of the Proposed Development boundary and more than 100 within 50m of the anticipated trackout routes.

Based on the assessment criteria detailed in Appendix E, the sensitivity of the receiving environment to potential dust soiling impacts was considered to be High for all construction phase activities. This is because the site is

situated in a predominantly residential area and the people would reasonably be expected to be present here for extended periods of time.

### Human Health

The annual mean concentration of PM<sub>10</sub> is 13.03µg/m<sup>3</sup> as detailed in Section 4. Based on the receptor counts provided, the area is considered to be of Low for all construction phase activities.

The sensitivity of the receiving environment to specific potential dust impacts, based on the criteria detailed in Appendix E is summarised in Table 11.

**Table 11: Sensitivity of the Surrounding Area**

| Potential Impact | Sensitivity of the Surrounding Area |              |            |
|------------------|-------------------------------------|--------------|------------|
|                  | Demolition                          | Construction | Trackout   |
| Dust Soiling     | High                                | High         | High       |
| Human Health     | Low                                 | Low          | Low        |
| Ecological       | Negligible                          | Negligible   | Negligible |

#### 5.1.4 Step 2C – Risk

Both the magnitude and sensitivity factors are combined in Step 2C to determine the risk of dust impacts without the application of best practice mitigation measures.

It should be noted that the potential for impacts depends significantly on the distance between the dust generating activity and receptor location. Risk was predicted based on a worst-case scenario of works being undertaken at the site boundary closest to each sensitive area. Therefore, actual risk is likely to be lower than that predicted during the majority of the construction phase. A summary of the risk from each dust generating activity is provided in Table 12.

**Table 12: Summary of Potential Unmitigated Dust Risks**

| Potential Impact | Risk       |              |            |
|------------------|------------|--------------|------------|
|                  | Demolition | Construction | Trackout   |
| Dust Soiling     | Medium     | Low          | Low        |
| Human Health     | Negligible | Negligible   | Negligible |
| Ecological       | Negligible | Negligible   | Negligible |

#### 5.1.5 Step 3 – Mitigation

The IAQM guidance provides a number of potential mitigation measures to reduce impacts during the construction phase. These measures have been adapted for the Proposed Development site as summarised in Table 13.

**Table 13: Fugitive Dust Mitigation Measures**

| Issue                              | Control Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Communication                      | <ul style="list-style-type: none"> <li>• Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.</li> <li>• Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager.</li> <li>• Display the head or regional office contact information.</li> <li>• Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Local Authority. The level of detail will depend on the risk, and should include as a minimum the highly recommended measures in this document. The desirable measures should be included as appropriate for the site.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Site Management                    | <ul style="list-style-type: none"> <li>• Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.</li> <li>• Make the complaints log available to the local authority when asked.</li> <li>• Record any exceptional incidents that cause dust and/or air emissions, either on- or off-site, and the action taken to resolve the situation in the log book.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Monitoring                         | <ul style="list-style-type: none"> <li>• Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100 m of site boundary, with cleaning to be provided if necessary.</li> <li>• Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked.</li> <li>• Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.</li> <li>• Agree dust deposition, dust flux, or real-time PM10 continuous monitoring locations with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on site or, if it a large site, before work on a phase commences. Further guidance is provided by IAQM on monitoring during demolition, earthworks and construction.</li> </ul> |
| Preparing and Maintaining the Site | <ul style="list-style-type: none"> <li>• Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.</li> <li>• Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.</li> <li>• Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period.</li> <li>• Avoid site runoff of water or mud.</li> <li>• Keep site fencing, barriers and scaffolding clean using wet methods.</li> <li>• Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below.</li> <li>• Cover, seed or fence stockpiles to prevent wind whipping.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                  |

| Issue            | Control Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operations       | <ul style="list-style-type: none"> <li>• Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.</li> <li>• Ensure an adequate water supply on the site for effective dust/particulate matter suppression/ mitigation, using non-potable water where possible and appropriate.</li> <li>• Use enclosed chutes and conveyors and covered skips.</li> <li>• Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.</li> <li>• Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.</li> </ul> |
| Waste Management | <ul style="list-style-type: none"> <li>• Avoid bonfires and burning of waste materials.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Demolition       | <ul style="list-style-type: none"> <li>• Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust).</li> <li>• Ensure effective water suppression is used during demolition operations. Hand held sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.</li> <li>• Avoid explosive blasting, using appropriate manual or mechanical alternatives.</li> <li>• Bag and remove any biological debris or damp down such material before demolition.</li> </ul>                                                                                                          |
| Construction     | <ul style="list-style-type: none"> <li>• Avoid scabbling (roughening of concrete surfaces) if possible.</li> <li>• Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Trackout         | <ul style="list-style-type: none"> <li>• Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.</li> <li>• Avoid dry sweeping of large areas.</li> <li>• Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.</li> <li>• Record all inspections of haul routes and any subsequent action in a site log book.</li> <li>• Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).</li> </ul>                                                                                                                                                                                                                    |

#### 5.1.6 Step 4 – Residual Impacts

Assuming the relevant mitigation measures outlined in Table 13 are implemented, the residual effect from all dust generating activities is predicted to be negligible and therefore **not significant** in accordance with the IAQM guidance.

## 5.2 Operational Phase Assessment

The assessment was undertaken in accordance with the methodology detailed in Section 3.2.

### 5.2.1 Future Exposure

Annual mean NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations were predicted across the Proposed Development for the 2027 DS scenario at a height of 1.5m to represent exposure across the ground floor level, as shown in Figures 7 to 9 within Appendix A.

Background NO<sub>2</sub> PM<sub>10</sub> and PM<sub>2.5</sub> levels are likely to be lower at elevated heights due to increased distance from emission sources, such as roads. Therefore, predicted concentrations at heights above ground floor level are considered acceptable in regards to future exposure and have not been assessed further.

#### Nitrogen Dioxide (NO<sub>2</sub>)

Predicted annual mean NO<sub>2</sub> concentrations across the Proposed Development site during the DS scenario are summarised in Table 14.

**Table 14: Modelling Results - Annual Mean NO<sub>2</sub> at Proposed Development**

| Floor Level   | Predicted 2027 Annual Mean NO <sub>2</sub> Concentration (µg/m <sup>3</sup> ) |
|---------------|-------------------------------------------------------------------------------|
| Ground (1.5m) | 30.42 – 36.73                                                                 |

The predicted concentrations shown in Table 12 indicate that there were no exceedances of the AQO across the Proposed Development. As such, it is considered that annual mean NO<sub>2</sub> levels at the Proposed Development site should not be viewed as a constraint to development.

Predictions of 1-hour NO<sub>2</sub> concentrations were not produced as part of the dispersion modelling assessment. LAQM.TG(22) states if annual mean NO<sub>2</sub> concentrations are below 60µg/m<sup>3</sup> then it is unlikely that the 1-hour AQO will be exceeded. As such, based on the results in Table 14, it is not predicted that on-site concentrations will exceed the 1-hour mean AQO for NO<sub>2</sub>.

Based on the results of the dispersion modelling assessment, the site is considered to be suitable for residential use without the implementation of mitigation techniques to protect future site users from elevated NO<sub>2</sub> concentrations.

#### Particulate Matter (PM<sub>10</sub> & PM<sub>2.5</sub>)

Predicted annual mean PM<sub>10</sub> and PM<sub>2.5</sub> concentrations across the Proposed Development site during the DS scenario are summarised in Table 15.

**Table 15: Modelling Results - Annual Mean PM<sub>10</sub> and PM<sub>2.5</sub> at Proposed Development**

| Floor Level   | Predicted 2027 Annual Mean Concentration (µg/m <sup>3</sup> ) |                   |
|---------------|---------------------------------------------------------------|-------------------|
|               | PM <sub>10</sub>                                              | PM <sub>2.5</sub> |
| Ground (1.5m) | 18.53 – 21.92                                                 | 10.76 - 11.66     |

The predicted concentrations shown in Table 13 indicate that there were no exceedances of the AQO across the Proposed Development. As such, it is considered that annual mean PM<sub>10</sub> and PM<sub>2.5</sub> levels at the Proposed Development site should not be viewed as a constraint to development.

Based on the results of the dispersion modelling assessment, the site is considered to be suitable for residential use without the implementation of mitigation techniques to protect future site users from elevated PM<sub>10</sub> and PM<sub>2.5</sub> concentrations.

### 5.2.2 Impact Assessment - Predicted Concentrations at Existing Sensitive Use

Based on data from the appointed traffic consultant, it is expected that there will be 69 Annual Average Daily Traffic (AADT) trips generated by the Proposed Development. Based on the anticipated AADT trip generation, a dispersion modelling assessment was undertaken in order to quantify potential changes in pollutant concentrations at sensitive locations in the vicinity of the site.

Impacts on annual mean NO<sub>2</sub> PM<sub>10</sub> and PM<sub>2.5</sub> concentrations as a result of operational phase exhaust emissions were predicted to be **Negligible**.

The overall significance of potential impacts was determined to be **not significant** in accordance with the EPUK and IAQM guidance. The use of robust assumptions, in the form of worse-case road vehicle emission factors, was considered to provide sufficient confidence of results for an assessment of this nature.

Full assessment results and commentary can be found in Appendix C, further discussion on the overall impact significance is provided in Table 16.

It should be noted that predicted impacts on annual mean NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations using 2023 worst-case scenario emission factors were also predicted to be Negligible at 27 sensitive receptor locations within the vicinity of the site. Full assessment results on the sensitivity analysis can be found in Appendix D.

### 5.2.3 Impact Significance

The overall significance of operational phase road traffic emission impacts for 2027 was determined as not significant. This was based on the predicted impacts at discrete receptor locations and the considerations outlined in Section 5.2. Further justifications are provided in Table 16.

**Table 16: Overall Road Emissions Impact Significance**

| Guidance                                                                                                                                                                                          | Comment                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of properties affected by slight, moderate or substantial air quality impacts and a judgement on the overall balance                                                                       | Impacts on annual mean NO <sub>2</sub> concentrations were predicted to be <b>Negligible</b> at 27 sensitive receptors. Impacts on PM <sub>10</sub> and PM <sub>2.5</sub> concentrations were predicted to be negligible and therefore not significant at all sensitive receptors.<br><br>The overall balance on air quality impacts as a result of the Proposed Development is therefore deemed <b>not significant</b> . |
| Where new exposure is introduced into an existing area of poor air quality, then the number of people exposed to levels above the objective or limit value will be relevant                       | The proposed development will not result in any new exposure to pollutant concentrations above the AQOs at sensitive locations on the application site and as such no new exposure has been introduced.                                                                                                                                                                                                                   |
| The percentage change in concentration relative to the objective and the descriptions of the impacts at the receptors                                                                             | The change in concentration relative to the AQO was predicted to range from: <ul style="list-style-type: none"> <li>• 0.0% to 0.075% for NO<sub>2</sub>;</li> <li>• 0.007 % to 0.033% for PM<sub>10</sub>;</li> <li>• 0.004% to 0.017% for PM<sub>2.5</sub></li> </ul> Resultant impacts were subsequently predicted to be <b>Negligible</b> at 27 receptor locations.                                                    |
| Whether or not an exceedance of an objective is predicted to arise or be removed in the study area due to a substantial increase or decrease.                                                     | There were no substantial exceedances of the annual mean AQO for NO <sub>2</sub> PM <sub>10</sub> or PM <sub>2.5</sub> at any location within the modelling extent.                                                                                                                                                                                                                                                       |
| The extent to which an objective is exceeded e.g. an annual mean NO <sub>2</sub> concentration of 41µg/m <sup>3</sup> should attract less significance than an annual mean of 51µg/m <sup>3</sup> | As stated above, there were no new exceedances of the annual mean AQOs for NO <sub>2</sub> , PM <sub>10</sub> and PM <sub>2.5</sub> at any location within the modelling extent.                                                                                                                                                                                                                                          |

The assessment was undertaken in accordance with the methodology detailed in Section 3.2 and full impact assessment results can be found in Appendix C.

#### 5.2.4 Combustion Emission Impacts

There is no scope within the development to provide any form of combustion plant. As such, potential air quality impacts associated with operational phase combustion emissions are therefore predicted to be not significant.

## 6. CONCLUSION

Envirosolution were commissioned by Mandale Construction North Ltd to undertake an Air Quality Impact Assessment in support of a proposed residential development at 40 Caversham Rd, Reading RG1 7EB.

During the construction phase of the Proposed Development there is the potential for air quality impacts as a result of fugitive dust emissions from the site. These were assessed in accordance with the IAQM methodology. It is considered that the use of good practice control measures would provide suitable mitigation for a development of this size and nature and reduce potential impacts to an acceptable level.

Dispersion modelling was undertaken to quantify annual mean NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations across the application to assess suitability for proposed use. Modelling results were subsequently verified using local monitoring data.

The dispersion modelling results indicated that annual mean NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations across the application site were below the relevant AQOs at the proposed sensitive use.

Impacts on annual mean NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations as a result of operational phase exhaust emissions were predicted to be Negligible at 27 sensitive receptor locations within the vicinity of the site.

The overall significance of potential impacts was determined to be **not significant** in accordance with the EPUK and IAQM guidance. The use of robust assumptions, in the form of worse-case road vehicle emission factors, was considered to provide sufficient confidence of results for an assessment of this nature.

There is also no onsite combustion plant associated with the Proposed Development. As a result, building emissions from combustion processes were also screened as not significant throughout the operational phase.

Based on the assessment results the site is considered suitable for the proposed end use and complies with the RBC Local Plan and NPPF.

## ABBREVIATIONS

|                   |                                                                    |
|-------------------|--------------------------------------------------------------------|
| RBC               | Reading Borough Council                                            |
| AADT              | Annual Average Daily Traffic                                       |
| ADM               | Atmospheric Dispersion Modelling                                   |
| APEC              | Air Pollution Exposure Criteria                                    |
| AQLV              | Air Quality Limit Value                                            |
| AQMA              | Air Quality Management Area                                        |
| AQO               | Air Quality Objectives                                             |
| AQS               | Air Quality Strategy                                               |
| CERC              | Cambridge Environmental Research Consultants                       |
| DEFRA             | Department for Environment, Food and Rural Affairs                 |
| DfT               | Department for Transport                                           |
| DM                | Do Minimum                                                         |
| DS                | Do Something                                                       |
| DMP               | Dust Management Plan                                               |
| EPUK              | Environmental Protection UK                                        |
| EU                | European Union                                                     |
| GIA               | Gross Internal Area                                                |
| HDV               | Heavy Duty Vehicle                                                 |
| IAQM              | Institute of Air Quality Management                                |
| LAQM              | Local Air Quality Management                                       |
| LA                | Local Authority                                                    |
| LDV               | Light Duty Vehicle                                                 |
| NGR               | National Grid Reference                                            |
| NO <sub>2</sub>   | Nitrogen dioxide                                                   |
| NO <sub>x</sub>   | Oxides of nitrogen                                                 |
| NPPF              | National Planning Policy Framework                                 |
| NPPG              | National Planning Practice Guidance                                |
| PM <sub>2.5</sub> | Particulate matter with an aerodynamic diameter of less than 2.5µm |
| PM <sub>10</sub>  | Particulate matter with an aerodynamic diameter of less than 10µm  |
| TEMPRO            | Trip End Model Presentation Program                                |
| Z <sub>0</sub>    | Roughness Length                                                   |

**END OF REPORT**

APPENDIX A: FIGURES

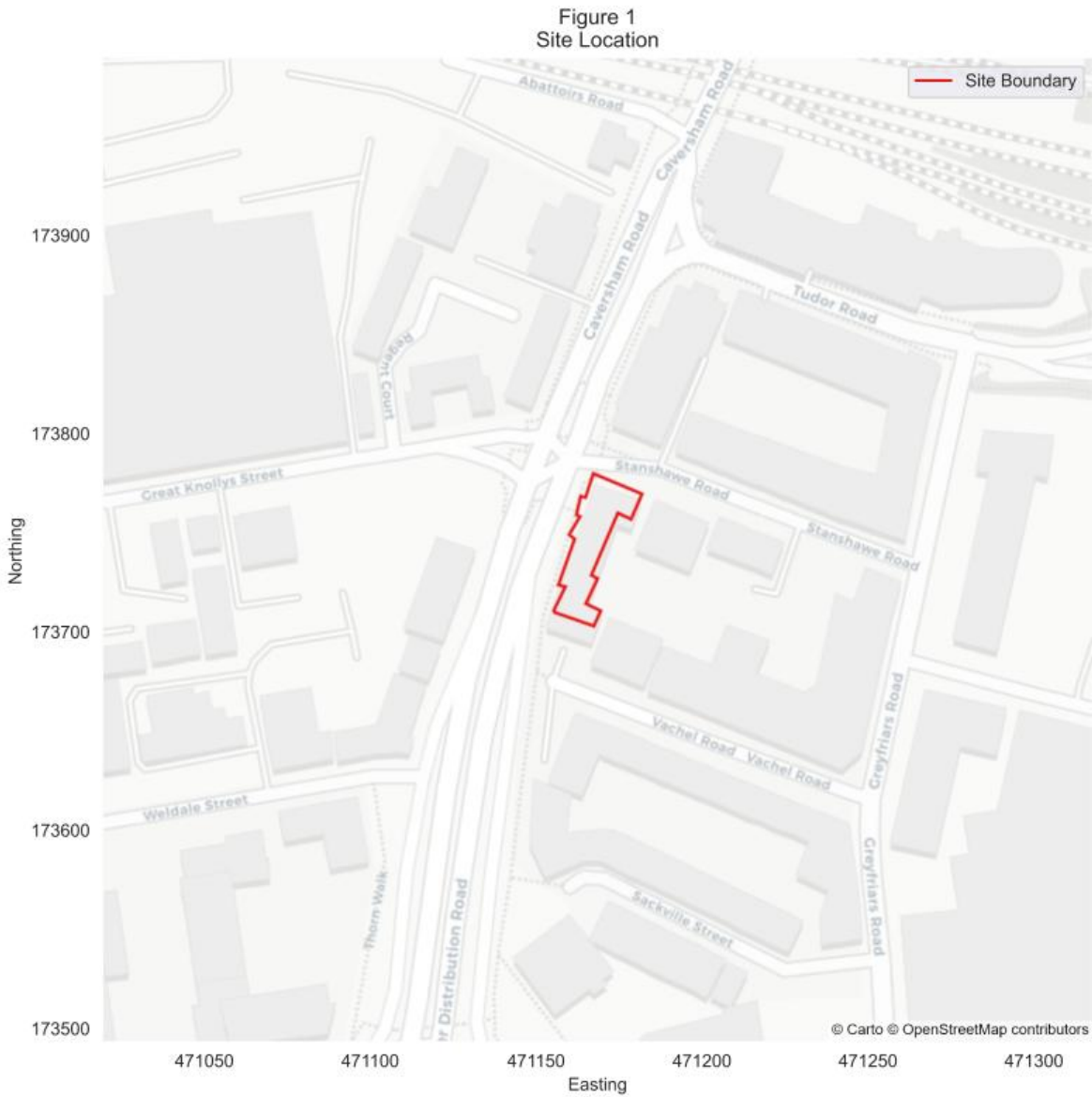
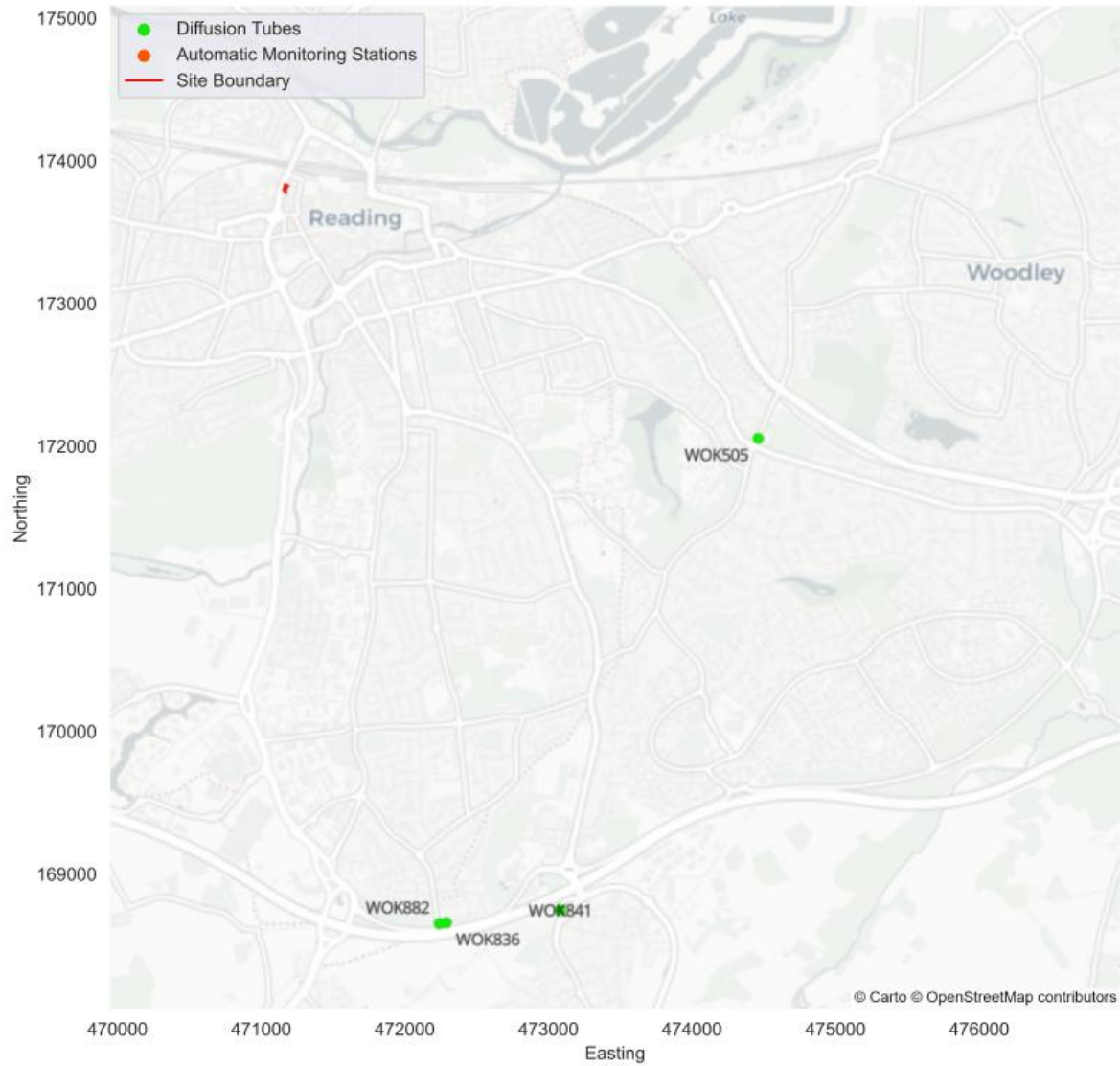
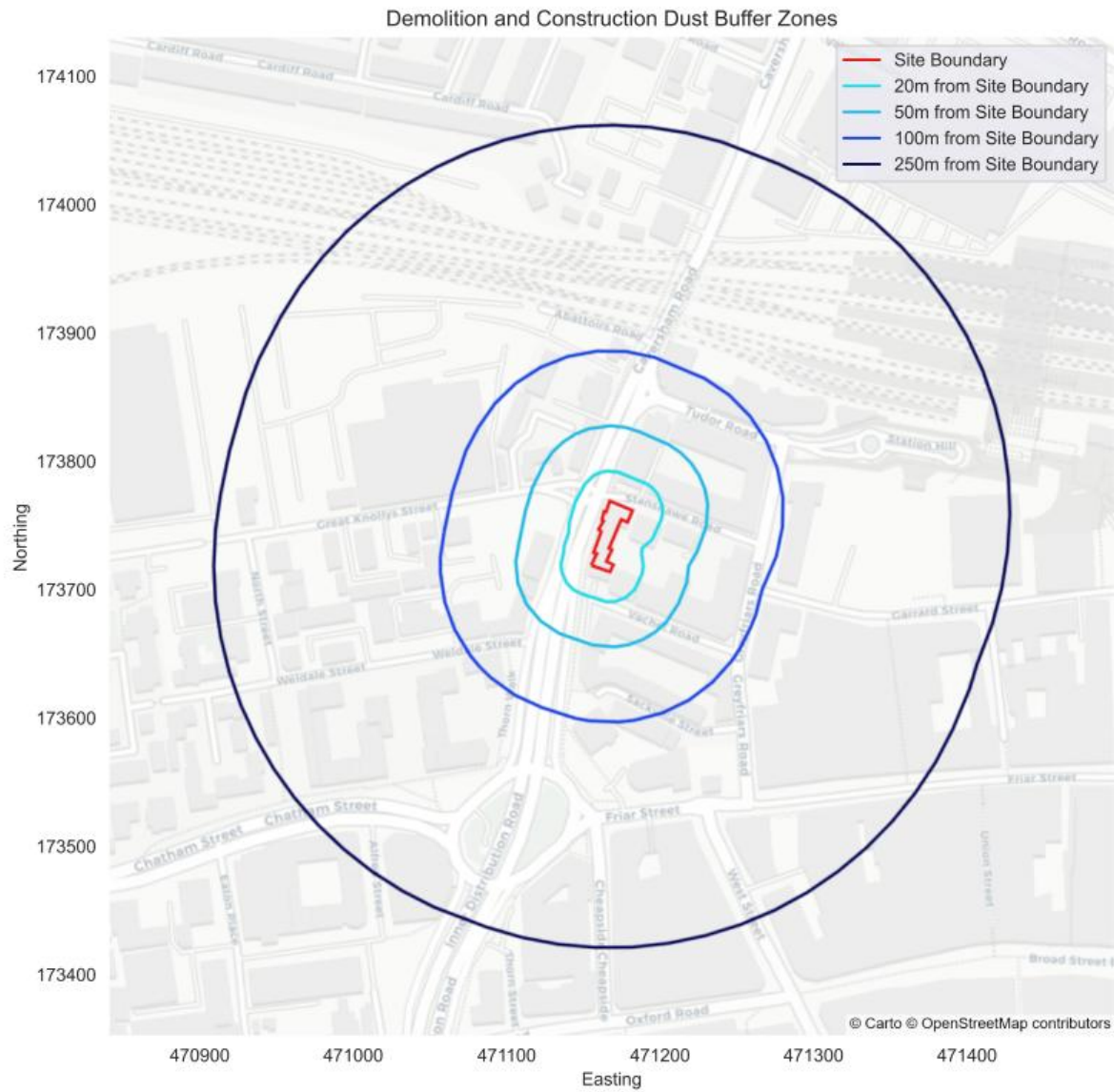
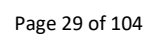


Figure 2  
Monitoring Locations







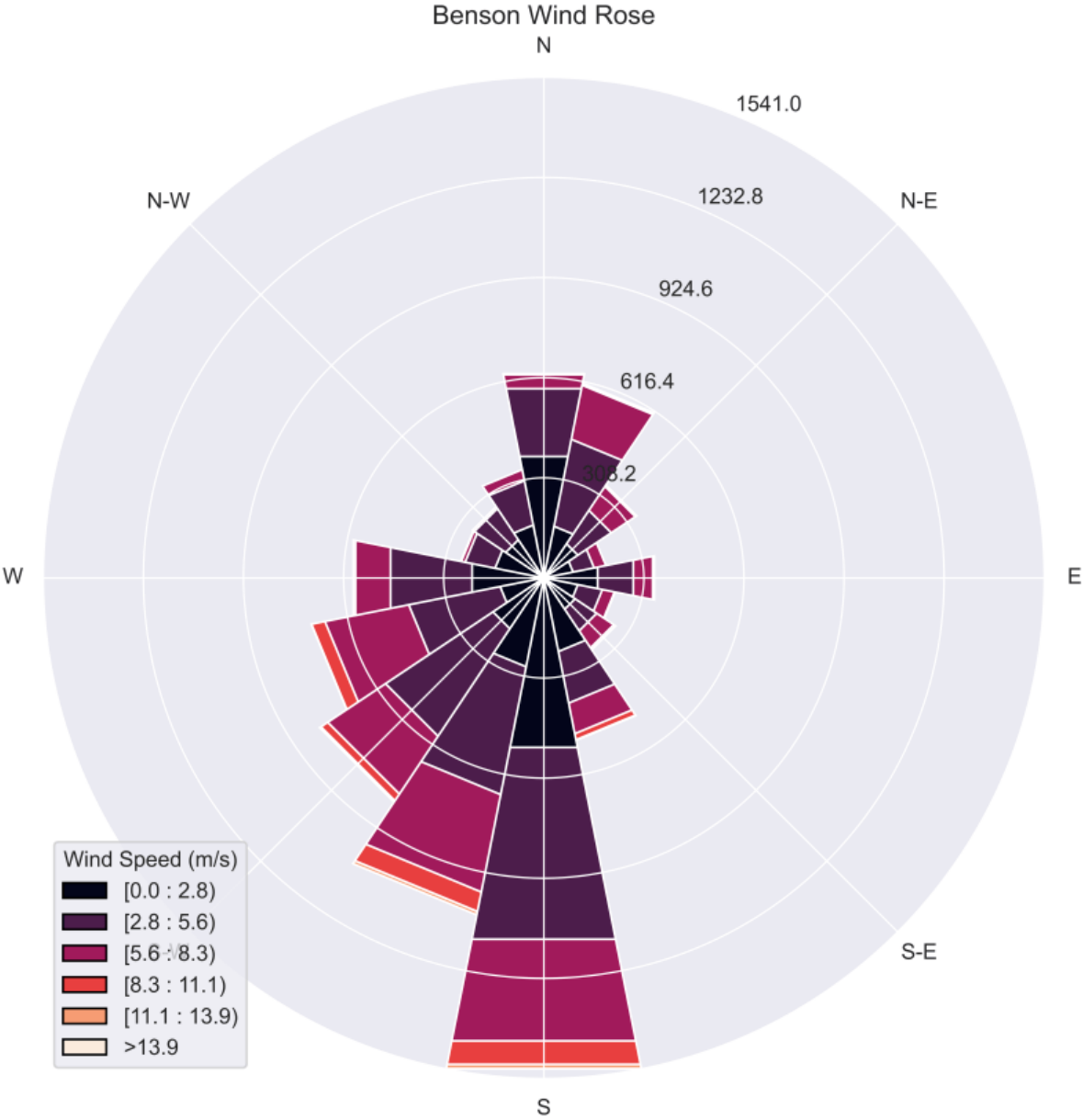
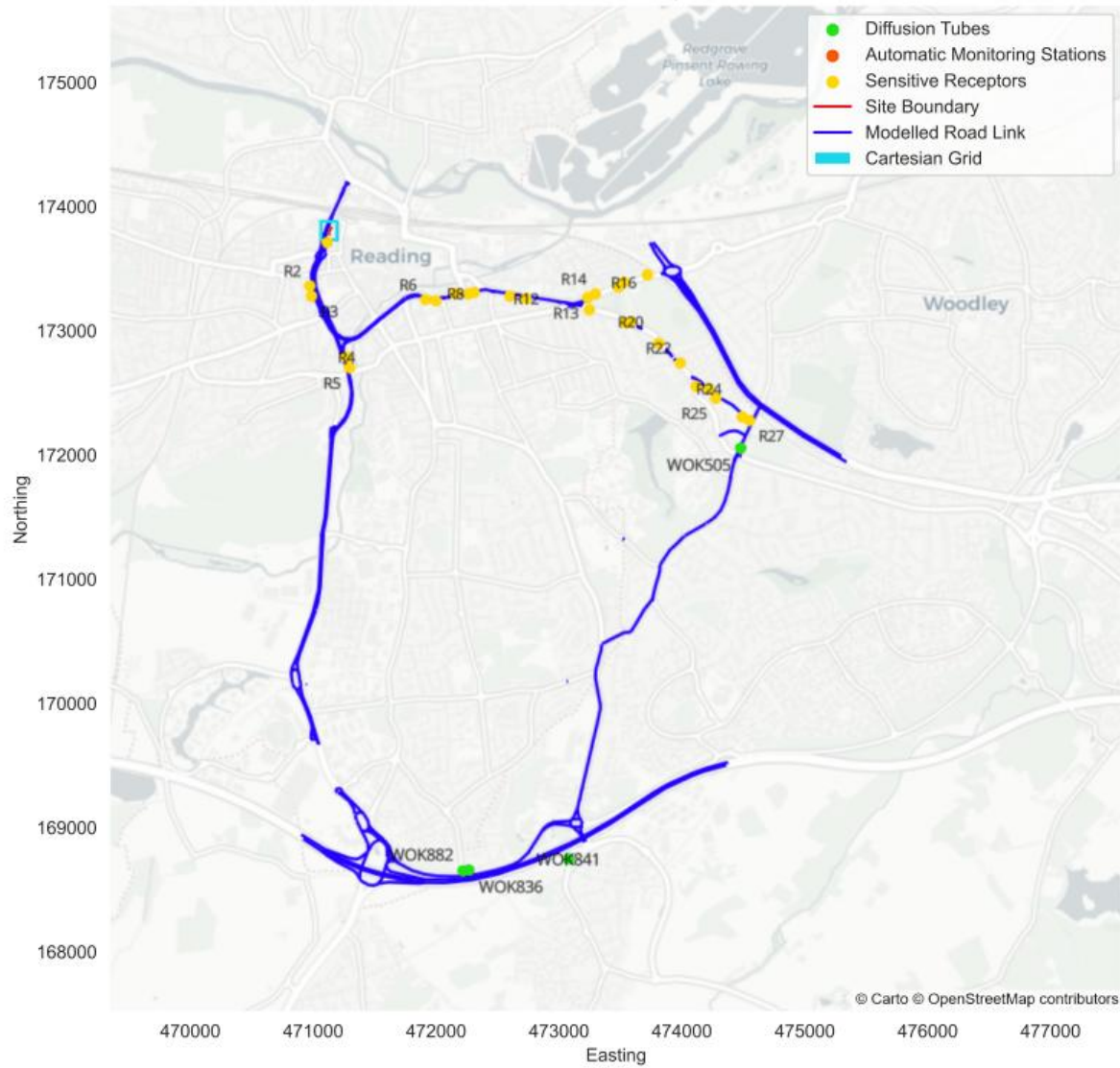
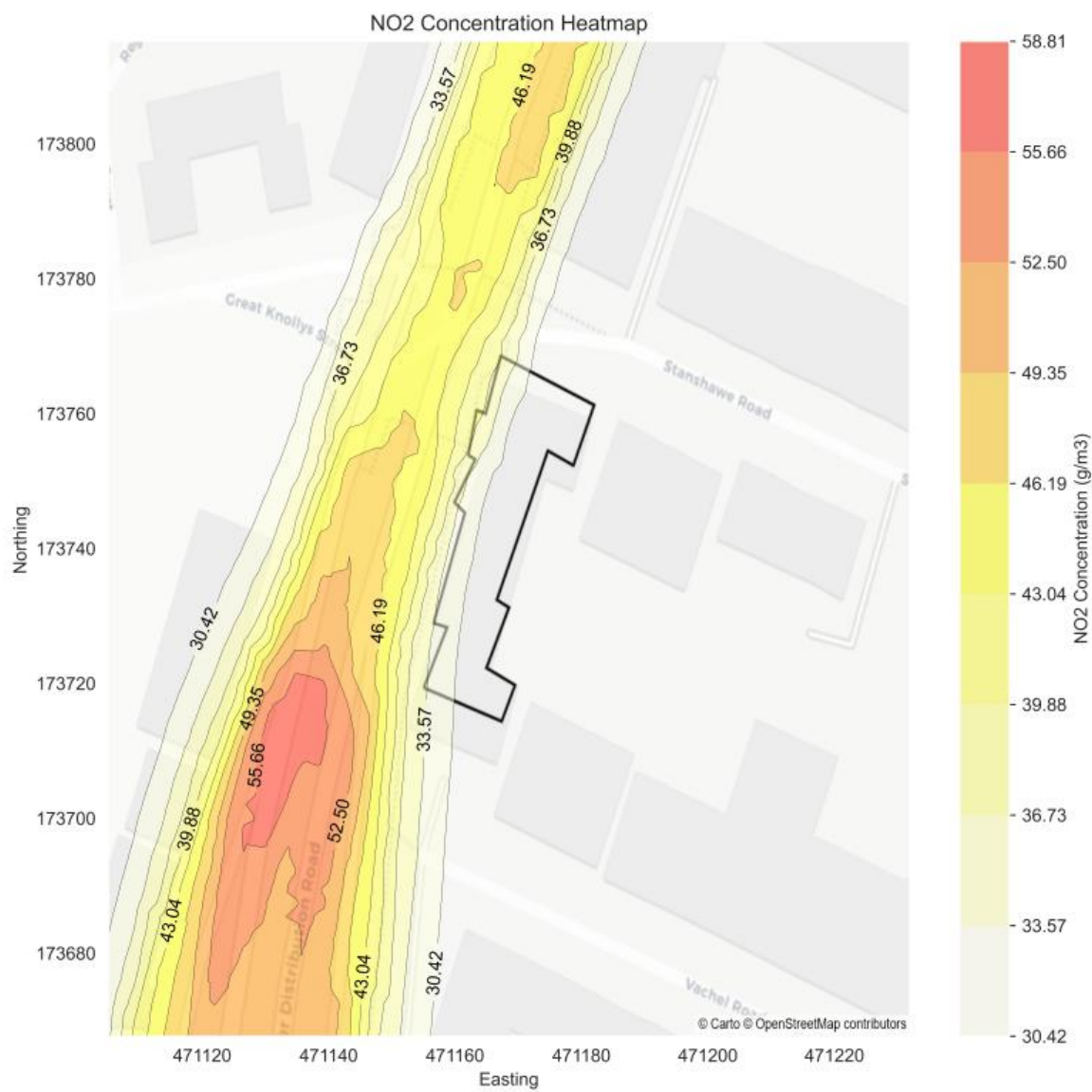
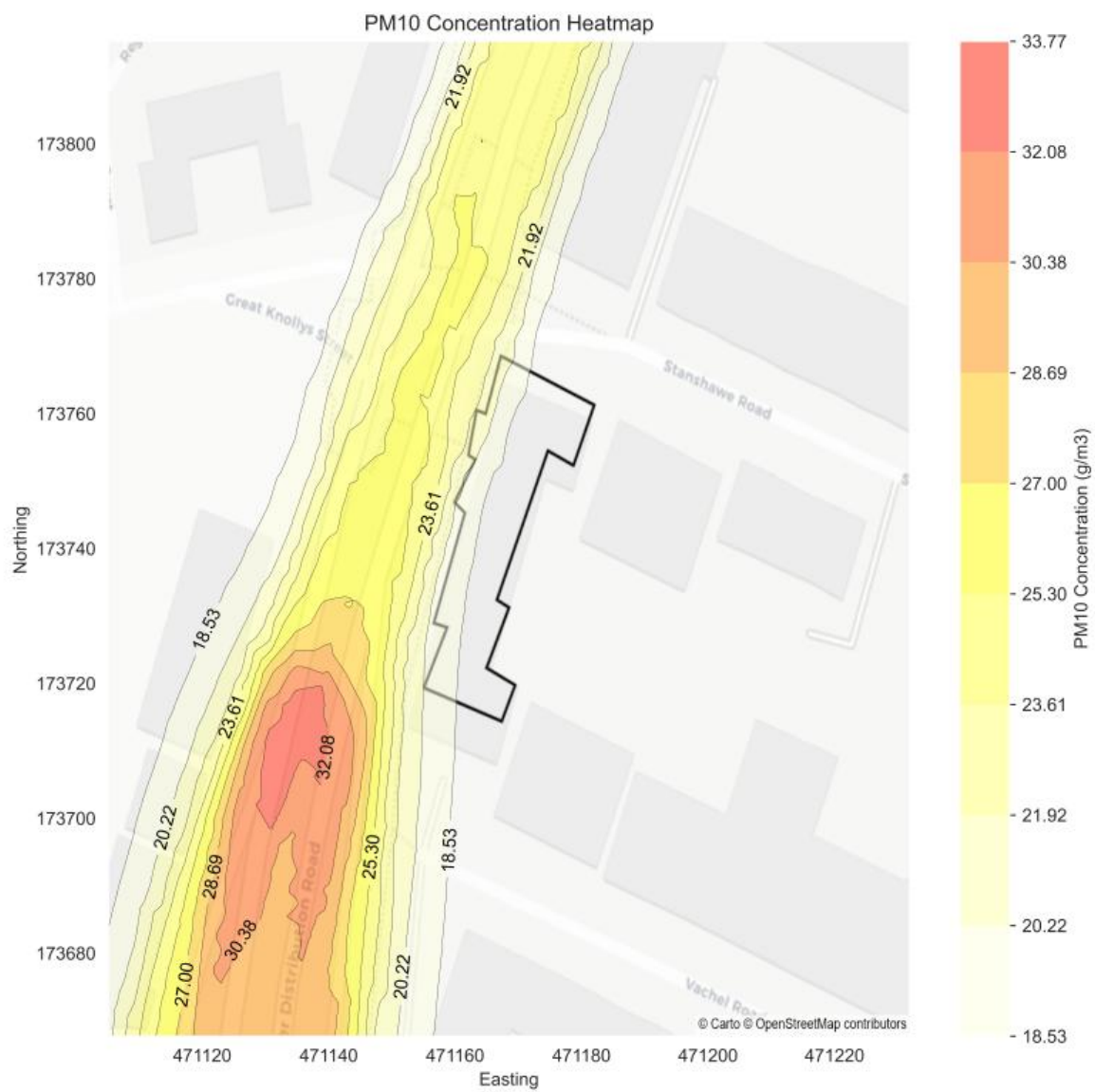
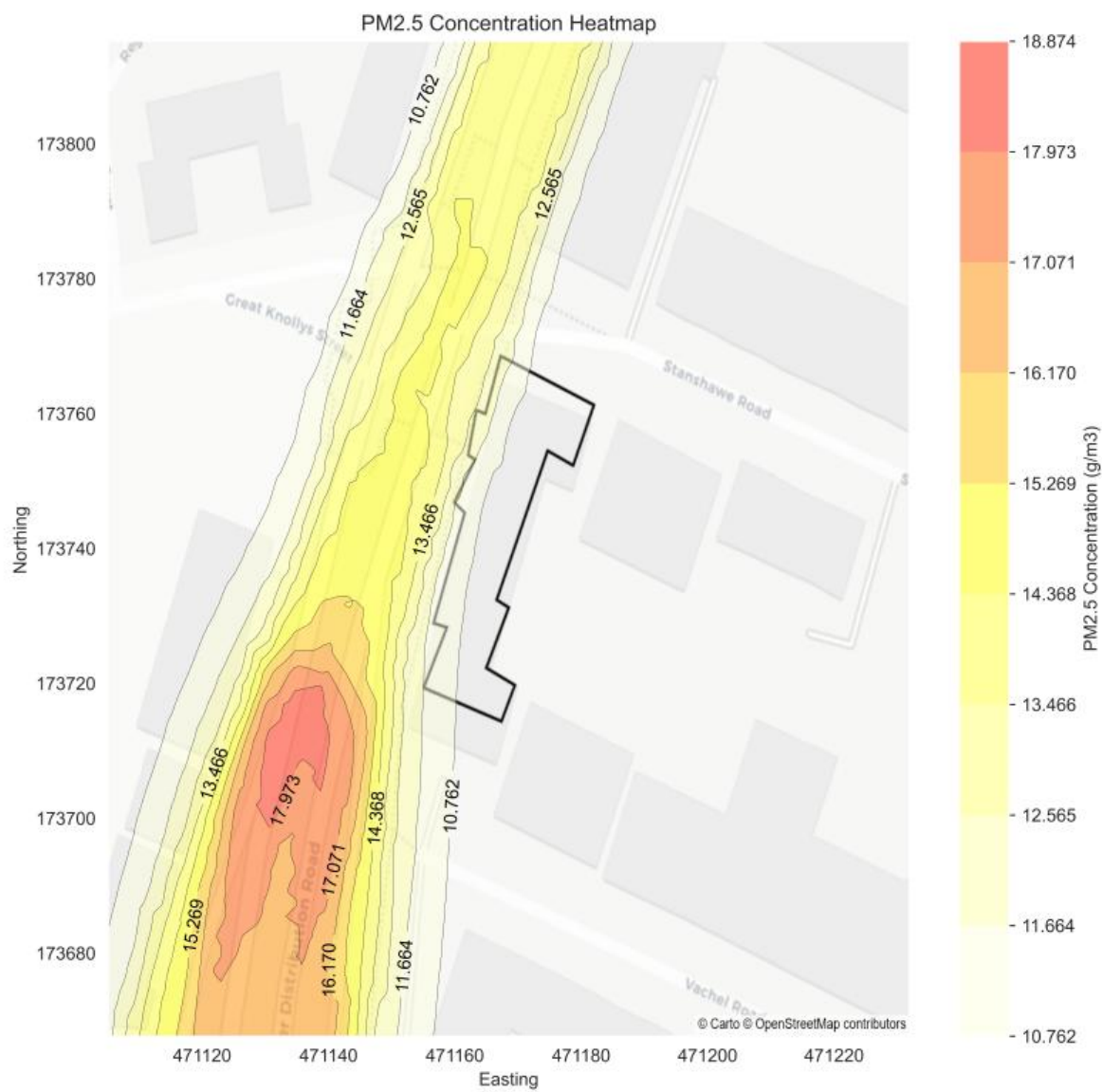


Figure 6  
ADMS Roads Inputs









## APPENDIX B: ASSESSMENT INPUTS

The Proposed Development has the potential to introduce future site users to poor air quality. Dispersion modelling using ADMS Roads was therefore undertaken to predict pollutant concentrations across the site to consider site suitability for the proposed end-use.

The assessment was undertaken in accordance with the guidance contained within LAQM.TG(22) and the EPUK and IAQM guidance.

### Dispersion Model

Dispersion modelling was undertaken using the ADMS-Roads dispersion model (version 5.0). ADMS-Roads is developed by Cambridge Environmental Research Consultants (CERC) and is routinely used throughout the world for the prediction of pollutant dispersion from road sources. Modelling predictions from this software package are accepted within the UK by the Environment Agency and DEFRA.

The model requires input data that details the following parameters:

- Assessment area;
- Traffic flow data;
- Vehicle emission factors;
- Spatial coordinates of emissions;
- Street width;
- Meteorological data;
- Roughness length;
- Monin-Obukhov length.

### Assessment Area

Ambient concentrations were predicted over the Proposed Development site and surrounding highway network. One Cartesian grid was included in the model over the area at approximately NGR: 471165, 173740 at a height of 1.5m to represent the proposed ground floor level for the 2027 opening year scenario.

Results were subsequently used to produce contour plots. Reference should be made to Figure 6 within Appendix A for a graphical representation of the verification inputs and operation phase DS extents, respectively.

### Traffic Flow Data

Development flow traffic data and associated network distribution provided by the appointed Transport Consultants for the scheme, indicated that a total flow generation of 69 AADT is anticipated as a result of the Proposed Development.

Baseline traffic data for the road links were obtained from the Department for Transport (DfT).

The DfT Matrix web tool enables the user to view and download traffic flows on every link of the A-road and motorway network in Great Britain for the years 1999 to 2023. The DfT matrix is referenced in LAQM.TG(22) as being a suitable source of data for air quality assessments and is therefore considered to provide a reasonable representation of traffic flows in the vicinity of the site.

Growth factors provided by the Trip End Model Presentation Program (TEMPO) software package were utilised to allow for conversion from the obtained 2023 traffic flow to 2027 which was used to represent the opening year scenario. Vehicle speed and roads widths were obtained from the Ordnance Survey.

A summary of the traffic data used in the verification scenario is provided in Table B1.

**Table B1: 2023 Verification Traffic Data**

| Road Link |                  | Road Width (m) | 24 Hour AADT Flow | HDV Pop (%) | Mean Vehicle Speed (km/hr) |
|-----------|------------------|----------------|-------------------|-------------|----------------------------|
| L1        | A33 Relief Road  | 7.2            | 14579.0           | 3.4         | 50.87                      |
| L2        | 1 Howard St      | 12.4           | 36279.0           | 3.3         | 61.3                       |
| L3        | 1 Howard St      | 13.0           | 36292.0           | 3.3         | 60.66                      |
| L4        | 11 Culver Ln     | 11.8           | 20668.0           | 4.4         | 82.84                      |
| L5        | 11 Culver Ln     | 11.0           | 17759.0           | 4.0         | 92.16                      |
| L6        | 16 Katesgrove Ln | 8.2            | 20374.0           | 2.6         | 11.19                      |
| L7        | 16 Laud Cl       | 11.9           | 15782.0           | 3.0         | 56.33                      |
| L8        | 17 Rose Kiln Ln  | 8.7            | 27324.0           | 3.4         | 42.17                      |
| L9        | 17 Rose Kiln Ln  | 8.1            | 27813.0           | 3.4         | 35.54                      |
| L10       | 17 Rose Kiln Ln  | 9.2            | 26988.0           | 3.5         | 44.25                      |
| L11       | 17 Rose Kiln Ln  | 8.3            | 28266.0           | 3.4         | 34.61                      |
| L12       | 2 Acre Rd        | 9.4            | 84318.0           | 7.8         | 42.7                       |
| L13       | 2 Acre Rd        | 6.4            | 83847.0           | 7.8         | 42.19                      |
| L14       | 2 Acre Rd        | 10.4           | 84181.0           | 7.8         | 41.36                      |
| L15       | 2 Acre Rd        | 10.6           | 84305.0           | 7.8         | 44.19                      |
| L16       | 20 Bideford Cl   | 11.8           | 24117.0           | 4.6         | 100.76                     |
| L17       | 20 Katesgrove Ln | 9.7            | 19926.0           | 2.7         | 50.85                      |
| L18       | 22 Blackthorn Cl | 13.7           | 21030.0           | 4.4         | 80.38                      |
| L19       | 22 Blackthorn Cl | 16.8           | 21004.0           | 4.4         | 78.59                      |
| L20       | 22 Blackthorn Cl | 12.5           | 20656.0           | 4.4         | 83.16                      |
| L21       | 22 Brook St W    | 7.3            | 16570.0           | 4.1         | 34.19                      |
| L22       | 22 Church Rd     | 11.3           | 17621.0           | 4.0         | 92.3                       |
| L23       | 23 Chatham St    | 9.2            | 25186.0           | 3.2         | 32.41                      |
| L24       | 23 Chatham St    | 8.0            | 25713.0           | 3.2         | 25.79                      |
| L25       | 24 A329          | 9.4            | 25061.0           | 3.3         | 30.79                      |
| L26       | 26 Brook St W    | 7.3            | 16405.0           | 4.1         | 31.98                      |

| Road Link |                         | Road Width (m) | 24 Hour AADT Flow | HDV Pop (%) | Mean Vehicle Speed (km/hr) |
|-----------|-------------------------|----------------|-------------------|-------------|----------------------------|
| L27       | 28 A329                 | 11.5           | 43577.0           | 3.4         | 61.46                      |
| L28       | 28 A329                 | 12.7           | 42637.0           | 3.4         | 61.13                      |
| L29       | 28 Brook St W           | 20.2           | 30512.0           | 3.2         | 51.01                      |
| L30       | 28 Brook St W           | 27.9           | 24706.0           | 3.5         | 48.39                      |
| L31       | 28 New Bright St        | 14.3           | 25988.0           | 3.6         | 32.15                      |
| L32       | 28 New Bright St        | 27.3           | 24842.0           | 3.5         | 40.22                      |
| L33       | 28 New Bright St        | 21.2           | 29954.0           | 3.3         | 25.26                      |
| L34       | 29-41 A329              | 10.7           | 26300.0           | 3.3         | 40.21                      |
| L35       | 29-41 A329              | 8.9            | 26672.0           | 3.3         | 34.26                      |
| L36       | 30 Brook St W           | 10.6           | 18110.0           | 4.0         | 33.99                      |
| L37       | 34 Bridge St            | 7.3            | 12587.0           | 2.3         | 48.01                      |
| L38       | 399 Whitley Wood Ln     | 14.7           | 96573.0           | 7.6         | 94.96                      |
| L39       | 4 Mill Ln               | 7.8            | 10234.0           | 2.3         | 67.17                      |
| L40       | 4 Mill Ln               | 6.7            | 5555.0            | 2.1         | 39.26                      |
| L41       | 4 Mill Ln               | 7.3            | 10475.0           | 2.3         | 49.61                      |
| L42       | 4 Mill Ln               | 26.8           | 10516.0           | 2.3         | 22.42                      |
| L43       | 4 Mill Ln               | 6.9            | 8398.0            | 2.2         | 47.28                      |
| L44       | 4 Mill Ln               | 7.2            | 9940.0            | 2.3         | 45.99                      |
| L45       | 4 Mill Ln               | 7.4            | 5570.0            | 2.1         | 56.06                      |
| L46       | 4 Mill Ln               | 7.8            | 8288.0            | 2.2         | 58.69                      |
| L47       | 40 Brook St W           | 12.0           | 12589.0           | 4.6         | 18.5                       |
| L48       | 401 Old Whitley Wood Ln | 14.2           | 96901.0           | 7.6         | 93.78                      |
| L49       | 43 Lexington Grove      | 8.6            | 5509.0            | 1.0         | 53.99                      |
| L50       | 47 Lower Brook St       | 15.2           | 19158.0           | 4.0         | 29.04                      |
| L51       | 47 Lower Brook St       | 11.3           | 19045.0           | 4.0         | 29.08                      |
| L52       | 48 Suttons Park Ave     | 8.5            | 8767.0            | 1.7         | 43.91                      |
| L53       | 48 Suttons Park Ave     | 7.8            | 8972.0            | 1.8         | 50.83                      |
| L54       | 5 Acre Rd               | 7.8            | 84409.0           | 7.8         | 48.28                      |
| L55       | 5 Acre Rd               | 9.3            | 84351.0           | 7.8         | 48.62                      |
| L56       | 51 Lexington Grove      | 18.5           | 90551.0           | 7.4         | 93.8                       |
| L57       | 54 Wolseley St          | 7.5            | 40557.0           | 2.9         | 58.21                      |
| L58       | 54 Wolseley St          | 7.7            | 36626.0           | 3.0         | 16.97                      |

| Road Link |                     | Road Width (m) | 24 Hour AADT Flow | HDV Pop (%) | Mean Vehicle Speed (km/hr) |
|-----------|---------------------|----------------|-------------------|-------------|----------------------------|
| L59       | 64 Old Shinfield Rd | 14.6           | 94914.0           | 7.6         | 94.71                      |
| L60       | 64 Old Shinfield Rd | 15.3           | 94862.0           | 7.6         | 95.76                      |
| L61       | 7 A33               | 14.1           | 83258.0           | 7.8         | 43.32                      |
| L62       | 7 A33               | 13.1           | 83156.0           | 7.8         | 15.93                      |
| L63       | 7 A33               | 10.3           | 58899.0           | 7.5         | 37.83                      |
| L64       | 7 A33               | 9.4            | 65141.0           | 7.3         | 37.83                      |
| L65       | 7 A33               | 12.2           | 83397.0           | 7.8         | 41.61                      |
| L66       | 75 Oxford Rd        | 8.5            | 31367.0           | 3.3         | 60.26                      |
| L67       | 76 New Bright St    | 25.7           | 22606.0           | 3.7         | 47.54                      |
| L68       | 76 New Bright St    | 24.9           | 22765.0           | 3.6         | 44.35                      |
| L69       | 76 New Bright St    | 24.7           | 22600.0           | 3.7         | 36.09                      |
| L70       | 76 New Bright St    | 11.0           | 16684.0           | 4.4         | 6.74                       |
| L71       | 76 New Bright St    | 14.2           | 20019.0           | 3.4         | 44.7                       |
| L72       | 76 New Bright St    | 25.6           | 22818.0           | 3.6         | 50.73                      |
| L73       | 78 Oxford Rd        | 6.7            | 30562.0           | 3.3         | 35.49                      |
| L74       | 83 Oxford Rd        | 8.4            | 31057.0           | 3.3         | 54.91                      |
| L75       | A327                | 31.9           | 95835.0           | 7.7         | 99.56                      |
| L76       | A329                | 10.6           | 27030.0           | 3.3         | 32.84                      |
| L77       | A329                | 10.1           | 8709.0            | 2.9         | 42.79                      |
| L78       | A329                | 12.2           | 20318.0           | 3.8         | 36.13                      |
| L79       | A329                | 10.6           | 27648.0           | 3.4         | 28.45                      |
| L80       | A329                | 8.1            | 8448.0            | 2.9         | 21.49                      |
| L81       | A329                | 7.7            | 8553.0            | 2.9         | 45.73                      |
| L82       | A329                | 8.9            | 8786.0            | 2.9         | 31.7                       |
| L83       | A329                | 7.6            | 14552.0           | 2.3         | 50.46                      |
| L84       | A329                | 12.4           | 27106.0           | 3.7         | 26.77                      |
| L85       | A329                | 9.8            | 34235.0           | 3.1         | 46.11                      |
| L86       | A329                | 7.9            | 14848.0           | 2.3         | 49.47                      |
| L87       | A329                | 7.7            | 11874.0           | 2.3         | 58.2                       |
| L88       | A3290               | 11.0           | 23766.0           | 4.6         | 101.63                     |
| L89       | A3290               | 11.7           | 22234.0           | 4.5         | 80.52                      |
| L90       | A33                 | 12.7           | 82993.0           | 7.8         | 37.58                      |

| Road Link |     | Road Width (m) | 24 Hour AADT Flow | HDV Pop (%) | Mean Vehicle Speed (km/hr) |
|-----------|-----|----------------|-------------------|-------------|----------------------------|
| L91       | A33 | 14.1           | 84144.0           | 7.8         | 29.24                      |
| L92       | A33 | 6.8            | 27545.0           | 4.5         | 52.54                      |
| L93       | A33 | 18.8           | 81241.0           | 7.6         | 32.42                      |
| L94       | A33 | 15.7           | 41833.0           | 6.1         | 18.4                       |
| L95       | A33 | 7.7            | 25758.0           | 3.1         | 40.28                      |
| L96       | A33 | 19.5           | 79812.0           | 7.5         | 52.65                      |
| L97       | A33 | 7.6            | 25771.0           | 3.1         | 55.05                      |
| L98       | A33 | 16.9           | 81344.0           | 7.6         | 33.72                      |
| L99       | A33 | 13.9           | 84251.0           | 7.8         | 34.55                      |
| L100      | A33 | 15.8           | 41821.0           | 6.1         | 16.19                      |
| L101      | A33 | 15.9           | 84392.0           | 7.8         | 55.12                      |
| L102      | A33 | 7.4            | 26065.0           | 3.1         | 49.73                      |
| L103      | A33 | 10.9           | 80668.0           | 7.5         | 25.77                      |
| L104      | A33 | 18.8           | 81378.0           | 7.6         | 33.94                      |
| L105      | A33 | 10.4           | 26133.0           | 3.1         | 46.64                      |
| L106      | A33 | 15.2           | 84493.0           | 7.8         | 17.99                      |
| L107      | A33 | 18.1           | 81459.0           | 7.6         | 42.23                      |
| L108      | A33 | 13.3           | 84108.0           | 7.8         | 38.44                      |
| L109      | A33 | 10.1           | 26100.0           | 3.1         | 19.44                      |
| L110      | A33 | 15.9           | 26188.0           | 3.1         | 44.46                      |
| L111      | A33 | 7.9            | 27554.0           | 4.4         | 23.1                       |
| L112      | A33 | 12.5           | 84308.0           | 7.8         | 30.65                      |
| L113      | A33 | 14.9           | 22478.0           | 3.6         | 57.71                      |
| L114      | A33 | 13.9           | 88663.0           | 7.2         | 28.39                      |
| L115      | A33 | 10.1           | 30531.0           | 3.3         | 11.39                      |
| L116      | A33 | 11.6           | 80333.0           | 7.6         | 37.69                      |
| L117      | A33 | 10.6           | 81044.0           | 7.6         | 38.0                       |
| L118      | A33 | 12.8           | 81176.0           | 7.6         | 38.18                      |
| L119      | A33 | 7.9            | 25837.0           | 3.1         | 33.51                      |
| L120      | A33 | 16.0           | 22433.0           | 3.5         | 45.27                      |
| L121      | A33 | 12.4           | 26168.0           | 3.1         | 33.03                      |
| L122      | A33 | 13.6           | 81552.0           | 7.6         | 35.48                      |

| Road Link |                  | Road Width (m) | 24 Hour AADT Flow | HDV Pop (%) | Mean Vehicle Speed (km/hr) |
|-----------|------------------|----------------|-------------------|-------------|----------------------------|
| L123      | A33              | 17.8           | 84526.0           | 7.8         | 33.81                      |
| L124      | A33              | 16.9           | 84410.0           | 7.8         | 47.8                       |
| L125      | A33              | 15.3           | 84378.0           | 7.8         | 43.3                       |
| L126      | A33              | 14.3           | 83010.0           | 7.8         | 31.82                      |
| L127      | A33              | 14.6           | 84537.0           | 7.8         | 46.47                      |
| L128      | A33              | 13.0           | 84524.0           | 7.8         | 16.21                      |
| L129      | A33              | 8.7            | 26371.0           | 4.3         | 45.61                      |
| L130      | A33              | 13.9           | 18242.0           | 4.1         | 40.11                      |
| L131      | A33 Imperial Way | 16.5           | 81584.0           | 7.6         | 33.94                      |
| L132      | A33 Imperial Way | 18.4           | 81442.0           | 7.6         | 37.87                      |
| L133      | Adelphi House    | 7.9            | 28149.0           | 3.3         | 31.97                      |
| L134      | Adelphi House    | 9.3            | 27738.0           | 3.3         | 33.91                      |
| L135      | Advantage        | 9.2            | 34159.0           | 3.1         | 59.96                      |
| L136      | Atlantis House   | 10.2           | 37721.0           | 3.3         | 56.39                      |
| L137      | Atlantis House   | 9.6            | 38031.0           | 3.3         | 61.91                      |
| L138      | B3270            | 10.1           | 5503.0            | 1.0         | 15.15                      |
| L139      | B3270            | 10.7           | 5508.0            | 1.0         | 11.3                       |
| L140      | B3270            | 9.8            | 121036.0          | 8.1         | 61.46                      |
| L141      | B3270            | 15.0           | 5508.0            | 1.0         | 7.06                       |
| L142      | B3270            | 7.9            | 5503.0            | 1.0         | 22.17                      |
| L143      | B3270            | 24.3           | 5503.0            | 1.0         | 33.18                      |
| L144      | B3270            | 20.0           | 5508.0            | 1.0         | 29.82                      |
| L145      | B3270            | 13.8           | 5503.0            | 1.0         | 24.66                      |
| L146      | B3270            | 10.7           | 5503.0            | 1.0         | 38.69                      |
| L147      | B3270            | 7.9            | 5503.0            | 1.0         | 45.91                      |
| L148      | B3270            | 12.0           | 5503.0            | 1.0         | 36.38                      |
| L149      | B3270            | 12.2           | 5508.0            | 1.0         | 47.22                      |
| L150      | B3270            | 10.8           | 5503.0            | 1.0         | 24.86                      |
| L151      | Basingstoke Road | 11.3           | 5506.0            | 1.0         | 21.89                      |
| L152      | Basingstoke Road | 11.3           | 78595.0           | 7.4         | 34.95                      |
| L153      | Basingstoke Road | 10.9           | 5506.0            | 1.0         | 31.17                      |
| L154      | Basingstoke Road | 20.0           | 79626.0           | 7.4         | 46.62                      |

| Road Link |                  | Road Width (m) | 24 Hour AADT Flow | HDV Pop (%) | Mean Vehicle Speed (km/hr) |
|-----------|------------------|----------------|-------------------|-------------|----------------------------|
| L155      | Basingstoke Road | 24.2           | 56901.0           | 5.0         | 43.13                      |
| L156      | Basingstoke Road | 10.37          | 5505.0            | 1.0         | 38.32                      |
| L157      | Basingstoke Road | 18.3           | 76642.0           | 7.2         | 38.39                      |
| L158      | Basingstoke Road | 26.1           | 76154.0           | 7.1         | 42.81                      |
| L159      | Basingstoke Road | 25.9           | 76441.0           | 7.1         | 56.46                      |
| L160      | Basingstoke Road | 19.0           | 65041.0           | 5.8         | 43.44                      |
| L161      | Basingstoke Road | 17.3           | 79690.0           | 7.5         | 36.25                      |
| L162      | Basingstoke Road | 13.5           | 79062.0           | 7.4         | 13.49                      |
| L163      | Basingstoke Road | 22.1           | 82531.0           | 7.3         | 37.03                      |
| L164      | Basingstoke Road | 18.1           | 81839.0           | 7.1         | 44.66                      |
| L165      | Basingstoke Road | 13.9           | 76775.0           | 6.8         | 35.57                      |
| L166      | Basingstoke Road | 14.4           | 79762.0           | 7.4         | 26.53                      |
| L167      | Basingstoke Road | 14.0           | 68462.0           | 6.4         | 45.19                      |
| L168      | Basingstoke Road | 27.5           | 60295.0           | 5.5         | 43.38                      |
| L169      | Basingstoke Road | 13.4           | 78328.0           | 7.4         | 18.58                      |
| L170      | Basingstoke Road | 14.9           | 5507.0            | 1.0         | 36.79                      |
| L171      | Basingstoke Road | 21.1           | 82764.0           | 7.3         | 33.84                      |
| L172      | Basingstoke Road | 15.5           | 80104.0           | 7.5         | 37.04                      |
| L173      | Basingstoke Road | 16.2           | 71481.0           | 6.4         | 23.67                      |
| L174      | Basingstoke Road | 14.2           | 5505.0            | 1.0         | 5.86                       |
| L175      | Basingstoke Road | 20.8           | 82640.0           | 7.3         | 32.3                       |
| L176      | Basingstoke Road | 13.4           | 5505.0            | 1.0         | 34.89                      |
| L177      | Basingstoke Road | 13.8           | 49340.0           | 3.7         | 13.86                      |
| L178      | Basingstoke Road | 17.7           | 56602.0           | 4.9         | 27.49                      |
| L179      | Basingstoke Road | 16.0           | 80186.0           | 7.5         | 24.65                      |
| L180      | Basingstoke Road | 15.4           | 79845.0           | 7.5         | 5.34                       |
| L181      | Basingstoke Road | 19.8           | 79527.0           | 7.4         | 32.99                      |
| L182      | Basingstoke Road | 15.9           | 69934.0           | 6.6         | 26.19                      |
| L183      | Basingstoke Road | 21.8           | 79667.0           | 7.4         | 36.46                      |
| L184      | Basingstoke Road | 16.9           | 62308.0           | 5.7         | 42.07                      |
| L185      | Basingstoke Road | 18.2           | 76547.0           | 7.2         | 27.29                      |
| L186      | Basingstoke Road | 36.3           | 5507.0            | 1.0         | 51.19                      |

| Road Link |                      | Road Width (m) | 24 Hour AADT Flow | HDV Pop (%) | Mean Vehicle Speed (km/hr) |
|-----------|----------------------|----------------|-------------------|-------------|----------------------------|
| L187      | Basingstoke Road     | 15.1           | 79570.0           | 7.3         | 11.34                      |
| L188      | Basingstoke Road     | 11.1           | 78683.0           | 7.4         | 41.79                      |
| L189      | Basingstoke Road     | 19.0           | 79039.0           | 7.4         | 39.27                      |
| L190      | Basingstoke Road     | 18.0           | 79085.0           | 7.4         | 24.3                       |
| L191      | Basingstoke Road     | 22.7           | 83254.0           | 7.2         | 21.55                      |
| L192      | Basingstoke Road     | 12.7           | 78914.0           | 7.4         | 27.35                      |
| L193      | Basingstoke Road     | 31.3           | 80704.0           | 7.3         | 36.53                      |
| L194      | Basingstoke Road     | 15.7           | 78210.0           | 6.9         | 44.01                      |
| L195      | Basingstoke Road     | 20.4           | 81165.0           | 7.3         | 16.62                      |
| L196      | Basingstoke Road     | 17.5           | 82777.0           | 7.2         | 44.32                      |
| L197      | Basingstoke Road     | 15.5           | 79469.0           | 7.5         | 18.54                      |
| L198      | Basingstoke Road     | 11.4           | 78955.0           | 7.5         | 36.53                      |
| L199      | Bennet Rd            | 13.4           | 84361.0           | 7.8         | 28.31                      |
| L200      | Bennet Road          | 16.7           | 8778.0            | 2.3         | 34.97                      |
| L201      | Berkeley Avenue      | 8.3            | 14245.0           | 3.1         | 36.78                      |
| L202      | Black Boy Roundabout | 11.2           | 5503.0            | 1.0         | 39.87                      |
| L203      | Capital Point        | 9.2            | 15992.0           | 3.7         | 16.46                      |
| L204      | Capital Point        | 22.0           | 20455.0           | 3.8         | 49.29                      |
| L205      | Capital Point        | 8.3            | 15974.0           | 3.7         | 55.96                      |
| L206      | Capital Point        | 22.8           | 20455.0           | 3.8         | 39.76                      |
| L207      | Capital Point        | 7.7            | 14850.0           | 3.3         | 58.39                      |
| L208      | Capital Point        | 15.2           | 17700.0           | 4.0         | 27.86                      |
| L209      | Castle Street        | 6.5            | 40227.0           | 3.4         | 55.13                      |
| L210      | Castle Street        | 7.4            | 28778.0           | 3.3         | 31.26                      |
| L211      | Castle Street        | 12.0           | 33847.0           | 3.2         | 24.89                      |
| L212      | Castle Street        | 13.1           | 33803.0           | 3.1         | 28.49                      |
| L213      | Castle Street        | 12.8           | 32992.0           | 3.1         | 32.11                      |
| L214      | Castle Street        | 5.9            | 38064.0           | 3.3         | 55.84                      |
| L215      | Castle Street        | 9.5            | 40512.0           | 3.4         | 51.89                      |
| L216      | Castle Street        | 8.2            | 44257.0           | 2.9         | 16.26                      |
| L217      | Castle Street        | 11.8           | 33382.0           | 3.1         | 24.31                      |
| L218      | Castle Street        | 17.9           | 31109.0           | 3.2         | 44.34                      |

| Road Link |                | Road Width (m) | 24 Hour AADT Flow | HDV Pop (%) | Mean Vehicle Speed (km/hr) |
|-----------|----------------|----------------|-------------------|-------------|----------------------------|
| L219      | Castle Street  | 11.0           | 38249.0           | 3.3         | 44.99                      |
| L220      | Castle Street  | 7.2            | 36833.0           | 3.2         | 51.94                      |
| L221      | Castle Street  | 7.3            | 41304.0           | 3.4         | 52.56                      |
| L222      | Castle Street  | 9.0            | 33107.0           | 3.1         | 7.09                       |
| L223      | Castle Street  | 7.6            | 34041.0           | 3.1         | 17.44                      |
| L224      | Castle Street  | 14.5           | 33462.0           | 3.2         | 18.3                       |
| L225      | Castle Street  | 8.7            | 28232.0           | 3.3         | 32.11                      |
| L226      | Castle Street  | 11.3           | 33925.0           | 3.1         | 20.08                      |
| L227      | Castle Street  | 8.8            | 33647.0           | 3.1         | 23.27                      |
| L228      | Castle Street  | 7.9            | 30068.0           | 3.1         | 15.02                      |
| L229      | Castle Street  | 10.2           | 33955.0           | 3.2         | 12.84                      |
| L230      | Castle Street  | 12.4           | 33214.0           | 3.2         | 15.21                      |
| L231      | Castle Street  | 8.2            | 37949.0           | 3.3         | 49.05                      |
| L232      | Castle Street  | 11.8           | 33100.0           | 3.2         | 11.04                      |
| L233      | Castle Street  | 12.1           | 30338.0           | 3.1         | 25.78                      |
| L234      | Castle Street  | 7.1            | 31639.0           | 3.3         | 45.66                      |
| L235      | Castle Street  | 12.5           | 32691.0           | 3.1         | 31.45                      |
| L236      | Castle Street  | 9.2            | 37812.0           | 3.4         | 51.2                       |
| L237      | Castle Street  | 13.4           | 33370.0           | 3.2         | 30.06                      |
| L238      | Castle Street  | 12.1           | 32871.0           | 3.1         | 25.63                      |
| L239      | Caversham Road | 12.0           | 27020.0           | 3.5         | 30.28                      |
| L240      | Caversham Road | 9.3            | 26962.0           | 3.5         | 53.09                      |
| L241      | Caversham Road | 14.7           | 26498.0           | 4.2         | 40.28                      |
| L242      | Caversham Road | 16.8           | 26460.0           | 4.2         | 26.14                      |
| L243      | Caversham Road | 7.0            | 26471.0           | 4.2         | 30.35                      |
| L244      | Caversham Road | 9.5            | 26674.0           | 3.5         | 37.29                      |
| L245      | Caversham Road | 15.4           | 26372.0           | 4.1         | 32.45                      |
| L246      | Caversham Road | 8.2            | 26571.0           | 4.3         | 39.26                      |
| L247      | Caversham Road | 13.8           | 26464.0           | 4.2         | 35.96                      |
| L248      | Caversham Road | 17.4           | 26457.0           | 4.1         | 36.96                      |
| L249      | Caversham Road | 9.9            | 26149.0           | 3.9         | 48.54                      |
| L250      | Caversham Road | 11.2           | 26508.0           | 4.2         | 29.4                       |

| Road Link |                | Road Width (m) | 24 Hour AADT Flow | HDV Pop (%) | Mean Vehicle Speed (km/hr) |
|-----------|----------------|----------------|-------------------|-------------|----------------------------|
| L251      | Caversham Road | 6.2            | 27406.0           | 3.5         | 44.08                      |
| L252      | Caversham Road | 11.9           | 27385.0           | 3.6         | 25.61                      |
| L253      | Caversham Road | 8.7            | 26181.0           | 4.0         | 19.35                      |
| L254      | Caversham Road | 10.1           | 26680.0           | 4.5         | 35.91                      |
| L255      | Caversham Road | 6.3            | 26474.0           | 4.2         | 33.51                      |
| L256      | Caversham Road | 16.7           | 26427.0           | 4.1         | 37.86                      |
| L257      | Caversham Road | 7.9            | 26302.0           | 3.3         | 27.64                      |
| L258      | Caversham Road | 17.1           | 26179.0           | 5.3         | 36.2                       |
| L259      | Caversham Road | 7.6            | 26480.0           | 4.2         | 36.42                      |
| L260      | Caversham Road | 16.6           | 26455.0           | 4.2         | 38.21                      |
| L261      | Caversham Road | 11.55          | 26478.0           | 4.2         | 28.44                      |
| L262      | Caversham Road | 12.9           | 26494.0           | 4.2         | 33.59                      |
| L263      | Caversham Road | 12.4           | 27452.0           | 3.6         | 45.61                      |
| L264      | Caversham Road | 9.6            | 26482.0           | 4.2         | 30.03                      |
| L265      | Caversham Road | 14.3           | 26457.0           | 4.3         | 23.14                      |
| L266      | Caversham Road | 6.8            | 26420.0           | 3.4         | 34.11                      |
| L267      | Caversham Road | 9.8            | 26632.0           | 4.4         | 13.6                       |
| L268      | Caversham Road | 8.3            | 26617.0           | 4.3         | 18.55                      |
| L269      | Caversham Road | 8.4            | 26259.0           | 4.0         | 41.7                       |
| L270      | Caversham Road | 13.3           | 26449.0           | 4.2         | 29.81                      |
| L271      | Caversham Road | 6.5            | 27406.0           | 3.4         | 20.1                       |
| L272      | Caversham Road | 16.7           | 26589.0           | 4.4         | 31.67                      |
| L273      | Caversham Road | 10.1           | 26469.0           | 4.2         | 33.94                      |
| L274      | Caversham Road | 13.7           | 26462.0           | 4.2         | 33.79                      |
| L275      | Caversham Road | 10.3           | 27449.0           | 3.6         | 25.45                      |
| L276      | Caversham Road | 19.8           | 26503.0           | 4.2         | 36.85                      |
| L277      | Caversham Road | 15.8           | 26619.0           | 4.4         | 18.33                      |
| L278      | Church Road    | 8.2            | 5465.0            | 1.0         | 15.0                       |
| L279      | Church Road    | 14.1           | 5465.0            | 1.0         | 25.87                      |
| L280      | Church Road    | 7.5            | 5460.0            | 1.0         | 39.99                      |
| L281      | Clarify Court  | 13.1           | 21309.0           | 4.4         | 60.32                      |
| L282      | Clarify Court  | 11.3           | 21989.0           | 4.5         | 80.2                       |

| Road Link |                        | Road Width (m) | 24 Hour AADT Flow | HDV Pop (%) | Mean Vehicle Speed (km/hr) |
|-----------|------------------------|----------------|-------------------|-------------|----------------------------|
| L283      | Clarify Court          | 11.7           | 23179.0           | 4.5         | 35.76                      |
| L284      | Clarify Court          | 17.8           | 21384.0           | 4.4         | 40.51                      |
| L285      | Clarify Court          | 8.2            | 21442.0           | 4.4         | 49.55                      |
| L286      | Clarify Court          | 13.7           | 21822.0           | 4.5         | 54.95                      |
| L287      | Elm Road               | 10.0           | 5485.0            | 1.0         | 16.32                      |
| L288      | Elm Road               | 7.8            | 5485.0            | 1.0         | 20.27                      |
| L289      | Elm Road               | 6.1            | 5479.0            | 1.0         | 41.21                      |
| L290      | Elm Road               | 7.8            | 5485.0            | 1.0         | 24.82                      |
| L291      | Elm Road               | 7.6            | 5484.0            | 1.0         | 26.8                       |
| L292      | Elm Road               | 6.6            | 5483.0            | 1.0         | 34.88                      |
| L293      | Elm Road               | 8.9            | 5480.0            | 1.0         | 27.25                      |
| L294      | Elm Road               | 7.9            | 5480.0            | 1.0         | 33.82                      |
| L295      | Elm Road               | 8.5            | 5480.0            | 1.0         | 31.41                      |
| L296      | Elm Road               | 9.3            | 5480.0            | 1.0         | 34.69                      |
| L297      | Elm Road               | 8.0            | 5480.0            | 1.0         | 30.3                       |
| L298      | Elm Road               | 7.1            | 5483.0            | 1.0         | 33.85                      |
| L299      | Elm Road               | 9.3            | 5480.0            | 1.0         | 30.0                       |
| L300      | Elm Road               | 7.8            | 5484.0            | 1.0         | 31.45                      |
| L301      | Elm Road               | 7.6            | 5478.0            | 1.0         | 30.41                      |
| L302      | Fobney Treatment Works | 8.4            | 28923.0           | 3.3         | 31.42                      |
| L303      | Friar St               | 11.5           | 28269.0           | 3.3         | 31.08                      |
| L304      | Heath Road             | 5.7            | 3616.0            | 3.6         | 10.0                       |
| L305      | Imperial Way           | 16.7           | 81282.0           | 7.6         | 44.99                      |
| L306      | Island Rd              | 8.2            | 25500.0           | 3.1         | 52.53                      |
| L307      | Island Rd              | 37.5           | 42191.0           | 6.2         | 46.85                      |
| L308      | Katesgrove Lane        | 7.1            | 20566.0           | 4.1         | 54.89                      |
| L309      | Katesgrove Lane        | 7.5            | 14918.0           | 3.3         | 36.02                      |
| L310      | Kennet Island turn     | 8.9            | 42829.0           | 6.3         | 12.95                      |
| L311      | Kennet Island turn     | 7.2            | 42830.0           | 6.3         | 8.96                       |
| L312      | Kennet Island turn     | 19.6           | 42447.0           | 6.2         | 21.89                      |
| L313      | Kennet Island turn     | 11.55          | 42162.0           | 6.2         | 45.98                      |
| L314      | Kennet Island turn     | 22.5           | 42381.0           | 6.2         | 47.36                      |

| Road Link |                    | Road Width (m) | 24 Hour AADT Flow | HDV Pop (%) | Mean Vehicle Speed (km/hr) |
|-----------|--------------------|----------------|-------------------|-------------|----------------------------|
| L315      | Kennet Island turn | 20.2           | 42449.0           | 6.2         | 35.41                      |
| L316      | Kennet Island turn | 35.6           | 42178.0           | 6.2         | 48.52                      |
| L317      | Kennet Island turn | 8.6            | 25677.0           | 3.1         | 41.99                      |
| L318      | Kings Road         | 10.8           | 19434.0           | 4.2         | 33.84                      |
| L319      | Kings Road         | 13.9           | 15573.0           | 4.6         | 37.34                      |
| L320      | Kings Road         | 13.6           | 15589.0           | 4.7         | 34.29                      |
| L321      | Kings Road         | 14.3           | 20738.0           | 4.3         | 25.83                      |
| L322      | Kings Road         | 12.6           | 20722.0           | 4.3         | 29.59                      |
| L323      | Kings Road         | 13.4           | 18465.0           | 4.2         | 29.53                      |
| L324      | Kings Road         | 13.6           | 15576.0           | 4.7         | 33.85                      |
| L325      | Kings Road         | 12.1           | 19452.0           | 4.2         | 26.6                       |
| L326      | Kings Road         | 13.6           | 15537.0           | 4.6         | 36.33                      |
| L327      | Kings Road         | 12.8           | 16632.0           | 4.3         | 26.42                      |
| L328      | Kings Road         | 16.8           | 20581.0           | 4.3         | 27.47                      |
| L329      | Kings Road         | 11.8           | 20897.0           | 4.3         | 21.85                      |
| L330      | Kings Road         | 14.6           | 17534.0           | 4.1         | 33.54                      |
| L331      | Kings Road         | 11.3           | 17009.0           | 4.2         | 31.31                      |
| L332      | Kings Road         | 13.8           | 17210.0           | 4.1         | 33.99                      |
| L333      | Kings Road         | 13.5           | 16183.0           | 4.4         | 33.3                       |
| L334      | Kings Road         | 13.3           | 18974.0           | 4.2         | 28.06                      |
| L335      | Kings Road         | 17.4           | 17387.0           | 4.1         | 36.49                      |
| L336      | Kings Road         | 16.0           | 15517.0           | 4.5         | 38.89                      |
| L337      | Kings Road         | 9.3            | 15458.0           | 3.8         | 27.5                       |
| L338      | Kings Road         | 16.4           | 15457.0           | 3.9         | 24.61                      |
| L339      | Kings Road         | 16.0           | 15447.0           | 4.0         | 18.13                      |
| L340      | Kings Road         | 8.3            | 20931.0           | 4.3         | 39.21                      |
| L341      | Kings Road         | 10.7           | 15448.0           | 4.1         | 32.87                      |
| L342      | Kings Road         | 19.3           | 20512.0           | 4.3         | 42.69                      |
| L343      | Kings Road         | 6.2            | 15453.0           | 3.8         | 30.26                      |
| L344      | Kings Road         | 13.8           | 21178.0           | 4.3         | 8.71                       |
| L345      | Kings Road         | 13.8           | 15481.0           | 4.3         | 37.31                      |
| L346      | Kings Road         | 17.2           | 20676.0           | 4.3         | 25.69                      |

| Road Link |             | Road Width (m) | 24 Hour AADT Flow | HDV Pop (%) | Mean Vehicle Speed (km/hr) |
|-----------|-------------|----------------|-------------------|-------------|----------------------------|
| L347      | Kings Road  | 13.3           | 15448.0           | 4.1         | 36.27                      |
| L348      | Lea Villa   | 9.9            | 62928.0           | 5.9         | 52.24                      |
| L349      | Little Lea  | 13.4           | 80241.0           | 7.5         | 8.34                       |
| L350      | Little Lea  | 15.1           | 80169.0           | 7.5         | 30.61                      |
| L351      | London Road | 8.8            | 21571.0           | 4.3         | 26.89                      |
| L352      | London Road | 12.8           | 24608.0           | 4.5         | 38.01                      |
| L353      | London Road | 9.8            | 21128.0           | 4.3         | 31.01                      |
| L354      | London Road | 14.3           | 24547.0           | 4.5         | 22.15                      |
| L355      | London Road | 12.7           | 23955.0           | 4.5         | 36.55                      |
| L356      | London Road | 8.3            | 21442.0           | 4.3         | 14.46                      |
| L357      | London Road | 12.9           | 21765.0           | 4.4         | 26.81                      |
| L358      | London Road | 10.9           | 20922.0           | 4.3         | 29.22                      |
| L359      | London Road | 11.7           | 21692.0           | 4.3         | 26.78                      |
| L360      | London Road | 14.4           | 21260.0           | 4.3         | 33.65                      |
| L361      | London Road | 12.5           | 21260.0           | 4.4         | 33.56                      |
| L362      | London Road | 12.7           | 21999.0           | 4.5         | 46.45                      |
| L363      | London Road | 12.2           | 22876.0           | 4.5         | 12.86                      |
| L364      | London Road | 12.3           | 21445.0           | 4.4         | 43.04                      |
| L365      | London Road | 11.9           | 23027.0           | 4.5         | 47.8                       |
| L366      | London Road | 9.4            | 21208.0           | 4.3         | 23.56                      |
| L367      | London Road | 13.6           | 20788.0           | 4.3         | 13.52                      |
| L368      | London Road | 9.8            | 21648.0           | 4.3         | 11.75                      |
| L369      | London Road | 9.0            | 23836.0           | 4.5         | 33.0                       |
| L370      | London Road | 13.4           | 24058.0           | 4.5         | 36.28                      |
| L371      | London Road | 6.1            | 21400.0           | 4.3         | 26.89                      |
| L372      | London Road | 13.6           | 21333.0           | 4.3         | 31.89                      |
| L373      | London Road | 12.1           | 20813.0           | 4.3         | 15.7                       |
| L374      | London Road | 15.5           | 23248.0           | 4.5         | 36.81                      |
| L375      | London Road | 12.3           | 24305.0           | 4.5         | 41.35                      |
| L376      | London Road | 12.3           | 24536.0           | 4.5         | 41.76                      |
| L377      | London Road | 14.5           | 22313.0           | 4.5         | 17.13                      |
| L378      | London Road | 14.1           | 23528.0           | 4.5         | 43.85                      |

| Road Link |                       | Road Width (m) | 24 Hour AADT Flow | HDV Pop (%) | Mean Vehicle Speed (km/hr) |
|-----------|-----------------------|----------------|-------------------|-------------|----------------------------|
| L379      | Longwater Ave         | 11.7           | 84559.0           | 7.8         | 39.61                      |
| L380      | Longwater Ave         | 12.6           | 83623.0           | 7.8         | 34.79                      |
| L381      | Longwater Ave         | 12.9           | 84522.0           | 7.8         | 43.06                      |
| L382      | Lower Earley Way West | 25.8           | 5503.0            | 1.0         | 39.02                      |
| L383      | M4                    | 13.7           | 82087.0           | 8.7         | 30.26                      |
| L384      | M4                    | 20.3           | 75115.0           | 6.7         | 103.59                     |
| L385      | M4                    | 21.1           | 79286.0           | 7.9         | 95.33                      |
| L386      | M4                    | 21.0           | 69576.0           | 6.5         | 100.83                     |
| L387      | M4                    | 11.2           | 74804.0           | 7.6         | 72.67                      |
| L388      | M4                    | 16.5           | 76218.0           | 7.8         | 100.72                     |
| L389      | M4                    | 19.5           | 78895.0           | 7.8         | 94.13                      |
| L390      | M4                    | 33.2           | 95770.0           | 7.7         | 104.71                     |
| L391      | M4                    | 15.1           | 108986.0          | 7.9         | 99.09                      |
| L392      | M4                    | 13.8           | 76753.0           | 6.8         | 103.94                     |
| L393      | M4                    | 16.1           | 100361.0          | 7.6         | 95.36                      |
| L394      | M4                    | 16.0           | 79465.0           | 8.3         | 99.88                      |
| L395      | M4                    | 22.9           | 94179.0           | 7.5         | 90.64                      |
| L396      | M4                    | 23.2           | 68005.0           | 6.4         | 109.79                     |
| L397      | M4                    | 20.7           | 94940.0           | 7.5         | 92.89                      |
| L398      | M4                    | 15.5           | 71057.0           | 6.5         | 98.22                      |
| L399      | M4                    | 18.4           | 91810.0           | 7.4         | 91.96                      |
| L400      | M4                    | 15.0           | 73248.0           | 6.7         | 99.84                      |
| L401      | New Century Place     | 21.1           | 4337.0            | 3.0         | 17.81                      |
| L402      | Northern Way          | 12.2           | 84571.0           | 7.8         | 37.99                      |
| L403      | Northern Way          | 12.0           | 84543.0           | 7.8         | 32.81                      |
| L404      | Oxford Road           | 9.6            | 6929.0            | 2.3         | 33.77                      |
| L405      | Oxford Road           | 9.0            | 6925.0            | 2.3         | 33.31                      |
| L406      | Oxford Road           | 9.6            | 6927.0            | 2.3         | 33.17                      |
| L407      | Pepper Lane           | 8.4            | 9720.0            | 1.8         | 46.3                       |
| L408      | Queens Road           | 9.7            | 10289.0           | 2.8         | 28.5                       |
| L409      | Queens Road           | 14.8           | 15498.0           | 3.5         | 27.04                      |
| L410      | Queens Road           | 9.5            | 14676.0           | 2.6         | 28.38                      |

| Road Link |                          | Road Width (m) | 24 Hour AADT Flow | HDV Pop (%) | Mean Vehicle Speed (km/hr) |
|-----------|--------------------------|----------------|-------------------|-------------|----------------------------|
| L411      | Queens Road              | 9.4            | 15459.0           | 3.8         | 34.34                      |
| L412      | Queens Road              | 10.1           | 15493.0           | 3.6         | 21.35                      |
| L413      | Queens Road              | 7.9            | 8938.0            | 2.9         | 32.26                      |
| L414      | Queens Road              | 7.4            | 13045.0           | 2.7         | 42.37                      |
| L415      | Queens Road              | 8.3            | 11339.0           | 2.9         | 31.84                      |
| L416      | Queens Road              | 10.0           | 14637.0           | 2.7         | 13.06                      |
| L417      | Queens Road              | 8.0            | 11507.0           | 2.9         | 47.14                      |
| L418      | Queens Road              | 10.5           | 15656.0           | 2.6         | 26.89                      |
| L419      | Queens Road              | 10.4           | 15478.0           | 3.6         | 32.1                       |
| L420      | Queens Road              | 8.0            | 17507.0           | 2.4         | 15.41                      |
| L421      | Queens Road              | 10.1           | 15499.0           | 3.5         | 13.33                      |
| L422      | Queens Road              | 7.7            | 13123.0           | 2.7         | 27.83                      |
| L423      | Queens Road              | 10.5           | 15335.0           | 2.6         | 32.42                      |
| L424      | Queens Road              | 11.7           | 15595.0           | 2.8         | 33.75                      |
| L425      | Queens Road              | 11.3           | 9438.0            | 2.9         | 10.55                      |
| L426      | Queens Road              | 9.7            | 9983.0            | 2.8         | 34.94                      |
| L427      | Queens Road              | 8.4            | 11183.0           | 2.9         | 42.21                      |
| L428      | Queens Road              | 11.1           | 15468.0           | 3.7         | 32.51                      |
| L429      | Queens Road              | 7.8            | 8915.0            | 2.9         | 41.55                      |
| L430      | Queens Road              | 4.9            | 15520.0           | 3.5         | 32.39                      |
| L431      | Queens Road              | 14.9           | 15587.0           | 3.4         | 37.7                       |
| L432      | Queens Road              | 14.8           | 16144.0           | 3.1         | 27.1                       |
| L433      | Queens Road              | 6.8            | 18845.0           | 2.3         | 35.59                      |
| L434      | Reading Gate Retail Park | 8.5            | 84448.0           | 7.8         | 36.31                      |
| L435      | Reading Gate Retail Park | 10.1           | 84373.0           | 7.8         | 47.69                      |
| L436      | Reading Gate Retail Park | 12.0           | 84312.0           | 7.8         | 47.11                      |
| L437      | Reading Stadium          | 18.0           | 84273.0           | 7.8         | 34.04                      |
| L438      | Reading Stadium          | 13.7           | 84344.0           | 7.8         | 40.08                      |
| L439      | Reading Stadium          | 13.7           | 84299.0           | 7.8         | 34.39                      |
| L440      | Rose Kiln Court          | 6.8            | 21209.0           | 3.4         | 57.74                      |
| L441      | Rose Kiln Lane           | 25.5           | 26224.0           | 3.1         | 39.6                       |
| L442      | Rose Kiln Lane           | 10.5           | 4097.0            | 2.5         | 7.61                       |

| Road Link |                               | Road Width (m) | 24 Hour AADT Flow | HDV Pop (%) | Mean Vehicle Speed (km/hr) |
|-----------|-------------------------------|----------------|-------------------|-------------|----------------------------|
| L443      | Rose Kiln Lane                | 11.7           | 26523.0           | 3.5         | 24.43                      |
| L444      | Rose Kiln Lane                | 20.9           | 8455.0            | 2.2         | 35.13                      |
| L445      | Rose Kiln Lane                | 11.4           | 28202.0           | 3.3         | 23.09                      |
| L446      | Rose Kiln Lane                | 9.1            | 30531.0           | 3.3         | 10.08                      |
| L447      | Rose Kiln Lane                | 10.2           | 26941.0           | 3.4         | 28.16                      |
| L448      | Rose Kiln Lane                | 7.6            | 39461.0           | 3.2         | 43.92                      |
| L449      | Rose Kiln Lane                | 12.6           | 28176.0           | 3.4         | 34.47                      |
| L450      | Rose Kiln Lane                | 13.4           | 36864.0           | 3.3         | 46.03                      |
| L451      | Rose Kiln Lane                | 8.1            | 29892.0           | 3.3         | 42.23                      |
| L452      | Rose Kiln Lane                | 14.4           | 27566.0           | 3.4         | 35.47                      |
| L453      | Rose Kiln Lane                | 21.7           | 8459.0            | 2.2         | 51.71                      |
| L454      | Rose Kiln Lane                | 7.8            | 33829.0           | 3.3         | 47.4                       |
| L455      | Rose Kiln Lane                | 8.0            | 42418.0           | 3.2         | 38.04                      |
| L456      | Rose Kiln Lane                | 9.2            | 26942.0           | 3.4         | 18.44                      |
| L457      | Rose Kiln Lane                | 11.0           | 28331.0           | 3.4         | 11.99                      |
| L458      | Rose Kiln Lane                | 8.2            | 28651.0           | 3.3         | 23.94                      |
| L459      | Rose Kiln Lane                | 7.9            | 27493.0           | 3.4         | 22.85                      |
| L460      | Rose Kiln Lane                | 12.2           | 26307.0           | 3.1         | 14.69                      |
| L461      | Rose Kiln Lane                | 8.4            | 40150.0           | 3.2         | 22.44                      |
| L462      | Rose Kiln Lane                | 23.1           | 26203.0           | 3.1         | 52.17                      |
| L463      | Shinfield Eastern Relief Road | 11.3           | 95184.0           | 7.6         | 37.7                       |
| L464      | Shinfield Eastern Relief Road | 14.4           | 94460.0           | 7.6         | 22.86                      |
| L465      | Shinfield Eastern Relief Road | 13.0           | 95779.0           | 7.7         | 42.39                      |
| L466      | Shinfield Eastern Relief Road | 11.1           | 95097.0           | 7.6         | 41.69                      |
| L467      | Shinfield Eastern Relief Road | 11.0           | 95868.0           | 7.7         | 41.81                      |
| L468      | Shinfield Eastern Relief Road | 10.9           | 95804.0           | 7.7         | 48.75                      |
| L469      | Shinfield Road                | 8.2            | 92022.0           | 7.6         | 47.79                      |
| L470      | Shinfield Road                | 9.7            | 90591.0           | 7.6         | 46.41                      |
| L471      | Shinfield Road                | 9.5            | 12604.0           | 3.6         | 25.46                      |
| L472      | Shinfield Road                | 20.7           | 96094.0           | 7.7         | 56.09                      |
| L473      | Shinfield Road                | 7.4            | 75074.0           | 7.7         | 46.09                      |
| L474      | Shinfield Road                | 7.5            | 83410.0           | 7.8         | 47.51                      |

| Road Link |                | Road Width (m) | 24 Hour AADT Flow | HDV Pop (%) | Mean Vehicle Speed (km/hr) |
|-----------|----------------|----------------|-------------------|-------------|----------------------------|
| L475      | Shinfield Road | 10.9           | 24342.0           | 6.0         | 23.29                      |
| L476      | Shinfield Road | 10.2           | 89205.0           | 7.6         | 46.26                      |
| L477      | Shinfield Road | 7.4            | 63530.0           | 7.5         | 45.92                      |
| L478      | Shinfield Road | 9.9            | 18758.0           | 5.2         | 16.88                      |
| L479      | Shinfield Road | 7.0            | 56045.0           | 7.4         | 42.78                      |
| L480      | Shinfield Road | 16.0           | 92411.0           | 7.6         | 40.29                      |
| L481      | Shinfield Road | 6.2            | 91472.0           | 7.6         | 53.1                       |
| L482      | Shinfield Road | 17.9           | 91855.0           | 7.6         | 39.54                      |
| L483      | Shinfield Road | 10.8           | 92548.0           | 7.6         | 45.29                      |
| L484      | Shinfield Road | 8.6            | 87996.0           | 7.6         | 46.58                      |
| L485      | Shinfield Road | 5.7            | 88659.0           | 7.6         | 53.46                      |
| L486      | Shinfield Road | 5.2            | 88665.0           | 7.6         | 53.39                      |
| L487      | Shinfield Road | 8.0            | 88207.0           | 7.6         | 59.29                      |
| L488      | Shinfield Road | 13.5           | 94744.0           | 7.7         | 19.91                      |
| L489      | Shinfield Road | 7.3            | 79724.0           | 7.7         | 48.46                      |
| L490      | Shinfield Road | 17.0           | 96101.0           | 7.7         | 35.89                      |
| L491      | Shinfield Road | 7.0            | 29826.0           | 6.5         | 33.53                      |
| L492      | Shinfield Road | 7.7            | 85866.0           | 7.5         | 47.74                      |
| L493      | Shinfield Road | 9.0            | 92756.0           | 7.6         | 50.19                      |
| L494      | Shinfield Road | 13.5           | 21078.0           | 5.6         | 20.08                      |
| L495      | Shinfield Road | 7.3            | 69547.0           | 7.6         | 41.44                      |
| L496      | Shinfield Road | 8.6            | 14570.0           | 4.2         | 22.88                      |
| L497      | Shinfield Road | 14.1           | 19604.0           | 5.3         | 23.0                       |
| L498      | Shinfield Road | 17.4           | 96424.0           | 7.7         | 16.71                      |
| L499      | Shinfield Road | 9.1            | 92613.0           | 7.6         | 45.38                      |
| L500      | Shinfield Road | 12.5           | 95666.0           | 7.7         | 21.5                       |
| L501      | Shinfield Road | 6.1            | 91580.0           | 7.6         | 51.34                      |
| L502      | Shinfield Road | 16.6           | 91384.0           | 7.6         | 22.4                       |
| L503      | Shinfield Road | 14.2           | 92798.0           | 7.6         | 37.24                      |
| L504      | Shinfield Road | 15.4           | 92007.0           | 7.6         | 35.73                      |
| L505      | Shinfield Road | 7.2            | 65971.0           | 7.5         | 44.49                      |
| L506      | Shinfield Road | 16.9           | 94366.0           | 7.6         | 27.32                      |

| Road Link |                         | Road Width (m) | 24 Hour AADT Flow | HDV Pop (%) | Mean Vehicle Speed (km/hr) |
|-----------|-------------------------|----------------|-------------------|-------------|----------------------------|
| L507      | Shinfield Road          | 10.1           | 17969.0           | 5.0         | 20.8                       |
| L508      | Shinfield Road          | 18.4           | 96402.0           | 7.7         | 29.36                      |
| L509      | Shinfield Road          | 18.0           | 95387.0           | 7.7         | 36.5                       |
| L510      | Shinfield Road          | 7.1            | 41327.0           | 6.8         | 40.91                      |
| L511      | Shinfield Road          | 18.8           | 92356.0           | 7.6         | 41.17                      |
| L512      | Shinfield Road          | 11.2           | 19808.0           | 5.4         | 19.68                      |
| L513      | Smallmead Rd            | 12.8           | 84332.0           | 7.8         | 38.94                      |
| L514      | Smallmead Rd            | 11.2           | 83194.0           | 7.8         | 37.21                      |
| L515      | St Peters Road          | 7.3            | 4054.0            | 4.2         | 17.25                      |
| L516      | St Peters Road          | 10.4           | 4062.0            | 4.2         | 16.95                      |
| L517      | St Peters Road          | 10.2           | 4058.0            | 4.2         | 11.16                      |
| L518      | Sutton Seeds Roundabout | 12.2           | 22939.0           | 4.5         | 19.77                      |
| L519      | The Oracle Centre       | 7.3            | 7556.0            | 2.7         | 18.44                      |
| L520      | The Oracle Centre       | 7.2            | 8077.0            | 2.8         | 8.54                       |
| L521      | The Picture House       | 8.3            | 27691.0           | 3.3         | 56.46                      |
| L522      | The Picture House       | 8.5            | 27251.0           | 3.3         | 51.26                      |
| L523      | The Picture House       | 8.7            | 27320.0           | 3.3         | 33.53                      |
| L524      | The Picture House       | 9.2            | 26839.0           | 3.3         | 34.71                      |
| L525      | Unit A1 Worton Dr       | 10.5           | 83847.0           | 7.8         | 42.72                      |
| L526      | Unit B Island Rd        | 7.8            | 25666.0           | 3.1         | 47.74                      |
| L527      | Upperwood Bungalow      | 14.4           | 120308.0          | 8.1         | 97.83                      |
| L528      | Upperwood Bungalow      | 14.7           | 120231.0          | 8.1         | 93.39                      |
| L529      | Whitley Wood Lane       | 12.1           | 5509.0            | 1.0         | 52.4                       |
| L530      | Whitley Wood Lane       | 7.0            | 5507.0            | 1.0         | 54.94                      |
| L531      | Whitley Wood Lane       | 7.0            | 5508.0            | 1.0         | 62.33                      |
| L532      | Whitley Wood Lane       | 6.7            | 5507.0            | 1.0         | 60.03                      |
| L533      | Whitley Wood Lane       | 10.9           | 5509.0            | 1.0         | 50.65                      |
| L534      | Whitley Wood Lane       | 6.7            | 5508.0            | 1.0         | 71.03                      |
| L535      | Whitley Wood Lane       | 7.2            | 5508.0            | 1.0         | 59.66                      |
| L536      | Whitley Wood Lane       | 6.4            | 5508.0            | 1.0         | 65.7                       |
| L537      | Whitley Wood Lane       | 10.8           | 5504.0            | 1.0         | 47.53                      |
| L538      | Whitley Wood Road       | 12.5           | 9584.0            | 2.0         | 40.48                      |

| Road Link |                 | Road Width (m) | 24 Hour AADT Flow | HDV Pop (%) | Mean Vehicle Speed (km/hr) |
|-----------|-----------------|----------------|-------------------|-------------|----------------------------|
| L539      | Wilderness Road | 8.2            | 5465.0            | 1.0         | 32.14                      |
| L540      | Wilderness Road | 7.9            | 5477.0            | 1.0         | 31.85                      |
| L541      | Wilderness Road | 12.7           | 5465.0            | 1.0         | 36.86                      |
| L542      | Wilderness Road | 7.4            | 5472.0            | 1.0         | 28.36                      |
| L543      | Wilderness Road | 8.0            | 5465.0            | 1.0         | 6.68                       |
| L544      | Wilderness Road | 9.6            | 5465.0            | 1.0         | 31.31                      |
| L545      | Wilderness Road | 9.0            | 5467.0            | 1.0         | 31.06                      |
| L546      | Wilderness Road | 12.6           | 5465.0            | 1.0         | 13.53                      |
| L547      | Wilderness Road | 8.0            | 5469.0            | 1.0         | 36.17                      |
| L548      | Wilderness Road | 9.2            | 5472.0            | 1.0         | 32.6                       |
| L549      | Wilderness Road | 8.9            | 5471.0            | 1.0         | 30.79                      |
| L550      | Wilderness Road | 7.6            | 5471.0            | 1.0         | 33.01                      |
| L551      | Wilderness Road | 9.5            | 5474.0            | 1.0         | 35.63                      |
| L552      | Wilderness Road | 11.6           | 5467.0            | 1.0         | 29.48                      |
| L553      | Wilderness Road | 9.1            | 5467.0            | 1.0         | 31.62                      |
| L554      | Wokingham Road  | 7.7            | 19498.0           | 4.4         | 35.14                      |
| L555      | Wokingham Road  | 12.4           | 19538.0           | 4.4         | 36.46                      |
| L556      | Wokingham Road  | 8.6            | 19820.0           | 4.4         | 25.67                      |
| L557      | Wokingham Road  | 7.9            | 19820.0           | 4.4         | 27.73                      |
| L558      | Wokingham Road  | 12.6           | 19891.0           | 4.4         | 22.94                      |
| L559      | Wokingham Road  | 10.2           | 20017.0           | 4.4         | 21.74                      |
| L560      | Wokingham Road  | 13.1           | 20144.0           | 4.4         | 21.96                      |
| L561      | Wokingham Road  | 4.8            | 20360.0           | 4.4         | 23.86                      |
| L562      | Wokingham Road  | 7.3            | 19394.0           | 4.4         | 32.38                      |
| L563      | Wokingham Road  | 10.5           | 19567.0           | 4.4         | 31.79                      |
| L564      | Wokingham Road  | 12.5           | 21400.0           | 4.3         | 7.91                       |
| L565      | Wokingham Road  | 11.0           | 20978.0           | 4.5         | 36.69                      |
| L566      | Wokingham Road  | 16.0           | 20938.0           | 4.5         | 40.51                      |
| L567      | Wokingham Road  | 13.3           | 20893.0           | 4.5         | 53.8                       |
| L568      | Wokingham Road  | 10.9           | 16359.0           | 3.8         | 5.0                        |
| L569      | Wokingham Road  | 10.0           | 20973.0           | 4.5         | 43.78                      |
| L570      | Wokingham Road  | 15.2           | 20913.0           | 4.5         | 42.39                      |

| Road Link |                | Road Width (m) | 24 Hour AADT Flow | HDV Pop (%) | Mean Vehicle Speed (km/hr) |
|-----------|----------------|----------------|-------------------|-------------|----------------------------|
| L571      | Wokingham Road | 7.5            | 20858.0           | 4.5         | 39.83                      |
| L572      | Wokingham Road | 9.4            | 20852.0           | 4.5         | 44.73                      |
| L573      | Wokingham Road | 14.1           | 21249.0           | 4.3         | 27.91                      |
| L574      | Wokingham Road | 15.4           | 16275.0           | 3.8         | 29.26                      |
| L575      | Wokingham Road | 16.2           | 16475.0           | 3.8         | 5.61                       |
| L576      | Wokingham Road | 16.5           | 16425.0           | 3.8         | 30.12                      |
| L577      | Wokingham Road | 7.8            | 16375.0           | 3.8         | 34.05                      |
| L578      | Wokingham Road | 13.2           | 21396.0           | 4.3         | 33.84                      |
| L579      | Wokingham Road | 10.9           | 16276.0           | 3.8         | 28.54                      |

Reference should be made to Figure 6 within Appendix A for a graphical representation of the road link locations used within the verification assessment. The road width and mean vehicle speed shown in Table B1 remained the same for the 2027 scenarios.

A summary of the 2027 traffic data is shown in Table B2.

**Table B2: 2027 Traffic Data**

| Road Link |                  | DM Scenario     |              | DS Scenario     |              |
|-----------|------------------|-----------------|--------------|-----------------|--------------|
|           |                  | 24 Hr AADT Flow | HDV Prop (%) | 24 Hr AADT Flow | HDV Prop (%) |
| L1        | A33 Relief Road  | 15078.0         | 3.4          | 15147.0         | 3.3          |
| L2        | 1 Howard St      | 37519.0         | 3.3          | 87260.0         | 7.8          |
| L3        | 1 Howard St      | 37533.0         | 3.3          | 35275.0         | 3.1          |
| L4        | 11 Culver Ln     | 21374.0         | 4.4          | 19692.0         | 4.2          |
| L5        | 11 Culver Ln     | 18366.0         | 4.0          | 29235.0         | 3.3          |
| L6        | 16 Katesgrove Ln | 21071.0         | 2.6          | 5766.0          | 1.0          |
| L7        | 16 Laud Cl       | 16322.0         | 3.0          | 5725.0          | 1.0          |
| L8        | 17 Rose Kiln Ln  | 28258.0         | 3.4          | 20640.0         | 4.4          |
| L9        | 17 Rose Kiln Ln  | 28764.0         | 3.4          | 21759.0         | 4.5          |
| L10       | 17 Rose Kiln Ln  | 27911.0         | 3.5          | 37588.0         | 3.3          |
| L11       | 17 Rose Kiln Ln  | 29233.0         | 3.4          | 86784.0         | 7.8          |
| L12       | 2 Acre Rd        | 87202.0         | 7.8          | 26662.0         | 3.2          |
| L13       | 2 Acre Rd        | 86715.0         | 7.8          | 27653.0         | 3.3          |
| L14       | 2 Acre Rd        | 87060.0         | 7.8          | 8640.0          | 2.2          |

| Road Link |                     | DM Scenario     |              | DS Scenario     |              |
|-----------|---------------------|-----------------|--------------|-----------------|--------------|
|           |                     | 24 Hr AADT Flow | HDV Prop (%) | 24 Hr AADT Flow | HDV Prop (%) |
| L15       | 2 Acre Rd           | 87188.0         | 7.8          | 42013.0         | 2.9          |
| L16       | 20 Bideford Cl      | 24941.0         | 4.6          | 23613.0         | 3.6          |
| L17       | 20 Katesgrove Ln    | 20608.0         | 2.7          | 28662.0         | 3.3          |
| L18       | 22 Blackthorn Cl    | 21749.0         | 4.4          | 85901.0         | 7.8          |
| L19       | 22 Blackthorn Cl    | 21722.0         | 4.4          | 87347.0         | 7.8          |
| L20       | 22 Blackthorn Cl    | 21362.0         | 4.4          | 23316.0         | 3.6          |
| L21       | 22 Brook St W       | 17137.0         | 4.1          | 87366.0         | 7.8          |
| L22       | 22 Church Rd        | 18224.0         | 4.0          | 35396.0         | 3.1          |
| L23       | 23 Chatham St       | 26047.0         | 3.2          | 5760.0          | 1.0          |
| L24       | 23 Chatham St       | 26593.0         | 3.2          | 79333.0         | 7.2          |
| L25       | 24 A329             | 25918.0         | 3.3          | 62426.0         | 5.5          |
| L26       | 26 Brook St W       | 16966.0         | 4.1          | 82997.0         | 7.5          |
| L27       | 28 A329             | 45067.0         | 3.4          | 81859.0         | 7.4          |
| L28       | 28 A329             | 44095.0         | 3.4          | 14801.0         | 3.1          |
| L29       | 28 Brook St W       | 31555.0         | 3.2          | 35028.0         | 3.1          |
| L30       | 28 Brook St W       | 25551.0         | 3.5          | 34676.0         | 3.2          |
| L31       | 28 New Bright St    | 26876.0         | 3.6          | 33878.0         | 3.1          |
| L32       | 28 New Bright St    | 25691.0         | 3.5          | 27549.0         | 4.3          |
| L33       | 28 New Bright St    | 30978.0         | 3.3          | 27270.0         | 3.3          |
| L34       | 29-41 A329          | 27200.0         | 3.3          | 27596.0         | 4.3          |
| L35       | 29-41 A329          | 27584.0         | 3.3          | 5721.0          | 1.0          |
| L36       | 30 Brook St W       | 18730.0         | 4.0          | 5741.0          | 1.0          |
| L37       | 34 Bridge St        | 13017.0         | 2.3          | 5734.0          | 1.0          |
| L38       | 399 Whitley Wood Ln | 99876.0         | 7.6          | 43967.0         | 6.2          |
| L39       | 4 Mill Ln           | 10584.0         | 2.3          | 19166.0         | 4.2          |
| L40       | 4 Mill Ln           | 5745.0          | 2.1          | 18051.0         | 4.1          |
| L41       | 4 Mill Ln           | 10834.0         | 2.3          | 21452.0         | 4.3          |
| L42       | 4 Mill Ln           | 10875.0         | 2.3          | 22579.0         | 4.4          |
| L43       | 4 Mill Ln           | 8686.0          | 2.2          | 22457.0         | 4.3          |
| L44       | 4 Mill Ln           | 10280.0         | 2.3          | 87520.0         | 7.8          |
| L45       | 4 Mill Ln           | 5760.0          | 2.1          | 99114.0         | 7.7          |
| L46       | 4 Mill Ln           | 8571.0          | 2.2          | 4555.0          | 2.9          |

| Road Link |                         | DM Scenario     |              | DS Scenario     |              |
|-----------|-------------------------|-----------------|--------------|-----------------|--------------|
|           |                         | 24 Hr AADT Flow | HDV Prop (%) | 24 Hr AADT Flow | HDV Prop (%) |
| L47       | 40 Brook St W           | 13019.0         | 4.6          | 16092.0         | 3.6          |
| L48       | 401 Old Whitley Wood Ln | 100215.0        | 7.6          | 15929.0         | 2.6          |
| L49       | 43 Lexington Grove      | 5698.0          | 1.0          | 87405.0         | 7.8          |
| L50       | 47 Lower Brook St       | 19814.0         | 4.0          | 31644.0         | 3.3          |
| L51       | 47 Lower Brook St       | 19696.0         | 4.0          | 29369.0         | 3.4          |
| L52       | 48 Suttons Park Ave     | 9067.0          | 1.7          | 99150.0         | 7.7          |
| L53       | 48 Suttons Park Ave     | 9279.0          | 1.8          | 58030.0         | 7.4          |
| L54       | 5 Acre Rd               | 87296.0         | 7.8          | 99457.0         | 7.7          |
| L55       | 5 Acre Rd               | 87235.0         | 7.8          | 94781.0         | 7.6          |
| L56       | 51 Lexington Grove      | 93648.0         | 7.4          | 20554.0         | 5.4          |
| L57       | 54 Wolseley St          | 41944.0         | 2.9          | 28323.0         | 3.3          |
| L58       | 54 Wolseley St          | 37879.0         | 3.0          | 5766.0          | 1.0          |
| L59       | 64 Old Shinfield Rd     | 98160.0         | 7.6          | 5766.0          | 1.0          |
| L60       | 64 Old Shinfield Rd     | 98106.0         | 7.6          | 5761.0          | 1.0          |
| L61       | 7 A33                   | 86106.0         | 7.8          | 9981.0          | 1.9          |
| L62       | 7 A33                   | 86000.0         | 7.8          | 5721.0          | 1.0          |
| L63       | 7 A33                   | 60913.0         | 7.5          | 5733.0          | 1.0          |
| L64       | 7 A33                   | 67369.0         | 7.3          | 5721.0          | 1.0          |
| L65       | 7 A33                   | 86249.0         | 7.8          | 5728.0          | 1.0          |
| L66       | 75 Oxford Rd            | 32440.0         | 3.3          | 5721.0          | 1.0          |
| L67       | 76 New Bright St        | 23380.0         | 3.7          | 5721.0          | 1.0          |
| L68       | 76 New Bright St        | 23544.0         | 3.6          | 5723.0          | 1.0          |
| L69       | 76 New Bright St        | 23373.0         | 3.7          | 5721.0          | 1.0          |
| L70       | 76 New Bright St        | 17255.0         | 4.4          | 5729.0          | 1.0          |
| L71       | 76 New Bright St        | 20703.0         | 3.4          | 5727.0          | 1.0          |
| L72       | 76 New Bright St        | 23599.0         | 3.6          | 5727.0          | 1.0          |
| L73       | 78 Oxford Rd            | 31607.0         | 3.3          | 5731.0          | 1.0          |
| L74       | 83 Oxford Rd            | 32119.0         | 3.3          | 5723.0          | 1.0          |
| L75       | A327                    | 99112.0         | 7.7          | 5723.0          | 1.0          |
| L76       | A329                    | 27955.0         | 3.3          | 20234.0         | 4.4          |
| L77       | A329                    | 9007.0          | 2.9          | 20275.0         | 4.4          |
| L78       | A329                    | 21013.0         | 3.8          | 20567.0         | 4.4          |

| Road Link |       | DM Scenario     |              | DS Scenario     |              |
|-----------|-------|-----------------|--------------|-----------------|--------------|
|           |       | 24 Hr AADT Flow | HDV Prop (%) | 24 Hr AADT Flow | HDV Prop (%) |
| L79       | A329  | 28593.0         | 3.4          | 20567.0         | 4.4          |
| L80       | A329  | 8737.0          | 2.9          | 20771.0         | 4.4          |
| L81       | A329  | 8846.0          | 2.9          | 20902.0         | 4.4          |
| L82       | A329  | 9087.0          | 2.9          | 21125.0         | 4.4          |
| L83       | A329  | 15050.0         | 2.3          | 20126.0         | 4.4          |
| L84       | A329  | 28033.0         | 3.7          | 20305.0         | 4.4          |
| L85       | A329  | 35406.0         | 3.1          | 22201.0         | 4.3          |
| L86       | A329  | 15356.0         | 2.3          | 21764.0         | 4.5          |
| L87       | A329  | 12280.0         | 2.3          | 21723.0         | 4.5          |
| L88       | A3290 | 24579.0         | 4.6          | 21676.0         | 4.4          |
| L89       | A3290 | 22994.0         | 4.5          | 16987.0         | 3.7          |
| L90       | A33   | 85832.0         | 7.8          | 21697.0         | 4.4          |
| L91       | A33   | 87022.0         | 7.8          | 21640.0         | 4.4          |
| L92       | A33   | 28488.0         | 4.5          | 21634.0         | 4.4          |
| L93       | A33   | 84019.0         | 7.6          | 22045.0         | 4.3          |
| L94       | A33   | 43264.0         | 6.1          | 16900.0         | 3.8          |
| L95       | A33   | 26639.0         | 3.1          | 17107.0         | 3.7          |
| L96       | A33   | 82542.0         | 7.5          | 17056.0         | 3.7          |
| L97       | A33   | 26653.0         | 3.1          | 17004.0         | 3.7          |
| L98       | A33   | 84126.0         | 7.6          | 22197.0         | 4.3          |
| L99       | A33   | 87132.0         | 7.8          | 16902.0         | 3.8          |
| L100      | A33   | 43251.0         | 6.1          | 37602.0         | 3.3          |
| L101      | A33   | 87278.0         | 7.8          | 21443.0         | 4.4          |
| L102      | A33   | 26957.0         | 3.1          | 18435.0         | 4.0          |
| L103      | A33   | 83427.0         | 7.5          | 21140.0         | 2.6          |
| L104      | A33   | 84161.0         | 7.6          | 16391.0         | 3.0          |
| L105      | A33   | 27026.0         | 3.1          | 28327.0         | 3.4          |
| L106      | A33   | 87383.0         | 7.8          | 28833.0         | 3.4          |
| L107      | A33   | 84245.0         | 7.6          | 27980.0         | 3.5          |
| L108      | A33   | 86984.0         | 7.8          | 29302.0         | 3.3          |
| L109      | A33   | 26992.0         | 3.1          | 87271.0         | 7.8          |
| L110      | A33   | 27084.0         | 3.1          | 87129.0         | 7.8          |

| Road Link |                  | DM Scenario     |              | DS Scenario     |              |
|-----------|------------------|-----------------|--------------|-----------------|--------------|
|           |                  | 24 Hr AADT Flow | HDV Prop (%) | 24 Hr AADT Flow | HDV Prop (%) |
| L111      | A33              | 28496.0         | 4.4          | 87257.0         | 7.8          |
| L112      | A33              | 87191.0         | 7.8          | 25010.0         | 4.6          |
| L113      | A33              | 23247.0         | 3.6          | 20677.0         | 2.7          |
| L114      | A33              | 91695.0         | 7.2          | 21818.0         | 4.4          |
| L115      | A33              | 31575.0         | 3.3          | 21791.0         | 4.4          |
| L116      | A33              | 83081.0         | 7.6          | 21431.0         | 4.4          |
| L117      | A33              | 83815.0         | 7.6          | 17206.0         | 4.1          |
| L118      | A33              | 83953.0         | 7.6          | 18293.0         | 4.0          |
| L119      | A33              | 26721.0         | 3.1          | 26116.0         | 3.2          |
| L120      | A33              | 23200.0         | 3.5          | 25987.0         | 3.2          |
| L121      | A33              | 27063.0         | 3.1          | 17035.0         | 4.1          |
| L122      | A33              | 84341.0         | 7.6          | 45136.0         | 3.4          |
| L123      | A33              | 87417.0         | 7.8          | 44164.0         | 3.4          |
| L124      | A33              | 87297.0         | 7.8          | 31624.0         | 3.2          |
| L125      | A33              | 87264.0         | 7.8          | 25620.0         | 3.5          |
| L126      | A33              | 85849.0         | 7.8          | 26945.0         | 3.6          |
| L127      | A33              | 87428.0         | 7.8          | 25760.0         | 3.5          |
| L128      | A33              | 87415.0         | 7.8          | 31047.0         | 3.2          |
| L129      | A33              | 27273.0         | 4.3          | 27269.0         | 3.3          |
| L130      | A33              | 18866.0         | 4.1          | 18799.0         | 4.0          |
| L131      | A33 Imperial Way | 84374.0         | 7.6          | 13086.0         | 2.3          |
| L132      | A33 Imperial Way | 84227.0         | 7.6          | 99945.0         | 7.6          |
| L133      | Adelphi House    | 29112.0         | 3.3          | 10653.0         | 2.3          |
| L134      | Adelphi House    | 28687.0         | 3.3          | 5814.0          | 2.0          |
| L135      | Advantage        | 35327.0         | 3.1          | 10903.0         | 2.3          |
| L136      | Atlantis House   | 39011.0         | 3.3          | 10944.0         | 2.3          |
| L137      | Atlantis House   | 39332.0         | 3.3          | 8755.0          | 2.2          |
| L138      | B3270            | 5692.0          | 1.0          | 10349.0         | 2.2          |
| L139      | B3270            | 5696.0          | 1.0          | 5829.0          | 2.1          |
| L140      | B3270            | 125175.0        | 8.1          | 13088.0         | 4.5          |
| L141      | B3270            | 5696.0          | 1.0          | 100284.0        | 7.6          |
| L142      | B3270            | 5691.0          | 1.0          | 5767.0          | 1.0          |

| Road Link |                  | DM Scenario     |              | DS Scenario     |              |
|-----------|------------------|-----------------|--------------|-----------------|--------------|
|           |                  | 24 Hr AADT Flow | HDV Prop (%) | 24 Hr AADT Flow | HDV Prop (%) |
| L143      | B3270            | 5691.0          | 1.0          | 19883.0         | 4.0          |
| L144      | B3270            | 5696.0          | 1.0          | 19765.0         | 4.0          |
| L145      | B3270            | 5691.0          | 1.0          | 9136.0          | 1.6          |
| L146      | B3270            | 5691.0          | 1.0          | 9348.0          | 1.8          |
| L147      | B3270            | 5692.0          | 1.0          | 87365.0         | 7.8          |
| L148      | B3270            | 5692.0          | 1.0          | 87304.0         | 7.8          |
| L149      | B3270            | 5696.0          | 1.0          | 93717.0         | 7.4          |
| L150      | B3270            | 5692.0          | 1.0          | 37948.0         | 3.0          |
| L151      | Basingstoke Road | 5695.0          | 1.0          | 98229.0         | 7.6          |
| L152      | Basingstoke Road | 81283.0         | 7.4          | 98175.0         | 7.6          |
| L153      | Basingstoke Road | 5694.0          | 1.0          | 86175.0         | 7.8          |
| L154      | Basingstoke Road | 82349.0         | 7.4          | 86069.0         | 7.8          |
| L155      | Basingstoke Road | 58847.0         | 5.0          | 60982.0         | 7.5          |
| L156      | Basingstoke Road | 5693.0          | 1.0          | 67438.0         | 7.3          |
| L157      | Basingstoke Road | 79264.0         | 7.2          | 86318.0         | 7.8          |
| L158      | Basingstoke Road | 78758.0         | 7.1          | 32509.0         | 3.3          |
| L159      | Basingstoke Road | 79055.0         | 7.1          | 23449.0         | 3.7          |
| L160      | Basingstoke Road | 67266.0         | 5.8          | 23442.0         | 3.7          |
| L161      | Basingstoke Road | 82415.0         | 7.5          | 17324.0         | 4.3          |
| L162      | Basingstoke Road | 81766.0         | 7.4          | 20772.0         | 3.4          |
| L163      | Basingstoke Road | 85354.0         | 7.3          | 23668.0         | 3.5          |
| L164      | Basingstoke Road | 84637.0         | 7.1          | 31676.0         | 3.3          |
| L165      | Basingstoke Road | 79401.0         | 6.8          | 32188.0         | 3.3          |
| L166      | Basingstoke Road | 82490.0         | 7.4          | 99181.0         | 7.7          |
| L167      | Basingstoke Road | 70803.0         | 6.4          | 28024.0         | 3.3          |
| L168      | Basingstoke Road | 62357.0         | 5.5          | 9076.0          | 2.9          |
| L169      | Basingstoke Road | 81007.0         | 7.4          | 21082.0         | 3.8          |
| L170      | Basingstoke Road | 5696.0          | 1.0          | 8806.0          | 2.8          |
| L171      | Basingstoke Road | 85595.0         | 7.3          | 8915.0          | 2.9          |
| L172      | Basingstoke Road | 82844.0         | 7.5          | 9156.0          | 2.9          |
| L173      | Basingstoke Road | 73925.0         | 6.4          | 15119.0         | 2.3          |
| L174      | Basingstoke Road | 5693.0          | 1.0          | 28102.0         | 3.7          |

| Road Link |                      | DM Scenario     |              | DS Scenario     |              |
|-----------|----------------------|-----------------|--------------|-----------------|--------------|
|           |                      | 24 Hr AADT Flow | HDV Prop (%) | 24 Hr AADT Flow | HDV Prop (%) |
| L175      | Basingstoke Road     | 85466.0         | 7.3          | 35475.0         | 3.1          |
| L176      | Basingstoke Road     | 5693.0          | 1.0          | 15425.0         | 2.3          |
| L177      | Basingstoke Road     | 51027.0         | 3.7          | 12349.0         | 2.3          |
| L178      | Basingstoke Road     | 58538.0         | 4.9          | 24648.0         | 4.6          |
| L179      | Basingstoke Road     | 82928.0         | 7.5          | 23063.0         | 4.5          |
| L180      | Basingstoke Road     | 82575.0         | 7.5          | 87091.0         | 7.8          |
| L181      | Basingstoke Road     | 82247.0         | 7.4          | 28557.0         | 4.5          |
| L182      | Basingstoke Road     | 72325.0         | 6.6          | 84088.0         | 7.6          |
| L183      | Basingstoke Road     | 82392.0         | 7.4          | 43333.0         | 6.1          |
| L184      | Basingstoke Road     | 64439.0         | 5.7          | 26708.0         | 3.1          |
| L185      | Basingstoke Road     | 79165.0         | 7.2          | 82611.0         | 7.5          |
| L186      | Basingstoke Road     | 5696.0          | 1.0          | 26722.0         | 3.1          |
| L187      | Basingstoke Road     | 82291.0         | 7.3          | 84195.0         | 7.6          |
| L188      | Basingstoke Road     | 81374.0         | 7.4          | 87201.0         | 7.8          |
| L189      | Basingstoke Road     | 81742.0         | 7.4          | 43320.0         | 6.1          |
| L190      | Basingstoke Road     | 81790.0         | 7.4          | 27026.0         | 3.1          |
| L191      | Basingstoke Road     | 86102.0         | 7.2          | 83496.0         | 7.5          |
| L192      | Basingstoke Road     | 81613.0         | 7.4          | 84230.0         | 7.6          |
| L193      | Basingstoke Road     | 83464.0         | 7.3          | 27095.0         | 3.1          |
| L194      | Basingstoke Road     | 80885.0         | 6.9          | 87452.0         | 7.8          |
| L195      | Basingstoke Road     | 83941.0         | 7.3          | 84314.0         | 7.6          |
| L196      | Basingstoke Road     | 85608.0         | 7.2          | 87053.0         | 7.8          |
| L197      | Basingstoke Road     | 82187.0         | 7.5          | 27061.0         | 3.1          |
| L198      | Basingstoke Road     | 81655.0         | 7.5          | 27153.0         | 3.1          |
| L199      | Bennet Rd            | 87246.0         | 7.8          | 28565.0         | 4.4          |
| L200      | Bennet Road          | 9078.0          | 2.3          | 91764.0         | 7.2          |
| L201      | Berkeley Avenue      | 14732.0         | 3.1          | 31644.0         | 3.3          |
| L202      | Black Boy Roundabout | 5692.0          | 1.0          | 83150.0         | 7.6          |
| L203      | Capital Point        | 16539.0         | 3.7          | 83884.0         | 7.6          |
| L204      | Capital Point        | 21154.0         | 3.8          | 84022.0         | 7.6          |
| L205      | Capital Point        | 16520.0         | 3.7          | 26790.0         | 3.1          |
| L206      | Capital Point        | 21154.0         | 3.8          | 23269.0         | 3.5          |

| Road Link |               | DM Scenario     |              | DS Scenario     |              |
|-----------|---------------|-----------------|--------------|-----------------|--------------|
|           |               | 24 Hr AADT Flow | HDV Prop (%) | 24 Hr AADT Flow | HDV Prop (%) |
| L207      | Capital Point | 15358.0         | 3.3          | 27132.0         | 3.1          |
| L208      | Capital Point | 18305.0         | 4.0          | 84410.0         | 7.6          |
| L209      | Castle Street | 41603.0         | 3.4          | 87486.0         | 7.8          |
| L210      | Castle Street | 29762.0         | 3.3          | 87333.0         | 7.8          |
| L211      | Castle Street | 35004.0         | 3.2          | 85918.0         | 7.8          |
| L212      | Castle Street | 34959.0         | 3.1          | 87497.0         | 7.8          |
| L213      | Castle Street | 34120.0         | 3.1          | 87484.0         | 7.8          |
| L214      | Castle Street | 39365.0         | 3.3          | 27342.0         | 4.3          |
| L215      | Castle Street | 41898.0         | 3.4          | 18935.0         | 4.1          |
| L216      | Castle Street | 45771.0         | 2.9          | 84443.0         | 7.6          |
| L217      | Castle Street | 34524.0         | 3.1          | 84296.0         | 7.6          |
| L218      | Castle Street | 32173.0         | 3.2          | 29181.0         | 3.3          |
| L219      | Castle Street | 39557.0         | 3.3          | 28756.0         | 3.3          |
| L220      | Castle Street | 38093.0         | 3.2          | 39080.0         | 3.3          |
| L221      | Castle Street | 42717.0         | 3.4          | 39401.0         | 3.3          |
| L222      | Castle Street | 34240.0         | 3.1          | 5761.0          | 1.0          |
| L223      | Castle Street | 35206.0         | 3.1          | 5765.0          | 1.0          |
| L224      | Castle Street | 34607.0         | 3.2          | 125244.0        | 8.1          |
| L225      | Castle Street | 29197.0         | 3.3          | 5765.0          | 1.0          |
| L226      | Castle Street | 35085.0         | 3.1          | 5760.0          | 1.0          |
| L227      | Castle Street | 34797.0         | 3.1          | 5760.0          | 1.0          |
| L228      | Castle Street | 31096.0         | 3.1          | 5765.0          | 1.0          |
| L229      | Castle Street | 35116.0         | 3.2          | 5760.0          | 1.0          |
| L230      | Castle Street | 34350.0         | 3.2          | 5761.0          | 1.0          |
| L231      | Castle Street | 39247.0         | 3.3          | 5761.0          | 1.0          |
| L232      | Castle Street | 34232.0         | 3.2          | 5765.0          | 1.0          |
| L233      | Castle Street | 31376.0         | 3.1          | 5761.0          | 1.0          |
| L234      | Castle Street | 32722.0         | 3.3          | 5764.0          | 1.0          |
| L235      | Castle Street | 33809.0         | 3.1          | 81352.0         | 7.4          |
| L236      | Castle Street | 39105.0         | 3.4          | 5763.0          | 1.0          |
| L237      | Castle Street | 34511.0         | 3.2          | 82418.0         | 7.4          |
| L238      | Castle Street | 33995.0         | 3.1          | 58916.0         | 5.0          |

| Road Link |                | DM Scenario     |              | DS Scenario     |              |
|-----------|----------------|-----------------|--------------|-----------------|--------------|
|           |                | 24 Hr AADT Flow | HDV Prop (%) | 24 Hr AADT Flow | HDV Prop (%) |
| L239      | Caversham Road | 27944.0         | 3.5          | 5762.0          | 1.0          |
| L240      | Caversham Road | 27885.0         | 3.5          | 78827.0         | 7.1          |
| L241      | Caversham Road | 27404.0         | 4.2          | 79124.0         | 7.1          |
| L242      | Caversham Road | 27365.0         | 4.2          | 67335.0         | 5.8          |
| L243      | Caversham Road | 27376.0         | 4.2          | 82484.0         | 7.5          |
| L244      | Caversham Road | 27586.0         | 3.5          | 81835.0         | 7.4          |
| L245      | Caversham Road | 27274.0         | 4.1          | 85423.0         | 7.3          |
| L246      | Caversham Road | 27480.0         | 4.3          | 84706.0         | 7.1          |
| L247      | Caversham Road | 27369.0         | 4.2          | 79470.0         | 6.8          |
| L248      | Caversham Road | 27362.0         | 4.1          | 82559.0         | 7.4          |
| L249      | Caversham Road | 27044.0         | 3.9          | 70872.0         | 6.4          |
| L250      | Caversham Road | 27415.0         | 4.2          | 81076.0         | 7.4          |
| L251      | Caversham Road | 28343.0         | 3.5          | 5765.0          | 1.0          |
| L252      | Caversham Road | 28322.0         | 3.6          | 85664.0         | 7.3          |
| L253      | Caversham Road | 27077.0         | 4.0          | 82913.0         | 7.5          |
| L254      | Caversham Road | 27593.0         | 4.5          | 73994.0         | 6.4          |
| L255      | Caversham Road | 27379.0         | 4.2          | 5762.0          | 1.0          |
| L256      | Caversham Road | 27331.0         | 4.1          | 85535.0         | 7.3          |
| L257      | Caversham Road | 27201.0         | 3.3          | 5762.0          | 1.0          |
| L258      | Caversham Road | 27074.0         | 5.3          | 51096.0         | 3.7          |
| L259      | Caversham Road | 27385.0         | 4.2          | 58607.0         | 4.9          |
| L260      | Caversham Road | 27360.0         | 4.2          | 82644.0         | 7.5          |
| L261      | Caversham Road | 27383.0         | 4.2          | 82316.0         | 7.4          |
| L262      | Caversham Road | 27400.0         | 4.2          | 72394.0         | 6.6          |
| L263      | Caversham Road | 28391.0         | 3.6          | 82461.0         | 7.4          |
| L264      | Caversham Road | 27388.0         | 4.2          | 64508.0         | 5.7          |
| L265      | Caversham Road | 27362.0         | 4.3          | 79234.0         | 7.1          |
| L266      | Caversham Road | 27323.0         | 3.4          | 5765.0          | 1.0          |
| L267      | Caversham Road | 27543.0         | 4.4          | 82360.0         | 7.3          |
| L268      | Caversham Road | 27527.0         | 4.3          | 81443.0         | 7.4          |
| L269      | Caversham Road | 27157.0         | 4.0          | 81811.0         | 7.4          |
| L270      | Caversham Road | 27353.0         | 4.2          | 86171.0         | 7.2          |

| Road Link |                        | DM Scenario     |              | DS Scenario     |              |
|-----------|------------------------|-----------------|--------------|-----------------|--------------|
|           |                        | 24 Hr AADT Flow | HDV Prop (%) | 24 Hr AADT Flow | HDV Prop (%) |
| L271      | Caversham Road         | 28343.0         | 3.4          | 81682.0         | 7.4          |
| L272      | Caversham Road         | 27499.0         | 4.4          | 83533.0         | 7.3          |
| L273      | Caversham Road         | 27374.0         | 4.2          | 80954.0         | 6.8          |
| L274      | Caversham Road         | 27367.0         | 4.2          | 84010.0         | 7.3          |
| L275      | Caversham Road         | 28387.0         | 3.6          | 85677.0         | 7.2          |
| L276      | Caversham Road         | 27410.0         | 4.2          | 82256.0         | 7.5          |
| L277      | Caversham Road         | 27529.0         | 4.4          | 81724.0         | 7.4          |
| L278      | Church Road            | 5652.0          | 1.0          | 87315.0         | 7.8          |
| L279      | Church Road            | 5652.0          | 1.0          | 9147.0          | 2.3          |
| L280      | Church Road            | 5647.0          | 1.0          | 5761.0          | 1.0          |
| L281      | Clarify Court          | 22038.0         | 4.4          | 16608.0         | 3.7          |
| L282      | Clarify Court          | 22741.0         | 4.5          | 21223.0         | 3.8          |
| L283      | Clarify Court          | 23971.0         | 4.5          | 16589.0         | 3.7          |
| L284      | Clarify Court          | 22115.0         | 4.4          | 21223.0         | 3.8          |
| L285      | Clarify Court          | 22175.0         | 4.4          | 15427.0         | 3.3          |
| L286      | Clarify Court          | 22569.0         | 4.5          | 18374.0         | 4.0          |
| L287      | Elm Road               | 5673.0          | 1.0          | 41672.0         | 3.4          |
| L288      | Elm Road               | 5672.0          | 1.0          | 29831.0         | 3.3          |
| L289      | Elm Road               | 5666.0          | 1.0          | 35073.0         | 3.1          |
| L290      | Elm Road               | 5672.0          | 1.0          | 34189.0         | 3.1          |
| L291      | Elm Road               | 5671.0          | 1.0          | 39434.0         | 3.3          |
| L292      | Elm Road               | 5670.0          | 1.0          | 41967.0         | 3.4          |
| L293      | Elm Road               | 5668.0          | 1.0          | 45840.0         | 2.9          |
| L294      | Elm Road               | 5667.0          | 1.0          | 34593.0         | 3.1          |
| L295      | Elm Road               | 5667.0          | 1.0          | 32242.0         | 3.2          |
| L296      | Elm Road               | 5668.0          | 1.0          | 39626.0         | 3.3          |
| L297      | Elm Road               | 5667.0          | 1.0          | 38162.0         | 3.2          |
| L298      | Elm Road               | 5671.0          | 1.0          | 42786.0         | 3.4          |
| L299      | Elm Road               | 5668.0          | 1.0          | 34309.0         | 3.1          |
| L300      | Elm Road               | 5671.0          | 1.0          | 29266.0         | 3.3          |
| L301      | Elm Road               | 5665.0          | 1.0          | 35154.0         | 3.1          |
| L302      | Fobney Treatment Works | 29912.0         | 3.3          | 34866.0         | 3.1          |

| Road Link |                    | DM Scenario     |              | DS Scenario     |              |
|-----------|--------------------|-----------------|--------------|-----------------|--------------|
|           |                    | 24 Hr AADT Flow | HDV Prop (%) | 24 Hr AADT Flow | HDV Prop (%) |
| L303      | Friar St           | 29235.0         | 3.3          | 31165.0         | 3.1          |
| L304      | Heath Road         | 3740.0          | 3.6          | 35185.0         | 3.2          |
| L305      | Imperial Way       | 84062.0         | 7.6          | 34419.0         | 3.2          |
| L306      | Island Rd          | 26372.0         | 3.1          | 39316.0         | 3.3          |
| L307      | Island Rd          | 43634.0         | 6.2          | 34301.0         | 3.2          |
| L308      | Katesgrove Lane    | 21270.0         | 4.1          | 31445.0         | 3.1          |
| L309      | Katesgrove Lane    | 15428.0         | 3.3          | 32791.0         | 3.3          |
| L310      | Kennet Island turn | 44294.0         | 6.3          | 39174.0         | 3.4          |
| L311      | Kennet Island turn | 44295.0         | 6.3          | 34580.0         | 3.2          |
| L312      | Kennet Island turn | 43898.0         | 6.2          | 34064.0         | 3.1          |
| L313      | Kennet Island turn | 43604.0         | 6.2          | 28013.0         | 3.5          |
| L314      | Kennet Island turn | 43831.0         | 6.2          | 27954.0         | 3.5          |
| L315      | Kennet Island turn | 43901.0         | 6.2          | 27473.0         | 4.2          |
| L316      | Kennet Island turn | 43620.0         | 6.2          | 27434.0         | 4.2          |
| L317      | Kennet Island turn | 26555.0         | 3.1          | 27445.0         | 4.2          |
| L318      | Kings Road         | 20099.0         | 4.2          | 27655.0         | 3.5          |
| L319      | Kings Road         | 16106.0         | 4.6          | 27343.0         | 4.1          |
| L320      | Kings Road         | 16122.0         | 4.7          | 27438.0         | 4.2          |
| L321      | Kings Road         | 21447.0         | 4.3          | 27431.0         | 4.1          |
| L322      | Kings Road         | 21430.0         | 4.3          | 27113.0         | 3.9          |
| L323      | Kings Road         | 19097.0         | 4.2          | 27484.0         | 4.2          |
| L324      | Kings Road         | 16109.0         | 4.7          | 28412.0         | 3.5          |
| L325      | Kings Road         | 20117.0         | 4.2          | 28391.0         | 3.6          |
| L326      | Kings Road         | 16068.0         | 4.6          | 27146.0         | 4.0          |
| L327      | Kings Road         | 17200.0         | 4.3          | 27662.0         | 4.5          |
| L328      | Kings Road         | 21285.0         | 4.3          | 27448.0         | 4.2          |
| L329      | Kings Road         | 21611.0         | 4.3          | 27400.0         | 4.1          |
| L330      | Kings Road         | 18134.0         | 4.1          | 27143.0         | 5.3          |
| L331      | Kings Road         | 17591.0         | 4.2          | 27454.0         | 4.2          |
| L332      | Kings Road         | 17799.0         | 4.1          | 27429.0         | 4.2          |
| L333      | Kings Road         | 16736.0         | 4.4          | 27452.0         | 4.2          |
| L334      | Kings Road         | 19623.0         | 4.2          | 27469.0         | 4.2          |

| Road Link |             | DM Scenario     |              | DS Scenario     |              |
|-----------|-------------|-----------------|--------------|-----------------|--------------|
|           |             | 24 Hr AADT Flow | HDV Prop (%) | 24 Hr AADT Flow | HDV Prop (%) |
| L335      | Kings Road  | 17982.0         | 4.1          | 28460.0         | 3.6          |
| L336      | Kings Road  | 16048.0         | 4.5          | 27457.0         | 4.2          |
| L337      | Kings Road  | 15987.0         | 3.8          | 27431.0         | 4.3          |
| L338      | Kings Road  | 15986.0         | 3.9          | 27392.0         | 3.4          |
| L339      | Kings Road  | 15975.0         | 4.0          | 27612.0         | 4.4          |
| L340      | Kings Road  | 21647.0         | 4.3          | 27226.0         | 4.0          |
| L341      | Kings Road  | 15976.0         | 4.1          | 27422.0         | 4.2          |
| L342      | Kings Road  | 21213.0         | 4.3          | 28412.0         | 3.4          |
| L343      | Kings Road  | 15982.0         | 3.8          | 27568.0         | 4.4          |
| L344      | Kings Road  | 21903.0         | 4.3          | 27443.0         | 4.2          |
| L345      | Kings Road  | 16011.0         | 4.3          | 27436.0         | 4.2          |
| L346      | Kings Road  | 21383.0         | 4.3          | 28456.0         | 3.6          |
| L347      | Kings Road  | 15976.0         | 4.1          | 27479.0         | 4.2          |
| L348      | Lea Villa   | 65080.0         | 5.9          | 27598.0         | 4.4          |
| L349      | Little Lea  | 82985.0         | 7.5          | 5721.0          | 1.0          |
| L350      | Little Lea  | 82911.0         | 7.5          | 5716.0          | 1.0          |
| L351      | London Road | 22309.0         | 4.3          | 22107.0         | 4.4          |
| L352      | London Road | 25449.0         | 4.5          | 22810.0         | 4.4          |
| L353      | London Road | 21851.0         | 4.3          | 24040.0         | 4.5          |
| L354      | London Road | 25387.0         | 4.5          | 22184.0         | 4.4          |
| L355      | London Road | 24774.0         | 4.5          | 22244.0         | 4.4          |
| L356      | London Road | 22175.0         | 4.3          | 22638.0         | 4.4          |
| L357      | London Road | 22510.0         | 4.4          | 5742.0          | 1.0          |
| L358      | London Road | 21637.0         | 4.3          | 5741.0          | 1.0          |
| L359      | London Road | 22434.0         | 4.3          | 5735.0          | 1.0          |
| L360      | London Road | 21988.0         | 4.3          | 5740.0          | 1.0          |
| L361      | London Road | 21987.0         | 4.4          | 5739.0          | 1.0          |
| L362      | London Road | 22752.0         | 4.5          | 5737.0          | 1.0          |
| L363      | London Road | 23658.0         | 4.5          | 5736.0          | 1.0          |
| L364      | London Road | 22178.0         | 4.4          | 5736.0          | 1.0          |
| L365      | London Road | 23814.0         | 4.5          | 5737.0          | 1.0          |
| L366      | London Road | 21934.0         | 4.3          | 5736.0          | 1.0          |

| Road Link |                       | DM Scenario     |              | DS Scenario     |              |
|-----------|-----------------------|-----------------|--------------|-----------------|--------------|
|           |                       | 24 Hr AADT Flow | HDV Prop (%) | 24 Hr AADT Flow | HDV Prop (%) |
| L367      | London Road           | 21499.0         | 4.3          | 5740.0          | 1.0          |
| L368      | London Road           | 22388.0         | 4.3          | 5737.0          | 1.0          |
| L369      | London Road           | 24652.0         | 4.5          | 5740.0          | 1.0          |
| L370      | London Road           | 24881.0         | 4.5          | 29981.0         | 3.3          |
| L371      | London Road           | 22132.0         | 4.3          | 29304.0         | 3.3          |
| L372      | London Road           | 22062.0         | 4.3          | 3809.0          | 3.6          |
| L373      | London Road           | 21525.0         | 4.3          | 84131.0         | 7.6          |
| L374      | London Road           | 24043.0         | 4.5          | 26441.0         | 3.1          |
| L375      | London Road           | 25136.0         | 4.5          | 43703.0         | 6.2          |
| L376      | London Road           | 25375.0         | 4.5          | 21339.0         | 4.1          |
| L377      | London Road           | 23076.0         | 4.5          | 15497.0         | 3.3          |
| L378      | London Road           | 24333.0         | 4.5          | 44363.0         | 6.3          |
| L379      | Longwater Ave         | 87451.0         | 7.8          | 44364.0         | 6.3          |
| L380      | Longwater Ave         | 86482.0         | 7.8          | 43673.0         | 6.2          |
| L381      | Longwater Ave         | 87412.0         | 7.8          | 43900.0         | 6.2          |
| L382      | Lower Earley Way West | 5692.0          | 1.0          | 43970.0         | 6.2          |
| L383      | M4                    | 84894.0         | 8.7          | 43689.0         | 6.2          |
| L384      | M4                    | 77684.0         | 6.7          | 26624.0         | 3.1          |
| L385      | M4                    | 81997.0         | 7.9          | 20168.0         | 4.2          |
| L386      | M4                    | 71955.0         | 6.5          | 16175.0         | 4.6          |
| L387      | M4                    | 77362.0         | 7.6          | 16191.0         | 4.7          |
| L388      | M4                    | 78825.0         | 7.8          | 21516.0         | 4.3          |
| L389      | M4                    | 81593.0         | 7.8          | 21499.0         | 4.3          |
| L390      | M4                    | 99045.0         | 7.7          | 16178.0         | 4.6          |
| L391      | M4                    | 112713.0        | 7.9          | 20186.0         | 4.2          |
| L392      | M4                    | 79378.0         | 6.8          | 16137.0         | 4.5          |
| L393      | M4                    | 103793.0        | 7.6          | 17269.0         | 4.3          |
| L394      | M4                    | 82182.0         | 8.3          | 21354.0         | 4.3          |
| L395      | M4                    | 97400.0         | 7.5          | 21680.0         | 4.3          |
| L396      | M4                    | 70330.0         | 6.4          | 18203.0         | 4.1          |
| L397      | M4                    | 98187.0         | 7.5          | 17660.0         | 4.1          |
| L398      | M4                    | 73487.0         | 6.5          | 17868.0         | 4.1          |

| Road Link |                   | DM Scenario     |              | DS Scenario     |              |
|-----------|-------------------|-----------------|--------------|-----------------|--------------|
|           |                   | 24 Hr AADT Flow | HDV Prop (%) | 24 Hr AADT Flow | HDV Prop (%) |
| L399      | M4                | 94950.0         | 7.4          | 16805.0         | 4.4          |
| L400      | M4                | 75754.0         | 6.7          | 16117.0         | 4.4          |
| L401      | New Century Place | 4486.0          | 3.0          | 16056.0         | 3.8          |
| L402      | Northern Way      | 87463.0         | 7.8          | 16055.0         | 3.9          |
| L403      | Northern Way      | 87434.0         | 7.8          | 16044.0         | 4.0          |
| L404      | Oxford Road       | 7166.0          | 2.3          | 21716.0         | 4.3          |
| L405      | Oxford Road       | 7162.0          | 2.3          | 16045.0         | 4.1          |
| L406      | Oxford Road       | 7164.0          | 2.3          | 21282.0         | 4.3          |
| L407      | Pepper Lane       | 10052.0         | 1.8          | 16051.0         | 3.8          |
| L408      | Queens Road       | 10641.0         | 2.8          | 21972.0         | 4.3          |
| L409      | Queens Road       | 16028.0         | 3.5          | 16080.0         | 4.3          |
| L410      | Queens Road       | 15178.0         | 2.6          | 16045.0         | 4.1          |
| L411      | Queens Road       | 15987.0         | 3.8          | 65149.0         | 5.9          |
| L412      | Queens Road       | 16023.0         | 3.6          | 83054.0         | 7.5          |
| L413      | Queens Road       | 9244.0          | 2.9          | 82980.0         | 7.5          |
| L414      | Queens Road       | 13491.0         | 2.7          | 22378.0         | 4.3          |
| L415      | Queens Road       | 11727.0         | 2.9          | 25518.0         | 4.5          |
| L416      | Queens Road       | 15138.0         | 2.7          | 21920.0         | 4.3          |
| L417      | Queens Road       | 11900.0         | 2.9          | 25456.0         | 4.5          |
| L418      | Queens Road       | 16192.0         | 2.6          | 24843.0         | 4.5          |
| L419      | Queens Road       | 16007.0         | 3.6          | 22244.0         | 4.3          |
| L420      | Queens Road       | 18105.0         | 2.4          | 21706.0         | 4.3          |
| L421      | Queens Road       | 16029.0         | 3.5          | 22503.0         | 4.3          |
| L422      | Queens Road       | 13572.0         | 2.7          | 22057.0         | 4.3          |
| L423      | Queens Road       | 15860.0         | 2.6          | 22056.0         | 4.4          |
| L424      | Queens Road       | 16128.0         | 2.8          | 22821.0         | 4.4          |
| L425      | Queens Road       | 9760.0          | 2.9          | 23727.0         | 4.5          |
| L426      | Queens Road       | 10324.0         | 2.8          | 22247.0         | 4.4          |
| L427      | Queens Road       | 11565.0         | 2.9          | 23883.0         | 4.5          |
| L428      | Queens Road       | 15997.0         | 3.7          | 22003.0         | 4.3          |
| L429      | Queens Road       | 9220.0          | 2.9          | 21568.0         | 4.3          |
| L430      | Queens Road       | 16051.0         | 3.5          | 24721.0         | 4.5          |

| Road Link |                          | DM Scenario     |              | DS Scenario     |              |
|-----------|--------------------------|-----------------|--------------|-----------------|--------------|
|           |                          | 24 Hr AADT Flow | HDV Prop (%) | 24 Hr AADT Flow | HDV Prop (%) |
| L431      | Queens Road              | 16120.0         | 3.4          | 24950.0         | 4.5          |
| L432      | Queens Road              | 16696.0         | 3.1          | 22201.0         | 4.3          |
| L433      | Queens Road              | 19490.0         | 2.3          | 22131.0         | 4.3          |
| L434      | Reading Gate Retail Park | 87336.0         | 7.8          | 21594.0         | 4.3          |
| L435      | Reading Gate Retail Park | 87259.0         | 7.8          | 24112.0         | 4.5          |
| L436      | Reading Gate Retail Park | 87196.0         | 7.8          | 25205.0         | 4.5          |
| L437      | Reading Stadium          | 87155.0         | 7.8          | 25444.0         | 4.5          |
| L438      | Reading Stadium          | 87229.0         | 7.8          | 23145.0         | 4.5          |
| L439      | Reading Stadium          | 87182.0         | 7.8          | 24402.0         | 4.5          |
| L440      | Rose Kiln Court          | 21934.0         | 3.4          | 86551.0         | 7.8          |
| L441      | Rose Kiln Lane           | 27121.0         | 3.1          | 87481.0         | 7.8          |
| L442      | Rose Kiln Lane           | 4237.0          | 2.5          | 5761.0          | 1.0          |
| L443      | Rose Kiln Lane           | 27430.0         | 3.5          | 84963.0         | 8.7          |
| L444      | Rose Kiln Lane           | 8744.0          | 2.2          | 77753.0         | 6.7          |
| L445      | Rose Kiln Lane           | 29166.0         | 3.3          | 82066.0         | 7.9          |
| L446      | Rose Kiln Lane           | 31575.0         | 3.3          | 72024.0         | 6.5          |
| L447      | Rose Kiln Lane           | 27862.0         | 3.4          | 77431.0         | 7.6          |
| L448      | Rose Kiln Lane           | 40811.0         | 3.2          | 78894.0         | 7.8          |
| L449      | Rose Kiln Lane           | 29140.0         | 3.4          | 81662.0         | 7.8          |
| L450      | Rose Kiln Lane           | 38125.0         | 3.3          | 112782.0        | 7.9          |
| L451      | Rose Kiln Lane           | 30915.0         | 3.3          | 79447.0         | 6.8          |
| L452      | Rose Kiln Lane           | 28508.0         | 3.4          | 103862.0        | 7.6          |
| L453      | Rose Kiln Lane           | 8748.0          | 2.2          | 82251.0         | 8.3          |
| L454      | Rose Kiln Lane           | 34986.0         | 3.3          | 97469.0         | 7.5          |
| L455      | Rose Kiln Lane           | 43869.0         | 3.2          | 70399.0         | 6.4          |
| L456      | Rose Kiln Lane           | 27863.0         | 3.4          | 98256.0         | 7.5          |
| L457      | Rose Kiln Lane           | 29300.0         | 3.4          | 73556.0         | 6.5          |
| L458      | Rose Kiln Lane           | 29631.0         | 3.3          | 95019.0         | 7.4          |
| L459      | Rose Kiln Lane           | 28433.0         | 3.4          | 75823.0         | 6.7          |
| L460      | Rose Kiln Lane           | 27207.0         | 3.1          | 87532.0         | 7.8          |
| L461      | Rose Kiln Lane           | 41523.0         | 3.2          | 87503.0         | 7.8          |
| L462      | Rose Kiln Lane           | 27099.0         | 3.1          | 7235.0          | 2.2          |

| Road Link |                               | DM Scenario     |              | DS Scenario     |              |
|-----------|-------------------------------|-----------------|--------------|-----------------|--------------|
|           |                               | 24 Hr AADT Flow | HDV Prop (%) | 24 Hr AADT Flow | HDV Prop (%) |
| L463      | Shinfield Eastern Relief Road | 98440.0         | 7.6          | 7231.0          | 2.2          |
| L464      | Shinfield Eastern Relief Road | 97690.0         | 7.6          | 7233.0          | 2.2          |
| L465      | Shinfield Eastern Relief Road | 99055.0         | 7.7          | 10121.0         | 1.8          |
| L466      | Shinfield Eastern Relief Road | 98349.0         | 7.6          | 10710.0         | 2.8          |
| L467      | Shinfield Eastern Relief Road | 99147.0         | 7.7          | 16097.0         | 3.5          |
| L468      | Shinfield Eastern Relief Road | 99081.0         | 7.7          | 15247.0         | 2.6          |
| L469      | Shinfield Road                | 95169.0         | 7.6          | 16056.0         | 3.7          |
| L470      | Shinfield Road                | 93689.0         | 7.6          | 9313.0          | 2.9          |
| L471      | Shinfield Road                | 13035.0         | 3.6          | 13560.0         | 2.7          |
| L472      | Shinfield Road                | 99380.0         | 7.7          | 11796.0         | 2.9          |
| L473      | Shinfield Road                | 77642.0         | 7.7          | 15207.0         | 2.7          |
| L474      | Shinfield Road                | 86263.0         | 7.8          | 11969.0         | 2.9          |
| L475      | Shinfield Road                | 25175.0         | 6.0          | 16261.0         | 2.6          |
| L476      | Shinfield Road                | 92256.0         | 7.6          | 16076.0         | 3.6          |
| L477      | Shinfield Road                | 65703.0         | 7.5          | 18174.0         | 2.4          |
| L478      | Shinfield Road                | 19400.0         | 5.2          | 16098.0         | 3.5          |
| L479      | Shinfield Road                | 57961.0         | 7.4          | 13641.0         | 2.7          |
| L480      | Shinfield Road                | 95572.0         | 7.6          | 16197.0         | 2.7          |
| L481      | Shinfield Road                | 94600.0         | 7.6          | 9829.0          | 2.9          |
| L482      | Shinfield Road                | 94996.0         | 7.6          | 10393.0         | 2.8          |
| L483      | Shinfield Road                | 95714.0         | 7.6          | 11634.0         | 2.9          |
| L484      | Shinfield Road                | 91006.0         | 7.6          | 16066.0         | 3.7          |
| L485      | Shinfield Road                | 91691.0         | 7.6          | 9289.0          | 2.9          |
| L486      | Shinfield Road                | 91698.0         | 7.6          | 16120.0         | 3.5          |
| L487      | Shinfield Road                | 91223.0         | 7.6          | 16189.0         | 3.4          |
| L488      | Shinfield Road                | 97984.0         | 7.7          | 16765.0         | 3.1          |
| L489      | Shinfield Road                | 82450.0         | 7.7          | 19559.0         | 2.3          |
| L490      | Shinfield Road                | 99388.0         | 7.7          | 87328.0         | 7.8          |
| L491      | Shinfield Road                | 30846.0         | 6.5          | 87265.0         | 7.8          |
| L492      | Shinfield Road                | 88802.0         | 7.5          | 87224.0         | 7.8          |
| L493      | Shinfield Road                | 95928.0         | 7.6          | 87298.0         | 7.8          |
| L494      | Shinfield Road                | 21799.0         | 5.6          | 87251.0         | 7.8          |

| Road Link |                         | DM Scenario     |              | DS Scenario     |              |
|-----------|-------------------------|-----------------|--------------|-----------------|--------------|
|           |                         | 24 Hr AADT Flow | HDV Prop (%) | 24 Hr AADT Flow | HDV Prop (%) |
| L495      | Shinfield Road          | 71926.0         | 7.6          | 22003.0         | 3.4          |
| L496      | Shinfield Road          | 15068.0         | 4.2          | 27190.0         | 3.1          |
| L497      | Shinfield Road          | 20274.0         | 5.3          | 4306.0          | 2.5          |
| L498      | Shinfield Road          | 99722.0         | 7.7          | 27499.0         | 3.5          |
| L499      | Shinfield Road          | 95781.0         | 7.6          | 8813.0          | 2.2          |
| L500      | Shinfield Road          | 98937.0         | 7.7          | 27931.0         | 3.4          |
| L501      | Shinfield Road          | 94712.0         | 7.6          | 40880.0         | 3.2          |
| L502      | Shinfield Road          | 94510.0         | 7.6          | 29209.0         | 3.4          |
| L503      | Shinfield Road          | 95972.0         | 7.6          | 38194.0         | 3.2          |
| L504      | Shinfield Road          | 95153.0         | 7.6          | 30984.0         | 3.3          |
| L505      | Shinfield Road          | 68227.0         | 7.5          | 28577.0         | 3.4          |
| L506      | Shinfield Road          | 97594.0         | 7.6          | 8817.0          | 2.2          |
| L507      | Shinfield Road          | 18583.0         | 5.0          | 35055.0         | 3.3          |
| L508      | Shinfield Road          | 99699.0         | 7.7          | 43938.0         | 3.2          |
| L509      | Shinfield Road          | 98650.0         | 7.7          | 27932.0         | 3.4          |
| L510      | Shinfield Road          | 42740.0         | 6.8          | 29700.0         | 3.3          |
| L511      | Shinfield Road          | 95514.0         | 7.6          | 28502.0         | 3.3          |
| L512      | Shinfield Road          | 20485.0         | 5.4          | 27276.0         | 3.1          |
| L513      | Smallmead Rd            | 87216.0         | 7.8          | 41592.0         | 3.2          |
| L514      | Smallmead Rd            | 86039.0         | 7.8          | 27168.0         | 3.1          |
| L515      | St Peters Road          | 4193.0          | 4.2          | 98509.0         | 7.6          |
| L516      | St Peters Road          | 4200.0          | 4.2          | 97759.0         | 7.6          |
| L517      | St Peters Road          | 4197.0          | 4.2          | 99124.0         | 7.7          |
| L518      | Sutton Seeds Roundabout | 23724.0         | 4.5          | 98418.0         | 7.6          |
| L519      | The Oracle Centre       | 7814.0          | 2.7          | 99216.0         | 7.7          |
| L520      | The Oracle Centre       | 8353.0          | 2.8          | 95238.0         | 7.6          |
| L521      | The Picture House       | 28639.0         | 3.3          | 93758.0         | 7.6          |
| L522      | The Picture House       | 28183.0         | 3.3          | 13104.0         | 3.6          |
| L523      | The Picture House       | 28254.0         | 3.3          | 99449.0         | 7.7          |
| L524      | The Picture House       | 27757.0         | 3.3          | 77711.0         | 7.7          |
| L525      | Unit A1 Worton Dr       | 86715.0         | 7.8          | 86332.0         | 7.8          |
| L526      | Unit B Island Rd        | 26544.0         | 3.1          | 25244.0         | 6.0          |

| Road Link |                    | DM Scenario     |              | DS Scenario     |              |
|-----------|--------------------|-----------------|--------------|-----------------|--------------|
|           |                    | 24 Hr AADT Flow | HDV Prop (%) | 24 Hr AADT Flow | HDV Prop (%) |
| L527      | Upperwood Bungalow | 124423.0        | 8.1          | 92325.0         | 7.6          |
| L528      | Upperwood Bungalow | 124343.0        | 8.1          | 65772.0         | 7.5          |
| L529      | Whitley Wood Lane  | 5698.0          | 1.0          | 19469.0         | 5.1          |
| L530      | Whitley Wood Lane  | 5695.0          | 1.0          | 95641.0         | 7.6          |
| L531      | Whitley Wood Lane  | 5697.0          | 1.0          | 94669.0         | 7.6          |
| L532      | Whitley Wood Lane  | 5696.0          | 1.0          | 95065.0         | 7.6          |
| L533      | Whitley Wood Lane  | 5697.0          | 1.0          | 95783.0         | 7.6          |
| L534      | Whitley Wood Lane  | 5697.0          | 1.0          | 91075.0         | 7.6          |
| L535      | Whitley Wood Lane  | 5697.0          | 1.0          | 91760.0         | 7.6          |
| L536      | Whitley Wood Lane  | 5697.0          | 1.0          | 91767.0         | 7.6          |
| L537      | Whitley Wood Lane  | 5692.0          | 1.0          | 91292.0         | 7.6          |
| L538      | Whitley Wood Road  | 9912.0          | 2.0          | 98053.0         | 7.7          |
| L539      | Wilderness Road    | 5652.0          | 1.0          | 82519.0         | 7.7          |
| L540      | Wilderness Road    | 5664.0          | 1.0          | 30915.0         | 6.5          |
| L541      | Wilderness Road    | 5652.0          | 1.0          | 88871.0         | 7.5          |
| L542      | Wilderness Road    | 5659.0          | 1.0          | 95997.0         | 7.6          |
| L543      | Wilderness Road    | 5652.0          | 1.0          | 21868.0         | 5.6          |
| L544      | Wilderness Road    | 5652.0          | 1.0          | 71995.0         | 7.6          |
| L545      | Wilderness Road    | 5654.0          | 1.0          | 15137.0         | 4.2          |
| L546      | Wilderness Road    | 5652.0          | 1.0          | 20343.0         | 5.3          |
| L547      | Wilderness Road    | 5656.0          | 1.0          | 99791.0         | 7.7          |
| L548      | Wilderness Road    | 5660.0          | 1.0          | 95850.0         | 7.6          |
| L549      | Wilderness Road    | 5658.0          | 1.0          | 99006.0         | 7.7          |
| L550      | Wilderness Road    | 5658.0          | 1.0          | 94579.0         | 7.6          |
| L551      | Wilderness Road    | 5662.0          | 1.0          | 96041.0         | 7.6          |
| L552      | Wilderness Road    | 5654.0          | 1.0          | 95222.0         | 7.6          |
| L553      | Wilderness Road    | 5654.0          | 1.0          | 68296.0         | 7.5          |
| L554      | Wokingham Road     | 20165.0         | 4.4          | 97663.0         | 7.6          |
| L555      | Wokingham Road     | 20206.0         | 4.4          | 18652.0         | 5.0          |
| L556      | Wokingham Road     | 20498.0         | 4.4          | 99768.0         | 7.7          |
| L557      | Wokingham Road     | 20498.0         | 4.4          | 98719.0         | 7.7          |
| L558      | Wokingham Road     | 20571.0         | 4.4          | 42809.0         | 6.8          |

| Road Link |                | DM Scenario     |              | DS Scenario     |              |
|-----------|----------------|-----------------|--------------|-----------------|--------------|
|           |                | 24 Hr AADT Flow | HDV Prop (%) | 24 Hr AADT Flow | HDV Prop (%) |
| L559      | Wokingham Road | 20702.0         | 4.4          | 95583.0         | 7.6          |
| L560      | Wokingham Road | 20833.0         | 4.4          | 87285.0         | 7.8          |
| L561      | Wokingham Road | 21056.0         | 4.4          | 86108.0         | 7.8          |
| L562      | Wokingham Road | 20057.0         | 4.4          | 4262.0          | 4.2          |
| L563      | Wokingham Road | 20236.0         | 4.4          | 4269.0          | 4.1          |
| L564      | Wokingham Road | 22132.0         | 4.3          | 4266.0          | 4.1          |
| L565      | Wokingham Road | 21695.0         | 4.5          | 23793.0         | 4.5          |
| L566      | Wokingham Road | 21654.0         | 4.5          | 7883.0          | 2.7          |
| L567      | Wokingham Road | 21607.0         | 4.5          | 8422.0          | 2.8          |
| L568      | Wokingham Road | 16918.0         | 3.8          | 28708.0         | 3.3          |
| L569      | Wokingham Road | 21690.0         | 4.5          | 28252.0         | 3.3          |
| L570      | Wokingham Road | 21628.0         | 4.5          | 27826.0         | 3.2          |
| L571      | Wokingham Road | 21571.0         | 4.5          | 86784.0         | 7.8          |
| L572      | Wokingham Road | 21565.0         | 4.5          | 26613.0         | 3.1          |
| L573      | Wokingham Road | 21976.0         | 4.3          | 124492.0        | 8.1          |
| L574      | Wokingham Road | 16831.0         | 3.8          | 124412.0        | 8.1          |
| L575      | Wokingham Road | 17038.0         | 3.8          | 5767.0          | 1.0          |
| L576      | Wokingham Road | 16987.0         | 3.8          | 5764.0          | 1.0          |
| L577      | Wokingham Road | 16935.0         | 3.8          | 5766.0          | 1.0          |
| L578      | Wokingham Road | 22128.0         | 4.3          | 5765.0          | 1.0          |
| L579      | Wokingham Road | 16833.0         | 3.8          | 5766.0          | 1.0          |

Reference should be made to Figure 6 within Appendix A for a graphical representation of the road link locations used within the operation phase assessment.

### Emission Factors

Emission factors for each link were calculated using the relevant traffic flows and the Emissions Factor Toolkit (version 12.0) released in December 2023, which incorporates updated COPERT v5.6 vehicle emissions factors for NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> and EURO 6 vehicle fleet sub-categories.

### NO<sub>x</sub> to NO<sub>2</sub> Conversion

Predicted annual mean NO<sub>x</sub> concentrations from the dispersion model were converted to NO<sub>2</sub> concentrations using the NO<sub>x</sub> to NO<sub>2</sub> Calculator (v.8.1) provided by DEFRA, which is the method detailed within LAQM.TG(22).

### Meteorological Data

Meteorological data used in this assessment was taken from Benson meteorological station over the period 1<sup>st</sup> January 2023 to 31<sup>st</sup> December 2023 (inclusive).

Benson meteorological station is located at approximate NGR: (462473, 191625) which is approximately 19.89km North of the Proposed Development. Benson data has been used for this assessment as it represents the closest meteorological station to the development site and as such, it is considered to provide a reasonable representation of conditions present.

All meteorological records used in the assessment were provided by the Met Office. Reference should be made to Figure 5 within Appendix A for a wind rose of utilised meteorological data.

### Roughness Length

The specific roughness length ( $z_0$ ) values used to represent conditions during the verification process, DM/DS scenario, as well as conditions at the Benson meteorological station are summarised in Table B3.

**Table B3: Utilised Roughness Lengths**

| Scenario                          | Roughness Length (m) | ADMS Description        |
|-----------------------------------|----------------------|-------------------------|
| Verification, DM and DS Scenarios | 1.0                  | Cities, woodlands       |
| Benson                            | 0.5                  | Parkland, open suburbia |

These values of  $z_0$  are considered appropriate for the morphology of the assessment area.

### Monin-Obukhov Length

The Monin-Obukhov length provides a measure of the stability of the atmosphere within certain urban or rural contexts. The specific length values used to represent conditions during the verification process, DM/DS scenario, as well as conditions at the Benson are summarised in Table B4.

**Table B4: Utilised Monin-Obukhov Lengths**

| Scenario                          | Monin-Obukhov Length (m) | ADMS Description                                 |
|-----------------------------------|--------------------------|--------------------------------------------------|
| Verification, DM and DS Scenarios | 30                       | Cities and large towns or Mixed urban/industrial |
| Benson                            | 30                       | Cities and large towns or Mixed urban/industrial |

This Monin-Obukhov value is considered appropriate for the morphology of the assessment area.

### Background Concentrations

The 2027 annual mean background concentrations, detailed in Table B5, were used in the dispersion modelling assessment to represent annual mean pollutant levels at the Proposed Development site and local monitoring sites.

Table B5 displays the specific background concentrations as predicted by DEFRA, utilised to represent the condition at the monitoring locations used within the verification process.

**Table B5: Predicted Background Pollutant Concentrations for Monitoring Locations**

| Monitoring Location | DEFRA Grid Square | Pollutant         | 2023 Predicted Background Concentration ( $\mu\text{g}/\text{m}^3$ ) |
|---------------------|-------------------|-------------------|----------------------------------------------------------------------|
| WOK505              | (474500, 172500)  | NO <sub>x</sub>   | 14.2657                                                              |
|                     |                   | NO <sub>2</sub>   | 10.8428                                                              |
|                     |                   | PM <sub>10</sub>  | 12.9263                                                              |
|                     |                   | PM <sub>2.5</sub> | 8.1517                                                               |
| WOK 882             | (472500, 168500)  | NO <sub>x</sub>   | 14.2145                                                              |
|                     |                   | NO <sub>2</sub>   | 10.8269                                                              |
|                     |                   | PM <sub>10</sub>  | 14.8953                                                              |
|                     |                   | PM <sub>2.5</sub> | 7.8586                                                               |
| WOK836              | (472500, 168500)  | NO <sub>x</sub>   | 14.2145                                                              |
|                     |                   | NO <sub>2</sub>   | 10.8269                                                              |
|                     |                   | PM <sub>10</sub>  | 14.8953                                                              |
|                     |                   | PM <sub>2.5</sub> | 7.8586                                                               |
| WOK841              | (473500, 168500)  | NO <sub>x</sub>   | 13.1303                                                              |
|                     |                   | NO <sub>2</sub>   | 10.0596                                                              |
|                     |                   | PM <sub>10</sub>  | 13.5522                                                              |
|                     |                   | PM <sub>2.5</sub> | 7.7477                                                               |

Table B6 displays the predicted background concentrations by DEFRA used in the operational phase assessment for the sensitive receptor locations.

**Table B6: Predicted Background Pollutant Concentrations at Sensitive Receptors**

| Sensitive Receptor | DEFRA Grid Square | Pollutant         | 2023 Predicted Background Concentration ( $\mu\text{g}/\text{m}^3$ ) |
|--------------------|-------------------|-------------------|----------------------------------------------------------------------|
| R1                 | (471500, 173500)  | NO <sub>x</sub>   | 18.0324                                                              |
|                    |                   | NO <sub>2</sub>   | 13.3814                                                              |
|                    |                   | PM <sub>10</sub>  | 12.6858                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.6444                                                               |
| R2                 | (471500, 173500)  | NO <sub>x</sub>   | 18.0324                                                              |
|                    |                   | NO <sub>2</sub>   | 13.3814                                                              |
|                    |                   | PM <sub>10</sub>  | 12.6858                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.6444                                                               |
| R3                 | (471500, 173500)  | NO <sub>x</sub>   | 18.0324                                                              |
|                    |                   | NO <sub>2</sub>   | 13.3814                                                              |

| Sensitive Receptor | DEFRA Grid Square | Pollutant         | 2023 Predicted Background Concentration ( $\mu\text{g}/\text{m}^3$ ) |
|--------------------|-------------------|-------------------|----------------------------------------------------------------------|
|                    |                   | PM <sub>10</sub>  | 12.6858                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.6444                                                               |
| R4                 | (471500, 172500)  | NO <sub>x</sub>   | 14.9253                                                              |
|                    |                   | NO <sub>2</sub>   | 11.2935                                                              |
|                    |                   | PM <sub>10</sub>  | 13.1721                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.9164                                                               |
|                    |                   |                   |                                                                      |
| R5                 | (471500, 172500)  | NO <sub>x</sub>   | 14.9253                                                              |
|                    |                   | NO <sub>2</sub>   | 11.2935                                                              |
|                    |                   | PM <sub>10</sub>  | 13.1721                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.9164                                                               |
| R6                 | (471500, 173500)  | NO <sub>x</sub>   | 18.0324                                                              |
|                    |                   | NO <sub>2</sub>   | 13.3814                                                              |
|                    |                   | PM <sub>10</sub>  | 12.6858                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.6444                                                               |
| R7                 | (472500, 173500)  | NO <sub>x</sub>   | 16.4174                                                              |
|                    |                   | NO <sub>2</sub>   | 12.2953                                                              |
|                    |                   | PM <sub>10</sub>  | 12.5546                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.6727                                                               |
| R8                 | (472500, 173500)  | NO <sub>x</sub>   | 16.4174                                                              |
|                    |                   | NO <sub>2</sub>   | 12.2953                                                              |
|                    |                   | PM <sub>10</sub>  | 12.5546                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.6727                                                               |
| R9                 | (472500, 173500)  | NO <sub>x</sub>   | 16.4174                                                              |
|                    |                   | NO <sub>2</sub>   | 12.2953                                                              |
|                    |                   | PM <sub>10</sub>  | 12.5546                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.6727                                                               |
| R10                | (472500, 173500)  | NO <sub>x</sub>   | 16.4174                                                              |
|                    |                   | NO <sub>2</sub>   | 12.2953                                                              |
|                    |                   | PM <sub>10</sub>  | 12.5546                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.6727                                                               |
| R11                | (472500, 173500)  | NO <sub>x</sub>   | 16.4174                                                              |
|                    |                   | NO <sub>2</sub>   | 12.2953                                                              |

| Sensitive Receptor | DEFRA Grid Square | Pollutant         | 2023 Predicted Background Concentration ( $\mu\text{g}/\text{m}^3$ ) |
|--------------------|-------------------|-------------------|----------------------------------------------------------------------|
|                    |                   | PM <sub>10</sub>  | 12.5546                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.6727                                                               |
| R12                | (472500, 173500)  | NO <sub>x</sub>   | 16.4174                                                              |
|                    |                   | NO <sub>2</sub>   | 12.2953                                                              |
|                    |                   | PM <sub>10</sub>  | 12.5546                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.6727                                                               |
| R13                | (473500, 173500)  | NO <sub>x</sub>   | 15.3151                                                              |
|                    |                   | NO <sub>2</sub>   | 11.5483                                                              |
|                    |                   | PM <sub>10</sub>  | 12.5355                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.675                                                                |
| R14                | (473500, 173500)  | NO <sub>x</sub>   | 15.3151                                                              |
|                    |                   | NO <sub>2</sub>   | 11.5483                                                              |
|                    |                   | PM <sub>10</sub>  | 12.5355                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.675                                                                |
| R15                | (473500, 173500)  | NO <sub>x</sub>   | 15.3151                                                              |
|                    |                   | NO <sub>2</sub>   | 11.5483                                                              |
|                    |                   | PM <sub>10</sub>  | 12.5355                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.675                                                                |
| R16                | (473500, 173500)  | NO <sub>x</sub>   | 15.3151                                                              |
|                    |                   | NO <sub>2</sub>   | 11.5483                                                              |
|                    |                   | PM <sub>10</sub>  | 12.5355                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.675                                                                |
| R17                | (473500, 173500)  | NO <sub>x</sub>   | 15.3151                                                              |
|                    |                   | NO <sub>2</sub>   | 11.5483                                                              |
|                    |                   | PM <sub>10</sub>  | 12.5355                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.675                                                                |
| R18                | (473500, 173500)  | NO <sub>x</sub>   | 15.3151                                                              |
|                    |                   | NO <sub>2</sub>   | 11.5483                                                              |
|                    |                   | PM <sub>10</sub>  | 12.5355                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.675                                                                |
| R19                | (473500, 173500)  | NO <sub>x</sub>   | 15.3151                                                              |
|                    |                   | NO <sub>2</sub>   | 11.5483                                                              |

| Sensitive Receptor | DEFRA Grid Square | Pollutant         | 2023 Predicted Background Concentration ( $\mu\text{g}/\text{m}^3$ ) |
|--------------------|-------------------|-------------------|----------------------------------------------------------------------|
|                    |                   | PM <sub>10</sub>  | 12.5355                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.675                                                                |
| R20                | (473500, 173500)  | NO <sub>x</sub>   | 15.3151                                                              |
|                    |                   | NO <sub>2</sub>   | 11.5483                                                              |
|                    |                   | PM <sub>10</sub>  | 12.5355                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.675                                                                |
|                    |                   |                   |                                                                      |
| R21                | (473500, 172500)  | NO <sub>x</sub>   | 12.4546                                                              |
|                    |                   | NO <sub>2</sub>   | 9.561                                                                |
|                    |                   | PM <sub>10</sub>  | 12.2795                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.7097                                                               |
| R22                | (473500, 172500)  | NO <sub>x</sub>   | 12.4546                                                              |
|                    |                   | NO <sub>2</sub>   | 9.561                                                                |
|                    |                   | PM <sub>10</sub>  | 12.2795                                                              |
|                    |                   | PM <sub>2.5</sub> | 7.7097                                                               |
| R23                | (474500, 172500)  | NO <sub>x</sub>   | 12.3404                                                              |
|                    |                   | NO <sub>2</sub>   | 9.4869                                                               |
|                    |                   | PM <sub>10</sub>  | 12.543                                                               |
|                    |                   | PM <sub>2.5</sub> | 7.7936                                                               |
| R24                | (474500, 172500)  | NO <sub>x</sub>   | 12.3404                                                              |
|                    |                   | NO <sub>2</sub>   | 9.4869                                                               |
|                    |                   | PM <sub>10</sub>  | 12.543                                                               |
|                    |                   | PM <sub>2.5</sub> | 7.7936                                                               |
| R25                | (474500, 172500)  | NO <sub>x</sub>   | 12.3404                                                              |
|                    |                   | NO <sub>2</sub>   | 9.4869                                                               |
|                    |                   | PM <sub>10</sub>  | 12.543                                                               |
|                    |                   | PM <sub>2.5</sub> | 7.7936                                                               |
| R26                | (474500, 172500)  | NO <sub>x</sub>   | 12.3404                                                              |
|                    |                   | NO <sub>2</sub>   | 9.4869                                                               |
|                    |                   | PM <sub>10</sub>  | 12.543                                                               |
|                    |                   | PM <sub>2.5</sub> | 7.7936                                                               |
| R27                | (474500, 172500)  | NO <sub>x</sub>   | 12.3404                                                              |
|                    |                   | NO <sub>2</sub>   | 9.4869                                                               |

| Sensitive Receptor | DEFRA Grid Square | Pollutant         | 2023 Predicted Background Concentration ( $\mu\text{g}/\text{m}^3$ ) |
|--------------------|-------------------|-------------------|----------------------------------------------------------------------|
|                    |                   | PM <sub>10</sub>  | 12.543                                                               |
|                    |                   | PM <sub>2.5</sub> | 7.7936                                                               |

2023 background concentrations for each receptor location have been used for the sensitivity analysis. The results of this are detailed in Appendix D.

## Verification

The predicted results from a dispersion model may differ from measured concentrations for a large number of reasons, including:

- Estimates of background concentrations;
- Uncertainties in source activity data such as traffic flows and emission factors;
- Variations in meteorological conditions;
- Overall model limitations;
- Uncertainties associated with monitoring data, including locations.

Model verification is the process by which these and other uncertainties are investigated and where possible minimised. In reality, the differences between modelled and monitored results are likely to be a combination of all of these aspects.

For the purpose of this assessment model verification was undertaken for 2023, using traffic data, meteorological data and monitoring results from this year.

RBC undertakes periodic monitoring of NO<sub>2</sub> concentrations at 4 roadside monitoring locations within the assessment extent. The road contribution to total NO<sub>x</sub> concentration was calculated from the monitored NO<sub>2</sub> result for use in the verification process. This was undertaken following the methodology contained within LAQM.TG(22). The monitored annual mean NO<sub>x</sub> concentration and calculated road NO<sub>x</sub> concentration are summarised in Table B7.

**Table B7: NO<sub>x</sub> Concentrations**

| Site ID | Monitored Road NO <sub>x</sub> Concentration ( $\mu\text{g}/\text{m}^3$ ) | Modelled Road NO <sub>x</sub> Concentration ( $\mu\text{g}/\text{m}^3$ ) |
|---------|---------------------------------------------------------------------------|--------------------------------------------------------------------------|
| WOK505  | 38.98                                                                     | 10.834                                                                   |
| WOK 882 | 30.0                                                                      | 16.183                                                                   |
| WOK836  | 17.75                                                                     | 15.998                                                                   |
| WOK841  | 23.51                                                                     | 10.694                                                                   |

The monitored and modelled NO<sub>x</sub> Road contribution concentrations were compared, and this indicated that a verification factor of **1.9254** was required to be applied to NO<sub>x</sub> modelling results, as shown in Graph 1.

Graph 1 is provided below.

Graph 1 - Verification Adjustment Factor

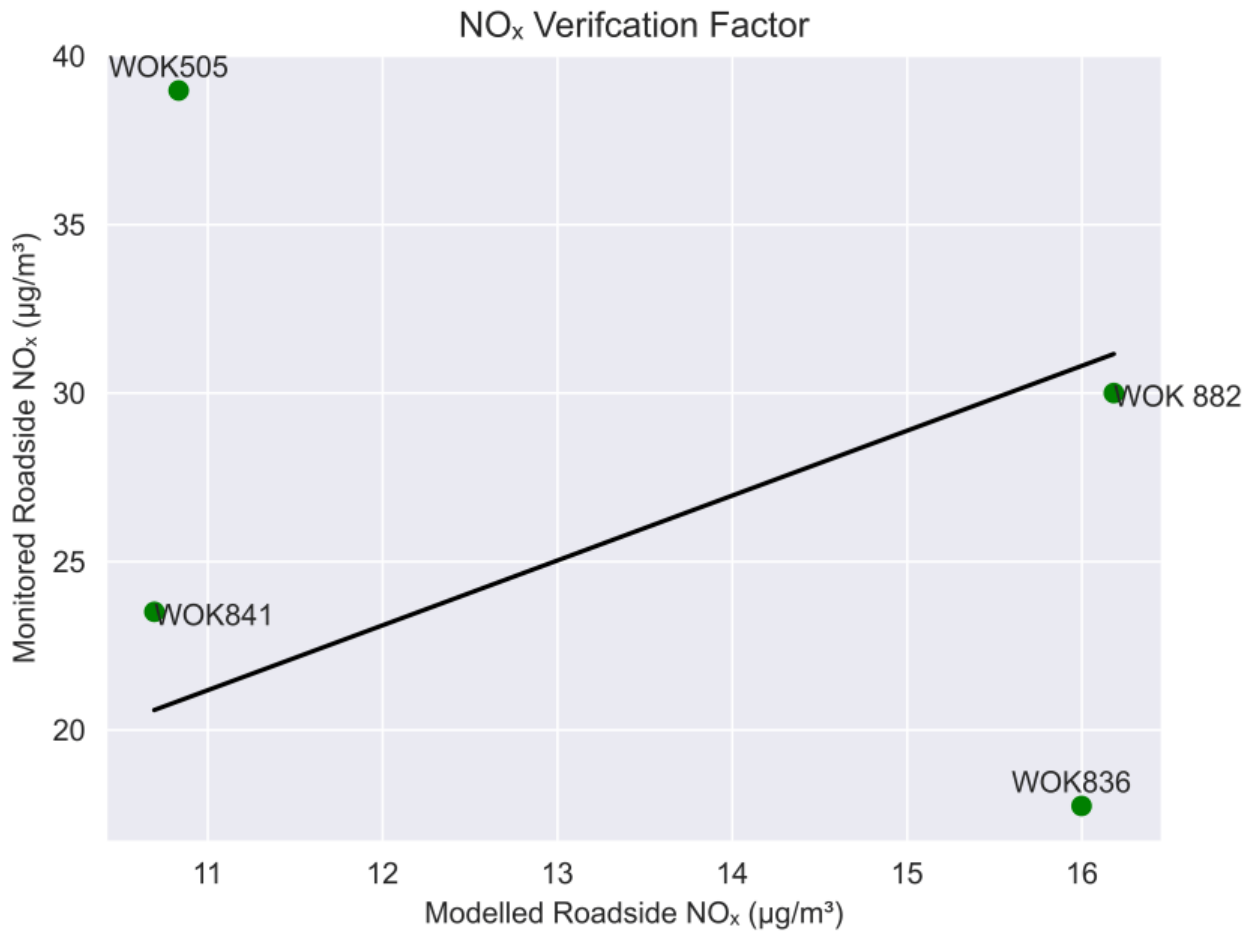


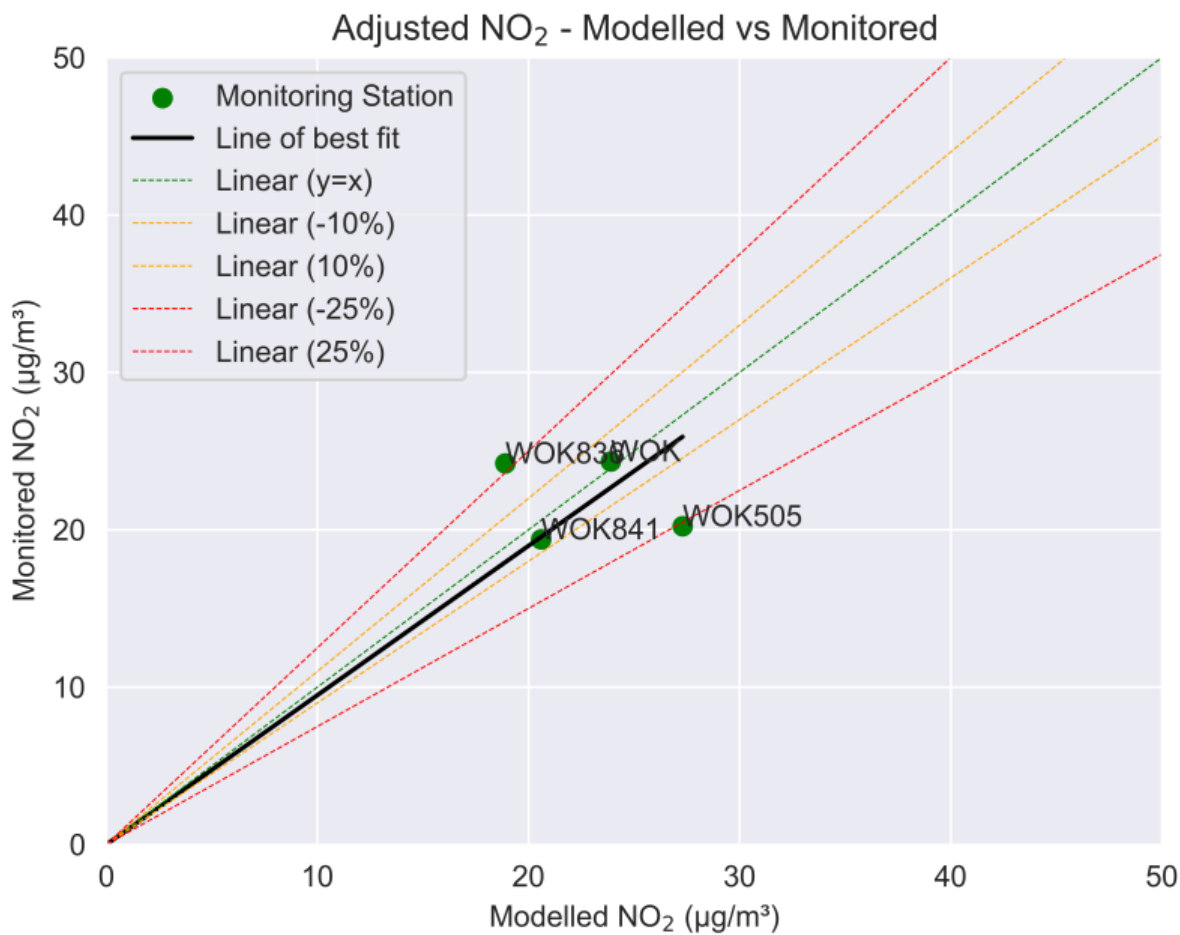
Table B8 presents the monitored annual mean NO<sub>2</sub> concentrations and the adjusted modelled total NO<sub>2</sub> concentration based on the above verification factor. Exceedances of the annual mean NO<sub>2</sub> AQO are highlighted in **bold**.

Table B8: NO<sub>2</sub> Concentrations

| Site ID | Monitored Road NO <sub>2</sub> Concentration (µg/m³) | Adjusted Modelled Road NO <sub>2</sub> Concentration (µg/m³) |
|---------|------------------------------------------------------|--------------------------------------------------------------|
| WOK505  | 27.3                                                 | 20.233                                                       |
| WOK882  | 23.9                                                 | 24.347                                                       |
| WOK836  | 18.9                                                 | 24.217                                                       |
| WOK841  | 20.6                                                 | 19.39                                                        |

A graphical representation of the adjusted NO<sub>2</sub> concentrations is provided within Graph 2.

Graph 2 – Modelled vs Monitored NO<sub>2</sub>



APPENDIX C: ASSESSMENT RESULTS

Predicted Concentrations at Sensitive Receptors

Nitrogen Dioxide (NO<sub>2</sub>)

Annual mean NO<sub>2</sub> concentrations were predicted for 2027 DM and DS scenarios and are summarised in Table C1.

Table C1: Predicted Annual Mean NO<sub>2</sub> Concentrations

| Receptors |                                                  | Predicted Annual Mean NO <sub>2</sub> Concentration (µg/m <sup>3</sup> ) |       |        |
|-----------|--------------------------------------------------|--------------------------------------------------------------------------|-------|--------|
|           |                                                  | DM                                                                       | DS    | Change |
| R1        | 6 Vachel Rd, Reading, Tanfields RG1 1NX, UK      | 38.98                                                                    | 39.0  | 0.02   |
| R2        | 12a Howard St, Reading RG1 7XS, UK               | 28.26                                                                    | 28.27 | 0.01   |
| R3        | 44 Howard St, Reading RG1 7XS, UK                | 28.37                                                                    | 28.38 | 0.01   |
| R4        | Capital Point, 60 Temple Pl, Reading RG1 6QL, UK | 33.52                                                                    | 33.54 | 0.02   |
| R5        | Capital Point, Temple Pl, Reading RG1 6QJ, UK    | 32.11                                                                    | 32.12 | 0.01   |
| R6        | 28 Queens Rd, Reading RG1 4AU, UK                | 19.8                                                                     | 19.82 | 0.02   |
| R7        | 52 Queens Rd, Reading RG1 4AU, UK                | 20.09                                                                    | 20.11 | 0.02   |
| R8        | Queens Wharf, 47 Queens Rd, Reading RG1 4QE, UK  | 16.06                                                                    | 16.07 | 0.01   |
| R9        | Barkham Mews, Reading RG1 4BX, UK                | 14.92                                                                    | 14.94 | 0.02   |
| R10       | 108 Queens Rd, Reading RG1 4DG, UK               | 16.79                                                                    | 16.81 | 0.02   |
| R11       | Charles Place, 246 Kings Rd, Reading RG1 4NZ, UK | 15.92                                                                    | 15.92 | 0.0    |
| R12       | 282 Kings Rd, Reading RG1 4HP, UK                | 16.21                                                                    | 16.22 | 0.01   |
| R13       | 229A London Rd, Reading RG1 3NY, UK              | 15.87                                                                    | 15.9  | 0.03   |
| R14       | 251 London Rd, Reading RG1 3NY, UK               | 14.47                                                                    | 14.49 | 0.02   |
| R15       | 150 London Rd, Reading RG1 3PA, UK               | 13.91                                                                    | 13.93 | 0.02   |
| R16       | 339 London Rd, Reading RG1 3NZ, UK               | 13.88                                                                    | 13.89 | 0.01   |
| R17       | 405 London Rd, Reading RG1 3PE, UK               | 14.49                                                                    | 14.51 | 0.02   |
| R18       | 18-20 Wokingham Rd, Reading RG6 1JQ, UK          | 17.19                                                                    | 17.21 | 0.02   |
| R19       | 56 Wokingham Rd, Reading RG6 1JJ, UK             | 15.0                                                                     | 15.01 | 0.01   |
| R20       | 21 Wokingham Rd, Reading RG6 1LE, UK             | 19.39                                                                    | 19.42 | 0.03   |
| R21       | 114 Wokingham Rd, Reading RG6 1JL, UK            | 13.89                                                                    | 13.89 | 0.0    |
| R22       | 81 Wokingham Rd, Reading RG6 1LH, UK             | 16.84                                                                    | 16.86 | 0.02   |
| R23       | 135A Wokingham Rd, Reading RG6 1LW, UK           | 16.73                                                                    | 16.74 | 0.01   |
| R24       | 55 St Peter's Rd, Reading RG6 1PA, UK            | 30.13                                                                    | 30.15 | 0.02   |
| R25       | 52 St Peter's Rd, Reading RG6 1PD, UK            | 21.04                                                                    | 21.05 | 0.01   |
| R26       | 128 St Peter's Rd, Reading RG6 1PH, UK           | 21.76                                                                    | 21.77 | 0.01   |
| R27       | 53 Church Rd, Earley, Reading RG6 1EY, UK        | 30.46                                                                    | 30.48 | 0.02   |

As indicated in Table C1, annual mean NO<sub>2</sub> concentrations were below the relevant AQO at all receptor locations considered.

Predicted impacts on annual mean NO<sub>2</sub> concentrations are summarised in Table C2.

**Table C2: Predicted NO<sub>2</sub> Impacts**

| Receptor |                                                  | % Change in Concentration Relative to AQO | Long Term Average Concentration | Impact     |
|----------|--------------------------------------------------|-------------------------------------------|---------------------------------|------------|
| R1       | 6 Vachel Rd, Reading, Tanfields RG1 1NX, UK      | 0.05                                      | 95-102% of AQO                  | Negligible |
| R2       | 12a Howard St, Reading RG1 7XS, UK               | 0.025                                     | 75% or Less than AQO            | Negligible |
| R3       | 44 Howard St, Reading RG1 7XS, UK                | 0.025                                     | 75% or Less than AQO            | Negligible |
| R4       | Capital Point, 60 Temple Pl, Reading RG1 6QL, UK | 0.05                                      | 76-94% of AQO                   | Negligible |
| R5       | Capital Point, Temple Pl, Reading RG1 6QJ, UK    | 0.025                                     | 76-94% of AQO                   | Negligible |
| R6       | 28 Queens Rd, Reading RG1 4AU, UK                | 0.05                                      | 75% or Less than AQO            | Negligible |
| R7       | 52 Queens Rd, Reading RG1 4AU, UK                | 0.05                                      | 75% or Less than AQO            | Negligible |
| R8       | Queens Wharf, 47 Queens Rd, Reading RG1 4QE, UK  | 0.025                                     | 75% or Less than AQO            | Negligible |
| R9       | Barkham Mews, Reading RG1 4BX, UK                | 0.05                                      | 75% or Less than AQO            | Negligible |
| R10      | 108 Queens Rd, Reading RG1 4DG, UK               | 0.05                                      | 75% or Less than AQO            | Negligible |
| R11      | Charles Place, 246 Kings Rd, Reading RG1 4NZ, UK | 0.0                                       | 75% or Less than AQO            | Negligible |
| R12      | 282 Kings Rd, Reading RG1 4HP, UK                | 0.025                                     | 75% or Less than AQO            | Negligible |
| R13      | 229A London Rd, Reading RG1 3NY, UK              | 0.075                                     | 75% or Less than AQO            | Negligible |
| R14      | 251 London Rd, Reading RG1 3NY, UK               | 0.05                                      | 75% or Less than AQO            | Negligible |
| R15      | 150 London Rd, Reading RG1 3PA, UK               | 0.05                                      | 75% or Less than AQO            | Negligible |
| R16      | 339 London Rd, Reading RG1 3NZ, UK               | 0.025                                     | 75% or Less than AQO            | Negligible |

| Receptor |                                           | % Change in Concentration Relative to AQO | Long Term Average Concentration | Impact     |
|----------|-------------------------------------------|-------------------------------------------|---------------------------------|------------|
| R17      | 405 London Rd, Reading RG1 3PE, UK        | 0.05                                      | 75% or Less than AQO            | Negligible |
| R18      | 18-20 Wokingham Rd, Reading RG6 1JQ, UK   | 0.05                                      | 75% or Less than AQO            | Negligible |
| R19      | 56 Wokingham Rd, Reading RG6 1JJ, UK      | 0.025                                     | 75% or Less than AQO            | Negligible |
| R20      | 21 Wokingham Rd, Reading RG6 1LE, UK      | 0.075                                     | 75% or Less than AQO            | Negligible |
| R21      | 114 Wokingham Rd, Reading RG6 1JL, UK     | 0.0                                       | 75% or Less than AQO            | Negligible |
| R22      | 81 Wokingham Rd, Reading RG6 1LH, UK      | 0.05                                      | 75% or Less than AQO            | Negligible |
| R23      | 135A Wokingham Rd, Reading RG6 1LW, UK    | 0.025                                     | 75% or Less than AQO            | Negligible |
| R24      | 55 St Peter's Rd, Reading RG6 1PA, UK     | 0.05                                      | 75% or Less than AQO            | Negligible |
| R25      | 52 St Peter's Rd, Reading RG6 1PD, UK     | 0.025                                     | 75% or Less than AQO            | Negligible |
| R26      | 128 St Peter's Rd, Reading RG6 1PH, UK    | 0.025                                     | 75% or Less than AQO            | Negligible |
| R27      | 53 Church Rd, Earley, Reading RG6 1EY, UK | 0.05                                      | 76-94% of AQO                   | Negligible |

As indicated in Table C2, impacts on annual mean NO<sub>2</sub> concentrations as a result of road vehicle exhaust emissions associated with the development were predicted to be negligible at all receptor locations. It is therefore considered that the overall impacts as a result of the proposed development are **Negligible**. Further justifications are discussed in Section 5.2.3 of the main report.

### Particulate Matter (PM<sub>10</sub>)

Annual mean PM<sub>10</sub> concentrations were predicted for 2027 DM and DS scenarios and are summarised Table C3.

**Table C3: Predicted Annual Mean PM<sub>10</sub> Concentrations**

| Receptor |                                             | Predicted Annual Mean PM <sub>10</sub> Concentration (µg/m <sup>3</sup> ) |        |        |
|----------|---------------------------------------------|---------------------------------------------------------------------------|--------|--------|
|          |                                             | DM                                                                        | DS     | Change |
| R1       | 6 Vachel Rd, Reading, Tanfields RG1 1NX, UK | 24.985                                                                    | 24.998 | 0.013  |
| R2       | 12a Howard St, Reading RG1 7XS, UK          | 18.869                                                                    | 18.876 | 0.008  |
| R3       | 44 Howard St, Reading RG1 7XS, UK           | 18.77                                                                     | 18.778 | 0.008  |

| Receptor |                                                  | Predicted Annual Mean PM <sub>10</sub> Concentration (µg/m <sup>3</sup> ) |        |        |
|----------|--------------------------------------------------|---------------------------------------------------------------------------|--------|--------|
|          |                                                  | DM                                                                        | DS     | Change |
| R4       | Capital Point, 60 Temple Pl, Reading RG1 6QL, UK | 20.802                                                                    | 20.811 | 0.008  |
| R5       | Capital Point, Temple Pl, Reading RG1 6QJ, UK    | 20.297                                                                    | 20.305 | 0.008  |
| R6       | 28 Queens Rd, Reading RG1 4AU, UK                | 16.642                                                                    | 16.653 | 0.011  |
| R7       | 52 Queens Rd, Reading RG1 4AU, UK                | 16.248                                                                    | 16.259 | 0.01   |
| R8       | Queens Wharf, 47 Queens Rd, Reading RG1 4QE, UK  | 14.28                                                                     | 14.287 | 0.007  |
| R9       | Barkham Mews, Reading RG1 4BX, UK                | 13.79                                                                     | 13.797 | 0.007  |
| R10      | 108 Queens Rd, Reading RG1 4DG, UK               | 14.838                                                                    | 14.845 | 0.007  |
| R11      | Charles Place, 246 Kings Rd, Reading RG1 4NZ, UK | 14.23                                                                     | 14.234 | 0.004  |
| R12      | 282 Kings Rd, Reading RG1 4HP, UK                | 14.29                                                                     | 14.294 | 0.004  |
| R13      | 229A London Rd, Reading RG1 3NY, UK              | 14.428                                                                    | 14.438 | 0.01   |
| R14      | 251 London Rd, Reading RG1 3NY, UK               | 13.739                                                                    | 13.747 | 0.008  |
| R15      | 150 London Rd, Reading RG1 3PA, UK               | 13.496                                                                    | 13.503 | 0.007  |
| R16      | 339 London Rd, Reading RG1 3NZ, UK               | 13.482                                                                    | 13.489 | 0.007  |
| R17      | 405 London Rd, Reading RG1 3PE, UK               | 13.751                                                                    | 13.759 | 0.007  |
| R18      | 18-20 Wokingham Rd, Reading RG6 1JQ, UK          | 14.94                                                                     | 14.947 | 0.008  |
| R19      | 56 Wokingham Rd, Reading RG6 1JJ, UK             | 13.991                                                                    | 13.995 | 0.004  |
| R20      | 21 Wokingham Rd, Reading RG6 1LE, UK             | 15.923                                                                    | 15.933 | 0.01   |
| R21      | 114 Wokingham Rd, Reading RG6 1JL, UK            | 14.386                                                                    | 14.389 | 0.003  |
| R22      | 81 Wokingham Rd, Reading RG6 1LH, UK             | 15.392                                                                    | 15.401 | 0.009  |
| R23      | 135A Wokingham Rd, Reading RG6 1LW, UK           | 16.249                                                                    | 16.257 | 0.008  |
| R24      | 55 St Peter's Rd, Reading RG6 1PA, UK            | 24.654                                                                    | 24.665 | 0.01   |
| R25      | 52 St Peter's Rd, Reading RG6 1PD, UK            | 18.737                                                                    | 18.743 | 0.006  |
| R26      | 128 St Peter's Rd, Reading RG6 1PH, UK           | 18.849                                                                    | 18.855 | 0.006  |
| R27      | 53 Church Rd, Earley, Reading RG6 1EY, UK        | 23.674                                                                    | 23.686 | 0.011  |

As indicated in Table C3, annual mean PM<sub>10</sub> concentrations were below the relevant AQO at all receptor locations considered.

Predicted impacts on annual mean PM<sub>10</sub> concentrations are summarised in Table C4.

**Table C4: Predicted PM<sub>10</sub> Impacts**

| Receptor |                                                  | % Change in Concentration Relative to AQO | Long Term Average Concentration | Impact     |
|----------|--------------------------------------------------|-------------------------------------------|---------------------------------|------------|
| R1       | 6 Vachel Rd, Reading, Tanfields RG1 1NX, UK      | 0.033                                     | 75% or Less than AQO            | Negligible |
| R2       | 12a Howard St, Reading RG1 7XS, UK               | 0.019                                     | 75% or Less than AQO            | Negligible |
| R3       | 44 Howard St, Reading RG1 7XS, UK                | 0.019                                     | 75% or Less than AQO            | Negligible |
| R4       | Capital Point, 60 Temple Pl, Reading RG1 6QL, UK | 0.021                                     | 75% or Less than AQO            | Negligible |
| R5       | Capital Point, Temple Pl, Reading RG1 6QJ, UK    | 0.021                                     | 75% or Less than AQO            | Negligible |
| R6       | 28 Queens Rd, Reading RG1 4AU, UK                | 0.027                                     | 75% or Less than AQO            | Negligible |
| R7       | 52 Queens Rd, Reading RG1 4AU, UK                | 0.026                                     | 75% or Less than AQO            | Negligible |
| R8       | Queens Wharf, 47 Queens Rd, Reading RG1 4QE, UK  | 0.016                                     | 75% or Less than AQO            | Negligible |
| R9       | Barkham Mews, Reading RG1 4BX, UK                | 0.017                                     | 75% or Less than AQO            | Negligible |
| R10      | 108 Queens Rd, Reading RG1 4DG, UK               | 0.018                                     | 75% or Less than AQO            | Negligible |
| R11      | Charles Place, 246 Kings Rd, Reading RG1 4NZ, UK | 0.01                                      | 75% or Less than AQO            | Negligible |
| R12      | 282 Kings Rd, Reading RG1 4HP, UK                | 0.011                                     | 75% or Less than AQO            | Negligible |
| R13      | 229A London Rd, Reading RG1 3NY, UK              | 0.025                                     | 75% or Less than AQO            | Negligible |
| R14      | 251 London Rd, Reading RG1 3NY, UK               | 0.02                                      | 75% or Less than AQO            | Negligible |
| R15      | 150 London Rd, Reading RG1 3PA, UK               | 0.017                                     | 75% or Less than AQO            | Negligible |
| R16      | 339 London Rd, Reading RG1 3NZ, UK               | 0.017                                     | 75% or Less than AQO            | Negligible |
| R17      | 405 London Rd, Reading RG1 3PE, UK               | 0.019                                     | 75% or Less than AQO            | Negligible |
| R18      | 18-20 Wokingham Rd, Reading RG6 1JQ, UK          | 0.019                                     | 75% or Less than AQO            | Negligible |
| R19      | 56 Wokingham Rd, Reading RG6 1JJ, UK             | 0.01                                      | 75% or Less than AQO            | Negligible |

| Receptor |                                           | % Change in Concentration Relative to AQO | Long Term Average Concentration | Impact     |
|----------|-------------------------------------------|-------------------------------------------|---------------------------------|------------|
| R20      | 21 Wokingham Rd, Reading RG6 1LE, UK      | 0.025                                     | 75% or Less than AQO            | Negligible |
| R21      | 114 Wokingham Rd, Reading RG6 1JL, UK     | 0.007                                     | 75% or Less than AQO            | Negligible |
| R22      | 81 Wokingham Rd, Reading RG6 1LH, UK      | 0.022                                     | 75% or Less than AQO            | Negligible |
| R23      | 135A Wokingham Rd, Reading RG6 1LW, UK    | 0.02                                      | 75% or Less than AQO            | Negligible |
| R24      | 55 St Peter's Rd, Reading RG6 1PA, UK     | 0.026                                     | 75% or Less than AQO            | Negligible |
| R25      | 52 St Peter's Rd, Reading RG6 1PD, UK     | 0.015                                     | 75% or Less than AQO            | Negligible |
| R26      | 128 St Peter's Rd, Reading RG6 1PH, UK    | 0.015                                     | 75% or Less than AQO            | Negligible |
| R27      | 53 Church Rd, Earley, Reading RG6 1EY, UK | 0.028                                     | 75% or Less than AQO            | Negligible |

As indicated in Table C4, impacts on annual mean PM<sub>10</sub> concentrations as a result of road vehicle exhaust emissions associated with the development were predicted to be negligible at all receptor locations. It is therefore considered that the overall impacts as a result of the proposed development are **Negligible**. Further justifications are discussed in Section 5.2.3 of the main report.

#### Particulate Matter (PM<sub>2.5</sub>)

Annual mean PM<sub>2.5</sub> concentrations were predicted for 2027 DM and DS scenarios and are summarised Table C5.

**Table C5: Predicted Annual Mean PM<sub>2.5</sub> Concentrations**

| Receptors |                                                  | Predicted Annual Mean PM <sub>10</sub> Concentration (µg/m <sup>3</sup> ) |        |        |
|-----------|--------------------------------------------------|---------------------------------------------------------------------------|--------|--------|
|           |                                                  | DM                                                                        | DS     | Change |
| R1        | 6 Vachel Rd, Reading, Tanfields RG1 1NX, UK      | 14.088                                                                    | 14.094 | 0.007  |
| R2        | 12a Howard St, Reading RG1 7XS, UK               | 10.956                                                                    | 10.961 | 0.004  |
| R3        | 44 Howard St, Reading RG1 7XS, UK                | 10.974                                                                    | 10.978 | 0.004  |
| R4        | Capital Point, 60 Temple Pl, Reading RG1 6QL, UK | 12.271                                                                    | 12.276 | 0.005  |
| R5        | Capital Point, Temple Pl, Reading RG1 6QJ, UK    | 11.93                                                                     | 11.935 | 0.005  |
| R6        | 28 Queens Rd, Reading RG1 4AU, UK                | 9.715                                                                     | 9.72   | 0.006  |
| R7        | 52 Queens Rd, Reading RG1 4AU, UK                | 9.605                                                                     | 9.61   | 0.005  |

| Receptors |                                                  | Predicted Annual Mean PM <sub>10</sub> Concentration (µg/m <sup>3</sup> ) |        |        |
|-----------|--------------------------------------------------|---------------------------------------------------------------------------|--------|--------|
|           |                                                  | DM                                                                        | DS     | Change |
| R8        | Queens Wharf, 47 Queens Rd, Reading RG1 4QE, UK  | 8.574                                                                     | 8.577  | 0.003  |
| R9        | Barkham Mews, Reading RG1 4BX, UK                | 8.318                                                                     | 8.321  | 0.004  |
| R10       | 108 Queens Rd, Reading RG1 4DG, UK               | 8.865                                                                     | 8.869  | 0.004  |
| R11       | Charles Place, 246 Kings Rd, Reading RG1 4NZ, UK | 8.546                                                                     | 8.548  | 0.002  |
| R12       | 282 Kings Rd, Reading RG1 4HP, UK                | 8.577                                                                     | 8.579  | 0.002  |
| R13       | 229A London Rd, Reading RG1 3NY, UK              | 8.66                                                                      | 8.665  | 0.005  |
| R14       | 251 London Rd, Reading RG1 3NY, UK               | 8.302                                                                     | 8.307  | 0.004  |
| R15       | 150 London Rd, Reading RG1 3PA, UK               | 8.177                                                                     | 8.18   | 0.004  |
| R16       | 339 London Rd, Reading RG1 3NZ, UK               | 8.17                                                                      | 8.173  | 0.003  |
| R17       | 405 London Rd, Reading RG1 3PE, UK               | 8.312                                                                     | 8.316  | 0.004  |
| R18       | 18-20 Wokingham Rd, Reading RG6 1JQ, UK          | 8.928                                                                     | 8.932  | 0.004  |
| R19       | 56 Wokingham Rd, Reading RG6 1JJ, UK             | 8.435                                                                     | 8.437  | 0.002  |
| R20       | 21 Wokingham Rd, Reading RG6 1LE, UK             | 9.44                                                                      | 9.446  | 0.005  |
| R21       | 114 Wokingham Rd, Reading RG6 1JL, UK            | 8.808                                                                     | 8.81   | 0.001  |
| R22       | 81 Wokingham Rd, Reading RG6 1LH, UK             | 9.335                                                                     | 9.34   | 0.005  |
| R23       | 135A Wokingham Rd, Reading RG6 1LW, UK           | 9.739                                                                     | 9.744  | 0.004  |
| R24       | 55 St Peter's Rd, Reading RG6 1PA, UK            | 14.211                                                                    | 14.217 | 0.005  |
| R25       | 52 St Peter's Rd, Reading RG6 1PD, UK            | 11.072                                                                    | 11.075 | 0.003  |
| R26       | 128 St Peter's Rd, Reading RG6 1PH, UK           | 11.126                                                                    | 11.129 | 0.003  |
| R27       | 53 Church Rd, Earley, Reading RG6 1EY, UK        | 13.674                                                                    | 13.68  | 0.006  |

As indicated in Table C3, annual mean PM<sub>2.5</sub> concentrations were below the relevant AQO at all receptor locations considered.

Predicted impacts on annual mean PM<sub>2.5</sub> concentrations are summarised in Table C6.

**Table C6: Predicted PM<sub>2.5</sub> Impacts**

| Receptors |                                             | % Change in Concentration Relative to AQO | Long Term Average Concentration | Impact     |
|-----------|---------------------------------------------|-------------------------------------------|---------------------------------|------------|
| R1        | 6 Vachel Rd, Reading, Tanfields RG1 1NX, UK | 0.017                                     | 75% or Less than AQO            | Negligible |

| Receptors |                                                  | % Change in Concentration Relative to AQO | Long Term Average Concentration | Impact     |
|-----------|--------------------------------------------------|-------------------------------------------|---------------------------------|------------|
| R2        | 12a Howard St, Reading RG1 7XS, UK               | 0.01                                      | 75% or Less than AQO            | Negligible |
| R3        | 44 Howard St, Reading RG1 7XS, UK                | 0.01                                      | 75% or Less than AQO            | Negligible |
| R4        | Capital Point, 60 Temple Pl, Reading RG1 6QL, UK | 0.012                                     | 75% or Less than AQO            | Negligible |
| R5        | Capital Point, Temple Pl, Reading RG1 6QJ, UK    | 0.012                                     | 75% or Less than AQO            | Negligible |
| R6        | 28 Queens Rd, Reading RG1 4AU, UK                | 0.014                                     | 75% or Less than AQO            | Negligible |
| R7        | 52 Queens Rd, Reading RG1 4AU, UK                | 0.014                                     | 75% or Less than AQO            | Negligible |
| R8        | Queens Wharf, 47 Queens Rd, Reading RG1 4QE, UK  | 0.009                                     | 75% or Less than AQO            | Negligible |
| R9        | Barkham Mews, Reading RG1 4BX, UK                | 0.009                                     | 75% or Less than AQO            | Negligible |
| R10       | 108 Queens Rd, Reading RG1 4DG, UK               | 0.009                                     | 75% or Less than AQO            | Negligible |
| R11       | Charles Place, 246 Kings Rd, Reading RG1 4NZ, UK | 0.005                                     | 75% or Less than AQO            | Negligible |
| R12       | 282 Kings Rd, Reading RG1 4HP, UK                | 0.006                                     | 75% or Less than AQO            | Negligible |
| R13       | 229A London Rd, Reading RG1 3NY, UK              | 0.013                                     | 75% or Less than AQO            | Negligible |
| R14       | 251 London Rd, Reading RG1 3NY, UK               | 0.011                                     | 75% or Less than AQO            | Negligible |
| R15       | 150 London Rd, Reading RG1 3PA, UK               | 0.009                                     | 75% or Less than AQO            | Negligible |
| R16       | 339 London Rd, Reading RG1 3NZ, UK               | 0.009                                     | 75% or Less than AQO            | Negligible |
| R17       | 405 London Rd, Reading RG1 3PE, UK               | 0.01                                      | 75% or Less than AQO            | Negligible |
| R18       | 18-20 Wokingham Rd, Reading RG6 1JQ, UK          | 0.01                                      | 75% or Less than AQO            | Negligible |
| R19       | 56 Wokingham Rd, Reading RG6 1JJ, UK             | 0.005                                     | 75% or Less than AQO            | Negligible |
| R20       | 21 Wokingham Rd, Reading RG6 1LE, UK             | 0.013                                     | 75% or Less than AQO            | Negligible |

| Receptors |                                           | % Change in Concentration Relative to AQO | Long Term Average Concentration | Impact     |
|-----------|-------------------------------------------|-------------------------------------------|---------------------------------|------------|
| R21       | 114 Wokingham Rd, Reading RG6 1JL, UK     | 0.004                                     | 75% or Less than AQO            | Negligible |
| R22       | 81 Wokingham Rd, Reading RG6 1LH, UK      | 0.012                                     | 75% or Less than AQO            | Negligible |
| R23       | 135A Wokingham Rd, Reading RG6 1LW, UK    | 0.01                                      | 75% or Less than AQO            | Negligible |
| R24       | 55 St Peter's Rd, Reading RG6 1PA, UK     | 0.014                                     | 75% or Less than AQO            | Negligible |
| R25       | 52 St Peter's Rd, Reading RG6 1PD, UK     | 0.008                                     | 75% or Less than AQO            | Negligible |
| R26       | 128 St Peter's Rd, Reading RG6 1PH, UK    | 0.008                                     | 75% or Less than AQO            | Negligible |
| R27       | 53 Church Rd, Earley, Reading RG6 1EY, UK | 0.015                                     | 75% or Less than AQO            | Negligible |

As indicated in Table C6, impacts on annual mean PM<sub>2.5</sub> concentrations as a result of road vehicle exhaust emissions associated with the development were predicted to be negligible at all receptor locations. It is therefore considered that the overall impacts as a result of the proposed development are **Negligible**. Further justifications are discussed in Section 5.2.3 of the main report.

## APPENDIX D: SENSITIVITY ANALYSIS RESULTS

### Predicted Concentrations at Sensitive Receptors – 2023 Emissions

Sensitivity analysis was undertaken to assess associated road vehicle exhaust emissions impacts based on the use of 2027 traffic data using 2023 emission factors. The use of 2023 emission factors assumes that vehicle emission factors will not improve in line with current predictions and future emission factors will remain consistent with those predicted for the baseline year.

The results are detailed in the following Sections.

#### Nitrogen Dioxide (NO<sub>2</sub>)

Annual mean NO<sub>2</sub> concentrations were predicted for 2023 DM and DS scenarios and are summarised in Table D1.

**Table D1: Predicted Annual Mean NO<sub>2</sub> Concentrations**

| Potential Impact |                                                  | Predicted Annual Mean NO <sub>2</sub> Concentration (µg/m <sup>3</sup> ) |              |        |
|------------------|--------------------------------------------------|--------------------------------------------------------------------------|--------------|--------|
|                  |                                                  | DM                                                                       | DS           | Change |
| R1               | 6 Vachel Rd, Reading, Tanfields RG1 1NX, UK      | <b>51.76</b>                                                             | <b>51.79</b> | 0.03   |
| R2               | 12a Howard St, Reading RG1 7XS, UK               | 37.23                                                                    | 37.25        | 0.02   |
| R3               | 44 Howard St, Reading RG1 7XS, UK                | 37.75                                                                    | 37.77        | 0.02   |
| R4               | Capital Point, 60 Temple Pl, Reading RG1 6QL, UK | <b>44.25</b>                                                             | <b>44.27</b> | 0.02   |
| R5               | Capital Point, Temple Pl, Reading RG1 6QJ, UK    | <b>42.85</b>                                                             | <b>42.87</b> | 0.02   |
| R6               | 28 Queens Rd, Reading RG1 4AU, UK                | 26.17                                                                    | 26.21        | 0.04   |
| R7               | 52 Queens Rd, Reading RG1 4AU, UK                | 25.97                                                                    | 26.0         | 0.03   |
| R8               | Queens Wharf, 47 Queens Rd, Reading RG1 4QE, UK  | 19.78                                                                    | 19.8         | 0.02   |
| R9               | Barkham Mews, Reading RG1 4BX, UK                | 17.97                                                                    | 17.99        | 0.02   |
| R10              | 108 Queens Rd, Reading RG1 4DG, UK               | 20.91                                                                    | 20.93        | 0.02   |
| R11              | Charles Place, 246 Kings Rd, Reading RG1 4NZ, UK | 19.57                                                                    | 19.59        | 0.02   |
| R12              | 282 Kings Rd, Reading RG1 4HP, UK                | 20.03                                                                    | 20.05        | 0.02   |
| R13              | 229A London Rd, Reading RG1 3NY, UK              | 19.81                                                                    | 19.84        | 0.03   |
| R14              | 251 London Rd, Reading RG1 3NY, UK               | 17.58                                                                    | 17.61        | 0.03   |
| R15              | 150 London Rd, Reading RG1 3PA, UK               | 16.69                                                                    | 16.72        | 0.03   |
| R16              | 339 London Rd, Reading RG1 3NZ, UK               | 16.63                                                                    | 16.66        | 0.03   |
| R17              | 405 London Rd, Reading RG1 3PE, UK               | 17.61                                                                    | 17.64        | 0.03   |

| Potential Impact |                                           | Predicted Annual Mean NO <sub>2</sub> Concentration (µg/m <sup>3</sup> ) |              |        |
|------------------|-------------------------------------------|--------------------------------------------------------------------------|--------------|--------|
|                  |                                           | DM                                                                       | DS           | Change |
| R18              | 18-20 Wokingham Rd, Reading RG6 1JQ, UK   | 21.9                                                                     | 21.93        | 0.03   |
| R19              | 56 Wokingham Rd, Reading RG6 1JJ, UK      | 18.48                                                                    | 18.5         | 0.02   |
| R20              | 21 Wokingham Rd, Reading RG6 1LE, UK      | 25.29                                                                    | 25.32        | 0.03   |
| R21              | 114 Wokingham Rd, Reading RG6 1JL, UK     | 17.67                                                                    | 17.67        | 0.0    |
| R22              | 81 Wokingham Rd, Reading RG6 1LH, UK      | 22.29                                                                    | 22.32        | 0.03   |
| R23              | 135A Wokingham Rd, Reading RG6 1LW, UK    | 22.36                                                                    | 22.38        | 0.02   |
| R24              | 55 St Peter's Rd, Reading RG6 1PA, UK     | <b>40.89</b>                                                             | <b>40.91</b> | 0.02   |
| R25              | 52 St Peter's Rd, Reading RG6 1PD, UK     | 28.64                                                                    | 28.66        | 0.02   |
| R26              | 128 St Peter's Rd, Reading RG6 1PH, UK    | 29.72                                                                    | 29.73        | 0.01   |
| R27              | 53 Church Rd, Earley, Reading RG6 1EY, UK | 41.31                                                                    | 41.33        | 0.02   |

As indicated in Table D1, annual mean NO<sub>2</sub> concentrations exceeded the AQO at 5 sensitive human receptor locations considered, none of which were as a result of increased pollutants due to the Proposed Development. The remaining 22 human receptor locations were predicted to experience NO<sub>2</sub> concentrations below the relevant AQO.

Predicted impacts on annual mean NO<sub>2</sub> concentrations are summarised in Table D2.

**Table D2: Predicted NO<sub>2</sub> Impacts**

| Potential Impact |                                                  | % Change in Concentration Relative to AQO | Long Term Average Concentration | Impact     |
|------------------|--------------------------------------------------|-------------------------------------------|---------------------------------|------------|
| R1               | 6 Vachel Rd, Reading, Tanfields RG1 1NX, UK      | 0.075                                     | 110% or More than AQO           | Negligible |
| R2               | 12a Howard St, Reading RG1 7XS, UK               | 0.05                                      | 76-94% of AQO                   | Negligible |
| R3               | 44 Howard St, Reading RG1 7XS, UK                | 0.05                                      | 95-102% of AQO                  | Negligible |
| R4               | Capital Point, 60 Temple Pl, Reading RG1 6QL, UK | 0.05                                      | 110% or More than AQO           | Negligible |
| R5               | Capital Point, Temple Pl, Reading RG1 6QJ, UK    | 0.05                                      | 103-109% of AQO                 | Negligible |
| R6               | 28 Queens Rd, Reading RG1 4AU, UK                | 0.1                                       | 75% or Less than AQO            | Negligible |
| R7               | 52 Queens Rd, Reading RG1 4AU, UK                | 0.075                                     | 75% or Less than AQO            | Negligible |
| R8               | Queens Wharf, 47 Queens Rd, Reading RG1 4QE, UK  | 0.05                                      | 75% or Less than AQO            | Negligible |

| Potential Impact |                                                  | % Change in Concentration Relative to AQO | Long Term Average Concentration | Impact     |
|------------------|--------------------------------------------------|-------------------------------------------|---------------------------------|------------|
| R9               | Barkham Mews, Reading RG1 4BX, UK                | 0.05                                      | 75% or Less than AQO            | Negligible |
| R10              | 108 Queens Rd, Reading RG1 4DG, UK               | 0.05                                      | 75% or Less than AQO            | Negligible |
| R11              | Charles Place, 246 Kings Rd, Reading RG1 4NZ, UK | 0.05                                      | 75% or Less than AQO            | Negligible |
| R12              | 282 Kings Rd, Reading RG1 4HP, UK                | 0.05                                      | 75% or Less than AQO            | Negligible |
| R13              | 229A London Rd, Reading RG1 3NY, UK              | 0.075                                     | 75% or Less than AQO            | Negligible |
| R14              | 251 London Rd, Reading RG1 3NY, UK               | 0.075                                     | 75% or Less than AQO            | Negligible |
| R15              | 150 London Rd, Reading RG1 3PA, UK               | 0.075                                     | 75% or Less than AQO            | Negligible |
| R16              | 339 London Rd, Reading RG1 3NZ, UK               | 0.075                                     | 75% or Less than AQO            | Negligible |
| R17              | 405 London Rd, Reading RG1 3PE, UK               | 0.075                                     | 75% or Less than AQO            | Negligible |
| R18              | 18-20 Wokingham Rd, Reading RG6 1JQ, UK          | 0.075                                     | 75% or Less than AQO            | Negligible |
| R19              | 56 Wokingham Rd, Reading RG6 1JJ, UK             | 0.05                                      | 75% or Less than AQO            | Negligible |
| R20              | 21 Wokingham Rd, Reading RG6 1LE, UK             | 0.075                                     | 75% or Less than AQO            | Negligible |
| R21              | 114 Wokingham Rd, Reading RG6 1JL, UK            | 0.0                                       | 75% or Less than AQO            | Negligible |
| R22              | 81 Wokingham Rd, Reading RG6 1LH, UK             | 0.075                                     | 75% or Less than AQO            | Negligible |
| R23              | 135A Wokingham Rd, Reading RG6 1LW, UK           | 0.05                                      | 75% or Less than AQO            | Negligible |
| R24              | 55 St Peter's Rd, Reading RG6 1PA, UK            | 0.05                                      | 103-109% of AQO                 | Negligible |
| R25              | 52 St Peter's Rd, Reading RG6 1PD, UK            | 0.05                                      | 75% or Less than AQO            | Negligible |
| R26              | 128 St Peter's Rd, Reading RG6 1PH, UK           | 0.025                                     | 75% or Less than AQO            | Negligible |
| R27              | 53 Church Rd, Earley, Reading RG6 1EY, UK        | 0.05                                      | 103-109% of AQO                 | Negligible |

As indicated in Table D2, impacts on annual mean NO<sub>2</sub> concentrations as a result of road vehicle exhaust emissions associated with the development were predicted to be negligible at all receptor locations. It is therefore considered that the overall impacts as a result of the proposed development are **Negligible**. Further justifications are discussed in Section 5.2.3 of the main report.

### Particulate Matter (PM<sub>10</sub>)

Annual mean PM<sub>10</sub> concentrations were predicted for 2023 DM and DS scenarios and are summarised Table D3.

**Table D3: Predicted Annual Mean PM<sub>10</sub> Concentrations**

| Potential Impact |                                                  | Predicted Annual Mean PM <sub>10</sub> Concentration (µg/m <sup>3</sup> ) |        |        |
|------------------|--------------------------------------------------|---------------------------------------------------------------------------|--------|--------|
|                  |                                                  | DM                                                                        | DS     | Change |
| R1               | 6 Vachel Rd, Reading, Tanfields RG1 1NX, UK      | 25.964                                                                    | 25.977 | 0.014  |
| R2               | 12a Howard St, Reading RG1 7XS, UK               | 19.618                                                                    | 19.626 | 0.008  |
| R3               | 44 Howard St, Reading RG1 7XS, UK                | 19.545                                                                    | 19.553 | 0.008  |
| R4               | Capital Point, 60 Temple Pl, Reading RG1 6QL, UK | 21.582                                                                    | 21.591 | 0.009  |
| R5               | Capital Point, Temple Pl, Reading RG1 6QJ, UK    | 21.037                                                                    | 21.046 | 0.009  |
| R6               | 28 Queens Rd, Reading RG1 4AU, UK                | 17.179                                                                    | 17.19  | 0.011  |
| R7               | 52 Queens Rd, Reading RG1 4AU, UK                | 16.782                                                                    | 16.793 | 0.011  |
| R8               | Queens Wharf, 47 Queens Rd, Reading RG1 4QE, UK  | 14.723                                                                    | 14.73  | 0.007  |
| R9               | Barkham Mews, Reading RG1 4BX, UK                | 14.21                                                                     | 14.217 | 0.007  |
| R10              | 108 Queens Rd, Reading RG1 4DG, UK               | 15.298                                                                    | 15.305 | 0.007  |
| R11              | Charles Place, 246 Kings Rd, Reading RG1 4NZ, UK | 14.671                                                                    | 14.675 | 0.004  |
| R12              | 282 Kings Rd, Reading RG1 4HP, UK                | 14.734                                                                    | 14.739 | 0.004  |
| R13              | 229A London Rd, Reading RG1 3NY, UK              | 14.89                                                                     | 14.901 | 0.011  |
| R14              | 251 London Rd, Reading RG1 3NY, UK               | 14.165                                                                    | 14.174 | 0.009  |
| R15              | 150 London Rd, Reading RG1 3PA, UK               | 13.909                                                                    | 13.916 | 0.007  |
| R16              | 339 London Rd, Reading RG1 3NZ, UK               | 13.894                                                                    | 13.901 | 0.007  |
| R17              | 405 London Rd, Reading RG1 3PE, UK               | 14.179                                                                    | 14.187 | 0.008  |
| R18              | 18-20 Wokingham Rd, Reading RG6 1JQ, UK          | 15.423                                                                    | 15.43  | 0.008  |
| R19              | 56 Wokingham Rd, Reading RG6 1JJ, UK             | 14.429                                                                    | 14.433 | 0.004  |
| R20              | 21 Wokingham Rd, Reading RG6 1LE, UK             | 16.463                                                                    | 16.473 | 0.01   |
| R21              | 114 Wokingham Rd, Reading RG6 1JL, UK            | 14.875                                                                    | 14.878 | 0.003  |
| R22              | 81 Wokingham Rd, Reading RG6 1LH, UK             | 15.944                                                                    | 15.953 | 0.009  |

| Potential Impact |                                           | Predicted Annual Mean PM <sub>10</sub> Concentration (µg/m <sup>3</sup> ) |        |        |
|------------------|-------------------------------------------|---------------------------------------------------------------------------|--------|--------|
|                  |                                           | DM                                                                        | DS     | Change |
| R23              | 135A Wokingham Rd, Reading RG6 1LW, UK    | 16.824                                                                    | 16.832 | 0.008  |
| R24              | 55 St Peter's Rd, Reading RG6 1PA, UK     | 25.432                                                                    | 25.442 | 0.011  |
| R25              | 52 St Peter's Rd, Reading RG6 1PD, UK     | 19.37                                                                     | 19.377 | 0.006  |
| R26              | 128 St Peter's Rd, Reading RG6 1PH, UK    | 19.524                                                                    | 19.531 | 0.006  |
| R27              | 53 Church Rd, Earley, Reading RG6 1EY, UK | 24.467                                                                    | 24.478 | 0.012  |

As indicated in Table D3, annual mean PM<sub>10</sub> concentrations were below the relevant AQO at all receptor locations considered.

Predicted impacts on annual mean PM<sub>10</sub> concentrations are summarised in Table D4.

**Table D4: Predicted PM<sub>10</sub> Impacts**

| Potential Impact |                                                  | % Change in Concentration Relative to AQO | Long Term Average Concentration | Impact     |
|------------------|--------------------------------------------------|-------------------------------------------|---------------------------------|------------|
| R1               | 6 Vachel Rd, Reading, Tanfields RG1 1NX, UK      | 0.034                                     | 75% or Less than AQO            | Negligible |
| R2               | 12a Howard St, Reading RG1 7XS, UK               | 0.02                                      | 75% or Less than AQO            | Negligible |
| R3               | 44 Howard St, Reading RG1 7XS, UK                | 0.021                                     | 75% or Less than AQO            | Negligible |
| R4               | Capital Point, 60 Temple Pl, Reading RG1 6QL, UK | 0.022                                     | 75% or Less than AQO            | Negligible |
| R5               | Capital Point, Temple Pl, Reading RG1 6QJ, UK    | 0.022                                     | 75% or Less than AQO            | Negligible |
| R6               | 28 Queens Rd, Reading RG1 4AU, UK                | 0.028                                     | 75% or Less than AQO            | Negligible |
| R7               | 52 Queens Rd, Reading RG1 4AU, UK                | 0.027                                     | 75% or Less than AQO            | Negligible |
| R8               | Queens Wharf, 47 Queens Rd, Reading RG1 4QE, UK  | 0.017                                     | 75% or Less than AQO            | Negligible |
| R9               | Barkham Mews, Reading RG1 4BX, UK                | 0.018                                     | 75% or Less than AQO            | Negligible |
| R10              | 108 Queens Rd, Reading RG1 4DG, UK               | 0.019                                     | 75% or Less than AQO            | Negligible |
| R11              | Charles Place, 246 Kings Rd, Reading RG1 4NZ, UK | 0.011                                     | 75% or Less than AQO            | Negligible |

| Potential Impact |                                           | % Change in Concentration Relative to AQO | Long Term Average Concentration | Impact     |
|------------------|-------------------------------------------|-------------------------------------------|---------------------------------|------------|
| R12              | 282 Kings Rd, Reading RG1 4HP, UK         | 0.011                                     | 75% or Less than AQO            | Negligible |
| R13              | 229A London Rd, Reading RG1 3NY, UK       | 0.026                                     | 75% or Less than AQO            | Negligible |
| R14              | 251 London Rd, Reading RG1 3NY, UK        | 0.021                                     | 75% or Less than AQO            | Negligible |
| R15              | 150 London Rd, Reading RG1 3PA, UK        | 0.018                                     | 75% or Less than AQO            | Negligible |
| R16              | 339 London Rd, Reading RG1 3NZ, UK        | 0.018                                     | 75% or Less than AQO            | Negligible |
| R17              | 405 London Rd, Reading RG1 3PE, UK        | 0.02                                      | 75% or Less than AQO            | Negligible |
| R18              | 18-20 Wokingham Rd, Reading RG6 1JQ, UK   | 0.02                                      | 75% or Less than AQO            | Negligible |
| R19              | 56 Wokingham Rd, Reading RG6 1JJ, UK      | 0.011                                     | 75% or Less than AQO            | Negligible |
| R20              | 21 Wokingham Rd, Reading RG6 1LE, UK      | 0.026                                     | 75% or Less than AQO            | Negligible |
| R21              | 114 Wokingham Rd, Reading RG6 1JL, UK     | 0.008                                     | 75% or Less than AQO            | Negligible |
| R22              | 81 Wokingham Rd, Reading RG6 1LH, UK      | 0.024                                     | 75% or Less than AQO            | Negligible |
| R23              | 135A Wokingham Rd, Reading RG6 1LW, UK    | 0.021                                     | 75% or Less than AQO            | Negligible |
| R24              | 55 St Peter's Rd, Reading RG6 1PA, UK     | 0.026                                     | 75% or Less than AQO            | Negligible |
| R25              | 52 St Peter's Rd, Reading RG6 1PD, UK     | 0.016                                     | 75% or Less than AQO            | Negligible |
| R26              | 128 St Peter's Rd, Reading RG6 1PH, UK    | 0.016                                     | 75% or Less than AQO            | Negligible |
| R27              | 53 Church Rd, Earley, Reading RG6 1EY, UK | 0.029                                     | 75% or Less than AQO            | Negligible |

As indicated in Table D4, impacts on annual mean NO<sub>2</sub> concentrations as a result of road vehicle exhaust emissions associated with the development were predicted to be negligible at all receptor locations. It is therefore considered that the overall impacts as a result of the proposed development are **Negligible**. Further justifications are discussed in Section 5.2.3 of the main report.

#### Particulate Matter (PM<sub>2.5</sub>)

Annual mean PM<sub>2.5</sub> concentrations were predicted for 2023 DM and DS scenarios and are summarised Table D5.

**Table D5: Predicted Annual Mean PM<sub>2.5</sub> Concentrations**

| Potential Impact |                                                  | Predicted Annual Mean PM <sub>10</sub> Concentration (µg/m <sup>3</sup> ) |        |        |
|------------------|--------------------------------------------------|---------------------------------------------------------------------------|--------|--------|
|                  |                                                  | DM                                                                        | DS     | Change |
| R1               | 6 Vachel Rd, Reading, Tanfields RG1 1NX, UK      | 25.964                                                                    | 25.977 | 0.014  |
| R2               | 12a Howard St, Reading RG1 7XS, UK               | 19.618                                                                    | 19.626 | 0.008  |
| R3               | 44 Howard St, Reading RG1 7XS, UK                | 19.545                                                                    | 19.553 | 0.008  |
| R4               | Capital Point, 60 Temple Pl, Reading RG1 6QL, UK | 21.582                                                                    | 21.591 | 0.009  |
| R5               | Capital Point, Temple Pl, Reading RG1 6QJ, UK    | 21.037                                                                    | 21.046 | 0.009  |
| R6               | 28 Queens Rd, Reading RG1 4AU, UK                | 17.179                                                                    | 17.19  | 0.011  |
| R7               | 52 Queens Rd, Reading RG1 4AU, UK                | 16.782                                                                    | 16.793 | 0.011  |
| R8               | Queens Wharf, 47 Queens Rd, Reading RG1 4QE, UK  | 14.723                                                                    | 14.73  | 0.007  |
| R9               | Barkham Mews, Reading RG1 4BX, UK                | 14.21                                                                     | 14.217 | 0.007  |
| R10              | 108 Queens Rd, Reading RG1 4DG, UK               | 15.298                                                                    | 15.305 | 0.007  |
| R11              | Charles Place, 246 Kings Rd, Reading RG1 4NZ, UK | 14.671                                                                    | 14.675 | 0.004  |
| R12              | 282 Kings Rd, Reading RG1 4HP, UK                | 14.734                                                                    | 14.739 | 0.004  |
| R13              | 229A London Rd, Reading RG1 3NY, UK              | 14.89                                                                     | 14.901 | 0.011  |
| R14              | 251 London Rd, Reading RG1 3NY, UK               | 14.165                                                                    | 14.174 | 0.009  |
| R15              | 150 London Rd, Reading RG1 3PA, UK               | 13.909                                                                    | 13.916 | 0.007  |
| R16              | 339 London Rd, Reading RG1 3NZ, UK               | 13.894                                                                    | 13.901 | 0.007  |
| R17              | 405 London Rd, Reading RG1 3PE, UK               | 14.179                                                                    | 14.187 | 0.008  |
| R18              | 18-20 Wokingham Rd, Reading RG6 1JQ, UK          | 15.423                                                                    | 15.43  | 0.008  |
| R19              | 56 Wokingham Rd, Reading RG6 1JJ, UK             | 14.429                                                                    | 14.433 | 0.004  |
| R20              | 21 Wokingham Rd, Reading RG6 1LE, UK             | 16.463                                                                    | 16.473 | 0.01   |
| R21              | 114 Wokingham Rd, Reading RG6 1JL, UK            | 14.875                                                                    | 14.878 | 0.003  |
| R22              | 81 Wokingham Rd, Reading RG6 1LH, UK             | 15.944                                                                    | 15.953 | 0.009  |
| R23              | 135A Wokingham Rd, Reading RG6 1LW, UK           | 16.824                                                                    | 16.832 | 0.008  |
| R24              | 55 St Peter's Rd, Reading RG6 1PA, UK            | 25.432                                                                    | 25.442 | 0.011  |
| R25              | 52 St Peter's Rd, Reading RG6 1PD, UK            | 19.37                                                                     | 19.377 | 0.006  |

| Potential Impact |                                           | Predicted Annual Mean PM <sub>10</sub> Concentration (µg/m <sup>3</sup> ) |        |        |
|------------------|-------------------------------------------|---------------------------------------------------------------------------|--------|--------|
|                  |                                           | DM                                                                        | DS     | Change |
| R26              | 128 St Peter's Rd, Reading RG6 1PH, UK    | 19.524                                                                    | 19.531 | 0.006  |
| R27              | 53 Church Rd, Earley, Reading RG6 1EY, UK | 24.467                                                                    | 24.478 | 0.012  |

As indicated in Table D3, annual mean PM<sub>2.5</sub> concentrations exceeded the AQO at 1 sensitive human receptor locations considered, none of which were as a result of increased pollutants due to the Proposed Development. The remaining 26 human receptor locations were predicted to experience PM<sub>2.5</sub> concentrations below the relevant AQO.

Predicted impacts on annual mean PM<sub>2.5</sub> concentrations are summarised in Table D6.

**Table D6: Predicted PM<sub>2.5</sub> Impacts**

| Potential Impact |                                                  | % Change in Concentration Relative to AQO | Long Term Average Concentration | Impact     |
|------------------|--------------------------------------------------|-------------------------------------------|---------------------------------|------------|
| R1               | 6 Vachel Rd, Reading, Tanfields RG1 1NX, UK      | 0.034                                     | 75% or Less than AQO            | Negligible |
| R2               | 12a Howard St, Reading RG1 7XS, UK               | 0.02                                      | 75% or Less than AQO            | Negligible |
| R3               | 44 Howard St, Reading RG1 7XS, UK                | 0.021                                     | 75% or Less than AQO            | Negligible |
| R4               | Capital Point, 60 Temple Pl, Reading RG1 6QL, UK | 0.022                                     | 75% or Less than AQO            | Negligible |
| R5               | Capital Point, Temple Pl, Reading RG1 6QJ, UK    | 0.022                                     | 75% or Less than AQO            | Negligible |
| R6               | 28 Queens Rd, Reading RG1 4AU, UK                | 0.028                                     | 75% or Less than AQO            | Negligible |
| R7               | 52 Queens Rd, Reading RG1 4AU, UK                | 0.027                                     | 75% or Less than AQO            | Negligible |
| R8               | Queens Wharf, 47 Queens Rd, Reading RG1 4QE, UK  | 0.017                                     | 75% or Less than AQO            | Negligible |
| R9               | Barkham Mews, Reading RG1 4BX, UK                | 0.018                                     | 75% or Less than AQO            | Negligible |
| R10              | 108 Queens Rd, Reading RG1 4DG, UK               | 0.019                                     | 75% or Less than AQO            | Negligible |
| R11              | Charles Place, 246 Kings Rd, Reading RG1 4NZ, UK | 0.011                                     | 75% or Less than AQO            | Negligible |
| R12              | 282 Kings Rd, Reading RG1 4HP, UK                | 0.011                                     | 75% or Less than AQO            | Negligible |
| R13              | 229A London Rd, Reading RG1 3NY, UK              | 0.026                                     | 75% or Less than AQO            | Negligible |

| Potential Impact |                                           | % Change in Concentration Relative to AQO | Long Term Average Concentration | Impact     |
|------------------|-------------------------------------------|-------------------------------------------|---------------------------------|------------|
| R14              | 251 London Rd, Reading RG1 3NY, UK        | 0.021                                     | 75% or Less than AQO            | Negligible |
| R15              | 150 London Rd, Reading RG1 3PA, UK        | 0.018                                     | 75% or Less than AQO            | Negligible |
| R16              | 339 London Rd, Reading RG1 3NZ, UK        | 0.018                                     | 75% or Less than AQO            | Negligible |
| R17              | 405 London Rd, Reading RG1 3PE, UK        | 0.02                                      | 75% or Less than AQO            | Negligible |
| R18              | 18-20 Wokingham Rd, Reading RG6 1JQ, UK   | 0.02                                      | 75% or Less than AQO            | Negligible |
| R19              | 56 Wokingham Rd, Reading RG6 1JJ, UK      | 0.011                                     | 75% or Less than AQO            | Negligible |
| R20              | 21 Wokingham Rd, Reading RG6 1LE, UK      | 0.026                                     | 75% or Less than AQO            | Negligible |
| R21              | 114 Wokingham Rd, Reading RG6 1JL, UK     | 0.008                                     | 75% or Less than AQO            | Negligible |
| R22              | 81 Wokingham Rd, Reading RG6 1LH, UK      | 0.024                                     | 75% or Less than AQO            | Negligible |
| R23              | 135A Wokingham Rd, Reading RG6 1LW, UK    | 0.021                                     | 75% or Less than AQO            | Negligible |
| R24              | 55 St Peter's Rd, Reading RG6 1PA, UK     | 0.026                                     | 75% or Less than AQO            | Negligible |
| R25              | 52 St Peter's Rd, Reading RG6 1PD, UK     | 0.016                                     | 75% or Less than AQO            | Negligible |
| R26              | 128 St Peter's Rd, Reading RG6 1PH, UK    | 0.016                                     | 75% or Less than AQO            | Negligible |
| R27              | 53 Church Rd, Earley, Reading RG6 1EY, UK | 0.029                                     | 75% or Less than AQO            | Negligible |

As indicated in Table D6, impacts on annual mean NO<sub>2</sub> concentrations as a result of road vehicle exhaust emissions associated with the development were predicted to be negligible at all receptor locations. It is therefore considered that the overall impacts as a result of the proposed development are **Negligible**. Further justifications are discussed in Section 5.2.3 of the main report.

## APPENDIX E: CONSTRUCTION PHASE METHODOLOGY

There is the potential for fugitive dust emissions to occur as a result of construction phase activities. These have been assessed in accordance with the methodology outlined within the Institute of Air Quality Management (IAQM) document 'Guidance on the Assessment of Dust from Demolition and Construction'.

Activities on the proposed construction site have been divided into three types to reflect their different potential impacts. These are:

- Demolition
- Earthworks
- Construction
- Trackout

The potential for dust emissions was assessed for each activity that is likely to take place and considered three separate dust effects:

- Annoyance due to dust soiling;
- Harm to ecological receptors;
- The risk of health effects due to a significant increase in exposure to PM<sub>10</sub> and PM<sub>2.5</sub>.

The assessment steps are detailed below.

### Step 1

Step 1 screens the requirement for a more detailed assessment. Should human receptors be identified within 250m from the site boundary or 50m from the construction vehicle route up to 250m from the site entrance, then the assessment should proceed to Step 2. Additionally, should ecological receptors be identified within 50m of the boundary site or 50m from the construction vehicle route up to 250m from the site entrance, then the assessment should also proceed to Step 2.

Should sensitive receptors not be present within the relevant distances then negligible impacts would be expected and further assessment is not necessary.

### Step 2

Step 2 assesses the risk of potential dust impacts. A site is allocated to a risk category based on two factors:

- The scale and nature of the works, which determines the magnitude of dust arising as: small, medium or large (Step 2A);
- The sensitivity of the area to dust impacts, which can be defined as low, medium or high sensitivity (Step 2B).

The two factors are combined in Step 2C to determine the risk of dust impacts without mitigation applied.

Step 2A defines the potential magnitude of dust emission through the construction phase. The relevant criteria are summarised in Table E1.

**Table E1: Construction Dust - Magnitude of Emission**

| Magnitude | Activity     | Criteria                                                                                                                                                                                                                                                                                                                                                           |
|-----------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Large     | Demolition   | <ul style="list-style-type: none"> <li>• Total building volume greater than 75,000m<sup>3</sup></li> <li>• Potentially dusty construction material (e.g. concrete)</li> <li>• On-site crushing and screening</li> <li>• Demolition activities greater than 12m above ground level</li> </ul>                                                                       |
|           | Earthworks   | <ul style="list-style-type: none"> <li>• Total site area greater than 110,000m<sup>2</sup></li> <li>• Potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size)</li> <li>• More than 10 heavy earth moving vehicles active at any one time</li> <li>• Formation of bunds greater than 6m in height</li> </ul> |
|           | Construction | <ul style="list-style-type: none"> <li>• Total building volume greater than 75,000m<sup>3</sup></li> <li>• On site concrete batching</li> <li>• Sandblasting</li> </ul>                                                                                                                                                                                            |
|           | Trackout     | <ul style="list-style-type: none"> <li>• More than 50 Heavy Duty Vehicle (HDV) trips per day</li> <li>• Potentially dusty surface material (e.g. high clay content)</li> <li>• Unpaved road length greater than 100m</li> </ul>                                                                                                                                    |
| Medium    | Demolition   | <ul style="list-style-type: none"> <li>• Total building volume 12,000m<sup>3</sup> to 75,000m<sup>3</sup></li> <li>• Potentially dusty construction material</li> <li>• Demolition activities 6m to 12m above ground level</li> </ul>                                                                                                                              |
|           | Earthworks   | <ul style="list-style-type: none"> <li>• Total site area 18,000m<sup>2</sup> to 110,000m<sup>2</sup></li> <li>• Moderately dusty soil type (e.g. silt)</li> <li>• 5 to 10 heavy earth moving vehicles active at any one time</li> <li>• Formation of bunds 3m to 6m in height</li> </ul>                                                                           |
|           | Construction | <ul style="list-style-type: none"> <li>• Total building volume 18,000m<sup>3</sup> to 110,000m<sup>3</sup></li> <li>• Potentially dusty construction material (e.g. concrete)</li> <li>• On site concrete batching</li> </ul>                                                                                                                                      |
|           | Trackout     | <ul style="list-style-type: none"> <li>• 20 to 50 HDV trips per day</li> <li>• Moderately dusty surface material (e.g. high clay content)</li> <li>• Unpaved road length 50m to 100m</li> </ul>                                                                                                                                                                    |
| Small     | Demolition   | <ul style="list-style-type: none"> <li>• Total building volume under 12,000m<sup>3</sup></li> <li>• Construction material with low potential for dust release (e.g. metal cladding or timber)</li> <li>• Demolition activities less than 6m above ground level</li> <li>• Demolition during wetter months</li> </ul>                                               |
|           | Earthworks   | <ul style="list-style-type: none"> <li>• Total site area less than 18,000m<sup>2</sup></li> <li>• Soil type with large grain size (e.g. sand)</li> <li>• Less than 5 heavy earth moving vehicles active at any one time</li> <li>• Formation of bunds less than 4m in height</li> <li>• Earthworks during wetter months</li> </ul>                                 |
|           | Construction | <ul style="list-style-type: none"> <li>• Total building volume less than 18,000m<sup>3</sup></li> <li>• Construction material with low potential for dust release (e.g. metal cladding or timber)</li> </ul>                                                                                                                                                       |
|           | Trackout     | <ul style="list-style-type: none"> <li>• &lt;20 HDV (3.5t) outward movements in any one day</li> </ul>                                                                                                                                                                                                                                                             |

| Magnitude | Activity | Criteria                                                                                                                                    |
|-----------|----------|---------------------------------------------------------------------------------------------------------------------------------------------|
|           |          | <ul style="list-style-type: none"> <li>Surface material with low potential for dust release</li> <li>Unpaved road length &lt;50m</li> </ul> |

Step 2B defines the sensitivity of the area around the development site for construction, earthworks and trackout. The factors influencing the sensitivity of the area are shown in Table E2.

**Table E2: Examples of Factors Defining Sensitivity of an Area**

| Sensitivity | Examples                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                   |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
|             | Human Receptors                                                                                                                                                                                                                                                                                                                                                                                                      | Ecological Receptors                                                                                                              |
| High        | <ul style="list-style-type: none"> <li>Users expect of high levels of amenity</li> <li>High aesthetic or value property</li> <li>People expected to be present continuously for extended periods of time</li> <li>Locations where members of the public are exposed over a time period relevant to the AQO for PM<sub>10</sub> e.g. residential properties, hospitals, schools and residential care homes</li> </ul> | <ul style="list-style-type: none"> <li>Internationally or nationally designated site e.g. Special Area of Conservation</li> </ul> |
| Medium      | <ul style="list-style-type: none"> <li>Users would expect to enjoy a reasonable level of amenity</li> <li>Aesthetics or value of their property could be diminished by soiling</li> <li>People or property wouldn't reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land e.g. parks and places of work</li> </ul>               | <ul style="list-style-type: none"> <li>Nationally designated site e.g. Sites of Special Scientific Interest</li> </ul>            |
| Low         | <ul style="list-style-type: none"> <li>Enjoyment of amenity would not reasonably be expected</li> <li>Property would not be expected to be diminished in appearance</li> <li>Transient exposure, where people would only be expected to be present for limited periods. e.g. public footpaths, playing fields, shopping streets, playing fields, farmland, footpaths, short term car park and roads</li> </ul>       | <ul style="list-style-type: none"> <li>Locally designated site e.g. Local Nature Reserve</li> </ul>                               |

The guidance also provides the following factors to consider when determining the sensitivity of an area to potential dust impacts during the construction phase:

- 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; if relevant the season during which works will take place;
- Any conclusions drawn from local topography;

- Duration of the potential impact, as a receptor may become more sensitive over time;
- Any known specific receptor sensitivities which go beyond the classifications given in the document.

These factors were considered in the undertaking of this assessment. The sensitivity of the area to dust soiling effects on people and property is shown in Table E3.

**Table E3: Sensitivity of the Area to Dust Soiling Effects on People and Property**

| Receptor Sensitivity | Number of Receptors | Distance from the Source (m) |              |               |               |
|----------------------|---------------------|------------------------------|--------------|---------------|---------------|
|                      |                     | Less than 20                 | Less than 50 | Less than 100 | Less than 250 |
| High                 | More than 100       | High                         | High         | Medium        | Low           |
|                      | 10 - 100            | High                         | Medium       | Low           | Low           |
|                      | 1 - 10              | Medium                       | Low          | Low           | Low           |
| Medium               | More than 1         | Medium                       | Low          | Low           | Low           |
| Low                  | More than 1         | Low                          | Low          | Low           | Low           |

Table E4 outlines the sensitivity of the area to human health impacts.

**Table E4: Sensitivity of the Area to Human Health Impacts**

| Receptor Sensitivity | Annual Mean PM <sub>10</sub> Concentration | Number of Receptors | Distance to Site |              |               |               |
|----------------------|--------------------------------------------|---------------------|------------------|--------------|---------------|---------------|
|                      |                                            |                     | Less than 20     | Less than 50 | Less than 100 | Less than 250 |
| High                 | Greater than 32µg/m <sup>3</sup>           | More than 100       | High             | High         | High          | Medium        |
|                      |                                            | 10 - 100            | High             | High         | Medium        | Low           |
|                      |                                            | 1 - 10              | High             | Medium       | Low           | Low           |
|                      | 28 - 32µg/m <sup>3</sup>                   | More than 100       | High             | High         | Medium        | Low           |
|                      |                                            | 10 - 100            | High             | Medium       | Low           | Low           |
|                      |                                            | 1 - 10              | High             | Medium       | Low           | Low           |
|                      | 24 - 28µg/m <sup>3</sup>                   | More than 100       | High             | Medium       | Low           | Low           |
|                      |                                            | 10 - 100            | High             | Medium       | Low           | Low           |
|                      |                                            | 1 - 10              | Medium           | Low          | Low           | Low           |
|                      | Less than 24µg/m <sup>3</sup>              | More than 100       | Medium           | Low          | Low           | Low           |
|                      |                                            | 10 - 100            | Low              | Low          | Low           | Low           |
|                      |                                            | 1 - 10              | Low              | Low          | Low           | Low           |
| Medium               | Greater than 32µg/m <sup>3</sup>           | More than 10        | High             | Medium       | Low           | Low           |
|                      |                                            | 1 - 10              | Medium           | Low          | Low           | Low           |
|                      | 28 - 32µg/m <sup>3</sup>                   | More than 10        | Medium           | Low          | Low           | Low           |
|                      |                                            | 1 - 10              | Low              | Low          | Low           | Low           |
|                      | 24 - 28µg/m <sup>3</sup>                   | More than 10        | Low              | Low          | Low           | Low           |

|     |                               |              |     |     |     |     |
|-----|-------------------------------|--------------|-----|-----|-----|-----|
|     | Less than 24µg/m <sup>3</sup> | 1 - 10       | Low | Low | Low | Low |
|     |                               | More than 10 | Low | Low | Low | Low |
|     |                               | 1 - 10       | Low | Low | Low | Low |
| Low | -                             | More than 1  | Low | Low | Low | Low |

Table E5 outlines the sensitivity of the area to ecological impacts.

**Table E5: Sensitivity of the Area to Ecological Impacts**

| Receptor Sensitivity | Distance from the Source (m) |              |
|----------------------|------------------------------|--------------|
|                      | Less than 20                 | Less than 50 |
| High                 | High                         | Medium       |
| Medium               | Medium                       | Low          |
| Low                  | Low                          | Low          |

Step 2C combines the dust emission magnitude with the sensitivity of the area to determine the risk of unmitigated impacts.

**Table E6: Dust Risk Category from Demolition**

| Receptor Sensitivity | Dust Emission Magnitude |        |            |
|----------------------|-------------------------|--------|------------|
|                      | Large                   | Medium | Small      |
| High                 | High                    | Medium | Medium     |
| Medium               | High                    | Medium | Low        |
| Low                  | Medium                  | Low    | Negligible |

Table E7 outlines the risk category from earthworks and construction activities.

**Table E7: Dust Risk Category from Earthworks and Construction**

| Receptor Sensitivity | Dust Emission Magnitude |        |            |
|----------------------|-------------------------|--------|------------|
|                      | Large                   | Medium | Small      |
| High                 | High                    | Medium | Low        |
| Medium               | Medium                  | Medium | Low        |
| Low                  | Low                     | Low    | Negligible |

Table E8 outlines the risk category from trackout.

**Table E8: Dust Risk Category from Trackout**

| Receptor Sensitivity | Dust Emission Magnitude |        |       |
|----------------------|-------------------------|--------|-------|
|                      | Large                   | Medium | Small |
| High                 | High                    | Medium | Low   |
| Medium               | Medium                  | Medium | Low   |

|     |     |     |            |
|-----|-----|-----|------------|
| Low | Low | Low | Negligible |
|-----|-----|-----|------------|

### Step 3

Step 3 requires the identification of site-specific mitigation measures within the IAQM guidance to reduce potential dust impacts based upon the relevant risk categories identified in Step 2. For sites with negligible risk mitigation measures beyond those required by legislation are not required. However, additional controls may be applied as part of good practice.

### Step 4

Once the risk of dust impacts has been determined and the appropriate mitigation measures identified, the final step is to determine the significance of any residual impacts. For almost all construction activity, the aim should be to control effects through the use of effective mitigation. Experience shows that this is normally possible. Hence the residual effect will normally be 'not significant'.