

Greater Manchester's Clean Air Plan to tackle Nitrogen Dioxide Exceedances at the Roadside: Option for Consultation

Local Plan Air Quality Modelling Report (AQ3)



Salford City Council



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COVID-19 Pandemic Statement

This work has not considered the impact of the COVID-19 pandemic. Whilst we are continuing, where possible, to develop the Greater Manchester Clean Air Plan, the pandemic has already had an impact on our ability to keep to the timescales previously indicated and there may be further impacts on timescales as the impact of the pandemic becomes clearer.

We are also mindful of the significant changes that could result from these exceptional times. We know that the transport sector has already been impacted by the pandemic, and government policies to stem its spread. The sector's ability to recover from revenue loss, whilst also being expected to respond to pre-pandemic clean air policy priorities by upgrading to a cleaner fleet, will clearly require further thought and consideration.

The groups most affected by our Clean Air Plan may require different levels of financial assistance than we had anticipated at the time of writing our previous submission to Government.

More broadly, we anticipate that there may be wider traffic and economic impacts that could significantly change the assumptions that sit behind our plans. We have begun to consider the impacts, and have committed to updating the government as the picture becomes clearer over time.

We remain committed to cleaning up Greater Manchester's air. However, given the extraordinary circumstances that will remain for some time, this piece of work remains unfinished until the impact of the COVID-19 pandemic has been fully considered by the Greater Manchester Authorities.

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1 Introduction

- 1.1.1 The Greater Manchester Urban Area Zone is one of 37 zones across the UK where, based on the Department for the Environment, Food and Rural Affairs (Defra) modelling for 2015, annual mean nitrogen dioxide (NO₂) concentrations exceeded the statutory Limit Values set by the European Union (EU) based on the World Health Organisation's air quality guidelines. These EU Limit Values were directly transposed into UK law as part of the Air Quality Standards Regulation 2010, and subsequently the Air Quality (Amendment of Domestic Regulations) (EU Exit) Regulations 2019. Of the ten Local Authorities within Greater Manchester (GM), seven are predicted to include road links which exceed the EU limits beyond 2020.
- 1.1.2 In order to address these exceedances, Defra and the Department for Transport (DfT) has set out an approach to introduce targeted local measures to bring NO₂ concentrations within legal limits, in their Clean Air Zone Framework and the National Plan. The Joint Air Quality Unit (JAQU), comprising teams from Defra and the DfT, has been set up specifically to deliver the National Plan to improve air quality and comply with the EU Limit Value (EU LV) and the equivalent UK Air Quality Objective (AQO). The JAQU guidance documents set out the assessment process and typical measures that an authority should consider to deliver compliance with the NO₂ annual mean AQO of 40 µg/m³.
- 1.1.3 Many local authorities across the UK (including eight within GM) have been instructed by JAQU to undertake detailed feasibility studies and develop plans for the implementation of appropriate measures to deliver compliance with the AQO in the 'shortest possible time'. According to the Supreme Court ruling the feasibility study must consider all options which are 'technically feasible' to be delivered in the shortest possible time and at least as quickly as a charge-based Clean Air Zone (CAZ) could. Local authorities need to consider a range of measures, including a charge-based CAZ as required by Government and set out in the JAQU guidance. The charge-based CAZ scenario is to be used as the reference case in terms of timescales and cost, against which other alternative measures are considered. It is the Government's preference that a charge-based CAZ is only implemented if other measures cannot deliver compliance in similar timescales while providing the same value for money.
- 1.1.4 TfGM is acting on behalf of the Greater Manchester Combined Authority (GMCA) and the ten Greater Manchester Local Authorities to undertake the feasibility study and develop the Greater Manchester Clean Air Plan (GM CAP) to meet the air quality challenge.

- 1.1.5 As required by JAQU, this 'AQ3' document provides the air quality results and discussion of the GM CAP options that have been assessed. Specifically, this document sets out the results of the proposed option for consultation. A summary of the methodology is set out in the Local Plan Air Quality Modelling Tracking Table (AQ1) and Local Plan Air Quality Modelling Methodology Report (AQ2), which underpins any air quality modelling for the baseline (2016) and the Do-Minimum (2021, 2023 and 2025) scenarios.
- 1.1.6 Details of the approach to model verification are provided in Appendix A. The full set of air quality modelling results are tabulated in Appendix B. Details of the Sensitivity Testing are reported in Appendix C.
- 1.1.7 Further information on the options development and the transport modelling are available in the Outline Business Case and supporting documents, and the equivalent transport modelling technical documentation (T1/T2/T3/T4), and in the version of AQ3 published at OBC.

2 Methodology Overview

- 2.1 Based on Government guidance, the following local evidence was used to understand likely NO₂ concentrations in Greater Manchester beyond 2020:
- Detailed Baseline Year (2016) and Future Years (2021, 2023 and 2025) transport model (actual and future demand on the road network);
 - Local vehicle fleet profiles (e.g. ages and types of vehicle) using Automatic Number Plate Recognition (ANPR) data;
 - Vehicle fleet licensing data for bus and taxi fleets;
 - Local background concentrations of NO_x and NO₂;
 - More detailed road network and junction data (e.g. alignment and width);
 - Representation of "air pollution" canyons (e.g. tall buildings);
 - Local air quality monitoring data from across Greater Manchester, which is described in AQ2 and presented in Figure 1; and
 - Confirmed future changes to the road network, and expected regional traffic growth and changes to the traffic fleet.
- 2.2 This local modelling was necessary to provide a more comprehensive understanding of the air quality across the entirety of Greater Manchester. The local modelling identified a larger number of locations which are expected to exceed the EU Limit Value, and higher concentrations of NO₂ in specific locations. This meant that all ten local authorities contained locations expected to be in exceedance of EU Limit Value for NO₂ after 2020. This reflected the fact that the local modelling used more detailed sources of data and more refined analytical tools. This resulted in three fundamental differences compared to the national modelling:

- The vehicle fleet in Greater Manchester is older and more polluting than assumed in the national model;
 - In some areas vehicles are moving more slowly than assumed in the national model; and
 - The background concentrations from non-road vehicle emissions sources (for example, electricity production, industry, local heating etc.) is higher than expected and needed to be uplifted.
- 2.2.1 Dispersion modelling of air quality produces outputs at specific coordinate points which predict a concentration of NO₂. However, JAQU specify that these points should represent a worst case location along a more general length of road, aimed at correlating with the relatively long sections of road links defined for use in the Government's more coarse Pollution Climate Mapping (PCM) model, This guidance also states to exclude locations close to junctions. Presenting point data provides more specific and spatially detailed information about air quality, as it allows an understanding of how concentrations of NO₂ vary at different locations along the road.
- 2.2.2 In order to compare local modelling results with the PCM model outputs, receptors were automatically generated using a GIS script at 4m from the modelled road edge at 2m elevation, at locations >25m from junctions (as per the parameters set out in the JAQU Evidence Guidance), on both sides of the road. These receptors were generated for every road link in the GM Saturn model. The GM Saturn model is more spatially detailed than the PCM model, and each PCM link can extend over many Saturn links. The maximum locally modelled receptor concentration adjacent to each PCM road link was selected for comparison with the PCM model prediction.
- 2.2.3 Consistent with the Outline Business Case (OBC), this version of reporting presents concentration and emissions information on the basis of point data, but the AQ3 document will also align these to key PCM links.
- 2.2.4 A range of sensitivity tests will be undertaken for the Full Business Case (FBC) submission, based on the JAQU guidance. These will be reported in Appendix C.

Updates to the Modelling Process post-OBC

- 2.2.5 Since the production of the modelling for the OBC, there have been a number of updates to best practice tools and datasets. These have led to updates to the modelling of projected future year traffic and vehicle emissions.
- 2.2.6 There have been no updates to the 2016 Base model applied.

Do Minimum 2021, 2023 & 2025

2.2.7 Since the OBC modelling, there have been a number of updates to the future year Do Minimum modelling process. During discussions with JAQU it was confirmed that these alterations did not constitute a change to the Target Determination process, but were appropriate technical refinements based on more up to date datasets.

2.2.8 These updates are:

- Update of Bus Routes and services and fleets. This has had two effects. Firstly, the OBC used a 2015/16 operational dataset which was correct for the Base Year model verification, and the fleet was then projected to the future years of 2021/2023/2025. The current modelling update has used the most recently available 2019 bus dataset and projected forward based on the OBC fleet-rollover method. This has resulted in an older future year bus fleet than was projected in the OBC, because bus operators have not invested in newer bus fleet as much since 2016 as in preceding years, which has the effect of increasing future emissions on a per vehicle basis. Secondly, overall bus mileage across GM has reduced by approx. 11% compared with the OBC assumptions, as operators have stopped running some less profitable routes.
- These factors in combination will have the overall effect of increasing the Do Minimum bus emissions compared with the OBC, because the impact of the older fleet is more significant than the reduced mileage. However, in Do Something scenarios, a 100% Euro VI fleet was assumed in the OBC and this modelling version. Therefore, the reduced mileage will be the only variant, and bus emissions will be reduced compared with the OBC.
- Updates to the Emission Factor Toolkit (from v8.0 to v9.1a) and associated NO_x-to-NO₂ tool. This has primarily affected the split of petrol and diesel cars, increasing the petrol and EV/hybrid fleet in line with more recent sales trends. Overall this has reduced NO_x emissions compared with OBC by approx. 2%, however this varies depending on the vehicle mix on a given road. Furthermore, because petrol cars have lower primary-NO₂ than diesel cars, there is a secondary effect which further reduces the final NO₂ concentrations.
- Growth of LGVs. The demand matrices had not been correctly projected forwards in the OBC modelling. This correction has increased LGV emissions by approx. 1%.
- Reduced number of modelled output points. In order to speed up model processing, only those sites that were predicted to be >38 µg/m³ in the OBC Do Minimum 2021 have been calculated herein. This reduces the number of output points reported from ~17,000 to ~2,500.

3 Without Scheme Results

Model Results and PCM Exceedance Link Comparison: Do Minimum 2021

- 3.1.1 As part of the Target Determination process, the local modelling is compared against the national PCM model (2015 base, as referenced in the Direction). The results for these locations, where the PCM model has predicted exceedances leading to authorities being included in the National Plan, are presented in Table 1.
- 3.1.2 The results of the modelling are subsequently presented for each local authority separately. This discussion reports the total number of assessed modelled locations in exceedance by road link. The maximum result for each PCM link is then also tabulated and along with information on background concentrations and vehicle type source apportionment.

Table 1: Model results and PCM Links leading to Districts being named in the National Plan – Do Minimum 2021

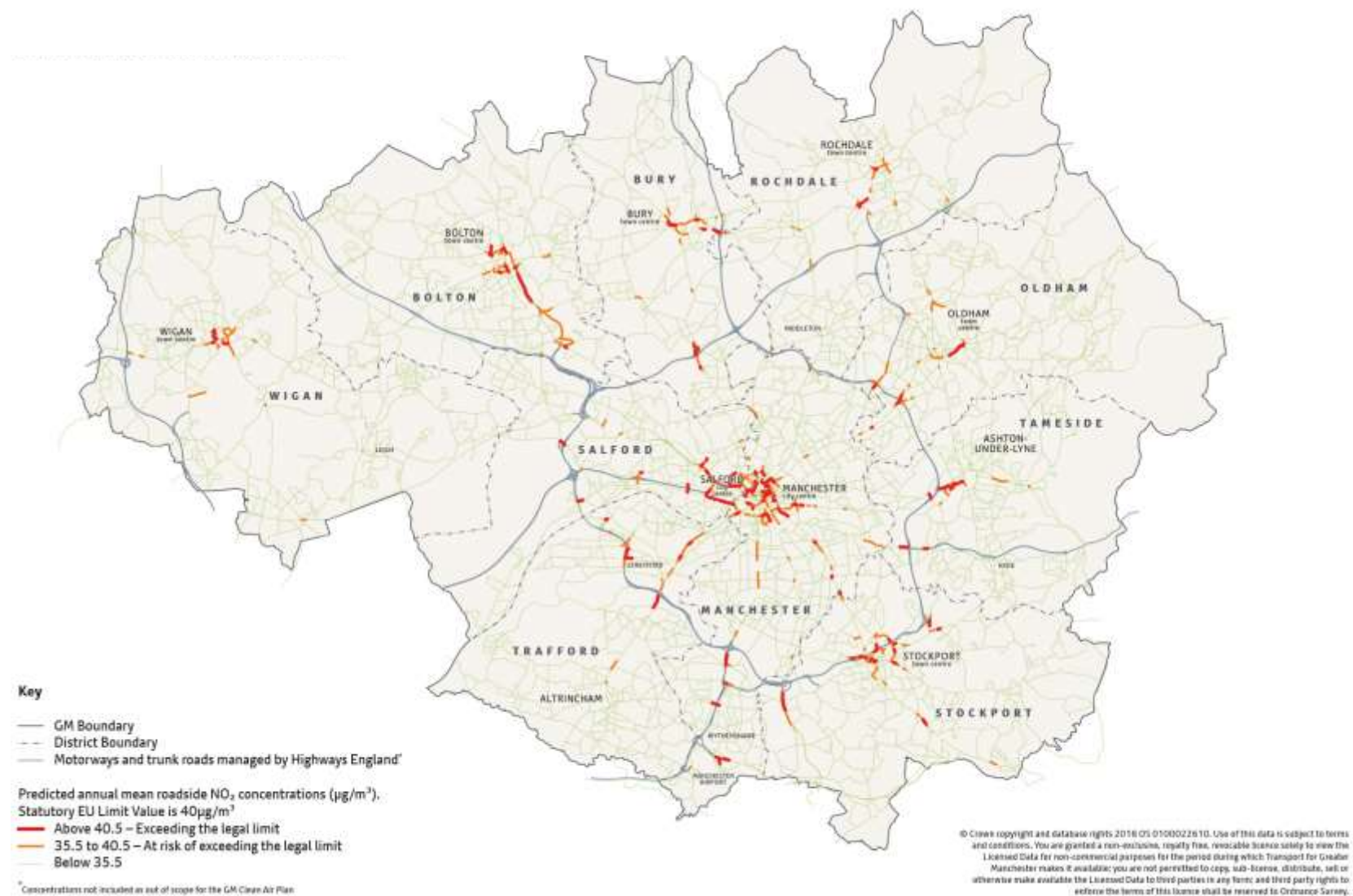
Census ID	Road Name	Local authority	PCM NO ₂ conc. (µg/m ³)	Local Model Results (µg/m ³)					Local Model : PCM
				Total NO ₂	BG ¹ NOx	BG NO ₂	Road NOx	Road NO ₂	
7431	A666	Bolton	40.6	44.0	26.5	18.4	53.7	25.6	108%
38354	A58	Bury	41.5	52.8	23.0	16.3	88.8	36.5	127%
37809	A5103	Manchester	41.2	38.8	16.8	12.3	54.7	26.4	94%
70273	A635	Manchester	40.4	37.8	32.5	21.7	37.1	16.1	94%
46068	A57M	Manchester	40.0	39.5	32.0	21.5	40.3	18.0	99%
56370	A57	Manchester	41.5	37.1	26.5	18.4	42.2	18.7	89%
36632	A62	Oldham	38.4	43.0	27.4	18.9	52.0	24.1	97%
36585	A57	Salford	38.7	48.4	26.5	18.4	69.8	30.0	125%
26352	A34	Stockport	40.3	44.6	20.5	14.7	64.2	29.9	111%
38735	A34	Stockport	40.6	41.6	20.5	14.7	57.0	26.9	103%
99618	A635	Tameside	42.2	47.4	26.9	18.5	66.5	28.9	112%
58022	A56	Trafford	38.5	38.2	16.8	12.3	54.0	25.9	99%

¹ BG = Background

- 3.1.3 Comparison of the model results for 2021 show reasonable agreement between the PCM links predicted to be in exceedance and local model total NO₂ concentrations for the majority of road links assessed. Of the 12 links identified, the local model concentrations are typically greater, but only two sites (38354: A58 in Bury and 36585: A57 in Salford) are greater than $\pm 25\%$, and Bury is also the worst case location as identified in the local modelling. The local road network in the vicinity of these PCM links is complex so direct comparison is difficult. The Bury A58 concentration of $52.8 \mu\text{g}/\text{m}^3$ is the maximum of any PCM receptor point on roads managed by local authorities.
- 3.1.4 The A635 in Tameside (Census ID:99618) has the highest PCM link concentration of $42.2 \mu\text{g}/\text{m}^3$, and is predicted to have a maximum concentration of $47.4 \mu\text{g}/\text{m}^3$ in the detailed local modelling. Again, the local road network in the vicinity of this PCM link is complex so direct comparison between the models is difficult.
- 3.1.5 However, the local modelling also predicts exceedances at a number of additional PCM links across Greater Manchester in 2021. These include locations in districts that were not identified as non-compliant in the national modelling, i.e. Rochdale and Wigan. There are 160 stretches of local road (road links) or 203 modelled points, where concentrations of NO₂ are forecast to exceed $40 \mu\text{g}/\text{m}^3$ for NO₂ beyond 2020, across GM as a whole. 137 of these local road links (or 146 modelled points) coincide with roads identified in the national PCM model. Typically, these roads have the greatest car use and heavy freight flows. The remaining 23 road link exceedances (or 57 modelled points) are on shorter stretches of local roads, primarily around town and city centres across Greater Manchester, which are not included in the national model but carry high volumes of traffic, including significant numbers of buses, taxis and Light Goods Vehicles (LGVs).
- 3.1.6 These results are summarised in the following section of this report, split by district. They are described based on the number of output points from the local network (rather the PCM network), and also include roads managed by the local authority excluded from the PCM network. The reporting does not include those roads managed by Highways England (HE) - which include motorways and trunk roads, although these roads and vehicle traffic are necessarily included in modelling process.

3.1.7 Table 2 and Chart 1 show the exceedances identified by local modelling and upon which the proposed GM CAP is based. Exceedances are found in the town and city centres and on major roads, particularly those close to the motorway network. The greatest cluster of sites in exceedance of the AQO is found in Manchester city centre, and this is also where some of the highest annual mean concentrations are predicted. This reflects higher traffic volumes, congestion, high buildings which create air pollution 'canyons', and high background levels of pollution. The aim of the GM CAP is to deliver measures that deliver compliance at these locations as soon as possible, without redistributing the problem to other locations. The geographical spread of NO₂ exceedances throughout Greater Manchester is shown in Chart 1 for 2021 and clearly highlights the complexity of the air quality issues the Clean Air Plan is trying to address. The modelled Do Minimum scenario NO₂ concentrations and exceedances for all of GM and then each district are presented separately in Figures 2 to 12 for 2021, Figures 13 to 23 for 2023, and Figures 24 to 34 for 2025.

Chart 1: Predicted NO₂ Exceedances in Greater Manchester in the Local Modelling in 2021



3.1.8 Table 2 shows the exceedances identified in the national modelling, using the PCM, and in the local modelling. The local modelling encompasses a wider road network than the PCM, including local and strategic roads. The primary spending objective of the GM CAP, as set out by JAQU, is to tackle exceedances identified by the local modelling on roads included within the PCM network.

Table 2: Predicted NO₂ Exceedances in Greater Manchester in the PCM and Local Modelling in 2021

Local authority	National (PCM) Model exceedances links	Local Model exceedances points on PCM links	Additional Local Model point exceedances on minor roads (non-PCM links)*	Total Local Model point exceedances
Bolton Metropolitan Borough Council	1	12	1	13
Bury Metropolitan Borough Council	1	12	4	16
Manchester City Council	3	55	21	76
Oldham Metropolitan Borough Council	0	9	0	9
Rochdale Metropolitan Borough Council	0	5	0	5
Salford City Council	1	34	2	36
Stockport Metropolitan Borough Council	2	16	5	21
Tameside Metropolitan Borough Council	1	13	0	13
Trafford Metropolitan Borough Council	1	2	5	7
Wigan Metropolitan Borough Council	0	2	5	7
Total	10	160	43	203

**These are road links that are not included in the national PCM model but have been modelled locally.*

- 3.1.9 Table 3 shows the distribution of non-compliant sites across Greater Manchester, both by spatial type and also in terms of how close they are to compliance. This shows that, whilst levels of NO₂ are below the AQO across much of the road network, in 2021 it is anticipated that 203 sites will remain non-compliant, of which 49 are predicted to experience annual mean concentrations between 45 µg/m³ and 50 µg/m³, and 11 to experience annual mean concentrations over 50 µg/m³ and as high as 57 µg/m³. A further 485 sites are compliant but experience annual mean concentrations close to the AQO and given modelling uncertainties, could be at risk of still exceeding in 2021.
- 3.1.10 Chart 1, Table 2 and Table 3, demonstrate the spatial diversity of predicted exceedances across GM, with predicted exceedances occurring both in urban centres, and close to heavily trafficked routes serving them (including those influenced by the motorway).
- 3.1.11 By 2023, the transition towards cleaner vehicles that would be expected without further action, as well as a reduction in background emissions, leads to a substantial reduction in the number of sites in exceedance of the AQO, from 203 in 2021 to 69 in 2023, and a reduction in the number of sites in compliance but close to the AQO from 485 in 2021 to 209 in 2023.
- 3.1.12 By 2025, the improvement in air quality expected without further action leads to a very substantial reduction in the number of sites in exceedance of the AQO, from 203 in 2021 to 12 in 2025, and a reduction in the number of sites in compliance but close to AQO from 485 in 2021 to 109 in 2025. Nevertheless, this suggests that achieving compliance with the AQO will take more than seven years in Greater Manchester without further action.
- 3.1.13 Information on air quality performance for individual local authorities can be found in appendices supporting the OBC Strategic Case.
- 3.1.14 It should be noted that forecasts of improvements in air quality have been shown to be overly optimistic in the past; if this was the case then compliance may take longer to achieve and any intervention would be of greater value than presented in this OBC.

Table 3: Predicted annual mean NO₂ concentrations at points on the Greater Manchester road network - 2021, 2023 and 2025 without further action ('Do Minimum')

Road classification ²	Compliant sites		Non-compliant sites			
	Very compliant (below 35 µg/m ³)	Compliant but marginal (35 to 40 µg/m ³)	Non-compliant (>40 to 45 µg/m ³)	Very non-compliant (>45 to 50 µg/m ³)	Extremely non-compliant (>50 µg/m ³)	Total non-compliant (>40 µg/m ³)
2021						
Inside Manchester-Salford Inner Relief Route (IRR)	150	72	29	19	5	53
Other urban centres	170	48	14	5	0	19
Other locations	1531	365	100	25	6	131
Total	1851	485	143	49	11	203
2023						
Inside IRR	205	39	21	9	1	31
Other urban centres	213	20	4	0	0	4
Other locations	1869	150	30	4	0	34
Total	2287	209	55	13	1	69
2025						
Inside IRR	240	27	8	0	0	8
Other urban centres	233	4	0	0	0	0
Other locations	1990	78	4	0	0	4
Total	2463	109	12	0	0	12

Note: The total number of predicted points and distribution of those points changes between 2021 and 2023/2025 due to planned changes to the road network.

² "Inside Inner Relief Route" is the area encircled by the Inner Relief Route. "Other urban centres" are areas that met a definition used for the purposes of air quality modelling for Option 4 testing, but generally comprise the town centres of the relevant district. "Other locations" are roads outside of Urban centres and the Inner Relief Route.

- 3.1.15 Based on extrapolation from the available transport model years, Greater Manchester is predicted to become fully compliant with the AQO for NO₂ in 2027.
- 3.1.16 In order to deliver compliance, emissions reductions equivalent to reducing traffic emissions by as much as 40-50% are required at some locations. This proposed GM CAP has assessed solutions that aim to deliver equivalent reductions in emissions in the shortest possible time and without limiting the ability to travel around the region or preventing successful business operations.

Comparison of Do Minimum Results with those used in the OBC

- 3.1.17 There is a reduction in the number of points of exceedance in 2021 from those presented in the OBC from 250 to 203, primarily as many of the more marginal exceedances along 'Other Locations' have reduced. However, over time into 2025, the emissions along bus routes are more persistent due to an older modelled fleet mix, so there is an increase in overall exceedances in 2025 from 8 to 12.
- 3.1.18 There are predicted to be exceedances in all 10 districts in the Do Minimum scenarios for both 2021 and 2023. By 2025, exceedances are only predicted in Salford, Manchester and Bury, which is consistent with the OBC scenarios (following the model refinement to A62 Oldham).
- 3.1.19 The updated modelling shows results consistent with methodological modelling alterations described previously. The locations where car and van flows are greatest have a reduced number of exceedances, typically sites classed as 'Other Locations'. Those sites in the IRR where bus contributions are most significant have an increased number of exceedances. The number of exceedances at sites classed as 'Other Urban Centres' are relatively unaltered, most likely because increases in bus emissions and reductions in car and van emissions offset one another.
- 3.1.20 Beyond the IRR, the key last points of exceedance in the OBC in 2025, which were on roads classed as 'Other Locations', still remain at:
- A57 Regent Rd, Salford
 - A6 Ardwick Green, Manchester
 - A58 Bury Bridge, Bury
- 3.1.21 Additionally, there is an extra exceedance at:
- A6 Chapel St, Salford.
- 3.1.22 The OBC exceedance site on the A56 Bury New Road, adjacent to M60 J18, is no longer predicted to exceed in 2025.

Influence of Highways England's Strategic Road Network

- 3.1.23 While the maps and tables show a number of exceedances on local roads that are in close proximity to the Strategic Road Network (SRN), which is managed by Highways England (HE), it should be noted that the mapping and analysis does not include exceedances actually allocated to the SRN. This is because Highways England have not been required to act to reduce NO₂ under the same direction as local authorities. Nevertheless, at local roads close to the SRN, pollution caused by motorway traffic can be as much as 50% greater than that from the local road. Furthermore, there are properties in exceedance situated along the motorway where there is very little local road traffic and 100,000 vehicles passing per day on the SRN.
- 3.1.24 Highways England have eight links predicted to be non-compliant in the PCM network based on national modelling. Highways England is currently assessing sections of the SRN around Greater Manchester to explore potential Measures to reduce air quality impacts. The GM CAP is predicted to provide substantial improvements in air quality on the SRN in Greater Manchester as most of the traffic on that network enters or exits within the region, and is therefore in scope for the proposed CAP daily charges. The modelling outputs of PCM equivalence points on HE managed roads have been produced in the CAP modelling process, but it should be noted that these points may not be representative of exposure and have not been checked against the criteria for 'qualifying features' agreed between JAQU and HE. Therefore, use of these results for interpretation of compliance of the SRN with the AQO is not appropriate.

Why is there a problem in Greater Manchester?

- 3.1.25 As demonstrated by the scale of exceedances identified in the Government's PCM model and the local modelling, Greater Manchester suffers from some of the worst air quality in the UK. The reasons for this are complex and multi-faceted.
- 3.1.26 Vehicles travelling on the roads in Greater Manchester traffic are older and more polluting than the national average, and traffic speeds are slower than average. This means the options considered in Greater Manchester may need to be bolder.

- 3.1.27 The transport modelling has also been analysed to understand the origins and destinations of traffic, by vehicle type, on these links. This shows that whilst a large proportion of traffic is associated with accessing the urban centres, there is also a significant use of the local road network to access the motorway for trips spread around Greater Manchester and beyond. The analysis indicates that a range of measures will be necessary to tackle Greater Manchester's NO₂ concentrations due to the diverse spatial context and reasons for travel.
- 3.1.28 Vehicle travel in Greater Manchester has been changing over the past 20 years. Traffic volumes on Highways England controlled motorways have been increasing but elsewhere on the local road network traffic levels have been stable or falling.
- 3.1.29 Analysis of the pollution sources at each location of exceedance has been undertaken, and an estimate of the emissions reduction required from vehicle transport has been calculated to enable compliance with the AQO for NO₂. This was utilised to inform the detail of measures required by the GM CAP.
- 3.1.30 The analysis shows that there are very diverse factors affecting vehicle emissions across Greater Manchester, with vehicle types and levels often differing between roads in close proximity to each other (see Chart 2). In many locations where there are significant exceedances, such as on roads in a city/town centre, the road network performs a variety of complex transport functions and therefore carries a diverse range of traffic, including cars, vans, Heavy Goods Vehicles (HGVs), buses and taxis.
- 3.1.31 The success of any potential scheme is determined by the removal of all predicted exceedances in the shortest possible time. The transport and emissions modelling process was developed based on the published JAQU guidance, and a range of indicative early schemes were tested to understand the likely scale of impact on NO₂ of charging CAZ schemes in 2021. This determined that compliance was not feasible in 2021, and therefore additional transport models were also constructed for 2023 and 2025 to understand the trajectory of NO₂ concentrations into the future.
- 3.1.32 To describe how the Consultation Option delivers compliance across GM, the results for a subset of the modelled receptors have been summarised. Chart 2 shows 16 of the key points that would eventually come to define compliance within GM and each district. These sites have been selected based on the maximum predicted concentrations i.e. last points of compliance in each district in the Consultation Option, plus where there are several points with high concentrations, those which display notably different source apportionment by vehicle type were added.

- 3.1.33 The air quality data and emissions source apportionment is provided in Table 4 for 2023, the year of full scheme opening. This table shows how each vehicle type contributes to the total road transport emissions on a given road link, and how variable they are across GM.
- 3.1.34 For example, buses are an insignificant fraction on the links in Bolton and several of the other districts, whilst on the links close to the IRR in Manchester and Salford, bus emissions account for 51-79% of total transport emissions in this subset of sites.
- 3.1.35 Emissions from freight vehicles (HGVs & LGVs) are often over 50% of emissions, with nine of the 16 sites having goods vehicle emissions >46%. Cars form a more consistently substantial proportion of total emissions, but also comprise the vast majority of vehicle movements, usually >75%.
- 3.1.36 Full data for all modelled links, years and scenarios is presented in Appendix B.

Chart 2: Key Exceedance Points across Greater Manchester

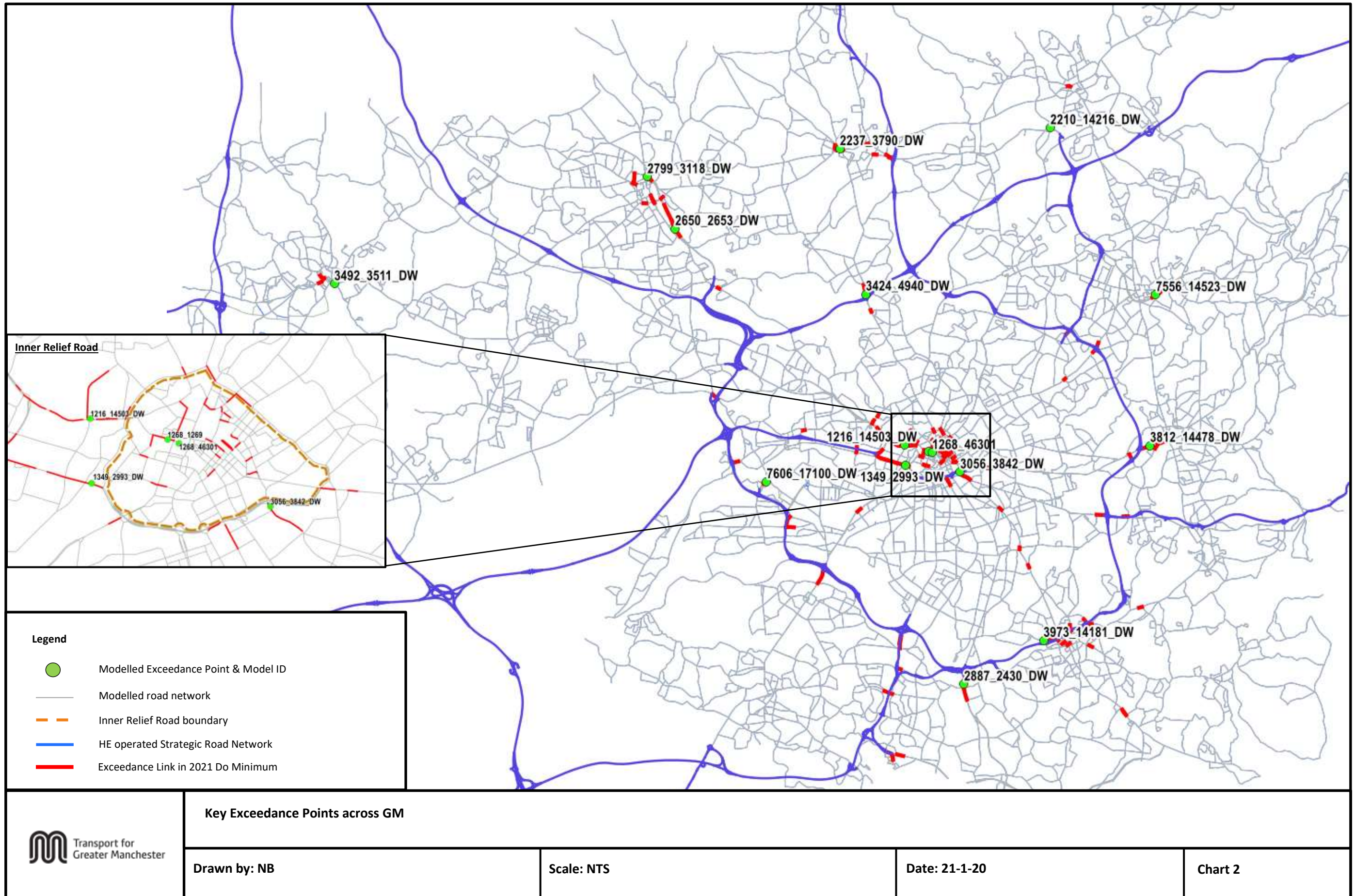


Table 4: Predicted annual mean NO₂ concentrations and source apportionment at key compliance points on the Greater Manchester road network - 2023 Do Minimum

Point ID	x	y	Census ID	Road name	Local Authority	PCM/LA/HE	PCM Total NO ₂ conc (µg/m ³)	Annual mean NO ₂ conc (µg/m ³)	BG ³ NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	Traffic Flow (veh per day)	NOx contribution by vehicle type (%)				
														Bus	Taxi	HGV	LGV	Car
2799_3118_DW	371751	409800	58048	A673	Bolton	PCM	23.8	40.0	26.0	18.1	49.7	21.9	27,724	0%	5%	33%	26%	36%
2650_2653_DW	372915	407622	7431	A666	Bolton	PCM	36.3	39.3	24.8	17.3	45.4	22.0	69,327	0%	6%	7%	44%	44%
2237_3790_DW	379830	410975	38354	A58	Bury	PCM	36.9	46.9	21.4	15.2	76.0	31.7	79,436	16%	5%	19%	24%	36%
3424_4940_DW	380920	404881	17924	A56	Bury	PCM	30.6	44.8	17.0	12.4	76.9	32.4	19,908	11%	5%	32%	20%	32%
3056_3842_DW	384880	397418	26157	A6	Manchester	PCM	30.4	47.7	32.2	21.6	64.5	26.1	38,674	29%	5%	13%	23%	30%
1268_1269	383558	398278	27974	A34	Manchester	PCM	23.3	50.8	35.6	23.4	99.4	27.4	9,350	79%	2%	3%	6%	11%
1268_46301	383702	398229	7947	A34	Manchester	PCM	24.2	49.0	35.6	23.4	92.0	25.6	8,486	77%	1%	8%	6%	8%
14523_14524	393320	405038	36632	A62	Oldham	PCM	34.4	38.8	24.5	17.1	46.1	21.7	24,908	1%	7%	18%	28%	47%
2210_14216_DW	388664	411856	17322	A664	Rochdale	PCM	28.0	43.7	17.9	13.0	75.0	30.7	34,377	0%	4%	44%	25%	27%
1349_2993_DW	382580	397716	73792	A57	Salford	PCM	33.2	45.7	24.7	17.2	64.6	28.5	57,405	2%	6%	22%	30%	41%
1216_14503_DW	382565	398546	17926	A6	Salford	PCM	25.0	46.8	25.2	17.6	81.1	29.3	31,518	51%	3%	15%	13%	19%
3973_14181_DW	388375	390354	58034	A5145	Stockport	PCM	28.6	42.0	20.9	14.9	61.0	27.1	26,281	14%	5%	21%	26%	34%
2887_2430_DW	385044	388518	26352	A34	Stockport	PCM	36.0	40.8	19.0	13.8	57.6	27.1	40,090	1%	6%	14%	27%	51%
3812_14478_DW	392847	398534	99618	A635	Tameside	PCM	37.6	42.2	25.5	17.7	55.4	24.5	41,257	7%	5%	24%	30%	34%
7606_17100_DW	376759	397007	N/A	B5214	Trafford	LA	N/A	40.5	19.6	14.1	66.9	26.4	28,968	36%	4%	23%	11%	25%
3492_3511_DW	358611	405310	8566	A577	Wigan	PCM	27.1	35.2	29.1	19.7	33.5	15.5	22,369	7%	5%	23%	26%	39%

³ BG = Background

4 CAP Consultation Option

- 4.1.1 As previously described, local modelling has revealed the problem to be larger than that initially identified by Government. Local modelling predicts a greater spatial distribution of NO₂ exceedances across roads in Greater Manchester and generally higher concentrations of NO₂ in specific locations.
- 4.1.2 Given the spatially variable and complex causes of exceedances across Greater Manchester, and with each exceedance site differing, the scale of the challenge means that the solutions are inter-related. Localised solutions such as re-routing traffic or tackling local pinch points will clearly be insufficient to tackle the region-wide problem, and risk simply moving the problem elsewhere.
- 4.1.3 A series of options, containing packages of Measures including CAZ schemes of different categories and sizes, were developed in response to the problem identified by local modelling and assessed for the OBC, with a preferred option selected. Further details of the options and modelling can be found in the OBC Strategic Case and associated technical T1/2/3/4 and AQ1/2/3 documents.
- 4.1.4 Since the OBC further work has been undertaken to refine and improve the modelling process for this preferred option, to meet the Government's technical requirements the Ministerial Direction. This is set out in T4 and in a series of supporting Technical Notes.
- 4.1.5 The CAP option which is being taken forward for consultation includes the following measures:
- A category C CAZ covering the whole of Greater Manchester in 2021, with temporary exemptions to 2023 for LGVs, minibuses, GM-licensed wheelchair accessible hackney cabs and private hire vehicles, and GM-registered coaches;
 - Measures to promote sustainable journeys and invest in electric vehicle charging infrastructure for taxis and a try-before-you-buy electric taxi scheme;
 - Funds to upgrade the bus fleet;
 - Funds for Taxi, PHV, LGV and HGV operators to upgrade their vehicles, plus Loan/Finance measures.

5 Summary Results for the Consultation Option

5.1.1 Table 5 shows the number of sites remaining in exceedance of legal limits in 2021, 2023, 2024 (based on linear interpolation of 2023 and 2025 point specific results) and 2025 under the Do Minimum scenario and with the Consultation Option by local authority. The results show:

- without action, there are predicted to be 203 non-compliant sites across Greater Manchester in 2021, 69 in 2023 and 12 remaining in 2025, with compliance forecast to be achieved by 2027;
- with action, two authorities (Wigan and Trafford) are forecast to become compliant in 2021, with 57 points of non-compliance remaining across the rest of the region;
- with action, by 2023 eight authorities are forecast to be compliant, with three non-compliant sites remaining in Manchester and Bury; and
- with action, GM achieves compliance in 2024, by removal of the last 12 exceedances.

Table 5: Number of sites remaining in exceedance of legal limits for NO₂ concentrations by year, Greater Manchester, by local authority for the range of modelled options

	2021		2023		2024 (interpolated)		2025	
	Do Min.	Consult. Option	Do Min.	Consult. Option	Do Min	Consult. Option	Do Min.	Consult. Option
Bolton	13	6	1	0	1	0	0	0
Bury	16	7	8	1	4	0	1	0
Manchester	76	22	39	2	20	0	9	0
Oldham	9	1	0	0	0	0	0	0
Rochdale	5	2	2	0	2	0	0	0
Salford	36	11	11	0	4	0	2	0
Stockport	21	4	3	0	0	0	0	0
Tameside	13	4	4	0	0	0	0	0
Trafford	7	0	1	0	0	0	0	0
Wigan	7	0	0	0	0	0	0	0
GM Total	203	57	69	3	31	0	12	0

Note: Calculation of 2024 was undertaken using linear interpolation between the 2023 and 2025 modelled NO₂ results for each model output point.

5.1.2 Greater Manchester aims to deliver compliance in the shortest possible time in a way that takes into account the need to minimise human exposure. Table 6 demonstrates the benefits being delivered in each year in terms of reduced concentrations even at sites remaining in exceedance in that year. This also shows that the number of sites close to exceedance reduces considerably in each year as a result of the Plan. Health benefits continue to be delivered by reductions in NO₂ concentrations even below the AQOs. In particular:

- With action, there are no sites that are extremely non-compliant (with concentrations over 50 µg/m³) in the first year; and substantial reduction in the number that are very non-compliant (with concentrations between 45-50 µg/m³) in the same year.
- By 2023, all sites are at, or close to, compliance across Greater Manchester. Three sites are predicted to remain non-compliant two in Manchester and one in Bury, but in all cases the predicted concentrations are close to 40 µg/m³.
- With action, compliance is achieved in all local authorities across Greater Manchester by 2024. With the vast majority of sites across the region predicted to have concentrations less than 35 µg/m³.

Table 6: Number of modelled sites by scale of NO₂ exceedance by year, Greater Manchester

Scenario	Compliant sites		Non-compliant sites				NO ₂ Change (µg/m³)
	Very compliant (below 35 µg/m³)	Compliant but close (35 to 40 µg/m³)	Non-compliant (40 to 45 µg/m³)	Very non-compliant (45 to 50 µg/m³)	Extremely non-compliant (> 50 µg/m³)	Total non-compliant (> 40 µg/m³)	
2021							
Do minimum	1851	485	143	49	11	203	na
Consult. Option	2266	216	52	5	0	57	-146
2023							
Do minimum	2287	209	55	13	1	69	na
Consult. Option	2485	51	3	0	0	3	-66
2025							
Do minimum	2463	109	12	0	0	12	na
Consult. Option	2525	14	0	0	0	0	-12

5.1.3 Table 7 shows the concentrations at the highest point of exceedance with each scenario in each year. This shows that, by 2023, the highest exceedances in the Consultation Option below 42 µg/m³, whereas in the Do Minimum the highest exceedance is nearly 51 µg/m³.

Table 7: Maximum NO₂ concentration as forecast in each year, in µg/m³

Scenario	2021	2023	2025
Do Minimum	56.9	50.8	45.4
Consult. Option	48.2	41.5	39.3

Detailed Discussion of Transport and Air Quality Impacts for the Consultation Option

- 5.1.4 The impacts of the proposed option will be discussed further with reference to the key exceedance points identified earlier, examining details on the changes to traffic and emissions by vehicle type.
- 5.1.5 The air quality and source apportionment data for the Consultation Option in 2023 are provided in Table 8, whilst the impacts on the traffic flows are provided in Table 9.

- 5.1.6 With the Consultation Option in effect, there are predicted to be three exceedances remaining in 2023, two located inside the Manchester regional centre and one in Bury. Both are only marginally above the AQO with the option, and are predicted to be compliant in 2024.
- 5.1.7 Of the Manchester regional centre sites which are still non-compliant, both are on adjacent sections of the A34, either side of Deansgate. These are the A34 John Dalton St (1268_1269) which has the highest concentration at 41.5 ug/m³, and the A34 Bridge St (1268_46301) at 41.1 ug/m³.
- 5.1.8 The A34 John Dalton St experiences a reduction of -9.3 ug/m³ due to the proposed option, whilst A34 Bridge St reduces by -7.9 ug/m³. Both of these sites have very similar source apportionment with emissions dominated by buses. Of the total change in emissions due to the option at John Dalton St, 92% of this NO_x reduction is related to the bus fleet, with a further 3% from both HGVs and LGVs.
- 5.1.9 The other remaining non-compliant site at A58 Bury Bridge (2237_3790_DW) experiences a reduction of 6.0 ug/m³, resulting in a concentration of 40.9 ug/m³. Here, NO_x emissions are distributed across all vehicle types, with 43% from freight vehicles and 16% from buses in the Do Minimum. Of the total change in emissions due to the option, 42% of this NO_x reduction is related to the bus fleet. Additionally 27% of the NO_x reduction came from HGVs upgrading to become compliant (300 veh/day), and 26% from LGVs upgrading to become compliant (3,300 veh/day).
- 5.1.10 The A6 Ardwick Green (3056_3842_DW) experiences the greatest improvement, reducing by -9.7 ug/m³ due to the option, which is located just outside of the IRR. Of the total change in emissions due to the option, 50% of this NO_x reduction is related to the bus fleet, with a further 21% (100 veh/day) and 19% (1,750 veh/day) from HGVs and LGVs, respectively.
- 5.1.11 All sites experience significant reductions in NO₂ concentrations due to the proposed option. The A57 (1349_2993_DW) in Salford becomes narrowly compliant, with a reduction of -5.4 ug/m³. Of the total change in emissions due to the option, 54% of this NO_x reduction came from HGVs upgrading to become compliant (450 veh/day), and 33% from LGVs upgrading to become compliant (2,700 veh/day). There are very few buses on this section of road.

- 5.1.12 In addition to the subset of sites selected for narrative discussion, there are certain links located on key bus corridors, including sections of the A34, A6, A56, A5103 and A62 located within the IRR where bus emissions form over 90% of the total emissions in the Do Minimum scenario. These corridors typically have very poor air quality with Do Minimum concentrations above 45 ug/m^3 in 2023. At these sites the consultation option, which leads to a fully Euro VI bus fleet, is highly effective in reducing NO_2 concentrations typically by between -10 to -15 ug/m^3 . As a result these locations do not comprise the last points of compliance for GM with the option in place, but still represent significant improvements to air pollution in GM.
- 5.1.13 It should be noted, that the number of AADT flows responding as upgrading, is not directly comparable to the total number of unique vehicles affected, as some vehicles are likely to travel along the link more than once per day (e.g a return trip) or on multiple links along overall routes (e.g. through Salford into Manchester regional centre).
- 5.1.14 There is also the likely effect that some vehicles have been reassigned onto these key routes from equivalent 'rat-running' routes, due to slight reductions in overall demand (and modelled trip delays or 'congestion') hence the gap between the reduced non-compliant flows and increased compliant flows, particularly for cars and LGVs, is relatively small.
- 5.1.15 The modelled Consultation Option scenario NO_2 concentrations and exceedances for each district are presented separately in Figures 34 to 44 for 2021, Figures 45 to 55 for 2023, and Figure 56 for 2025. Full results for all modelled receptors in exceedance in the Do Minimum scenario for 2021 are presented in Appendix B.

Table 8: Predicted annual mean NO₂ concentrations and source apportionment at key compliance points on the Greater Manchester road network – Consultation Option 2023

Point ID	Census ID	Road name	Local Authority	Annual mean NO ₂ conc (µg/m ³)	BG NO _x conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NO _x contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NO _x contribution by vehicle type (%)					Change in Annual mean NO ₂ conc (µg/m ³)
										Bus	Taxi	HGV	LGV	Car	
2799_3118_DW	58048	A673	Bolton	35.8	26.0	18.1	38.3	17.7	27,717	0%	5%	26%	24%	45%	-4.2
2650_2653_DW	7431	A666	Bolton	35.7	24.8	17.3	37.2	18.3	69,221	0%	5%	3%	39%	52%	-3.6
2237_3790_DW	38354	A58	Bury	40.9	21.4	15.2	57.4	25.7	79,390	8%	5%	16%	23%	47%	-6.0
3424_4940_DW	17924	A56	Bury	37.8	17.0	12.4	55.0	25.4	19,874	3%	5%	23%	22%	47%	-7.0
3056_3842_DW	26157	A6	Manchester	38.0	32.2	21.6	34.8	16.4	38,483	7%	6%	4%	27%	56%	-9.7
1268_1269	27974	A34	Manchester	41.5	35.6	23.4	53.5	18.0	9,268	67%	2%	3%	8%	20%	-9.3
1268_46301	7947	A34	Manchester	41.1	35.6	23.4	54.6	17.7	8,471	68%	2%	9%	8%	13%	-7.9
14523_14524	36632	A62	Oldham	35.1	24.5	17.1	37.1	18.0	24,900	0%	6%	10%	25%	58%	-3.7
2210_14216_DW	17322	A664	Rochdale	38.3	17.9	13.0	58.7	25.3	34,374	0%	4%	38%	24%	34%	-5.4
1349_2993_DW	73792	A57	Salford	40.3	24.7	17.2	49.3	23.0	57,259	0%	6%	12%	29%	53%	-5.4
1216_14503_DW	17926	A6	Salford	38.6	25.2	17.6	50.7	21.0	31,487	36%	4%	16%	15%	30%	-8.2
3973_14181_DW	58034	A5145	Stockport	37.2	20.9	14.9	48.2	22.4	26,267	10%	5%	18%	25%	43%	-4.8
2887_2430_DW	26352	A34	Stockport	37.1	19.0	13.8	48.2	23.4	40,051	0%	6%	7%	25%	62%	-3.7
3812_14478_DW	99618	A635	Tameside	37.2	25.5	17.7	41.8	19.5	41,228	4%	5%	16%	30%	45%	-5.0
7606_17100_DW	N/A	B5214	Trafford	32.7	19.6	14.1	41.2	18.6	28,919	23%	5%	16%	14%	42%	-7.8
3492_3511_DW	8566	A577	Wigan	31.7	29.1	19.7	24.7	12.0	22,353	2%	6%	14%	26%	52%	-3.5

Table 9: Predicted impact on traffic flows at key compliance points on the Greater Manchester road network – Consultation Option 2023

Point ID	Local Authority	Do Min : Total AADT Flows (no. veh per day)									Consultation Option : Change in AADT Flows (no. veh per day) from Do Min.								
		All Vehicles	Taxi (comp)	Taxi (non-comp)	HGV (comp)	HGV (non-comp)	LGV (comp)	LGV (non-comp)	Car (comp)	Car (non-comp)	All Vehicles	Taxi (comp)	Taxi (non-comp)	HGV (comp)	HGV (non-comp)	LGV (comp)	LGV (non-comp)	Car (comp)	Car (non-comp)
2799_3118_DW	Bolton	27,724	1,202	316	738	161	3,013	1,423	18,101	2,613	-7	258	-258	154	-153	1,157	-1,203	42	-4
2650_2653_DW	Bolton	69,327	2,752	720	2,058	448	8,681	4,099	43,799	6,389	-106	591	-585	365	-388	3,253	-3,393	50	1
2237_3790_DW	Bury	79,436	3,579	944	1,462	319	7,953	3,759	52,604	7,570	-46	772	-770	295	-300	3,181	-3,267	80	-37
3424_4940_DW	Bury	19,908	837	220	1,025	223	1,991	940	12,640	1,826	-34	182	-179	214	-213	765	-778	-19	-6
3056_3842_DW	Manchester	38,674	1,687	444	546	119	4,396	2,077	24,671	3,535	-192	362	-361	99	-98	1,691	-1,752	-117	-16
1268_1269	Manchester	9,350	366	97	127	28	792	374	5,468	783	-82	79	-79	28	-26	312	-319	-67	-10
1268_46301	Manchester	8,486	323	86	188	41	785	371	4,660	667	-15	74	-70	39	-39	321	-324	-4	-12
14523_14524	Oldham	24,908	1,067	281	575	125	2,614	1,235	16,483	2,381	-9	224	-230	114	-117	1,038	-1,069	26	5
2210_14216_DW	Rochdale	34,377	1,413	371	1,943	423	4,206	1,987	20,851	3,001	-3	303	-302	397	-401	1,616	-1,677	68	-8
1349_2993_DW	Salford	57,405	2,345	614	2,234	486	6,931	3,273	35,954	5,195	-145	506	-499	456	-447	2,626	-2,693	-70	-24
1216_14503_DW	Salford	31,518	1,392	368	825	180	3,052	1,443	19,799	2,810	-31	302	-299	168	-171	1,234	-1,260	7	-13
3973_14181_DW	Stockport	26,281	1,096	289	492	107	3,031	1,433	16,957	2,452	-13	234	-236	103	-102	1,206	-1,243	39	-14
2887_2430_DW	Stockport	40,090	1,559	409	931	203	3,885	1,836	27,009	3,997	-39	327	-328	197	-184	1,314	-1,363	-42	38
3812_14478_DW	Tameside	41,257	1,709	448	1,755	382	5,462	2,580	24,936	3,583	-30	368	-362	309	-314	2,071	-2,161	48	10
7606_17100_DW	Trafford	28,968	1,246	328	1,815	396	2,249	1,063	18,406	2,608	-49	264	-267	370	-377	885	-919	11	-17
3492_3511_DW	Wigan	22,369	917	242	924	201	2,591	1,225	13,914	2,069	-16	185	-198	185	-170	1,017	-1,054	28	-9

Conclusions

- 5.1.16 There have been a number of best practice updates to assumptions used in the prediction of future year traffic and emissions forecasts applied since the assessment of the OBC. Comparison of the NO₂ model results for 2021 continue to show reasonable agreement between the national PCM model and local model concentrations, at the links predicted to be in exceedance for by national PCM modelling. Again, the local modelling identified a larger number of locations which are expected to exceed the AQO, and higher concentrations of NO₂ in specific locations. Local modelling has shown that all ten local authorities contain locations expected to be in exceedance of the AQO for annual mean NO₂ after 2020. This reflects that local modelling uses more detailed sources of data and more refined analytical tools.
- 5.1.17 Whilst levels of NO₂ are below the AQO across much of the road network, in 2021 it is anticipated that 203 sites will remain non-compliant, of which 49 are predicted to experience annual mean concentrations between 45 µg/m³ and 50 µg/m³, and 11 to experience annual mean concentrations over 50 µg/m³, with a maximum of 57 µg/m³. By 2023, the transition towards cleaner vehicles that would be expected without further action, as well as a reduction in background concentrations, leads to a substantial reduction in the number of sites in exceedance of the AQO, from 230 in 2021 to 69 in 2023. The highest and longest lasting exceedances are predicted in central Manchester, but exceedances occur throughout Greater Manchester.
- 5.1.18 The air quality modelling indicates that compliance in GM with the NO₂ AQO is predicted to occur without a CAP intervention by 2027.
- 5.1.19 The analysis shows that there are very diverse factors affecting vehicle emissions across Greater Manchester, with vehicle types and levels often differing between roads in close proximity to each other. In many locations where there are significant exceedances, such as on roads in a city/town centre, the road network performs a variety of complex transport functions and therefore carries a diverse range of traffic, including cars, vans, Heavy Goods Vehicles (HGVs), buses and taxis.
- 5.1.20 A series of options, containing packages of Measures including CAZ schemes of different categories and sizes, were developed in response to the modelled and measured exceedances for the OBC, with a preferred option selected. This option has been further refined, with full modelling and assessment carried out across three model forecast year scenarios, and reported herein.
- 5.1.21 The preferred option has been further developed to ensure compliance by 2024, as required by the Ministerial Direction and consistent with the preferred option from the OBC.
- 5.1.22 By 2023, only three sites are predicted to remain non-compliant, with two located in the regional centre of Manchester and the other in Bury.

- 5.1.23 The consultation option would deliver significant reductions in modelled NO₂ concentrations at all areas of poor air quality across GM. At the last remaining points of compliance, this is predicted to be -9.7 ug/m³ in 2023 in Manchester and -6.0 ug/m³ in Bury. At certain key bus corridors inside the IRR, there are predicted to be improvements in NO₂ concentration of upto -15 ug/m³.
- 5.1.24 A wide range of sensitivity tests and analyses were undertaken for the OBC phase, based on guidance issued by JAQU. These indicated that the modelled concentrations could be over- or under-estimated, however this is unavoidable and a reasonable aspect of any predictive analysis. Overall, it was concluded that there are a variety of assumptions that could act in combination either synergistically or antagonistically, to mean that future concentrations are higher or lower, and that the impacts of the scheme could be greater or lesser, than those predicted using the selected methodology in the OBC. However, the process applied was considered to be reasonable and appropriate, and the conclusions regarding the case for the scheme are robust. These sensitivity tests have not been updated at this stage of the process, but are expected to be for submission of the FBC.
- 5.1.25 Further refinement of the modelling may be necessary depending on the outcomes of any consultation, for example in relation to the impact of potential charge levels, funds or discounts and exemptions.

References

1. Clean Air Zone Framework Principles for Setting Up Clean Air Zones in England, Defra & DfT, May 2017
2. Air quality plan for nitrogen dioxide (NO₂) in UK (2017): UK plan for tackling roadside nitrogen dioxide concentrations, Detailed plan, Defra & DfT, July 2017
3. Local Air Quality Management Technical Guidance TG(16) <https://laqm.defra.gov.uk/technical-guidance/>, Defra, 2018
4. Supplementary Note on Sensitivity Testing, JAQU Guidance, October 2017

Appendix A – Air Quality Model Verification

- 6.1.1 A total of 314 monitoring sites were reviewed for the model verification process and of these a number of sites were discounted for a variety of reasons including low data capture, inappropriate location (e.g. bus stop), unidentified location, or co-location with a continuous analyser site. There were 194 sites used for the model verification, 147 for roadside predictions and 47 for background mapping adjustment. The monitoring data for all sites is provided in the files issued to JAQU with the AQ3 document. These files contain the model verification performance by site, including background concentrations and verification zone. Sites which were excluded from the verification process are detailed in Table 15.
- 6.1.2 Initially, the Defra background maps were compared with background monitoring sites. Of those sites reported as background type locations by the local authorities, only those sites with very low modelled road component NO_x were used in the verification process. These monitoring sites were grouped as 'Zone 2', and the Defra background maps were found to under-estimate the measured Total NO_x and Total NO₂ concentrations by a factor of 1.30. The background NO_x and NO₂ maps were therefore uplifted by this adjustment factor, and used in the modelling process.
- 6.1.3 There are 16 continuous analyser sites in GM, of which nine were suitable for roadside verification and four for background verification. Three are background sites, but with a road component which meant they were not considered suitable for either grouping. Where the diffusion tube data was used for verification, road NO_x was back calculated using the Defra NO_x to NO₂ calculator v6.1, with calculated f-NO₂ from the dispersion modelling input for each site.
- 6.1.4 The air quality modelling outputs were converted to NO₂ and then compared to the monitoring data. Only monitoring sites with data capture greater than 75% in the calendar year 2016 were used in the verification process.
- 6.1.5 The initial modelling applied the canyon module to the entire GM modelled road network. The results were then reviewed spatially for patterns of model performance, and each site checked locally. The canyon model input files were produced by CERC on behalf of TfGM. These initial model outputs were reviewed, and it was considered that the canyon module was performing poorly in areas which were not significantly built up, potentially due the relatively longer length of less homogenous road links, and additionally compromising model run times over the very large study area.

- 6.1.6 A zonal approach to model verification was considered necessary, to refine the spatial performance of the model, including application of the canyon module. The study area was split into three zones:
- the area of central Manchester inside the Inner Relief Road (IRR) where there is a predominance of tall buildings (Zone 5),
 - the A57 Hyde Road at Mottram (which is operated by Highways England) which is very narrow and congested (Zone 4); and
 - the remainder of GM (Zone 1).
- 6.1.7 The canyon module was used in Zone 4 and 5, but not in Zone 1. A total of 118 sites were used in the verification process for Zone 1 (remainder of GM outside the Manchester city centre Inner Ring Road). Twenty one sites were included for Zone 4 (A57 Mottram) and eight sites were included for Zone 5 (sites within the Manchester-Salford Inner Relief Road). These sites are presented in Figure 1.
- 6.1.8 The results for all monitoring sites prior to adjustment (but with the canyon module applied in Zone 4 and 5 locations) are presented in Table 10. These show that the study area showed a slight systematic bias of under prediction (fractional bias of 0.27) with an RMSE of 12.5 $\mu\text{g}/\text{m}^3$. Analysis was undertaken to address the overall under prediction, and refine the model performance.
- 6.1.9 The verification process was applied following guidance in LAQM.TG(16) to adjust Road NO_x, with a further adjustment applied to Road NO₂, and the resulting model performance for the three zones considered are presented in Table 10.

Table 10: Modelled verification results for roadside locations

Annual mean conc. bands ($\mu\text{g}/\text{m}^3$)	No adjustm't: All roadside sites	No adjustm't: Zone 1	Zone 1	No adjustm't: Zone 4	Zone 4	No adjustm't: Zone 5	Zone 5
No. sites	147	118	118	21	21	8	8
Mod NO _x Rd v Mon NO _x Rd Factor	n/a	n/a	1.98	n/a	2.003	n/a	1.494
Mod NO ₂ Rd v Mon NO ₂ Rd Factor	n/a	n/a	1.002	n/a	0.981	n/a	0.936
RMSE	12.5	10.9	8.3	20.0	12.1	8.5	7.0
Fractional Bias	0.27	0.26	0.07	0.39	0.03	0.12	0.02
Correlation Coefficient	0.68	0.55	0.52	0.70	0.70	0.80	0.78
No. sites within $\pm 25\%$	78	64	94	7	17	7	7

Note: Zone 2 was used for background verification and Zone 3 was not used.

- 6.1.10 The results show that the RMSE is improved and the fractional bias reduced compared to the overall dataset for each of the three zones. The number of sites within $\pm 25\%$ of monitored concentrations in each zone is improved or remains the same. Each outlier site was reviewed to determine whether it should be excluded, but it was considered these should remain to describe the spread of the data. These verification factors were applied to the model results.
- 6.1.11 The model performance at each monitoring site is provided below by verification zone in Table 12 to Table 14, and the modelled road NO_x and total NO₂ (pre- and post- adjustment) are provided for each zone in Graph 1 to 9.

- 6.1.12 The continuous analysers were highly variable in their response, possibly relating to variations in f-NO₂, amongst other factors. Therefore, the performance of continuous analysers was also considered separately to diffusion tubes. A separate approach, using just the continuous analyser data to produce the road NO_x adjustment factor, and then both continuous analysers and diffusion tubes to produce the a total NO₂ adjustment factor was applied to Zone 1 (Zone 4 and 5 only contained one continuous analyser and this method was not considered appropriate). The model performance using this approach is summarised in Table 11.
- 6.1.13 Overall, the RMSE and number of outliers sites were poorer using this approach, whilst the Fractional Bias and Correlation Coefficient were slightly better. The test was not considered to significantly improve overall model performance, and therefore this approach has not been applied. This is discussed further in the sensitivity analysis in Appendix C.

Table 11: Modelled verification results for roadside locations – Continuous Analyser for NO_x Rd Adjustment Test

Annual mean concentration bands (µg/m ³)	No adjustment: Zone 1	Zone 1
No. sites	CM: 7 DT: 111	118
Mod NO _x Rd v Mon NO _x Rd Factor	n/a	2.200
Mod Total NO ₂ v Mon Total NO ₂ Factor	n/a	0.984
RMSE	10.9	8.4
Fractional Bias	0.26	0.04
Correlation Coefficient	0.55	0.51
No. sites within ±25%	64	92

Table 12: Verification Results: Zone 1

Ref.	X	Y	Measured NOx Conc	Measured NO ₂ Conc	DC %	Md f- NO ₂	Background NOx	Background NO ₂	Mod Total NO ₂	Mon/Mod Total NO ₂	Mod Road NOx	Mon Road NOx	Mon/Mod Road NOx	Mod Road NO ₂	Mon Road NO ₂	Mon/Mod Road NO ₂	Adjusted Modelled NOx (Roads)	Adjusted Modelled NO ₂ (Roads)	Adjusted Modelled NO ₂ (Total)
SalfordSA33	372597	400725	55.3	31.5	100%	0.24	21.2	15.2	23.0	-27%	14.5	34.1	2.4	7.8	16.3	2.1	28.7	13.94	29.10
SalfordSA55	372850	400733	70.6	37.9	92%	0.25	21.2	15.2	26.0	-31%	18.3	49.4	2.7	10.8	22.7	2.1	36.2	17.25	32.41
Wigan 54	370612	400586	61.7	33.9	100%	0.24	20.2	14.5	19.2	-43%	10.2	41.5	4.1	4.7	19.4	4.1	20.2	10.05	24.52
MMLR_018_1215	399196	395942	45.5	26.5	100%	0.23	18.0	13.1	26.0	-2%	22.3	27.4	1.2	12.9	13.3	1.0	44.2	20.52	33.65
MMLR_020_1215	398451	396636	75.4	39.1	100%	0.24	18.1	13.2	29.5	-25%	23.2	57.3	2.5	16.4	26.0	1.6	45.9	21.47	34.63
MMLR_056_1215	399049	396280	22.3	15.2	100%	0.24	16.7	12.2	13.7	-10%	2.9	5.7	2.0	1.5	3.0	2.0	5.8	3.03	15.23
MMLR_065_1215	398825	396336	52.4	29.8	100%	0.25	18.1	13.2	21.7	-27%	17.5	34.3	2.0	8.5	16.7	2.0	34.6	16.83	29.99
MMLR_010_1215	398357	395315	46.6	27.4	100%	0.27	17.9	13.0	17.0	-38%	7.6	28.7	3.8	4.0	14.4	3.6	15.1	7.83	20.85
MMLR_021_1215	398147	396837	73.1	38.4	100%	0.25	18.1	13.2	24.2	-37%	21.3	55.0	2.6	11.1	25.2	2.3	42.2	20.05	33.20
MMLR_022_1215	397449	397210	54.8	31.3	83%	0.25	21.1	15.0	22.5	-28%	9.0	33.8	3.7	7.4	16.2	2.2	17.9	8.99	24.04
MMLR_006_1215	395369	395062	49.5	29.4	100%	0.24	26.3	18.2	21.8	-26%	11.1	23.2	2.1	3.6	11.2	3.1	22.0	10.63	28.84
TamesideT 20	394609	395102	79.8	41.8	100%	0.23	26.6	18.4	27.7	-34%	18.4	53.2	2.9	9.3	23.4	2.5	36.4	16.78	35.19
MMLR_003_1215	395526	395405	36.6	23.5	100%	0.27	26.3	18.2	22.7	-4%	7.5	10.4	1.4	4.5	5.3	1.2	14.9	7.63	25.84
MMLR_004_1215	394885	395408	45.4	27.7	100%	0.26	26.6	18.4	23.0	-17%	9.6	18.8	2.0	4.6	9.3	2.0	19.0	9.45	27.86
MMLR_005_1215	395127	395435	56.3	32.6	83%	0.25	26.3	18.2	23.0	-29%	7.1	30.0	4.2	4.8	14.4	3.0	14.1	7.05	25.26
MMLR_007_1215	395619	395230	48.5	29.3	92%	0.27	26.3	18.2	26.3	-10%	14.2	22.2	1.6	8.1	11.1	1.4	28.0	13.82	32.02
Wigan 14	366880	403255	66.4	36.4	100%	0.26	20.5	14.7	22.9	-37%	9.3	45.9	4.9	8.2	21.7	2.7	18.4	9.34	24.05
Wigan 28	366423	399893	73.4	38.6	92%	0.22	22.9	16.2	19.5	-50%	13.4	50.5	3.8	3.3	22.4	6.8	26.5	12.62	28.81
Wigan 61	364025	403080	64.7	35.5	100%	0.25	20.1	14.5	27.9	-21%	24.3	44.5	1.8	13.5	21.0	1.6	48.1	22.53	36.99
Wigan 71	368244	402562	67.8	36.9	100%	0.25	20.8	14.9	25.1	-32%	10.7	47.1	4.4	10.3	22.0	2.1	21.3	10.64	25.52
Wigan 114	365115	400259	71.3	40.1	100%	0.27	28.9	19.8	28.6	-29%	16.4	42.4	2.6	8.7	20.2	2.3	32.5	15.88	35.71
Trafford22	377054	390078	63.3	35.6	83%	0.26	23.8	16.8	29.5	-17%	19.3	39.5	2.0	12.7	18.7	1.5	38.3	18.22	35.06
Bolton41	366296	406568	85.2	43.4	92%	0.24	21.7	15.5	22.0	-49%	10.3	63.5	6.2	6.5	27.9	4.3	20.3	10.04	25.56
Bolton60	373288	405062	59.1	34.2	92%	0.25	28.1	19.4	26.7	-22%	12.1	31.0	2.6	7.4	14.8	2.0	23.9	11.62	31.01
Rochdale2A	388537	409942	61.5	33.3	92%	0.22	19.9	14.3	35.4	6%	47.7	41.6	0.9	21.1	19.0	0.9	94.4	37.38	51.70

Ref.	X	Y	Measured NOx Conc	Measured NO ₂ Conc	DC %	Md f- NO ₂	Background NOx	Background NO ₂	Mod Total NO ₂	Mon/Mod Total NO ₂	Mod Road NOx	Mon Road NOx	Mon/Mod Road NOx	Mod Road NO ₂	Mon Road NO ₂	Mon/Mod Road NO ₂	Adjusted Modelled NOx (Roads)	Adjusted Modelled NO ₂ (Roads)	Adjusted Modelled NO ₂ (Total)
Rochdale6A	385414	408319	91.8	44.6	100%	0.23	19.0	13.7	39.9	-10%	59.3	72.8	1.2	26.2	30.9	1.2	117.5	45.02	58.76
BURY	380637	406972	59.0	30.0	94%	0.24	25.0	17.6	24.5	-18%	10.0	34.0	3.4	7.0	12.4	1.8	19.8	9.77	27.32
BuryBU6	379658	410888	74.5	40.8	100%	0.25	29.1	20.0	37.2	-9%	28.2	45.4	1.6	17.2	20.8	1.2	55.8	24.99	44.97
Rochdale12A	392072	415685	85.8	43.3	92%	0.24	19.5	14.1	23.7	-45%	18.7	66.3	3.6	9.6	29.3	3.0	37.0	17.61	31.67
Rochdale11A	389969	413814	89.1	46.8	100%	0.24	35.9	23.7	35.6	-24%	26.1	53.2	2.0	11.9	23.2	1.9	51.7	22.63	46.31
Wigan 35	357132	398669	73.5	39.0	92%	0.25	19.7	14.2	27.4	-30%	27.0	53.9	2.0	13.2	24.8	1.9	53.4	24.68	38.83
Wigan 52	362138	396947	83.4	41.7	100%	0.23	18.5	13.4	26.2	-37%	20.3	64.9	3.2	12.8	28.3	2.2	40.1	18.76	32.15
BUR1	378195	407477	64.0	28.0	95%	0.26	26.4	18.3	39.2	40%	28.2	37.6	1.3	20.9	9.7	0.5	55.8	25.33	43.65
Bolton48	375402	407462	48.5	28.7	75%	0.23	24.2	17.1	23.6	-18%	12.7	24.3	1.9	6.5	11.7	1.8	25.1	12.05	29.13
Bolton62	374193	405460	163.3	66.1	92%	0.21	25.0	17.5	33.0	-50%	17.8	138.3	7.8	15.5	48.5	3.1	35.3	16.04	33.57
Wigan 115	353845	405360	58.9	32.6	75%	0.25	17.0	12.5	25.8	-21%	26.1	41.9	1.6	13.4	20.1	1.5	51.6	24.22	36.70
Trafford24	379260	385811	52.4	30.7	92%	0.28	21.0	15.0	28.0	-9%	8.7	31.4	3.6	13.0	15.7	1.2	17.2	8.88	23.86
STK5	391483	387636	58.0	25.0	99%	0.21	28.0	19.2	35.1	40%	23.8	30.0	1.3	15.9	5.8	0.4	47.1	20.45	39.67
StockportSK 7	392063	386969	99.5	47.7	100%	0.22	23.5	16.6	22.3	-53%	23.6	76.0	3.2	5.8	31.1	5.4	46.6	20.74	37.29
StockportSK28	385700	386220	86.3	43.7	100%	0.21	26.7	18.6	30.5	-30%	22.7	59.6	2.6	11.9	25.1	2.1	45.0	19.78	38.37
BuryBU8	380753	412622	56.7	32.0	100%	0.21	24.3	17.2	27.5	-14%	16.2	32.4	2.0	10.3	14.9	1.4	32.1	14.73	31.88
Wigan 53	353896	408519	62.7	33.9	92%	0.25	15.5	11.5	24.1	-29%	25.4	47.2	1.9	12.7	22.4	1.8	50.3	23.74	35.24
Wigan 81	355979	410362	56.0	30.5	100%	0.24	14.7	10.9	13.0	-57%	7.0	41.3	5.9	2.1	19.6	9.3	13.8	7.10	18.00
Bolton43	365500	409885	83.3	44.1	83%	0.26	27.0	18.5	26.0	-41%	12.4	56.4	4.6	7.4	25.5	3.4	24.5	12.02	30.55
Wigan 43	356833	403150	70.5	37.1	100%	0.23	19.9	14.3	29.7	-20%	29.5	50.6	1.7	15.4	22.8	1.5	58.4	25.77	40.08
Wigan 23	361835	404090	66.2	36.3	100%	0.26	20.3	14.5	17.2	-52%	14.8	45.9	3.1	2.7	21.7	8.1	29.4	14.50	29.04
Wigan 33	359726	405534	79.3	41.8	92%	0.24	25.2	17.6	29.5	-29%	18.1	54.0	3.0	11.9	24.2	2.0	35.9	16.90	34.47
Wigan 51	358787	405931	49.2	29.9	75%	0.23	39.0	25.0	33.6	12%	15.0	10.2	0.7	8.6	4.9	0.6	29.8	13.51	38.55
StockportSK 4	396469	390800	22.5	15.7	100%	0.24	19.7	14.2	16.8	7%	6.6	2.8	0.4	2.6	1.5	0.6	13.1	6.67	20.89
StockportSK25	395770	388655	54.4	30.6	100%	0.19	23.3	16.5	24.9	-19%	9.9	31.1	3.2	8.4	14.1	1.7	19.5	9.22	25.69
TamesideT 18	391967	395521	97.3	49.3	100%	0.25	27.4	18.8	39.0	-21%	39.0	69.9	1.8	20.1	30.5	1.5	77.2	33.16	51.99

Ref.	X	Y	Measured NOx Conc	Measured NO ₂ Conc	DC %	Md f- NO ₂	Background NOx	Background NO ₂	Mod Total NO ₂	Mon/Mod Total NO ₂	Mod Road NOx	Mon Road NOx	Mon/Mod Road NOx	Mod Road NO ₂	Mon Road NO ₂	Mon/Mod Road NO ₂	Adjusted Modelled NOx (Roads)	Adjusted Modelled NO ₂ (Roads)	Adjusted Modelled NO ₂ (Total)
TamesideT 19	392478	395505	73.8	39.5	75%	0.22	28.7	19.6	36.5	-7%	22.3	45.1	2.0	16.9	19.8	1.2	44.2	19.50	39.13
TamesideT 24	390475	395621	72.3	39.3	100%	0.25	25.8	17.9	28.6	-27%	13.5	46.6	3.4	10.7	21.4	2.0	26.8	12.96	30.90
TamesideT 48	392699	395741	49.5	30.1	92%	0.28	28.7	19.6	26.9	-11%	13.9	20.8	1.5	7.3	10.4	1.4	27.6	13.65	33.28
TamesideT 10	392515	396749	78.4	41.4	100%	0.23	27.1	18.7	29.8	-28%	19.6	51.3	2.6	11.1	22.7	2.0	38.9	17.83	36.51
MAN73	388604	396043	82.8	43.6	100%	0.23	31.6	21.4	39.5	-9%	17.5	51.2	2.9	18.1	22.2	1.2	34.6	15.76	37.14
StockportSK19	389479	393464	79.9	42.5	100%	0.23	30.3	20.6	42.1	-1%	20.2	49.7	2.5	21.5	21.9	1.0	40.0	18.06	38.69
Rochdale7A	388602	411924	67.9	36.7	100%	0.23	23.8	16.7	28.3	-23%	28.9	44.1	1.5	11.6	20.0	1.7	57.1	24.99	41.73
Rochdale8A	388929	412091	106.6	51.2	92%	0.24	23.2	16.4	32.3	-37%	34.0	83.4	2.5	15.8	34.7	2.2	67.3	29.14	45.58
Rochdale9A	389058	412214	88.2	45.2	100%	0.23	26.9	18.6	40.6	-10%	41.6	61.3	1.5	22.0	26.5	1.2	82.4	33.88	52.52
Rochdale15A	392977	411907	60.7	32.8	75%	0.22	18.3	13.3	28.7	-13%	32.4	42.4	1.3	15.4	19.5	1.3	64.1	27.74	41.05
BUR2	381651	403221	111.0	42.0	99%	0.23	24.7	17.3	30.4	-28%	18.7	86.3	4.6	13.1	24.7	1.9	37.1	17.12	34.42
BuryBU5	380294	406411	62.1	35.5	92%	0.27	25.0	17.6	23.8	-33%	11.9	37.0	3.1	6.2	18.0	2.9	23.6	11.82	29.38
M60	374810	400854	129.0	46.0	94%	0.24	20.2	14.5	36.3	-21%	47.6	108.8	2.3	21.8	31.5	1.4	94.1	38.36	52.88
SalfordSA04	377451	401828	51.7	30.4	83%	0.21	28.5	19.6	22.8	-25%	7.8	23.2	3.0	3.2	10.8	3.4	15.5	7.42	27.02
SalfordSA28	377289	401010	56.6	32.9	100%	0.24	28.5	19.6	27.7	-16%	19.7	28.1	1.4	8.1	13.3	1.6	39.0	17.96	37.56
SalfordSA31	374024	401905	57.5	32.5	100%	0.25	20.8	14.9	29.6	-9%	23.9	36.7	1.5	14.6	17.6	1.2	47.2	22.06	36.98
SalfordSA38	377788	403063	54.7	31.0	100%	0.23	21.5	15.3	20.4	-34%	11.1	33.2	3.0	5.1	15.7	3.1	21.9	10.71	25.99
TamesideT 26	394948	401826	39.5	24.8	100%	0.28	23.9	16.8	20.0	-19%	5.6	15.6	2.8	3.2	8.0	2.5	11.2	5.80	22.62
TamesideT 32	396970	402416	50.4	29.2	100%	0.25	20.0	14.4	25.0	-14%	7.7	30.4	3.9	10.6	14.8	1.4	15.3	7.77	22.17
TamesideT 33	397011	402592	45.8	27.6	100%	0.26	23.1	16.3	18.7	-32%	5.0	22.6	4.5	2.4	11.3	4.7	9.9	5.13	21.47
TamesideT 34	397066	402586	47.6	28.5	100%	0.26	23.1	16.3	22.9	-20%	10.0	24.5	2.5	6.5	12.1	1.9	19.7	9.92	26.26
TamesideT 35	397068	402535	79.6	41.8	100%	0.25	23.1	16.3	22.0	-47%	8.1	56.4	7.0	5.7	25.5	4.5	16.0	8.05	24.39
TamesideT 37	396727	402072	73.5	39.9	100%	0.28	20.0	14.4	24.0	-40%	10.9	53.5	4.9	9.6	25.5	2.7	21.6	11.06	25.46
TamesideT SPEC	394193	399264	69.3	37.3	100%	0.16	33.7	22.6	28.0	-25%	16.5	35.6	2.2	5.5	14.7	2.7	32.6	13.61	36.17
TamesideT 15	395403	398729	48.1	29.6	92%	0.26	34.9	23.1	29.9	1%	11.2	13.2	1.2	6.8	6.5	1.0	22.1	10.70	33.81
TamesideT 27	396174	398218	51.4	31.1	100%	0.27	31.2	21.1	27.3	-12%	7.6	20.2	2.7	6.2	10.0	1.6	15.0	7.53	28.63

Ref.	X	Y	Measured NOx Conc	Measured NO ₂ Conc	DC %	Md f- NO ₂	Background NOx	Background NO ₂	Mod Total NO ₂	Mon/Mod Total NO ₂	Mod Road NOx	Mon Road NOx	Mon/Mod Road NOx	Mod Road NO ₂	Mon Road NO ₂	Mon/Mod Road NO ₂	Adjusted Modelled NOx (Roads)	Adjusted Modelled NO ₂ (Roads)	Adjusted Modelled NO ₂ (Total)
TamesideT 40	394063	399307	65.2	36.6	100%	0.21	33.7	22.6	26.4	-28%	8.0	31.4	3.9	3.9	14.0	3.6	15.9	7.44	30.01
TamesideT 41	394117	399259	62.1	34.7	100%	0.17	33.7	22.6	26.5	-24%	12.4	28.4	2.3	4.0	12.2	3.1	24.6	10.66	33.23
TamesideT 42	394494	399011	55.5	33.1	100%	0.26	33.7	22.6	27.1	-18%	11.0	21.8	2.0	4.6	10.5	2.3	21.9	10.57	33.14
TamesideT 43	394210	398926	86.2	46.4	100%	0.27	36.1	23.7	32.7	-30%	16.4	50.1	3.1	9.0	22.7	2.5	32.4	15.34	39.01
TamesideT 14	393697	398794	72.5	40.6	100%	0.26	34.7	22.9	33.8	-17%	22.0	37.9	1.7	10.9	17.7	1.6	43.6	20.08	43.02
Bolton3	370747	407923	95.0	49.1	92%	0.26	29.7	20.3	33.9	-31%	12.1	65.3	5.4	13.6	28.8	2.1	23.9	11.65	31.95
Bolton66	371441	411600	75.8	40.4	92%	0.24	25.9	18.1	32.2	-20%	19.3	49.9	2.6	14.2	22.3	1.6	38.3	17.69	35.79
StockportSK16	391569	391226	48.3	28.9	100%	0.23	26.7	18.5	29.0	0%	13.2	21.6	1.6	10.5	10.4	1.0	26.0	12.38	30.91
StockportSK11	391082	387936	82.6	43.4	83%	0.24	28.0	19.2	40.4	-7%	20.6	54.6	2.6	21.1	24.2	1.1	40.9	18.79	38.01
StockportSK15	389886	388961	65.3	37.0	100%	0.26	29.7	20.2	29.4	-20%	14.1	35.6	2.5	9.2	16.8	1.8	28.0	13.45	33.70
MAN87A	387019	396563	65.4	37.1	100%	0.26	30.4	20.6	29.2	-21%	17.5	35.1	2.0	8.6	16.4	1.9	34.6	16.29	36.92
MAN75	387363	394618	107.3	51.5	100%	0.21	33.4	22.4	40.8	-21%	23.8	73.9	3.1	18.4	29.2	1.6	47.1	20.07	42.43
TRF2	379411	394013	76.0	33.0	98%	0.27	27.4	18.9	31.5	-5%	27.0	48.6	1.8	12.6	14.1	1.1	53.5	24.66	43.56
BuryBU1	384376	404918	63.0	35.2	92%	0.26	22.3	15.9	31.4	-11%	33.5	40.7	1.2	15.5	19.4	1.2	66.4	29.77	45.64
TamesideT 13	392583	398433	79.2	42.9	100%	0.25	33.6	22.3	38.5	-10%	35.6	45.7	1.3	16.2	20.6	1.3	70.4	30.04	52.33
TamesideT 16	391421	397973	89.0	46.1	100%	0.25	27.1	18.7	26.7	-42%	14.4	61.9	4.3	8.0	27.4	3.4	28.5	13.74	32.44
TamesideT 17	389069	398245	64.3	36.2	100%	0.24	29.1	19.9	30.0	-17%	12.2	35.2	2.9	10.2	16.3	1.6	24.2	11.61	31.47
TamesideT 25	393051	401037	52.2	30.4	100%	0.24	24.0	16.9	25.0	-18%	11.8	28.2	2.4	8.1	13.5	1.7	23.3	11.36	28.23
TamesideT 30	393419	399691	75.6	41.6	100%	0.25	33.3	22.2	28.6	-31%	13.4	42.3	3.2	6.4	19.4	3.0	26.4	12.62	34.82
MAN37	382828	391491	89.0	46.3	100%	0.28	21.7	15.5	32.4	-30%	24.3	67.3	2.8	16.9	30.8	1.8	48.1	22.97	38.44
OldhamOL11	393783	405097	57.8	34.1	92%	0.25	34.4	22.9	27.7	-19%	14.9	23.4	1.6	4.8	11.2	2.3	29.6	13.91	36.80
CW	393884	409183	79.0	34.0	94%	0.26	23.2	16.4	23.5	-31%	10.7	55.8	5.2	7.0	17.6	2.5	21.3	10.65	27.08
SalfordSA34	375362	397800	90.6	45.6	100%	0.25	21.3	15.2	37.6	-18%	49.0	69.3	1.4	22.4	30.4	1.4	97.0	40.11	55.32
SalfordSA42	374697	399854	75.1	39.1	100%	0.24	18.8	13.6	40.5	4%	62.0	56.3	0.9	26.9	25.4	0.9	122.8	47.80	61.41
SalfordSA50	375396	397805	84.7	43.7	100%	0.25	21.3	15.2	26.7	-39%	26.0	63.4	2.4	11.5	28.5	2.5	51.5	23.85	39.06
SalfordSA51	375213	397661	71.9	37.7	100%	0.22	21.3	15.2	39.2	4%	38.4	50.6	1.3	24.0	22.5	0.9	76.1	31.58	46.79

Ref.	X	Y	Measured NOx Conc	Measured NO ₂ Conc	DC %	Md f- NO ₂	Background NOx	Background NO ₂	Mod Total NO ₂	Mon/Mod Total NO ₂	Mod Road NOx	Mon Road NOx	Mon/Mod Road NOx	Mod Road NO ₂	Mon Road NO ₂	Mon/Mod Road NO ₂	Adjusted Modelled NOx (Roads)	Adjusted Modelled NO ₂ (Roads)	Adjusted Modelled NO ₂ (Total)
SalfordSA52	375148	397588	65.6	35.2	100%	0.22	21.3	15.2	31.0	-12%	26.2	44.3	1.7	15.8	20.0	1.3	51.8	22.93	38.14
SalfordSA53	374757	399891	68.6	36.5	100%	0.24	18.8	13.6	25.7	-30%	24.8	49.8	2.0	12.1	22.9	1.9	49.2	22.66	36.27
StockportSK20	386921	389529	90.9	47.9	100%	0.28	24.7	17.3	34.4	-28%	33.0	66.1	2.0	17.1	30.6	1.8	65.2	30.28	47.59
MAN74	385401	390096	67.1	38.0	100%	0.28	27.3	18.8	28.4	-25%	14.6	39.9	2.7	9.6	19.2	2.0	28.9	14.27	33.07
StockportSK12	385031	388288	110.2	54.5	100%	0.26	26.5	18.4	38.1	-30%	24.9	83.7	3.4	19.6	36.0	1.8	49.3	22.93	41.37
SalfordSA14	382833	401035	61.6	35.5	100%	0.28	26.9	18.6	25.3	-29%	12.7	34.7	2.7	6.6	16.9	2.5	25.2	12.55	31.19
SalfordSA17	380741	400863	68.8	38.1	100%	0.24	28.8	19.7	21.2	-44%	2.6	40.0	15.1	1.6	18.4	11.9	5.2	2.66	22.34
SalfordSA25	381304	398014	57.4	33.6	100%	0.25	32.8	21.9	30.1	-10%	15.3	24.5	1.6	8.2	11.7	1.4	30.3	14.26	36.16
SalfordSA44	380412	398439	71.9	40.7	100%	0.28	35.5	23.4	34.1	-16%	24.5	36.5	1.5	10.7	17.4	1.6	48.5	22.52	45.88
Oldham OL24	389720	403629	87.1	44.9	92%	0.23	29.0	19.8	35.0	-22%	30.7	58.0	1.9	15.2	25.1	1.7	60.7	26.12	45.95
MAN28	387960	397429	77.0	41.0	100%	0.21	33.8	22.5	39.0	-5%	16.3	43.2	2.7	16.5	18.5	1.1	32.2	14.30	36.76
MAN86A	387161	396850	64.3	36.7	100%	0.27	30.4	20.6	27.9	-24%	12.2	33.9	2.8	7.3	16.1	2.2	24.2	11.79	32.42
MAN36	385199	399743	74.9	40.1	92%	0.20	34.0	22.6	31.4	-22%	16.5	40.9	2.5	8.8	17.5	2.0	32.7	14.35	36.96
MAN88A	386535	396700	104.2	52.7	100%	0.26	32.6	21.8	31.0	-41%	18.5	71.6	3.9	9.2	30.8	3.4	36.6	17.11	38.95
MAN89A	386717	396829	62.0	35.7	100%	0.25	32.6	21.8	25.7	-28%	7.6	29.4	3.9	3.9	13.9	3.6	15.0	7.38	29.22

Table 13: Verification Results: Zone 4

Ref.	X	Y	Measured NOx Conc	Measured NO ₂ Conc	DC %	Md f- NO ₂	Background NOx	Background NO ₂	Mod Total NO ₂	Mon/Mod Total NO ₂	Mod Road NOx	Mon Road NOx	Mon/Mod Road NOx	Mod Road NO ₂	Mon Road NO ₂	Mon/Mod Road NO ₂	Adjusted Modelled NOx (Roads)	Adjusted Modelled NO ₂ (Roads)	Adjusted Modelled NO ₂ (Total)
MMLR_026_1215	400948	395800	89.3	45.1	75%	0.27	16.2	11.9	21.7	-52%	19.0	73.2	3.8	9.8	33.3	3.4	38.1	18.40	30.27
TamesideT 11	400416	396062	174.8	62.8	100%	0.18	17.1	12.5	33.8	-46%	50.1	157.8	3.1	21.3	50.4	2.4	100.4	35.85	48.31
TamesideT 21	400430	395961	123.9	56.1	100%	0.25	16.2	11.9	31.0	-45%	39.8	107.7	2.7	19.1	44.3	2.3	79.7	34.06	45.93
MMLR_024_1215	400102	395940	110.5	48.7	100%	0.21	16.2	11.9	38.3	-21%	61.9	94.4	1.5	26.4	36.8	1.4	124.1	44.15	56.02
MMLR_025_1215	400364	396006	139.2	59.6	92%	0.23	17.1	12.5	33.3	-44%	44.9	122.2	2.7	20.9	47.2	2.3	90.0	36.49	48.95
MMLR_036_1215	400622	395977	33.5	20.6	83%	0.23	16.2	11.9	14.0	-32%	4.0	17.3	4.3	2.1	8.7	4.2	8.0	4.07	15.94
MMLR_044_1215	400490	396118	103.7	46.5	100%	0.20	17.1	12.5	32.2	-31%	44.5	86.7	1.9	19.8	34.0	1.7	89.1	33.99	46.45

MMLR_051_1215	400493	395915	97.4	47.3	92%	0.25	16.2	11.9	31.6	-33%	41.1	81.2	2.0	19.8	35.5	1.8	82.3	35.14	47.01
MMLR_054_1215	400022	395909	102.1	46.1	100%	0.21	16.2	11.9	38.1	-17%	61.4	86.0	1.4	26.2	34.3	1.3	123.0	43.86	55.73
MMLR_057_1215	399876	395861	91.6	43.3	100%	0.21	18.0	13.1	47.0	9%	85.6	73.6	0.9	33.9	30.2	0.9	171.5	55.42	68.56
MMLR_067_1215	400701	395902	28.8	18.4	100%	0.24	16.2	11.9	14.0	-24%	4.0	12.6	3.2	2.1	6.5	3.1	8.0	4.12	15.99
TAM1	399719	395805	162.0	49.0	95%	0.21	18.0	13.1	34.2	-30%	47.6	144.0	3.0	21.0	35.9	1.7	95.3	36.06	49.19
MMLR_012_1215	398901	395501	96.2	47.5	100%	0.26	17.9	13.0	27.7	-42%	29.6	78.3	2.6	14.7	34.4	2.3	59.4	26.75	39.77
MMLR_013_1215	399291	395634	153.5	58.9	100%	0.19	18.0	13.1	46.4	-21%	87.5	135.5	1.5	33.3	45.7	1.4	175.4	53.51	66.64
MMLR_014_1215	399315	395639	297.2	89.5	92%	0.19	18.0	13.1	51.8	-42%	106.8	279.1	2.6	38.7	76.4	2.0	214.0	61.79	74.92
MMLR_015_1215	399305	395625	201.8	69.9	100%	0.19	18.0	13.1	35.3	-49%	52.2	183.7	3.5	22.2	56.8	2.6	104.7	37.32	50.45
MMLR_016_1215	399300	395652	89.8	42.6	92%	0.20	18.0	13.1	26.4	-38%	28.3	71.8	2.5	13.3	29.4	2.2	56.8	23.82	36.95
MMLR_019_1215	399691	395821	84.9	41.0	100%	0.20	18.0	13.1	45.6	11%	80.9	66.8	0.8	32.4	27.9	0.9	162.0	53.19	66.32
MMLR_050_1215	400744	395786	72.1	37.9	100%	0.25	16.2	11.9	30.9	-19%	39.2	55.9	1.4	19.0	26.0	1.4	78.5	33.97	45.84
MMLR_064_1215	399413	395738	231.2	75.7	100%	0.19	18.0	13.1	44.1	-42%	79.8	213.1	2.7	31.0	62.6	2.0	159.8	50.08	63.21
MMLR_069A_1215	399718	395804	126.3	53.7	83%	0.20	18.0	13.1	36.8	-31%	54.7	108.2	2.0	23.7	40.5	1.7	109.6	40.04	53.17

Table 14: Verification Results: Zone 5

Ref.	X	Y	Measured NOx Conc	Measured NO ₂ Conc	DC %	Md f- NO ₂	Background NOx	Background NO ₂	Mod Total NO ₂	Mon/Mod Total NO ₂	Mod Road NOx	Mon Road NOx	Mon/Mod Road NOx	Mod Road NO ₂	Mon Road NO ₂	Mon/Mod Road NO ₂	Adjusted Modelled NOx (Roads)	Adjusted Modelled NO ₂ (Roads)	Adjusted Modelled NO ₂ (Total)
SalfordSA39	383041	398555	88.4	46.8	100%	0.22	50.5	30.9	47.1	1%	38.7	37.9	1.0	16.2	15.9	1.0	57.9	21.43	52.32
SalfordSA27	383080	398743	70.2	39.8	92%	0.24	50.5	30.9	38.3	-4%	16.1	19.7	1.2	7.4	8.9	1.2	24.0	10.08	40.96
MAN1	384238	397278	232.0	66.0	78%	0.15	47.2	29.4	53.1	-20%	70.9	184.8	2.6	23.7	36.6	1.5	105.9	29.59	58.96
MAN9A/B	384602	398304	103.3	51.9	100%	0.20	50.8	31.2	35.7	-31%	10.0	52.5	5.3	4.5	20.7	4.6	14.9	6.19	37.35
MAN24	383958	398058	86.4	45.3	100%	0.18	50.5	30.9	49.2	9%	47.8	35.9	0.8	18.3	14.4	0.8	71.5	23.70	54.58
MAN29A	384120	397501	184.2	66.2	100%	0.13	47.2	29.4	60.6	-9%	111.5	137.0	1.2	31.2	36.8	1.2	166.5	37.88	67.24
MAN72	384760	397383	70.6	40.0	100%	0.24	47.2	29.4	34.5	-14%	11.0	23.4	2.1	5.2	10.6	2.1	16.4	7.11	36.48
MAN82	384239	397278	154.7	61.9	100%	0.15	47.2	29.4	53.7	-13%	73.8	107.5	1.5	24.4	32.6	1.3	110.3	30.38	59.75

Table 15: Excluded Sites

Reference	Reason to exclude
MAN8	No data
Oldham OL31	
SalfordSA59	
SalfordSA60	
OldhamOL14	
M60J18_009_1215	Only 6 months of data
M60J18_010_1215	
M60J18_011_1215	
M60J18_017_1215	
M60J18_020c_1215	
M60J18_012_1215	
M60J18_021_1215	
M60J18_013_1215	
M60J18_014_1215	
M62J20J25_015_0116	
M62J20J25_016_0116	
M62J20J25_017_0116	
M62J20J25_018_0116	
M62J20J25_019_0116	
M62J20J25_020_0116	
M62J20J25_021_0116	
M62J20J25_022_0116	
M62J20J25_023_0116	
M62J20J25_024_0116	
M62J20J25_033_0116	
M60J18_001_1215	
M60J18_002_1215	

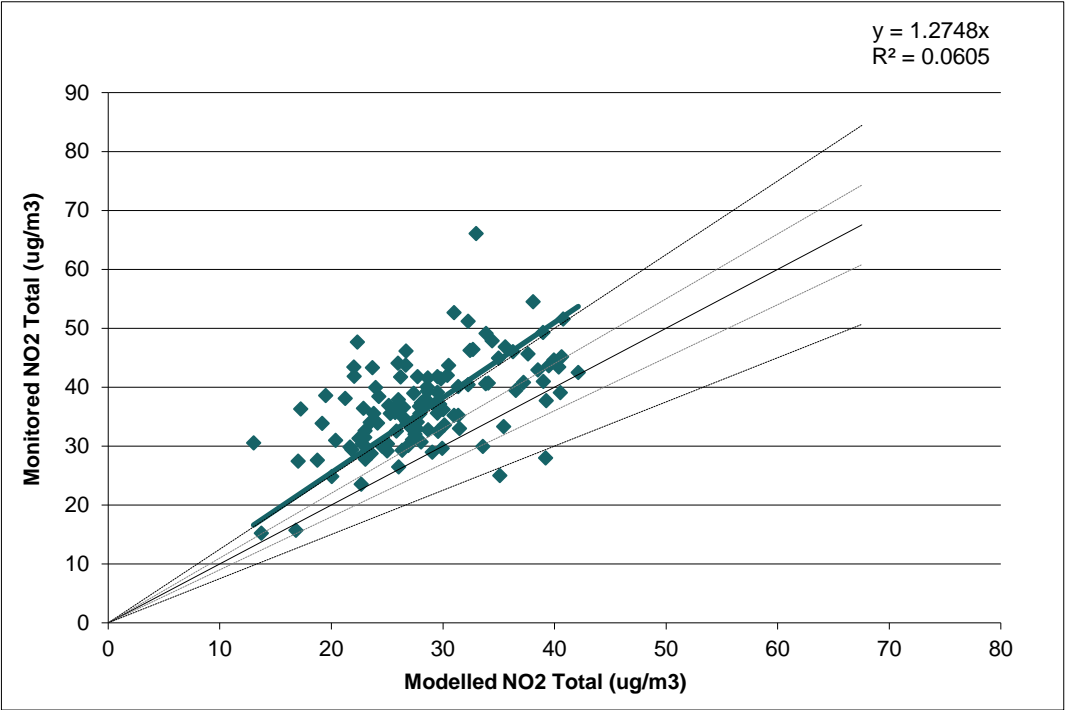
Reference	Reason to exclude
M60J18_003_1215	
M60J18_004_1215	
M60J18_005_1215	
M60J18_007_1215	
M60J18_008_1215	
M60J18_016_1215	
M60J18_018_1215	
M60J18_006_1215	
M60J18_015_1215	
M60J18_019_1215	
M62J20J25_035a_0116	
MAN59	Co-located with a CM
MAN59	
MAN59	
MAN82	
MAN83	
MAN84	
MAN90	
MAN91	
MAN92	
OldhamOL20	
OldhamOL21	
Oldham OL22	
SalfordSA20	
SalfordSA21	
SalfordSA22	
SalfordSA23	
SalfordSA24	

Reference	Reason to exclude
SalfordSA29	
StockportSK22	
StockportSK22	
StockportSK22	
TamesideT 9	
TamesideT 12	
TamesideT 45	
TamesideT 46	
TamesideT 47	
Trafford19	
Trafford 19a	
Trafford20	
Trafford 20a	
Trafford 25	
Trafford 25A	
Wigan 47	
Wigan 48	
Wigan 49	
MAN77	BG site - in narrow canyon with local combustion sources nearby
TamesideT 1	Location could not be identified
Bolton14	
Trafford 15	
Trafford18	
Trafford23	
MMLR_002_1215	BG sites that include a road contribution and not used in the Defra map comparison process
MMLR_063_1215	
Wigan 116	

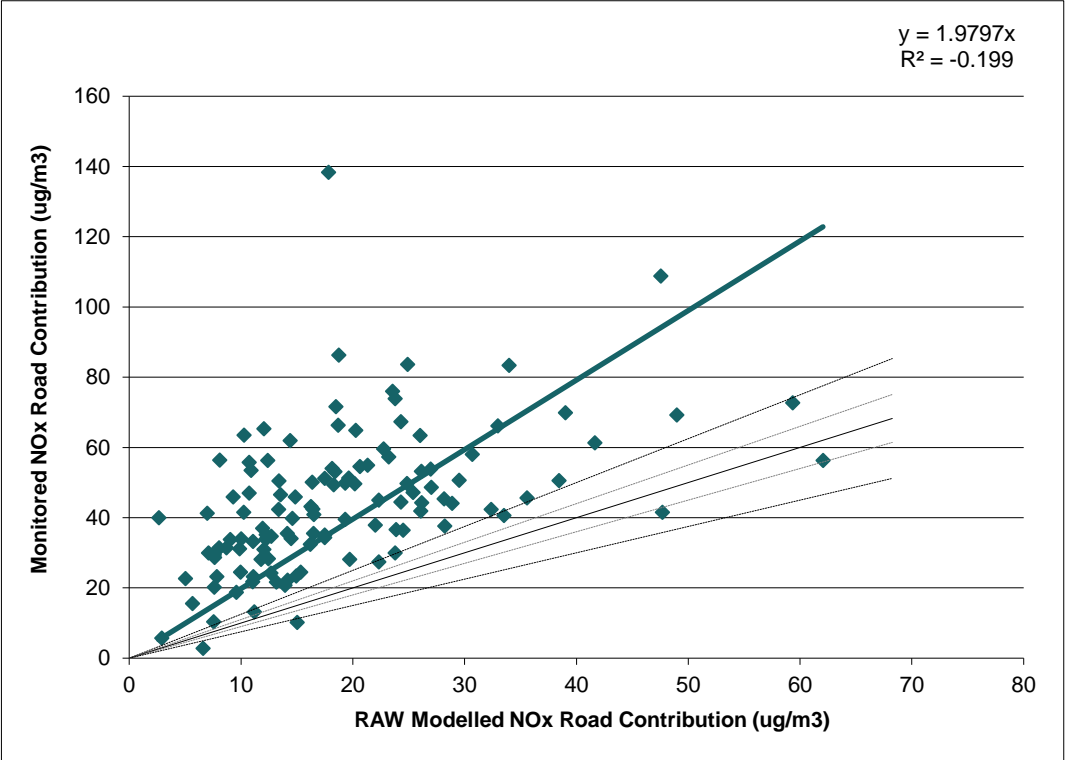
Reference	Reason to exclude
Bolton63	
SalfordSA02	
SalfordSA01	
TamesideT 3	
TamesideT 23	
Bolton16	
Bolton65	
StockportSK29	
StockportSK 1	
StockportSK18	
MAN79	
MAN80	
MAN81	
StockportSK 3	
TRAF	
Trafford5	
Trafford9	
Trafford19	
Trafford13	
Trafford21	
Rochdale4A	
Rochdale5A	
OldhamOL10	
TamesideT 22	
TamesideT 29	
ECCL	
SalfordSA23	
SalfordSA54	

Reference	Reason to exclude
StockportSK17	
StockportSK21	
StockportSK27	
StockportSK 6	
MAN77	
SalfordSA13	
SalfordSA26	
SalfordSA37	
OldhamOL17	
Oldham OL23	
MAN14	
MAN26A/B	
MAN78	
MAN3	
MAN71	Behind ADMS canyon wall in city centre
MAN88	

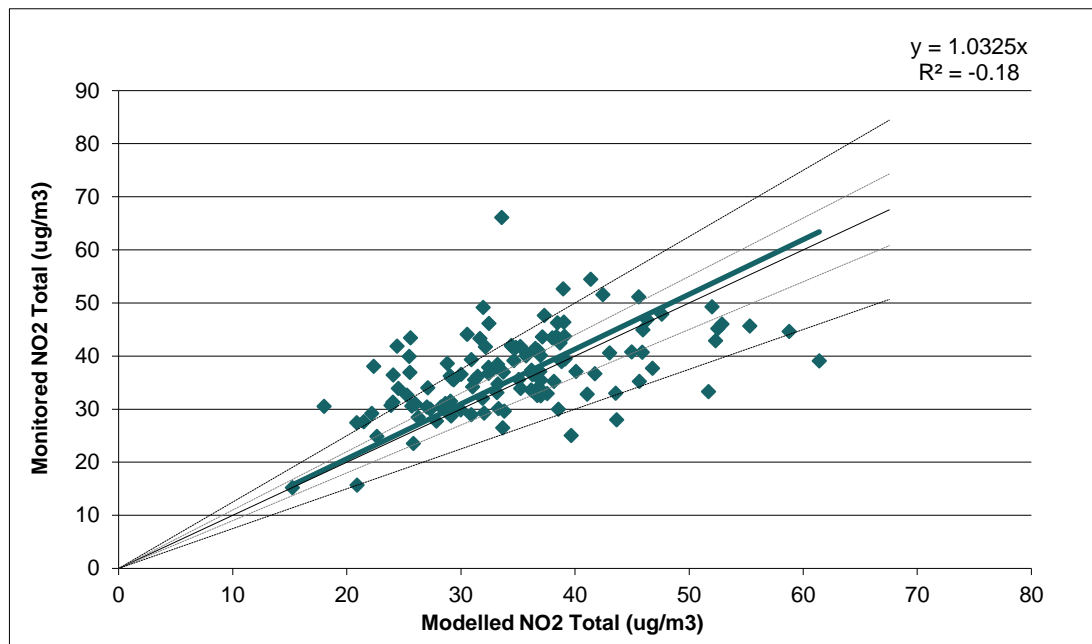
Graph 1: Modelled vs Monitored Total NO₂ for Zone 1 (Unadjusted)



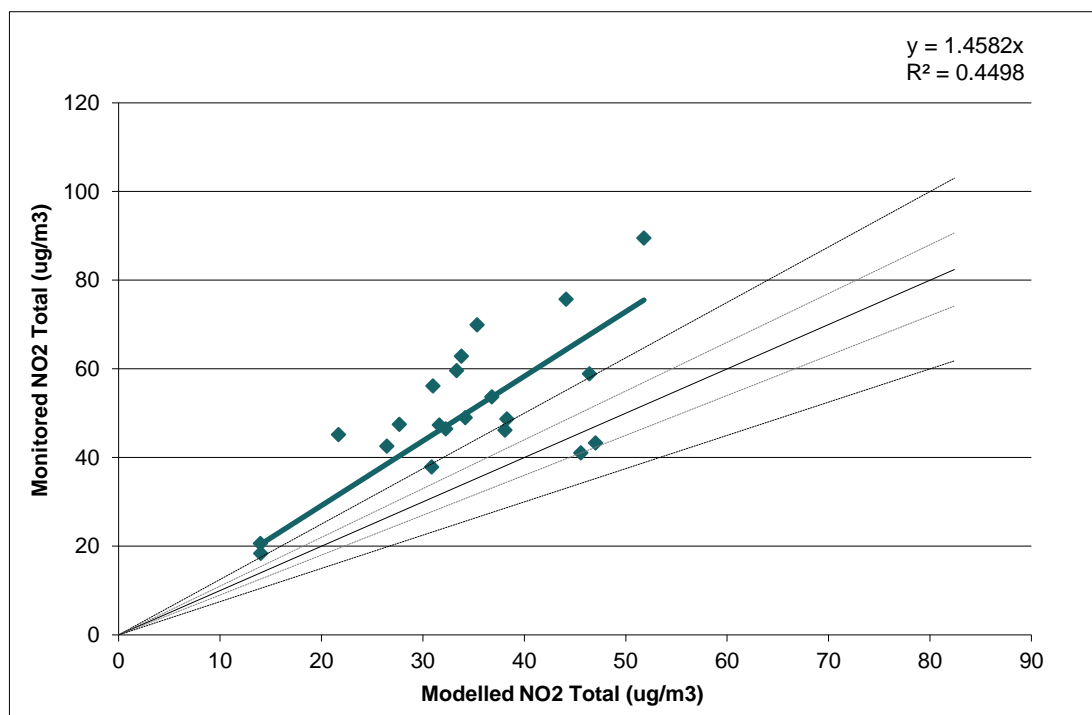
Graph 2: Modelled vs Monitored Road NO_x for Zone 1 (Unadjusted)



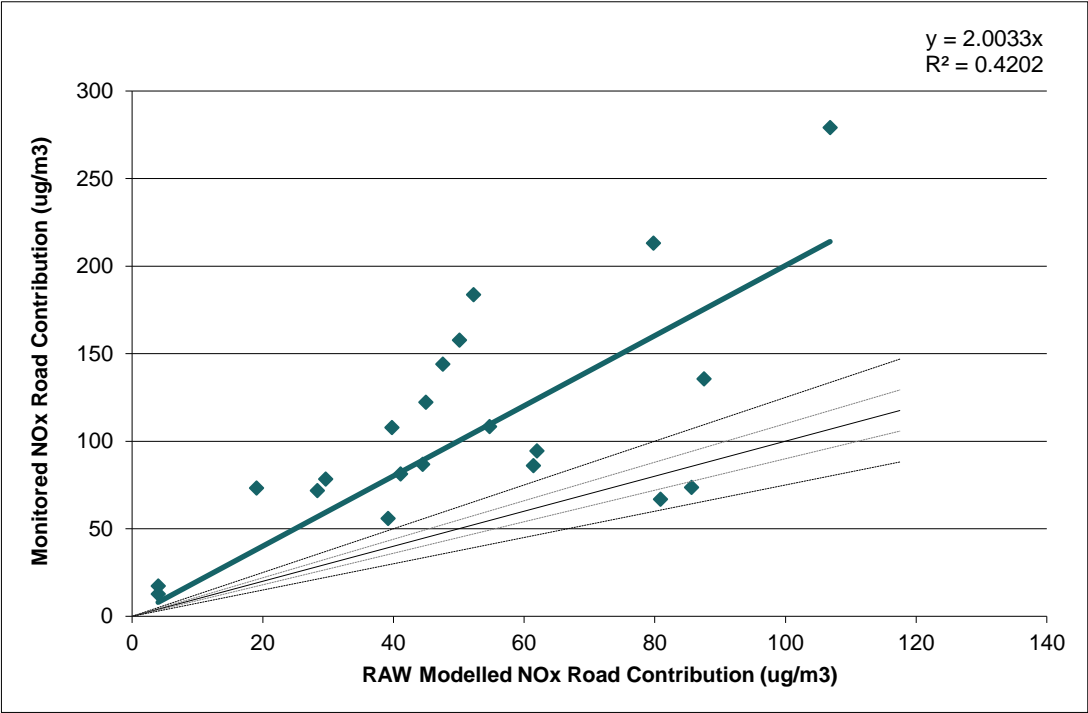
Graph 3: Modelled vs Monitored Total NO₂ for Zone 1 (Adjusted)



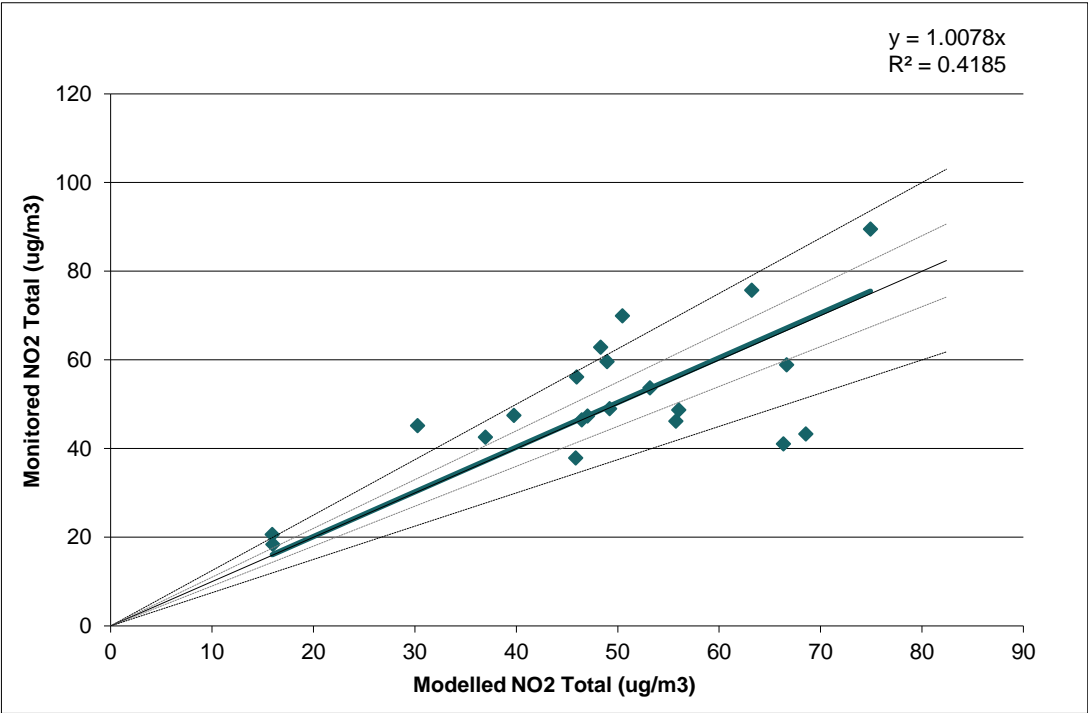
Graph 4: Modelled vs Monitored Total NO₂ for Zone 4 (Unadjusted)



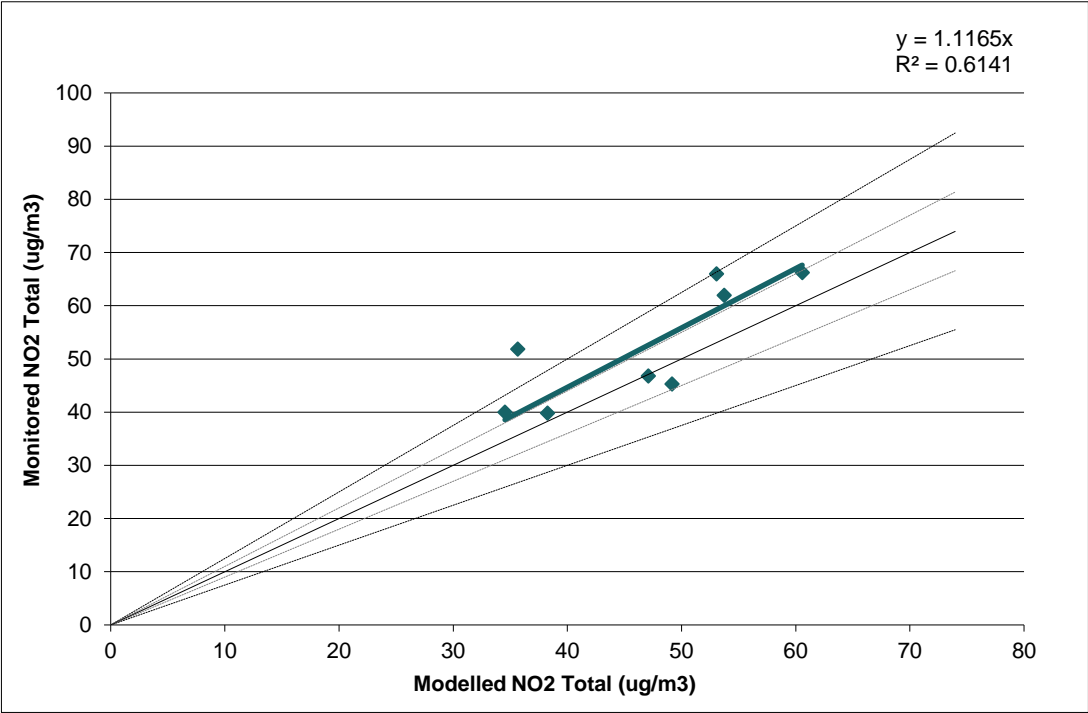
Graph 5: Modelled vs Monitored Road NOx for Zone 4 (Unadjusted)



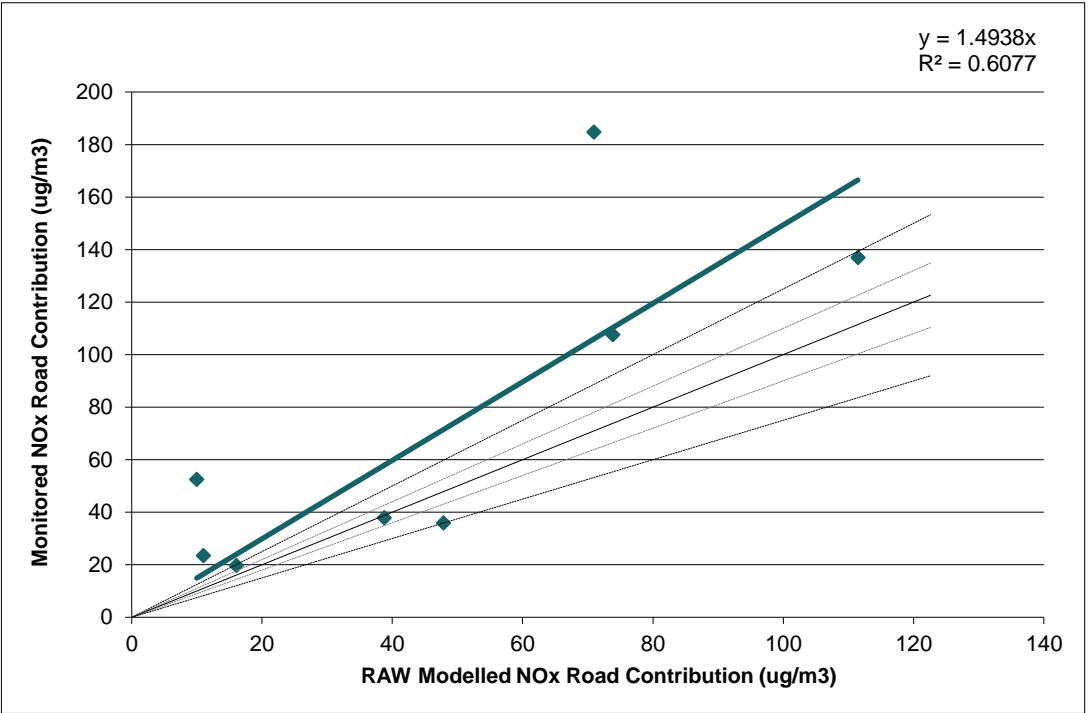
Graph 6: Modelled vs Monitored Total NO₂ for Zone 4 (Adjusted)



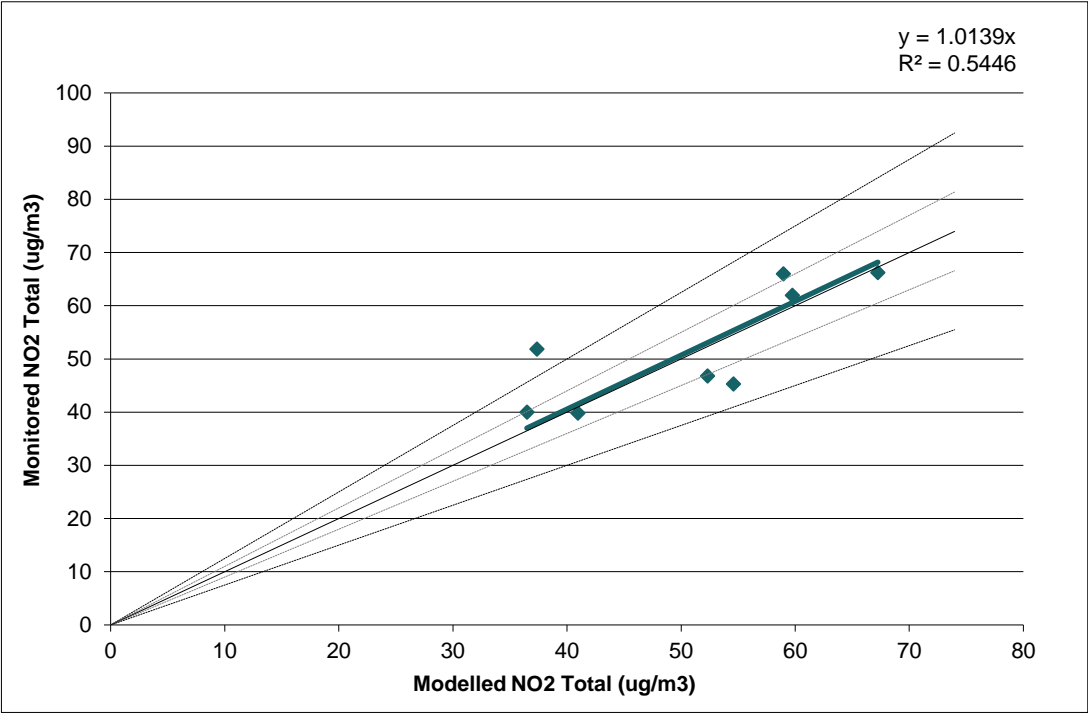
Graph 7: Modelled vs Monitored Total NO₂ for Zone 5 (Unadjusted)



Graph 8: Modelled vs Monitored Road NO_x for Zone 5 (Unadjusted)



Graph 9: Modelled vs Monitored Total NO₂ for Zone 5 (Adjusted)



Appendix B – Model Results

Table B-1: Predicted annual mean NO₂ concentrations and source apportionment at exceedance links on the Greater Manchester road network - Do Minimum – 2021

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
2119_2564_DW	2119_2564	371207	409524	17905	A673	Bolton	PCM	42.5	28.2	19.5	52.4	23.0	27,036	29%	6%	9%	20%	37%	na
2799_3775_DW	2799_3775	371869	409735	8030	A666	Bolton	PCM	43.2	28.2	19.5	51.5	23.7	20,952	0%	6%	13%	33%	47%	na
2799_3118_DW	2799_3118	371751	409800	58048	A673	Bolton	PCM	45.0	28.2	19.5	58.9	25.6	27,034	0%	5%	33%	26%	36%	na
2650_2653_DW	2653_2650	372915	407622	7431	A666	Bolton	PCM	44.0	26.5	18.4	53.7	25.6	65,608	0%	6%	9%	44%	42%	na
2649_2650_DW	2650_2649	372622	408297	7431	A666	Bolton	PCM	41.0	25.0	17.5	48.4	23.5	66,792	0%	6%	8%	44%	43%	na
1986_2053_DW	1986_2053	372038	408749	74518	A575	Bolton	PCM	42.5	25.0	17.5	59.6	25.0	21,641	40%	4%	12%	17%	27%	na
2053_12949_DW	2053_12949	371997	408820	74518	A575	Bolton	PCM	42.0	28.4	19.5	54.2	22.5	15,363	57%	3%	4%	14%	23%	na
3064_15148_DW	3064_15148	371642	408705	7921	A579	Bolton	PCM	42.8	28.4	19.5	55.4	23.3	26,130	37%	5%	11%	16%	31%	na
2648_6404_DW	2648_6404	372355	408934	47988	A579	Bolton	PCM	44.8	25.0	17.5	59.7	27.3	34,591	8%	5%	16%	33%	38%	na
2407_6761_DW	2407_6761	374740	405143	73087	A667	Bolton	PCM	41.8	18.9	13.7	64.0	28.0	38,236	13%	5%	25%	19%	37%	na
NonPCM_307	6404_2648	372340	408924	N/A	A579 BRADFORD STREET	Bolton	LA	44.5	25.0	17.5	58.8	27.0	34,591	8%	5%	16%	33%	38%	na
Jct490	2113_2119	371155	409546	N/A		Bolton	LA	48.3	28.2	19.5	68.6	28.8	9,766	28%	5%	8%	27%	32%	na
Jct491	2490_14486	371909	409019	N/A		Bolton	LA	40.6	28.2	19.5	50.6	21.1	15,344	58%	3%	4%	13%	23%	na
4912_2244	4912_2244	381959	410596	73198	A58	Bury	PCM	41.4	22.9	16.3	56.8	25.1	23,371	10%	4%	32%	28%	26%	na
2244_2756_DW	2244_2756	381848	410697	N/A	B6221 WASH LANE	Bury	LA	42.1	22.9	16.3	59.7	25.8	19,486	0%	5%	44%	21%	30%	na
2244_4913_DW	2244_4913	381968	410627	73198	A58	Bury	PCM	48.6	22.9	16.3	76.4	32.3	23,925	9%	6%	24%	23%	38%	na
2552_3975_DW	2552_3975	380966	411188	N/A	B6222 MOORGATE	Bury	LA	41.6	21.8	15.6	61.4	26.0	24,673	7%	5%	40%	17%	31%	na
2243_4639_DW	2243_4639	381310	410749	16556	A58	Bury	PCM	42.6	22.9	16.3	59.5	26.3	27,809	20%	4%	15%	30%	30%	na
3790_3652	3790_2237	379874	410937	38354	A58	Bury	PCM	50.6	23.0	16.3	83.8	34.3	78,616	14%	6%	19%	24%	37%	na
2237_3790_DW	3790_2237	379830	410975	38354	A58	Bury	PCM	52.8	23.0	16.3	88.8	36.5	78,616	14%	6%	19%	24%	37%	na
3652_6021	3790_2237	379755	410929	38354	A58	Bury	PCM	47.8	23.0	16.3	75.1	31.5	78,616	14%	6%	19%	24%	37%	na
3089_5572_DW	3089_5572	379629	411052	N/A	B6214 CROSTONS ROAD	Bury	LA	45.7	24.9	17.5	64.6	28.2	45,833	18%	6%	15%	23%	38%	na
3089_5572	3089_5572	379597	411059	N/A	B6214 CROSTONS ROAD	Bury	LA	41.2	24.9	17.5	52.6	23.7	45,833	18%	6%	15%	23%	38%	na
4939_3424	4939_3424	380899	404868	17924	A56	Bury	PCM	45.4	18.1	13.2	75.3	32.3	22,741	7%	5%	29%	24%	35%	na
3424_4940_DW	3424_4940	380920	404881	17924	A56	Bury	PCM	51.2	18.1	13.2	93.8	38.1	19,839	8%	5%	37%	18%	32%	na
1742_9011_DW	1742_9011	381149	404182	46572	A56	Bury	PCM	45.1	21.8	15.5	71.6	29.6	36,839	17%	5%	28%	19%	31%	na
2483_2951_DW	2483_2951	380856	405206	17924	A56	Bury	PCM	44.6	19.2	13.9	70.6	30.7	45,447	9%	5%	24%	22%	39%	na
NonPCM_69	3424_4939	380931	404841	N/A	A56 BURY NEW ROAD	Bury	LA	50.9	18.1	13.2	92.0	37.7	42,580	8%	5%	33%	21%	33%	na
Jct495	3424_7436	380909	404951	N/A		Bury	LA	45.4	18.1	13.2	76.1	32.3	40,679	6%	6%	23%	26%	40%	na
1268_1269	1268_1269	383558	398278	27974	A34	Manchester	PCM	56.9	38.5	25.0	123.8	31.9	9,626	79%	2%	3%	6%	11%	na
1356_4539_DW	1356_4539	383054	398617	99519	A6042	Manchester	PCM	42.2	38.5	25.0	41.5	17.2	26,240	0%	7%	23%	26%	44%	na
1269_3272	1269_3272	383423	398312	27974	A34	Manchester	PCM	43.6	38.5	25.0	57.5	18.6	5,889	84%	1%	3%	4%	8%	na
1322_3273	1322_3273	383249	398058	27975	A34	Manchester	PCM	48.3	38.5	25.0	55.0	23.3	15,576	0%	8%	11%	25%	56%	na
1324_3276_DW	1324_3276	383489	397693	N/A	GREAT BRIDGEWATER STREET	Manchester	LA	48.8	32.0	21.5	70.3	27.2	9,297	12%	5%	25%	26%	32%	na
3272_8542_DW	3272_8542	383361	398267	N/A	GARTSIDE STREET	Manchester	LA	41.7	38.5	25.0	38.7	16.7	5,196	0%	9%	11%	18%	61%	na
1324_8570	1324_8570	383385	397701	7922	A6143	Manchester	PCM	42.0	32.0	21.5	49.0	20.5	14,133	8%	5%	21%	29%	37%	na
1312_5801_DW	1312_5801	383778	399163	36577	A56	Manchester	PCM	43.3	27.4	18.9	58.1	24.4	22,919	18%	4%	26%	24%	28%	na
1309_2291	1309_2291	384105	399123	17935	A665	Manchester	PCM	43.0	28.6	19.6	58.4	23.5	30,989	15%	5%	20%	26%	35%	na
2353_45005_DW	2353_45005	384492	398898	75248	A664	Manchester	PCM	40.5	38.8	25.3	38.4	15.3	6,910	77%	1%	9%	5%	8%	na
2353_45005	2353_45005	384467	398922	75248	A664	Manchester	PCM	42.4	38.8	25.3	44.8	17.2	6,910	77%	1%	9%	5%	8%	na
1472_1511_DW	1472_1511	385939	397630	27403	A635	Manchester	PCM	41.3	32.5	21.7	44.6	19.6	26,880	6%	4%	33%	28%	29%	na
1341_2939_DW	1341_2939	385618	397656	75239	A635	Manchester	PCM	47.0	32.5	21.7	62.1	25.2	24,559	7%	3%	43%	20%	27%	na
1341_2939	1341_2939	385616	397633	75239	A635	Manchester	PCM	40.7	32.5	21.7	44.0	18.9	24,559	7%	3%	43%	20%	27%	na
2608_4852_DW	2608_4852	385272	397130	26157	A6	Manchester	PCM	44.7	32.5	21.7	51.3	23.0	35,956	18%	6%	7%	31%	39%	na
2607_2608_DW	2607_2608	385142	397223	26157	A6	Manchester	PCM	41.4	32.5	21.7	42.8	19.6	35,850	17%	6%	6%	32%	40%	na
2607_3056_DW	2607_3056	384957	397311	26157	A6	Manchester	PCM	48.5	34.9	23.1	59.1	25.4	35,850	21%	6%	8%	26%	39%	na

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
2286_1286_DW	2286_1286	384598	398032	N/A	AUBURN STREET	Manchester	LA	42.3	38.8	25.3	43.8	17.1	6,756	13%	5%	29%	17%	36%	na
1242_1243	1242_1243	384483	398343	70154	A62	Manchester	PCM	52.0	38.8	25.3	114.4	26.7	1,446	100%	0%	0%	0%	0%	na
2293_6119_DW	2293_6119	384344	398215	N/A		Manchester	LA	44.3	38.8	25.3	64.1	19.0	2,354	100%	0%	0%	0%	0%	na
5429_8559_DW	5429_8559	384266	398150	N/A	NEW YORK STREET	Manchester	LA	41.1	38.8	25.3	40.7	15.9	6,189	39%	5%	4%	18%	35%	na
1338_2904_DW	1338_2904	384418	396982	N/A	B5117 OXFORD ROAD	Manchester	LA	41.7	33.1	22.1	56.8	19.6	2,562	100%	0%	0%	0%	0%	na
1338_4532_DW	1338_4532	384338	397135	75242	A34	Manchester	PCM	42.1	34.9	23.1	52.8	19.0	3,827	98%	0%	0%	0%	1%	na
2006_3292	2006_3292	384110	397858	56529	A5103	Manchester	PCM	44.9	34.9	23.1	71.3	21.8	5,729	89%	1%	1%	5%	4%	na
1336_16404	1336_16404	384137	397465	17929	A34	Manchester	PCM	46.2	34.9	23.1	80.2	23.1	4,689	95%	0%	1%	1%	3%	na
1336_16404_DW	1336_16404	384153	397473	17929	A34	Manchester	PCM	45.7	34.9	23.1	77.6	22.6	4,689	95%	0%	1%	1%	3%	na
1268_46301	1268_46301	383702	398229	7947	A34	Manchester	PCM	53.9	38.5	25.0	108.4	28.9	8,508	76%	1%	8%	7%	8%	na
8547_47130_DW	8547_47130	383976	398274	N/A	KING STREET	Manchester	LA	45.1	38.5	25.0	50.5	20.1	20,392	23%	6%	9%	20%	42%	na
8547_47130	8547_47130	383973	398256	N/A	KING STREET	Manchester	LA	48.9	38.5	25.0	61.6	23.9	20,392	23%	6%	9%	20%	42%	na
1259_1243	1259_1243	384409	398297	N/A	PICCADILLY	Manchester	LA	40.9	38.8	25.3	48.6	15.6	1,308	100%	0%	0%	0%	0%	na
2289_12835	2289_12835	384282	398507	70153	A6	Manchester	PCM	46.8	38.8	25.3	69.4	21.6	9,250	81%	2%	1%	4%	12%	na
3261_1302	3261_1302	384528	398779	75246	A665	Manchester	PCM	42.7	38.8	25.3	42.8	17.4	14,185	0%	6%	30%	25%	39%	na
8546_14050	8546_14050	384384	398801	57427	A664	Manchester	PCM	49.2	38.8	25.3	79.3	24.0	7,905	77%	2%	4%	4%	14%	na
5806_1304	5806_1304	384250	398668	57427	A664	Manchester	PCM	41.8	38.8	25.3	50.9	16.5	2,705	85%	1%	6%	3%	4%	na
2290_3027	2290_3027	384038	398775	48035	A6042	Manchester	PCM	43.5	38.8	25.3	58.3	18.3	2,927	94%	0%	2%	2%	2%	na
2290_3027_DW	2290_3027	384055	398767	48035	A6042	Manchester	PCM	45.6	38.8	25.3	68.1	20.4	2,927	94%	0%	2%	2%	2%	na
1305_2290_DW	1305_2290	384091	398691	N/A	WITHY GROVE	Manchester	LA	48.0	38.8	25.3	80.7	22.7	2,927	94%	0%	1%	2%	2%	na
1307_1317	1307_1317	383757	398717	36551	A6	Manchester	PCM	48.1	38.5	25.0	78.2	23.1	4,360	88%	1%	2%	5%	4%	na
1307_1317_DW	1307_1317	383771	398733	36551	A6	Manchester	PCM	44.6	38.5	25.0	61.8	19.6	4,360	88%	1%	2%	5%	4%	na
3056_3842	3056_3842	384855	397401	26157	A6	Manchester	PCM	42.9	34.9	23.1	45.8	19.8	37,543	29%	5%	13%	23%	30%	na
3056_3842_DW	3056_3842	384880	397418	26157	A6	Manchester	PCM	52.7	34.9	23.1	74.7	29.6	37,543	29%	5%	13%	23%	30%	na
3033_2293	3033_2293	384317	398195	N/A	PARKER STREET	Manchester	LA	49.6	38.8	25.3	94.7	24.4	2,494	100%	0%	0%	0%	0%	na
1261_6042_DW	1261_6042	384451	398215	77003	A6	Manchester	PCM	41.5	38.8	25.3	52.4	16.2	1,257	100%	0%	0%	0%	0%	na
1261_6042	1261_6042	384466	398201	77003	A6	Manchester	PCM	41.6	38.8	25.3	52.8	16.3	1,257	100%	0%	0%	0%	0%	na
3016_6022_DW	3016_6022	384639	397855	46165	A6	Manchester	PCM	43.5	34.9	23.1	59.2	20.4	7,253	64%	3%	5%	8%	20%	na
1302_8546	1302_8546	384428	398838	75248	A664	Manchester	PCM	44.4	38.8	25.3	59.0	19.2	7,838	69%	1%	15%	6%	9%	na
1302_8546_DW	1302_8546	384414	398854	75248	A664	Manchester	PCM	41.3	38.8	25.3	46.3	16.0	7,838	69%	1%	15%	6%	9%	na
2893_5074	2892_2890	384158	397155	75243	A57M	Manchester	PCM	41.2	34.9	23.1	41.8	18.1	59,203	0%	5%	12%	39%	43%	na
5409_5430_DW	5409_5430	384209	398072	N/A	CHARLOTTE STREET	Manchester	LA	41.9	38.8	25.3	39.4	16.6	12,674	1%	8%	7%	25%	58%	na
1263_5429	1263_5429	384207	398182	N/A	BACK GEORGE STREET	Manchester	LA	46.6	38.8	25.3	57.5	21.4	6,189	41%	4%	4%	17%	33%	na
2283_8544_DW	2283_8544	383791	398603	27992	A56	Manchester	PCM	50.5	38.5	25.0	88.2	25.5	4,359	82%	1%	4%	7%	5%	na
1267_1985	1267_1985	383672	398364	16536	A56	Manchester	PCM	47.4	38.5	25.0	60.7	22.4	8,523	42%	4%	9%	17%	28%	na
1267_1985_DW	1267_1985	383687	398358	16536	A56	Manchester	PCM	46.3	38.5	25.0	57.3	21.3	8,523	42%	4%	9%	17%	28%	na
1985_2283	1985_2283	383717	398477	16536	A56	Manchester	PCM	40.7	38.5	25.0	41.9	15.7	7,782	58%	3%	6%	14%	19%	na
1985_2283_DW	1985_2283	383734	398471	16536	A56	Manchester	PCM	42.0	38.5	25.0	46.1	17.0	7,782	58%	3%	6%	14%	19%	na
1685_1686_DW	1685_1686	387382	394221	73778	A6	Manchester	PCM	41.4	25.5	17.8	56.3	23.6	27,722	36%	4%	13%	17%	29%	na
1469_3669_DW	1469_3669	386578	395884	28695	A6	Manchester	PCM	41.9	26.4	18.3	55.0	23.6	27,696	35%	5%	7%	16%	36%	na
1684_4312_DW	1684_4312	387763	393475	73778	A6	Manchester	PCM	41.1	27.3	18.8	49.6	22.2	34,104	22%	6%	9%	20%	42%	na
4373_5121_DW	4373_5121	382333	389181	48339	A560	Manchester	PCM	41.1	19.9	14.3	58.4	26.7	33,771	3%	6%	27%	24%	40%	na
1846_2423	1846_2423	381858	388161	26047	M56	Manchester	PCM	42.5	20.5	14.8	58.6	27.7	13,717	16%	6%	6%	27%	44%	na
1846_2423_DW	1846_2423	381865	388177	26047	M56	Manchester	PCM	45.6	20.5	14.8	66.4	30.8	13,717	16%	6%	6%	27%	44%	na
2855_2218_DW	2856_2855	382356	390128	7701	A5103	Manchester	PCM	44.7	19.5	14.1	67.8	30.6	104,100	0%	7%	15%	29%	50%	na
2844_2848	2855_2847	382344	390388	7701	A5103	Manchester	PCM	45.3	19.5	14.1	68.5	31.2	126,892	2%	7%	16%	28%	48%	na
2847_2855_DW	2855_2847	382389	390376	7701	A5103	Manchester	PCM	45.9	19.5	14.1	69.6	31.8	126,892	2%	7%	16%	28%	48%	na
14951_17000_DW	14951_17000	381833	385986	N/A	THORLEY LANE	Manchester	LA	40.9	34.2	22.4	43.1	18.5	17,161	22%	5%	22%	19%	32%	na
7634_8756_DW	7634_8756	382361	385549	N/A	RINGWAY ROAD WEST	Manchester	LA	44.2	39.0	24.9	43.7	19.3	32,613	0%	5%	31%	22%	43%	na

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
12800_14480_DW	12800_14480	382038	385547	N/A	OUTWOOD LANE	Manchester	LA	45.8	39.0	24.9	47.3	20.9	33,590	0%	7%	27%	17%	49%	na
NonPCM_184	1336_16404	384110	397517	N/A	A34 OXFORD STREET	Manchester	LA	47.4	34.9	23.1	87.3	24.3	4,689	95%	0%	1%	1%	3%	na
NonPCM_207	4530_1268	383624	398258	N/A	A34 BRIDGE STREET	Manchester	LA	55.3	38.5	25.0	113.9	30.3	13,969	22%	6%	10%	24%	38%	na
NonPCM_216	5408_5432	384079	397954	N/A	GEORGE STREET	Manchester	LA	40.9	34.9	23.1	47.5	17.8	10,104	58%	4%	2%	11%	25%	na
Jct254	14490_5406	384292	398620	N/A		Manchester	LA	43.4	38.8	25.3	53.0	18.2	5,751	66%	3%	7%	7%	18%	na
Jct262	2006_3292	384156	397878	N/A		Manchester	LA	47.8	34.9	23.1	86.6	24.8	5,729	89%	1%	1%	5%	4%	na
Jct280	1402_5407	383617	397503	N/A		Manchester	LA	40.5	32.0	21.5	44.1	18.9	26,526	13%	7%	8%	24%	47%	na
Jct282	1275_1279	384116	398263	N/A		Manchester	LA	47.1	38.8	25.3	57.5	21.8	8,099	34%	5%	7%	19%	35%	na
Jct285	8546_14050	384363	398784	N/A		Manchester	LA	48.0	38.8	25.3	73.9	22.8	7,905	77%	2%	4%	4%	14%	na
Jct526	1275_1279	384116	398262	N/A		Manchester	LA	47.1	38.8	25.3	57.5	21.8	8,099	34%	5%	7%	19%	35%	na
3911_4112	3911_4112	389383	403282	99617	A663	Oldham	PCM	41.8	22.8	16.1	55.8	25.7	40,918	7%	6%	16%	25%	47%	na
1996_14524_DW	1996_14524	393502	405226	36632	A62	Oldham	PCM	45.1	27.4	18.9	59.9	26.2	32,589	19%	5%	15%	25%	36%	na
N14523_14524	14523_14524	393312	405043	36632	A62	Oldham	PCM	43.0	27.4	18.9	52.0	24.1	52,086	0%	7%	16%	31%	46%	na
1975_2466_DW	14523_7556	392991	404790	N/A	WATERLOO STREET	Oldham	LA	40.8	23.7	16.7	51.1	24.1	51,724	0%	7%	14%	32%	47%	na
7556_14523_DW	7556_14523	393092	404851	36632	A62	Oldham	PCM	43.6	26.1	18.2	54.9	25.5	24,556	1%	7%	19%	27%	47%	na
1295_1703	1295_1703	390482	402513	77008	A62	Oldham	PCM	43.2	23.7	16.6	59.4	26.6	36,619	8%	6%	22%	28%	37%	na
3914_5661_DW	3914_5661	390653	402743	6606	A62	Oldham	PCM	40.9	23.7	16.6	53.5	24.3	37,005	6%	5%	28%	30%	31%	na
3914_5661	3914_5661	390627	402753	6606	A62	Oldham	PCM	42.2	23.7	16.6	56.8	25.6	37,005	6%	5%	28%	30%	31%	na
1433_1615_DW	1433_1615	389260	401329	73781	A62	Oldham	PCM	40.7	21.6	15.4	62.1	25.3	17,354	29%	2%	31%	23%	15%	na
2202_2205_DW	2202_2205	389446	413627	27469	A680	Rochdale	PCM	41.5	28.9	19.8	47.1	21.7	23,678	7%	6%	20%	30%	37%	na
2210_14216_DW	2210_14216	388664	411856	17322	A664	Rochdale	PCM	49.2	19.0	13.8	88.9	35.4	34,283	0%	4%	44%	25%	27%	na
14220_14221	14220_14221	389004	412157	26586	A58	Rochdale	PCM	41.6	21.0	15.0	59.9	26.5	45,258	10%	5%	25%	23%	36%	na
2210_4463_DW	2210_4463	388729	411971	26586	A58	Rochdale	PCM	48.5	19.0	13.8	89.7	34.7	45,257	9%	4%	41%	20%	26%	na
2210_4463	2210_4463	388741	411950	26586	A58	Rochdale	PCM	41.7	19.0	13.8	67.6	28.0	45,257	9%	4%	41%	20%	26%	na
1345_1346_DW	1345_1346	380555	398426	56535	A5186	Salford	PCM	41.6	27.6	18.9	50.7	22.7	13,698	18%	4%	28%	20%	30%	na
1345_1346	1345_1346	380537	398426	56535	A5186	Salford	PCM	40.6	27.6	18.9	47.5	21.6	13,698	18%	4%	28%	20%	30%	na
1364_1366	1364_1366	381428	399804	17245	A576	Salford	PCM	42.3	26.2	18.1	56.3	24.2	30,801	24%	6%	17%	16%	37%	na
5249_7952	5249_7952	381205	399532	58028	A576	Salford	PCM	41.7	26.2	18.1	53.4	23.6	34,128	18%	6%	15%	19%	43%	na
5249_7952_DW	5249_7952	381224	399526	58028	A576	Salford	PCM	40.8	26.2	18.1	51.1	22.7	34,128	18%	6%	15%	19%	43%	na
2672_14311_DW	2299_14311	381434	399244	6161	A6	Salford	PCM	41.5	26.2	18.1	52.6	23.4	51,175	28%	5%	12%	16%	37%	na
14311_2299_DW	2299_14311	381488	399165	6161	A6	Salford	PCM	49.8	26.2	18.1	78.6	31.6	51,175	28%	5%	12%	16%	37%	na
3964_4732	3964_4732	382882	397222	99516	A56	Salford	PCM	40.5	26.5	18.4	49.0	22.2	35,279	5%	5%	28%	27%	34%	na
3964_4732_DW	3964_4732	382871	397244	99516	A56	Salford	PCM	46.2	26.5	18.4	64.2	27.8	35,279	5%	5%	28%	27%	34%	na
1867_4574_DW	1867_4574	382129	397840	36585	A57	Salford	PCM	48.4	26.5	18.4	69.8	30.0	48,951	2%	5%	28%	27%	38%	na
1232_1257	1232_1257	381738	398808	6161	A6	Salford	PCM	42.3	25.0	17.4	60.1	24.9	40,494	41%	4%	14%	14%	27%	na
1349_1867_DW	1349_1867	382371	397772	48023	A57	Salford	PCM	46.6	26.5	18.4	64.2	28.2	46,160	2%	5%	26%	27%	39%	na
3786_1233_DW	3968_1233	381517	398259	27751	A5063	Salford	PCM	40.9	25.0	17.4	51.7	23.5	33,600	4%	6%	22%	22%	45%	na
1349_2993_DW	1349_2993	382580	397716	73792	A57	Salford	PCM	50.1	26.5	18.4	73.5	31.8	52,841	2%	6%	24%	29%	39%	na
1349_2993	1349_2993	382574	397693	73792	A57	Salford	PCM	41.2	26.5	18.4	50.0	22.9	52,841	2%	6%	24%	29%	39%	na
5505_5507_DW	5505_5507	382099	398640	56160	A6	Salford	PCM	45.1	27.1	18.7	67.7	26.5	29,069	49%	4%	9%	13%	25%	na
3969_6612_DW	3969_6612	381512	398031	6562	A57	Salford	PCM	46.1	25.0	17.4	64.7	28.7	50,875	2%	5%	24%	29%	40%	na
4575_6612_DW	4575_6612	381692	397971	36585	A57	Salford	PCM	40.9	24.1	16.9	51.1	24.0	49,524	2%	6%	16%	35%	42%	na
3850_7895_DW	3850_7895	382754	398553	17926	A6	Salford	PCM	43.1	27.1	18.7	59.7	24.5	31,966	40%	4%	10%	17%	29%	na
4575_7897_DW	4575_7897	381821	397932	36585	A57	Salford	PCM	41.0	24.1	16.9	51.4	24.1	49,523	2%	6%	17%	34%	42%	na
3752_4897_DW	3752_4897	382876	398556	70151	A6	Salford	PCM	41.7	27.1	18.7	56.7	23.1	23,923	48%	4%	11%	14%	23%	na
3752_7895_DW	3752_7895	382815	398555	17926	A6	Salford	PCM	40.9	27.1	18.7	53.8	22.2	23,923	46%	4%	11%	15%	24%	na
12947_1223_DW	12947_1223	381649	398952	6161	A6	Salford	PCM	40.8	25.0	17.4	53.3	23.4	24,294	24%	6%	5%	20%	44%	na
12945_14431_DW	12945_14431	381917	398711	56160	A6	Salford	PCM	49.1	25.0	17.4	81.3	31.7	35,668	41%	5%	9%	15%	31%	na
1232_12945_DW	1232_12945	381825	398784	56160	A6	Salford	PCM	50.1	25.0	17.4	89.1	32.7	35,677	46%	3%	17%	13%	21%	na

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
3850_14502_DW	3850_14502	382685	398551	17926	A6	Salford	PCM	47.0	27.1	18.7	73.8	28.4	31,957	46%	4%	12%	14%	24%	na
5505_14310_DW	5505_14310	382293	398539	56160	A6	Salford	PCM	43.2	27.1	18.7	61.0	24.5	29,070	48%	4%	8%	13%	26%	na
1216_14503_DW	1216_14503	382565	398546	17926	A6	Salford	PCM	52.2	27.1	18.7	95.2	33.5	31,963	48%	3%	16%	13%	20%	na
1216_14503	1216_14503	382567	398523	17926	A6	Salford	PCM	45.6	27.1	18.7	70.1	26.9	31,963	48%	3%	16%	13%	20%	na
5179_5182_DW	5179_5182	374598	400597	74618	A572	Salford	PCM	44.5	15.8	11.6	71.7	32.8	33,371	3%	7%	15%	29%	46%	na
1579_17017_DW	1579_17017	377344	400951	37363	A580	Salford	PCM	42.6	19.2	13.9	65.4	28.7	37,837	9%	5%	25%	24%	36%	na
1589_14316_DW	1589_14316	378317	399184	7292	A576	Salford	PCM	40.6	24.8	17.3	59.2	23.3	18,443	40%	3%	29%	11%	17%	na
NonPCM_147	4951_4554	375357	397837	N/A	A57 LIVERPOOL ROAD	Salford	LA	43.2	16.7	12.3	69.3	30.9	17,489	20%	5%	7%	28%	39%	na
NonPCM_219	2993_1202	382678	397661	N/A	A57 REGENT ROAD	Salford	LA	46.1	26.5	18.4	65.1	27.8	52,841	2%	4%	39%	25%	30%	na
Jct205	4554_4951	375367	397806	N/A		Salford	LA	41.3	16.7	12.3	63.5	29.0	17,489	20%	5%	7%	28%	39%	na
Jct290	1216_7959	382540	398554	N/A		Salford	LA	45.1	27.1	18.7	68.2	26.4	5,096	0%	6%	25%	31%	38%	na
1859_14054_DW	1859_14054	389505	390884	N/A	B6167 LANCASHIRE HILL	Stockport	LA	40.9	25.8	18.0	48.8	22.9	17,617	13%	7%	8%	26%	46%	na
3620_5931_DW	3620_5931	390351	390720	37920	A626	Stockport	PCM	47.3	25.9	18.0	69.9	29.3	32,245	0%	4%	40%	26%	30%	na
2663_5015	2663_5015	390347	391028	N/A	B6104 CARRINGTON ROAD	Stockport	LA	41.0	20.5	14.7	62.4	26.4	16,735	19%	3%	42%	20%	17%	na
2663_5015_DW	2663_5015	390344	391047	N/A	B6104 CARRINGTON ROAD	Stockport	LA	47.6	20.5	14.7	83.4	32.9	16,735	19%	3%	42%	20%	17%	na
5021_6254_DW	5021_6254	390116	391212	37920	A626	Stockport	PCM	43.5	20.5	14.7	64.4	28.8	28,941	0%	4%	32%	36%	28%	na
1860_4172	1860_4172	389421	390671	58254	A560	Stockport	PCM	41.2	25.8	18.0	50.2	23.2	9,631	37%	5%	3%	20%	34%	na
1859_1860	1859_1860	389494	390731	58254	A560	Stockport	PCM	41.8	25.8	18.0	51.6	23.9	9,631	31%	5%	6%	23%	35%	na
1678_2967	1678_2967	388831	390418	27983	A5145	Stockport	PCM	41.4	22.3	15.8	55.1	25.6	19,226	20%	4%	15%	27%	34%	na
2669_14483_DW	2669_14483	389208	390259	N/A	CHESTERGATE	Stockport	LA	40.6	25.8	18.0	64.9	22.6	1,283	100%	0%	0%	0%	0%	na
3426_4162_DW	3426_4162	390357	390129	27384	A626	Stockport	PCM	40.7	25.9	18.0	49.5	22.7	31,225	8%	6%	18%	23%	44%	na
5160_6071_DW	5160_6071	392018	392010	27296	A560	Stockport	PCM	40.5	26.0	18.0	48.6	22.5	32,466	0%	6%	23%	24%	46%	na
1924_8878_DW	1924_8878	392443	391754	27296	A560	Stockport	PCM	42.1	21.6	15.4	64.7	26.8	33,207	10%	5%	37%	14%	34%	na
3973_14181_DW	3973_14181	388375	390354	58034	A5145	Stockport	PCM	46.0	22.3	15.8	69.1	30.2	25,707	12%	5%	22%	25%	36%	na
3973_14181	3973_14181	388376	390333	58034	A5145	Stockport	PCM	43.0	22.3	15.8	60.4	27.2	25,707	12%	5%	22%	25%	36%	na
2430_3710_DW	2430_3710	385097	388122	38735	A34	Stockport	PCM	41.6	20.5	14.7	57.0	26.9	64,578	0%	7%	15%	28%	50%	na
2887_2430_DW	2887_2430	385044	388518	26352	A34	Stockport	PCM	44.6	20.5	14.7	64.2	29.9	37,785	1%	7%	16%	26%	50%	na
2184_14428_DW	2184_14428	391822	387266	99018	A6	Stockport	PCM	43.5	20.9	15.0	67.4	28.5	33,953	13%	6%	29%	17%	35%	na
6055_14428_DW	6055_14428	391767	387344	99018	A6	Stockport	PCM	41.5	20.9	15.0	61.6	26.6	33,953	13%	6%	27%	18%	36%	na
NonPCM_273	6205_6055	391720	387414	N/A	A6 LONDON ROAD	Stockport	LA	42.1	20.9	15.0	64.9	27.1	33,953	15%	5%	32%	17%	31%	na
Jct355	1850_1864	389388	390175	N/A		Stockport	LA	42.6	25.8	18.0	62.1	24.6	20,875	22%	5%	16%	23%	34%	na
Jct539	3426_4162	390301	390159	N/A		Stockport	LA	41.3	25.9	18.0	51.3	23.4	31,225	8%	6%	18%	23%	44%	na
7637_2941_DW	7637_2941	393180	398661	99618	A635	Tameside	PCM	46.2	27.3	18.8	64.8	27.4	27,958	17%	5%	25%	23%	30%	na
2941_5978_DW	7638_5978	393398	398690	37451	A635	Tameside	PCM	42.4	27.3	18.8	50.5	23.6	52,662	0%	6%	17%	32%	45%	na
1695_14478_DW	1695_14478	392753	398494	99618	A635	Tameside	PCM	47.3	26.9	18.5	65.2	28.8	45,770	3%	5%	24%	31%	37%	na
1695_14478	1695_14478	392761	398476	99618	A635	Tameside	PCM	41.2	26.9	18.5	49.3	22.7	45,770	3%	5%	24%	31%	37%	na
3813_3812_DW	3813_3812	392978	398478	74561	A6017	Tameside	PCM	42.7	26.9	18.5	53.0	24.2	32,808	8%	6%	16%	29%	41%	na
7638_3813	7638_3813	393112	398511	74561	A6017	Tameside	PCM	42.2	27.3	18.8	52.3	23.4	30,512	10%	6%	22%	23%	39%	na
1695_5659	1695_5659	392588	398416	99618	A635	Tameside	PCM	40.6	26.9	18.5	47.4	22.1	47,142	3%	6%	20%	33%	39%	na
1695_5659_DW	1695_5659	392582	398435	99618	A635	Tameside	PCM	46.8	26.9	18.5	62.9	28.3	47,142	3%	6%	20%	33%	39%	na
5655_5656_DW	5655_5656	392042	398069	76074	A6140	Tameside	PCM	42.5	26.9	18.5	55.0	24.0	20,701	0%	4%	44%	25%	27%	na
3812_14478	3812_14478	392855	398516	74561	A6017	Tameside	PCM	41.4	26.9	18.5	50.7	22.9	40,856	5%	5%	27%	29%	33%	na
3812_14478_DW	3812_14478	392847	398534	99618	A635	Tameside	PCM	47.4	26.9	18.5	66.5	28.9	40,856	5%	5%	27%	29%	33%	na
3761_5653_DW	3761_5653	390802	395630	99512	A57	Tameside	PCM	40.6	20.0	14.4	58.4	26.2	19,628	8%	5%	29%	27%	32%	na
Jct449	3227_8517	391912	395574	N/A		Tameside	LA	41.0	21.7	15.4	54.8	25.6	18,554	2%	7%	10%	34%	47%	na
2305_5949_DW	2305_5949	380182	395145	36578	A56	Trafford	PCM	40.5	31.1	20.9	42.1	19.6	30,521	18%	7%	11%	21%	44%	na
1382_3622_DW	1382_3622	380628	395827	56499	A56	Trafford	PCM	40.6	31.1	20.9	42.6	19.7	34,809	15%	7%	9%	24%	45%	na
7603_7606_DW	7603_7606	376675	396960	N/A	B5214 TRAFFORD BOULEVARD	Trafford	LA	44.4	21.2	15.2	73.9	29.2	21,474	21%	5%	29%	14%	31%	na
7606_17100_DW	7606_17100	376759	397007	N/A	B5214 TRAFFORD BOULEVARD	Trafford	LA	45.0	21.2	15.2	77.0	29.8	28,971	30%	4%	27%	12%	26%	na

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
NonPCM_324	2833_2349	378901	392774	N/A	A56 CROSS STREET	Trafford	LA	43.3	20.6	14.8	62.8	28.5	45,598	8%	7%	15%	25%	45%	na
Jct225	3529_8101	377585	395102	N/A		Trafford	LA	40.8	20.7	14.8	54.5	26.0	8,225	0%	9%	7%	22%	62%	na
Jct231	3304_3529	377588	395133	N/A		Trafford	LA	41.6	20.7	14.8	56.6	26.7	6,277	0%	5%	37%	20%	38%	na
3492_3511_DW	3492_3511	358611	405310	8566	A577	Wigan	PCM	40.5	31.0	20.8	43.7	19.8	23,473	8%	5%	24%	25%	38%	na
3431_7687_DW	3431_7687	358110	405811	N/A	MARKET STREET	Wigan	LA	40.5	31.0	20.8	57.6	19.8	2,098	100%	0%	0%	0%	0%	na
3103_3435_DW	3103_3435	358085	405595	N/A	KING STREET WEST	Wigan	LA	46.8	31.0	20.8	82.1	26.1	7,512	81%	1%	8%	4%	6%	na
3396_3466_DW	3396_3466	358002	405379	8568	A49	Wigan	PCM	41.0	31.0	20.8	49.4	20.2	18,143	51%	3%	10%	11%	24%	na
3103_8156	3103_8156	358146	405514	N/A		Wigan	LA	42.5	31.0	20.8	59.3	21.7	8,264	56%	2%	21%	11%	10%	na
3431_3463	3431_3463	358038	405924	N/A	NEW MARKET STREET	Wigan	LA	40.5	31.0	20.8	51.1	19.8	12,144	62%	3%	8%	10%	18%	na
Jct485	3103_3435	358163	405546	N/A	KING STREET WEST	Wigan	LA	41.1	31.0	20.8	55.8	20.3	7,512	81%	1%	8%	4%	6%	na

Table B-2: Predicted annual mean NO₂ concentrations and source apportionment at exceedance links on the Greater Manchester road network – Consultation Option – 2021

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
2119_2564_DW	2119_2564	371207	409524	17905	A673	Bolton	PCM	38.0	28.2	19.5	38.4	18.5	26,937	11%	6%	4%	28%	52%	-4.5
2799_3775_DW	2799_3775	371869	409735	8030	A666	Bolton	PCM	40.6	28.2	19.5	43.5	21.1	20,943	0%	6%	4%	37%	53%	-2.6
2799_3118_DW	2799_3118	371751	409800	58048	A673	Bolton	PCM	41.5	28.2	19.5	47.3	22.1	27,032	0%	5%	21%	31%	43%	-3.5
2650_2653_DW	2653_2650	372915	407622	7431	A666	Bolton	PCM	42.2	26.5	18.4	48.2	23.8	65,613	0%	5%	3%	48%	45%	-1.8
2649_2650_DW	2650_2649	372622	408297	7431	A666	Bolton	PCM	39.5	25.0	17.5	44.0	22.0	66,797	0%	5%	2%	47%	46%	-1.5
1986_2053_DW	1986_2053	372038	408749	74518	A575	Bolton	PCM	36.5	25.0	17.5	40.1	19.0	21,632	21%	5%	6%	26%	42%	-6.0
2053_12949_DW	2053_12949	371997	408820	74518	A575	Bolton	PCM	36.3	28.4	19.5	35.8	16.8	15,326	34%	4%	2%	23%	37%	-5.7
3064_15148_DW	3064_15148	371642	408705	7921	A579	Bolton	PCM	37.8	28.4	19.5	39.7	18.3	26,074	25%	5%	5%	22%	43%	-5.0
2648_6404_DW	2648_6404	372355	408934	47988	A579	Bolton	PCM	41.5	25.0	17.5	49.0	24.0	34,553	2%	5%	5%	41%	47%	-3.3
2407_6761_DW	2407_6761	374740	405143	73087	A667	Bolton	PCM	36.9	18.9	13.7	47.8	23.1	38,196	6%	6%	11%	27%	51%	-4.9
NonPCM_307	6404_2648	372340	408924	N/A	A579 BRADFORD STREET	Bolton	LA	41.4	25.0	17.5	48.8	23.8	34,553	2%	5%	5%	41%	47%	-3.1
Jct490	2113_2119	371155	409546	N/A		Bolton	LA	43.1	28.2	19.5	50.5	23.6	9,754	7%	5%	3%	39%	46%	-5.2
Jct491	2490_14486	371909	409019	N/A		Bolton	LA	34.4	28.2	19.5	31.4	14.9	15,306	33%	4%	2%	22%	39%	-6.2
4912_2244	4912_2244	381959	410596	73198	A58	Bury	PCM	36.5	22.9	16.3	41.2	20.2	23,355	2%	4%	13%	41%	39%	-4.9
2244_2756_DW	2244_2756	381848	410697	N/A	B6221 WASH LANE	Bury	LA	36.9	22.9	16.3	42.6	20.6	19,458	0%	5%	20%	31%	43%	-5.2
2244_4913_DW	2244_4913	381968	410627	73198	A58	Bury	PCM	42.9	22.9	16.3	56.0	26.7	23,910	1%	6%	9%	32%	52%	-5.7
2552_3975_DW	2552_3975	380966	411188	N/A	B6222 MOORGATE	Bury	LA	37.5	21.8	15.6	48.1	22.0	24,710	5%	5%	28%	22%	40%	-4.1
2243_4639_DW	2243_4639	381310	410749	16556	A58	Bury	PCM	38.5	22.9	16.3	46.3	22.2	27,807	10%	4%	7%	39%	39%	-4.1
3790_3652	3790_2237	379874	410937	38354	A58	Bury	PCM	46.4	23.0	16.3	68.0	30.1	78,541	6%	5%	13%	29%	46%	-4.2
2237_3790_DW	3790_2237	379830	410975	38354	A58	Bury	PCM	48.2	23.0	16.3	71.5	32.0	78,541	6%	5%	13%	29%	46%	-4.6
3652_6021	3790_2237	379755	410929	38354	A58	Bury	PCM	43.8	23.0	16.3	60.9	27.5	78,541	6%	5%	13%	29%	46%	-4.0
3089_5572_DW	3089_5572	379629	411052	N/A	B6214 CROSTONS ROAD	Bury	LA	41.5	24.9	17.5	50.8	24.0	45,760	9%	6%	6%	30%	49%	-4.2
3089_5572	3089_5572	379597	411059	N/A	B6214 CROSTONS ROAD	Bury	LA	37.6	24.9	17.5	41.5	20.1	45,760	9%	6%	6%	30%	49%	-3.6
4939_3424	4939_3424	380899	404868	17924	A56	Bury	PCM	40.0	18.1	13.2	56.3	26.9	22,740	1%	5%	10%	34%	49%	-5.4
3424_4940_DW	3424_4940	380920	404881	17924	A56	Bury	PCM	45.0	18.1	13.2	69.1	31.9	19,780	2%	5%	19%	27%	47%	-6.2
1742_9011_DW	1742_9011	381149	404182	46572	A56	Bury	PCM	40.0	21.8	15.5	54.0	24.5	36,768	9%	5%	19%	25%	42%	-5.1
2483_2951_DW	2483_2951	380856	405206	17924	A56	Bury	PCM	39.2	19.2	13.9	52.2	25.3	45,351	1%	6%	9%	31%	53%	-5.4
NonPCM_69	3424_4939	380931	404841	N/A	A56 BURY NEW ROAD	Bury	LA	45.1	18.1	13.2	69.2	31.9	42,519	2%	5%	15%	30%	48%	-5.8
Jct495	3424_7436	380909	404951	N/A		Bury	LA	39.7	18.1	13.2	55.7	26.5	40,594	1%	6%	7%	35%	52%	-5.7
1268_1269	1268_1269	383558	398278	27974	A34	Manchester	PCM	45.6	38.5	25.0	60.2	20.6	9,611	60%	3%	2%	12%	23%	-11.3
1356_4539_DW	1356_4539	383054	398617	99519	A6042	Manchester	PCM	39.4	38.5	25.0	32.4	14.4	26,188	0%	6%	9%	32%	53%	-2.8
1269_3272	1269_3272	383423	398312	27974	A34	Manchester	PCM	35.0	38.5	25.0	25.5	10.0	5,860	67%	2%	2%	10%	19%	-8.6
1322_3273	1322_3273	383249	398058	27975	A34	Manchester	PCM	46.1	38.5	25.0	47.8	21.1	15,529	0%	7%	3%	27%	62%	-2.2
1324_3276_DW	1324_3276	383489	397693	N/A	GREAT BRIDGEWATER STREET	Manchester	LA	43.8	32.0	21.5	51.8	22.3	9,221	5%	6%	11%	35%	43%	-5.0
3272_8542_DW	3272_8542	383361	398267	N/A	GARTSIDE STREET	Manchester	LA	39.9	38.5	25.0	33.1	14.9	5,175	0%	8%	4%	20%	68%	-1.8
1324_8570	1324_8570	383385	397701	7922	A6143	Manchester	PCM	39.5	32.0	21.5	41.0	18.0	14,125	4%	5%	14%	34%	44%	-2.5
1312_5801_DW	1312_5801	383778	399163	36577	A56	Manchester	PCM	39.2	27.4	18.9	44.5	20.3	22,912	12%	4%	18%	31%	35%	-4.1
1309_2291	1309_2291	384105	399123	17935	A665	Manchester	PCM	38.0	28.6	19.6	40.9	18.4	30,942	2%	5%	7%	36%	49%	-5.0
2353_45005_DW	2353_45005	384492	398898	75248	A664	Manchester	PCM	35.3	38.8	25.3	22.7	10.0	6,854	66%	2%	6%	9%	16%	-5.2
2353_45005	2353_45005	384467	398922	75248	A664	Manchester	PCM	36.6	38.8	25.3	26.2	11.3	6,854	66%	2%	6%	9%	16%	-5.8
1472_1511_DW	1472_1511	385939	397630	27403	A635	Manchester	PCM	37.0	32.5	21.7	31.3	15.2	26,855	1%	5%	11%	41%	42%	-4.3
1341_2939_DW	1341_2939	385618	397656	75239	A635	Manchester	PCM	41.3	32.5	21.7	42.6	19.6	24,548	2%	4%	21%	31%	41%	-5.7
1341_2939	1341_2939	385616	397633	75239	A635	Manchester	PCM	36.2	32.5	21.7	30.4	14.5	24,548	2%	4%	21%	31%	41%	-4.5
2608_4852_DW	2608_4852	385272	397130	26157	A6	Manchester	PCM	41.4	32.5	21.7	40.8	19.6	35,936	5%	6%	3%	38%	49%	-3.3
2607_2608_DW	2607_2608	385142	397223	26157	A6	Manchester	PCM	38.5	32.5	21.7	34.2	16.7	35,832	4%	6%	2%	39%	49%	-2.9
2607_3056_DW	2607_3056	384957	397311	26157	A6	Manchester	PCM	44.6	34.9	23.1	45.9	21.5	35,832	9%	6%	3%	33%	49%	-3.9
2286_1286_DW	2286_1286	384598	398032	N/A	AUBURN STREET	Manchester	LA	39.9	38.8	25.3	35.7	14.7	6,691	14%	4%	21%	19%	41%	-2.4

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
1242_1243	1242_1243	384483	398343	70154	A62	Manchester	PCM	40.8	38.8	25.3	52.8	15.5	1,447	100%	0%	0%	0%	0%	-11.2
2293_6119_DW	2293_6119	384344	398215	N/A		Manchester	LA	30.4	38.8	25.3	12.9	5.1	2,354	100%	0%	0%	0%	0%	-13.9
5429_8559_DW	5429_8559	384266	398150	N/A	NEW YORK STREET	Manchester	LA	36.1	38.8	25.3	24.4	10.9	6,181	9%	6%	2%	29%	55%	-5.0
1338_2904_DW	1338_2904	384418	396982	N/A	B5117 OXFORD ROAD	Manchester	LA	28.3	33.1	22.1	13.6	6.2	2,563	100%	0%	0%	0%	0%	-13.4
1338_4532_DW	1338_4532	384338	397135	75242	A34	Manchester	PCM	30.4	34.9	23.1	15.7	7.3	3,821	87%	1%	0%	2%	10%	-11.7
2006_3292	2006_3292	384110	397858	56529	A5103	Manchester	PCM	31.4	34.9	23.1	20.0	8.3	5,686	59%	2%	2%	21%	16%	-13.5
1336_16404	1336_16404	384137	397465	17929	A34	Manchester	PCM	31.8	34.9	23.1	22.0	8.8	4,655	79%	2%	1%	5%	13%	-14.4
1336_16404_DW	1336_16404	384153	397473	17929	A34	Manchester	PCM	31.7	34.9	23.1	21.5	8.6	4,655	79%	2%	1%	5%	13%	-14.0
1268_46301	1268_46301	383702	398229	7947	A34	Manchester	PCM	44.7	38.5	25.0	59.9	19.7	8,501	63%	2%	8%	13%	14%	-9.2
8547_47130_DW	8547_47130	383976	398274	N/A	KING STREET	Manchester	LA	41.3	38.5	25.0	37.3	16.3	20,362	8%	6%	4%	27%	55%	-3.8
8547_47130	8547_47130	383973	398256	N/A	KING STREET	Manchester	LA	44.6	38.5	25.0	45.7	19.6	20,362	8%	6%	4%	27%	55%	-4.3
1259_1243	1259_1243	384409	398297	N/A	PICCADILLY	Manchester	LA	30.0	38.8	25.3	11.9	4.7	1,310	100%	0%	0%	0%	0%	-10.9
2289_12835	2289_12835	384282	398507	70153	A6	Manchester	PCM	38.1	38.8	25.3	34.3	12.8	9,309	64%	3%	1%	9%	24%	-8.7
3261_1302	3261_1302	384528	398779	75246	A665	Manchester	PCM	39.2	38.8	25.3	31.4	14.0	14,128	0%	5%	11%	33%	51%	-3.5
8546_14050	8546_14050	384384	398801	57427	A664	Manchester	PCM	40.6	38.8	25.3	42.2	15.3	7,925	61%	3%	2%	7%	27%	-8.6
5806_1304	5806_1304	384250	398668	57427	A664	Manchester	PCM	35.3	38.8	25.3	27.5	10.0	2,684	78%	1%	7%	6%	8%	-6.5
2290_3027	2290_3027	384038	398775	48035	A6042	Manchester	PCM	30.7	38.8	25.3	13.1	5.4	2,920	70%	2%	3%	12%	14%	-12.8
2290_3027_DW	2290_3027	384055	398767	48035	A6042	Manchester	PCM	31.3	38.8	25.3	14.8	6.0	2,920	70%	2%	3%	12%	14%	-14.3
1305_2290_DW	1305_2290	384091	398691	N/A	WITHY GROVE	Manchester	LA	33.7	38.8	25.3	22.3	8.5	2,920	81%	1%	1%	8%	9%	-14.3
1307_1317	1307_1317	383757	398717	36551	A6	Manchester	PCM	37.4	38.5	25.0	34.2	12.4	4,339	76%	1%	1%	12%	9%	-10.7
1307_1317_DW	1307_1317	383771	398733	36551	A6	Manchester	PCM	35.3	38.5	25.0	27.4	10.3	4,339	76%	1%	1%	12%	9%	-9.3
3056_3842	3056_3842	384855	397401	26157	A6	Manchester	PCM	36.8	34.9	23.1	28.1	13.7	37,527	5%	6%	4%	33%	52%	-6.1
3056_3842_DW	3056_3842	384880	397418	26157	A6	Manchester	PCM	43.9	34.9	23.1	44.1	20.8	37,527	5%	6%	4%	33%	52%	-8.8
3033_2293	3033_2293	384317	398195	N/A	PARKER STREET	Manchester	LA	32.2	38.8	25.3	18.4	6.9	2,494	100%	0%	0%	0%	0%	-17.4
1261_6042_DW	1261_6042	384451	398215	77003	A6	Manchester	PCM	35.2	38.8	25.3	28.6	9.9	1,257	100%	0%	0%	0%	0%	-6.3
1261_6042	1261_6042	384466	398201	77003	A6	Manchester	PCM	35.3	38.8	25.3	29.0	10.0	1,257	100%	0%	0%	0%	0%	-6.3
3016_6022_DW	3016_6022	384639	397855	46165	A6	Manchester	PCM	39.1	34.9	23.1	42.4	16.0	7,258	54%	3%	4%	11%	27%	-4.4
1302_8546	1302_8546	384428	398838	75248	A664	Manchester	PCM	37.7	38.8	25.3	33.4	12.4	7,772	56%	2%	16%	10%	16%	-6.7
1302_8546_DW	1302_8546	384414	398854	75248	A664	Manchester	PCM	35.5	38.8	25.3	26.5	10.3	7,772	56%	2%	16%	10%	16%	-5.8
2893_5074	2892_2890	384158	397155	75243	A57M	Manchester	PCM	39.0	34.9	23.1	35.1	15.9	59,112	0%	5%	3%	44%	49%	-2.2
5409_5430_DW	5409_5430	384209	398072	N/A	CHARLOTTE STREET	Manchester	LA	39.5	38.8	25.3	32.0	14.3	12,694	1%	7%	2%	27%	63%	-2.4
1263_5429	1263_5429	384207	398182	N/A	BACK GEORGE STREET	Manchester	LA	40.2	38.8	25.3	34.1	15.0	6,181	10%	6%	2%	28%	55%	-6.4
2283_8544_DW	2283_8544	383791	398603	27992	A56	Manchester	PCM	39.8	38.5	25.0	41.4	14.8	4,339	68%	2%	3%	16%	11%	-10.7
1267_1985	1267_1985	383672	398364	16536	A56	Manchester	PCM	40.7	38.5	25.0	36.2	15.7	8,489	13%	5%	5%	29%	47%	-6.7
1267_1985_DW	1267_1985	383687	398358	16536	A56	Manchester	PCM	39.9	38.5	25.0	34.1	14.9	8,489	13%	5%	5%	29%	47%	-6.4
1985_2283	1985_2283	383717	398477	16536	A56	Manchester	PCM	35.9	38.5	25.0	26.2	10.9	7,756	41%	4%	3%	22%	31%	-4.8
1985_2283_DW	1985_2283	383734	398471	16536	A56	Manchester	PCM	36.9	38.5	25.0	28.9	11.9	7,756	41%	4%	3%	22%	31%	-5.1
1685_1686_DW	1685_1686	387382	394221	73778	A6	Manchester	PCM	36.5	25.5	17.8	40.4	18.7	27,677	21%	5%	9%	25%	40%	-4.9
1469_3669_DW	1469_3669	386578	395884	28695	A6	Manchester	PCM	37.3	26.4	18.3	40.2	19.0	27,642	18%	6%	3%	23%	50%	-4.6
1684_4312_DW	1684_4312	387763	393475	73778	A6	Manchester	PCM	36.8	27.3	18.8	36.7	18.0	34,015	5%	6%	3%	28%	58%	-4.3
4373_5121_DW	4373_5121	382333	389181	48339	A560	Manchester	PCM	37.4	19.9	14.3	47.0	23.1	33,774	1%	6%	9%	31%	53%	-3.7
1846_2423	1846_2423	381858	388161	26047	M56	Manchester	PCM	40.2	20.5	14.8	51.5	25.4	13,708	2%	6%	2%	34%	56%	-2.3
1846_2423_DW	1846_2423	381865	388177	26047	M56	Manchester	PCM	43.0	20.5	14.8	58.0	28.2	13,708	2%	6%	2%	34%	56%	-2.6
2855_2218_DW	2856_2855	382356	390128	7701	A5103	Manchester	PCM	41.4	19.5	14.1	56.8	27.3	104,061	0%	6%	4%	33%	56%	-3.3
2844_2848	2855_2847	382344	390388	7701	A5103	Manchester	PCM	42.2	19.5	14.1	58.3	28.1	126,822	0%	6%	5%	32%	57%	-3.1
2847_2855_DW	2855_2847	382389	390376	7701	A5103	Manchester	PCM	42.9	19.5	14.1	59.9	28.8	126,822	0%	6%	5%	32%	57%	-3.0
14951_17000_DW	14951_17000	381833	385986	N/A	THORLEY LANE	Manchester	LA	37.4	34.2	22.4	32.1	15.0	17,155	13%	5%	13%	26%	43%	-3.5
7634_8756_DW	7634_8756	382361	385549	N/A	RINGWAY ROAD WEST	Manchester	LA	42.8	39.0	24.9	39.2	17.9	32,610	0%	4%	24%	24%	48%	-1.4
12800_14480_DW	12800_14480	382038	385547	N/A	OUTWOOD LANE	Manchester	LA	42.7	39.0	24.9	37.5	17.8	33,592	0%	7%	9%	22%	63%	-3.1

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
NonPCM_184	1336_16404	384110	397517	N/A	A34 OXFORD STREET	Manchester	LA	31.0	34.9	23.1	19.7	8.0	4,655	79%	2%	1%	5%	13%	-16.4
NonPCM_207	4530_1268	383624	398258	N/A	A34 BRIDGE STREET	Manchester	LA	44.4	38.5	25.0	55.7	19.4	13,949	17%	5%	4%	29%	46%	-10.9
NonPCM_216	5408_5432	384079	397954	N/A	GEORGE STREET	Manchester	LA	33.7	34.9	23.1	23.9	10.7	10,100	18%	6%	1%	23%	52%	-7.2
Jct254	14490_5406	384292	398620	N/A		Manchester	LA	38.0	38.8	25.3	33.3	12.7	5,749	53%	3%	6%	11%	27%	-5.4
Jct262	2006_3292	384156	397878	N/A		Manchester	LA	32.8	34.9	23.1	23.8	9.7	5,686	59%	2%	2%	21%	16%	-15.0
Jct280	1402_5407	383617	397503	N/A		Manchester	LA	38.2	32.0	21.5	36.8	16.6	26,458	6%	7%	3%	28%	56%	-2.3
Jct282	1275_1279	384116	398263	N/A		Manchester	LA	41.4	38.8	25.3	36.7	16.1	8,076	8%	6%	3%	29%	54%	-5.7
Jct285	8546_14050	384363	398784	N/A		Manchester	LA	39.7	38.8	25.3	39.3	14.4	7,925	61%	3%	2%	7%	27%	-8.3
Jct526	1275_1279	384116	398262	N/A		Manchester	LA	41.4	38.8	25.3	36.7	16.1	8,076	8%	6%	3%	29%	54%	-5.7
3911_4112	3911_4112	389383	403282	99617	A663	Oldham	PCM	38.8	22.8	16.1	46.3	22.6	40,901	3%	6%	6%	30%	56%	-3.0
1996_14524_DW	1996_14524	393502	405226	36632	A62	Oldham	PCM	40.2	27.4	18.9	44.1	21.4	32,568	4%	6%	6%	34%	50%	-4.9
N14523_14524	14523_14524	393312	405043	36632	A62	Oldham	PCM	40.3	27.4	18.9	43.8	21.4	52,053	0%	6%	5%	36%	53%	-2.7
1975_2466_DW	14523_7556	392991	404790	N/A	WATERLOO STREET	Oldham	LA	38.3	23.7	16.7	43.6	21.6	51,688	0%	6%	4%	37%	53%	-2.5
7556_14523_DW	7556_14523	393092	404851	36632	A62	Oldham	PCM	41.0	26.1	18.2	46.7	22.9	24,543	0%	6%	6%	31%	56%	-2.6
1295_1703	1295_1703	390482	402513	77008	A62	Oldham	PCM	39.1	23.7	16.6	46.0	22.5	36,613	2%	6%	9%	36%	48%	-4.1
3914_5661_DW	3914_5661	390653	402743	6606	A62	Oldham	PCM	36.8	23.7	16.6	40.7	20.2	36,986	1%	5%	10%	41%	43%	-4.1
3914_5661	3914_5661	390627	402753	6606	A62	Oldham	PCM	38.0	23.7	16.6	43.3	21.3	36,986	1%	5%	10%	41%	43%	-4.2
1433_1615_DW	1433_1615	389260	401329	73781	A62	Oldham	PCM	35.7	21.6	15.4	45.0	20.3	17,337	18%	3%	26%	33%	21%	-5.0
2202_2205_DW	2202_2205	389446	413627	27469	A680	Rochdale	PCM	39.3	28.9	19.8	40.7	19.5	23,676	4%	5%	13%	34%	43%	-2.2
2210_14216_DW	2210_14216	388664	411856	17322	A664	Rochdale	PCM	44.8	19.0	13.8	71.2	31.0	34,278	0%	4%	31%	31%	34%	-4.4
14220_14221	14220_14221	389004	412157	26586	A58	Rochdale	PCM	36.7	21.0	15.0	44.2	21.7	45,220	2%	6%	10%	32%	50%	-4.9
2210_4463_DW	2210_4463	388729	411971	26586	A58	Rochdale	PCM	43.4	19.0	13.8	69.1	29.6	45,220	5%	4%	31%	26%	34%	-5.1
2210_4463	2210_4463	388741	411950	26586	A58	Rochdale	PCM	37.2	19.0	13.8	52.0	23.5	45,220	5%	4%	31%	26%	34%	-4.5
1345_1346_DW	1345_1346	380555	398426	56535	A5186	Salford	PCM	37.8	27.6	18.9	38.7	18.8	13,697	9%	5%	12%	29%	45%	-3.8
1345_1346	1345_1346	380537	398426	56535	A5186	Salford	PCM	37.1	27.6	18.9	37.0	18.1	13,697	9%	5%	12%	29%	45%	-3.5
1364_1366	1364_1366	381428	399804	17245	A576	Salford	PCM	37.9	26.2	18.1	42.0	19.8	30,799	11%	6%	11%	22%	50%	-4.4
5249_7952	5249_7952	381205	399532	58028	A576	Salford	PCM	36.8	26.2	18.1	38.0	18.6	34,122	3%	7%	6%	26%	59%	-4.9
5249_7952_DW	5249_7952	381224	399526	58028	A576	Salford	PCM	35.9	26.2	18.1	36.2	17.8	34,122	3%	7%	6%	26%	59%	-4.9
2672_14311_DW	2299_14311	381434	399244	6161	A6	Salford	PCM	36.8	26.2	18.1	37.9	18.6	51,068	10%	6%	5%	24%	55%	-4.7
14311_2299_DW	2299_14311	381488	399165	6161	A6	Salford	PCM	43.2	26.2	18.1	53.9	25.0	51,068	10%	6%	5%	24%	55%	-6.6
3964_4732	3964_4732	382882	397222	99516	A56	Salford	PCM	37.9	26.5	18.4	41.0	19.5	35,249	3%	5%	18%	33%	41%	-2.6
3964_4732_DW	3964_4732	382871	397244	99516	A56	Salford	PCM	43.1	26.5	18.4	53.8	24.8	35,249	3%	5%	18%	33%	41%	-3.1
1867_4574_DW	1867_4574	382129	397840	36585	A57	Salford	PCM	44.1	26.5	18.4	54.7	25.7	48,917	1%	5%	12%	34%	48%	-4.3
1232_1257	1232_1257	381738	398808	6161	A6	Salford	PCM	35.8	25.0	17.4	38.8	18.4	40,400	18%	5%	8%	24%	46%	-6.5
1349_1867_DW	1349_1867	382371	397772	48023	A57	Salford	PCM	42.4	26.5	18.4	50.2	24.0	46,128	0%	5%	10%	35%	50%	-4.2
3786_1233_DW	3968_1233	381517	398259	27751	A5063	Salford	PCM	37.2	25.0	17.4	40.3	19.8	33,526	1%	6%	8%	28%	57%	-3.7
1349_2993_DW	1349_2993	382580	397716	73792	A57	Salford	PCM	46.0	26.5	18.4	58.7	27.6	52,802	0%	5%	9%	36%	49%	-4.1
1349_2993	1349_2993	382574	397693	73792	A57	Salford	PCM	37.9	26.5	18.4	39.9	19.5	52,802	0%	5%	9%	36%	49%	-3.3
5505_5507_DW	5505_5507	382099	398640	56160	A6	Salford	PCM	36.8	27.1	18.7	38.5	18.1	28,982	20%	5%	5%	23%	46%	-8.3
3969_6612_DW	3969_6612	381512	398031	6562	A57	Salford	PCM	42.3	25.0	17.4	52.1	24.9	50,826	0%	5%	10%	36%	49%	-3.8
4575_6612_DW	4575_6612	381692	397971	36585	A57	Salford	PCM	38.1	24.1	16.9	42.8	21.2	49,481	0%	5%	5%	41%	49%	-2.8
3850_7895_DW	3850_7895	382754	398553	17926	A6	Salford	PCM	35.6	27.1	18.7	35.0	16.9	31,847	9%	6%	4%	30%	51%	-7.5
4575_7897_DW	4575_7897	381821	397932	36585	A57	Salford	PCM	38.1	24.1	16.9	42.9	21.2	49,482	0%	5%	5%	40%	50%	-2.9
3752_4897_DW	3752_4897	382876	398556	70151	A6	Salford	PCM	33.7	27.1	18.7	30.8	15.0	23,854	13%	6%	5%	29%	47%	-8.0
3752_7895_DW	3752_7895	382815	398555	17926	A6	Salford	PCM	33.3	27.1	18.7	29.8	14.6	23,854	12%	6%	5%	30%	48%	-7.6
12947_1223_DW	12947_1223	381649	398952	6161	A6	Salford	PCM	35.7	25.0	17.4	37.3	18.3	24,276	4%	7%	2%	28%	59%	-5.1
12945_14431_DW	12945_14431	381917	398711	56160	A6	Salford	PCM	40.5	25.0	17.4	48.8	23.1	35,586	9%	6%	4%	27%	54%	-8.6
1232_12945_DW	1232_12945	381825	398784	56160	A6	Salford	PCM	42.8	25.0	17.4	59.1	25.4	35,594	29%	4%	14%	20%	32%	-7.3
3850_14502_DW	3850_14502	382685	398551	17926	A6	Salford	PCM	38.6	27.1	18.7	43.1	19.9	31,838	20%	5%	6%	26%	43%	-8.4

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
5505_14310_DW	5505_14310	382293	398539	56160	A6	Salford	PCM	34.8	27.1	18.7	33.3	16.1	28,982	14%	6%	4%	26%	50%	-8.4
1216_14503_DW	1216_14503	382565	398546	17926	A6	Salford	PCM	44.0	27.1	18.7	60.2	25.3	31,844	30%	4%	13%	21%	32%	-8.2
1216_14503	1216_14503	382567	398523	17926	A6	Salford	PCM	38.6	27.1	18.7	44.8	19.9	31,844	30%	4%	13%	21%	32%	-7.0
5179_5182_DW	5179_5182	374598	400597	74618	A572	Salford	PCM	41.5	15.8	11.6	61.8	29.8	33,345	1%	6%	4%	34%	55%	-3.0
1579_17017_DW	1579_17017	377344	400951	37363	A580	Salford	PCM	38.1	19.2	13.9	50.6	24.2	37,781	4%	5%	11%	32%	48%	-4.5
1589_14316_DW	1589_14316	378317	399184	7292	A576	Salford	PCM	34.2	24.8	17.3	37.7	16.9	18,430	24%	3%	27%	18%	28%	-6.4
NonPCM_147	4951_4554	375357	397837	N/A	A57 LIVERPOOL ROAD	Salford	LA	38.5	16.7	12.3	53.5	26.2	17,477	3%	6%	3%	37%	52%	-4.7
NonPCM_219	2993_1202	382678	397661	N/A	A57 REGENT ROAD	Salford	LA	42.5	26.5	18.4	52.5	24.1	52,803	1%	4%	27%	31%	38%	-3.6
Jct205	4554_4951	375367	397806	N/A		Salford	LA	37.1	16.7	12.3	50.1	24.8	17,477	3%	6%	3%	37%	52%	-4.2
Jct290	1216_7959	382540	398554	N/A		Salford	LA	38.3	27.1	18.7	43.8	19.6	5,075	0%	5%	8%	39%	48%	-6.8
1859_14054_DW	1859_14054	389505	390884	N/A	B6167 LANCASHIRE HILL	Stockport	LA	38.3	25.8	18.0	41.1	20.3	17,617	3%	6%	3%	31%	57%	-2.6
3620_5931_DW	3620_5931	390351	390720	37920	A626	Stockport	PCM	44.0	25.9	18.0	58.2	26.0	32,266	0%	4%	29%	31%	36%	-3.3
2663_5015	2663_5015	390347	391028	N/A	B6104 CARRINGTON ROAD	Stockport	LA	35.3	20.5	14.7	43.2	20.6	16,708	8%	3%	26%	34%	29%	-5.7
2663_5015_DW	2663_5015	390344	391047	N/A	B6104 CARRINGTON ROAD	Stockport	LA	40.6	20.5	14.7	56.5	25.9	16,708	8%	3%	26%	34%	29%	-7.0
5021_6254_DW	5021_6254	390116	391212	37920	A626	Stockport	PCM	40.4	20.5	14.7	54.1	25.7	28,934	0%	4%	20%	43%	33%	-3.1
1860_4172	1860_4172	389421	390671	58254	A560	Stockport	PCM	37.9	25.8	18.0	40.3	19.9	9,626	9%	5%	1%	31%	53%	-3.3
1859_1860	1859_1860	389494	390731	58254	A560	Stockport	PCM	38.8	25.8	18.0	42.3	20.8	9,626	10%	5%	4%	32%	49%	-3.0
1678_2967	1678_2967	388831	390418	27983	A5145	Stockport	PCM	38.1	22.3	15.8	45.0	22.3	19,229	5%	5%	5%	38%	47%	-3.3
2669_14483_DW	2669_14483	389208	390259	N/A	CHESTERGATE	Stockport	LA	33.3	25.8	18.0	38.8	15.3	1,283	100%	0%	0%	0%	0%	-7.3
3426_4162_DW	3426_4162	390357	390129	27384	A626	Stockport	PCM	37.5	25.9	18.0	39.9	19.6	31,219	2%	6%	7%	29%	55%	-3.2
5160_6071_DW	5160_6071	392018	392010	27296	A560	Stockport	PCM	38.0	26.0	18.0	41.0	20.0	32,436	0%	6%	11%	28%	54%	-2.5
1924_8878_DW	1924_8878	392443	391754	27296	A560	Stockport	PCM	38.5	21.6	15.4	52.3	23.2	33,192	6%	5%	29%	18%	42%	-3.6
3973_14181_DW	3973_14181	388375	390354	58034	A5145	Stockport	PCM	42.8	22.3	15.8	58.0	27.0	25,713	8%	5%	14%	30%	43%	-3.2
3973_14181	3973_14181	388376	390333	58034	A5145	Stockport	PCM	40.0	22.3	15.8	50.8	24.3	25,713	8%	5%	14%	30%	43%	-3.0
2430_3710_DW	2430_3710	385097	388122	38735	A34	Stockport	PCM	39.3	20.5	14.7	49.8	24.5	64,566	0%	6%	5%	32%	58%	-2.3
2887_2430_DW	2887_2430	385044	388518	26352	A34	Stockport	PCM	42.1	20.5	14.7	56.2	27.4	37,786	0%	6%	5%	30%	58%	-2.5
2184_14428_DW	2184_14428	391822	387266	99018	A6	Stockport	PCM	37.7	20.9	15.0	47.8	22.7	33,927	3%	6%	15%	25%	51%	-5.8
6055_14428_DW	6055_14428	391767	387344	99018	A6	Stockport	PCM	36.2	20.9	15.0	44.4	21.3	33,927	4%	6%	14%	25%	51%	-5.3
NonPCM_273	6205_6055	391720	387414	N/A	A6 LONDON ROAD	Stockport	LA	36.8	20.9	15.0	47.2	21.9	33,927	9%	5%	19%	23%	44%	-5.3
Jct355	1850_1864	389388	390175	N/A		Stockport	LA	35.9	25.8	18.0	39.1	17.9	20,859	5%	6%	6%	34%	50%	-6.7
Jct539	3426_4162	390301	390159	N/A		Stockport	LA	38.0	25.9	18.0	41.2	20.1	31,219	2%	6%	7%	29%	55%	-3.3
7637_2941_DW	7637_2941	393180	398661	99618	A635	Tameside	PCM	42.1	27.3	18.8	50.4	23.3	27,951	12%	5%	14%	30%	38%	-4.1
2941_5978_DW	7638_5978	393398	398690	37451	A635	Tameside	PCM	40.4	27.3	18.8	44.1	21.6	52,681	0%	6%	6%	36%	52%	-2.0
1695_14478_DW	1695_14478	392753	398494	99618	A635	Tameside	PCM	43.7	26.9	18.5	52.9	25.2	45,758	1%	5%	10%	38%	46%	-3.6
1695_14478	1695_14478	392761	398476	99618	A635	Tameside	PCM	38.1	26.9	18.5	40.1	19.6	45,758	1%	5%	10%	38%	46%	-3.1
3813_3812_DW	3813_3812	392978	398478	74561	A6017	Tameside	PCM	39.5	26.9	18.5	43.0	21.0	32,806	2%	5%	6%	36%	50%	-3.2
7638_3813	7638_3813	393112	398511	74561	A6017	Tameside	PCM	38.5	27.3	18.8	40.5	19.7	30,499	2%	6%	10%	30%	52%	-3.7
1695_5659	1695_5659	392588	398416	99618	A635	Tameside	PCM	38.0	26.9	18.5	39.4	19.5	47,131	1%	5%	8%	40%	47%	-2.6
1695_5659_DW	1695_5659	392582	398435	99618	A635	Tameside	PCM	43.7	26.9	18.5	52.4	25.2	47,131	1%	5%	8%	40%	47%	-3.1
5655_5656_DW	5655_5656	392042	398069	76074	A6140	Tameside	PCM	38.5	26.9	18.5	41.9	20.0	20,676	0%	4%	24%	34%	37%	-4.0
3812_14478	3812_14478	392855	398516	74561	A6017	Tameside	PCM	38.3	26.9	18.5	40.9	19.8	40,847	3%	5%	14%	37%	42%	-3.1
3812_14478_DW	3812_14478	392847	398534	99618	A635	Tameside	PCM	43.7	26.9	18.5	53.7	25.2	40,847	3%	5%	14%	37%	42%	-3.7
3761_5653_DW	3761_5653	390802	395630	99512	A57	Tameside	PCM	36.3	20.0	14.4	44.5	21.9	19,623	2%	5%	12%	37%	44%	-4.3
Jct449	3227_8517	391912	395574	N/A		Tameside	LA	38.4	21.7	15.4	46.7	22.9	18,546	0%	6%	3%	38%	53%	-2.6
2305_5949_DW	2305_5949	380182	395145	36578	A56	Trafford	PCM	37.7	31.1	20.9	34.0	16.8	30,487	4%	7%	4%	27%	58%	-2.8
1382_3622_DW	1382_3622	380628	395827	56499	A56	Trafford	PCM	37.5	31.1	20.9	33.6	16.7	34,757	2%	7%	3%	31%	57%	-3.1
7603_7606_DW	7603_7606	376675	396960	N/A	B5214 TRAFFORD BOULEVARD	Trafford	LA	36.6	21.2	15.2	45.7	21.4	21,468	5%	6%	14%	24%	51%	-7.8
7606_17100_DW	7606_17100	376759	397007	N/A	B5214 TRAFFORD BOULEVARD	Trafford	LA	37.4	21.2	15.2	48.9	22.2	28,956	20%	5%	13%	19%	42%	-7.6
NonPCM_324	2833_2349	378901	392774	N/A	A56 CROSS STREET	Trafford	LA	39.5	20.6	14.8	50.5	24.7	45,570	1%	7%	5%	31%	56%	-3.8

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
Jct225	3529_8101	377585	395102	N/A		Trafford	LA	38.4	20.7	14.8	47.3	23.6	8,179	0%	8%	2%	24%	67%	-2.4
Jct231	3304_3529	377588	395133	N/A		Trafford	LA	38.9	20.7	14.8	48.6	24.1	6,269	0%	6%	12%	28%	54%	-2.7
3492_3511_DW	3492_3511	358611	405310	8566	A577	Wigan	PCM	37.1	31.0	20.8	33.4	16.3	23,466	2%	5%	11%	32%	50%	-3.4
3431_7687_DW	3431_7687	358110	405811	N/A	MARKET STREET	Wigan	LA	28.6	31.0	20.8	18.4	7.9	2,098	100%	0%	0%	0%	0%	-11.9
3103_3435_DW	3103_3435	358085	405595	N/A	KING STREET WEST	Wigan	LA	37.3	31.0	20.8	43.3	16.6	7,511	72%	1%	7%	7%	13%	-9.5
3396_3466_DW	3396_3466	358002	405379	8568	A49	Wigan	PCM	34.0	31.0	20.8	27.5	13.2	18,127	18%	5%	6%	22%	49%	-7.0
3103_8156	3103_8156	358146	405514	N/A		Wigan	LA	35.3	31.0	20.8	34.3	14.5	8,279	37%	3%	22%	20%	18%	-7.2
3431_3463	3431_3463	358038	405924	N/A	NEW MARKET STREET	Wigan	LA	33.2	31.0	20.8	27.8	12.5	12,114	42%	4%	5%	17%	33%	-7.3
Jct485	3103_3435	358163	405546	N/A	KING STREET WEST	Wigan	LA	34.0	31.0	20.8	31.6	13.2	7,511	72%	1%	7%	7%	13%	-7.1

Table B-3: Predicted annual mean NO₂ concentrations and source apportionment at exceedance links on the Greater Manchester road network – Do Minimum – 2023

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
2119_2564_DW	2119_2564	371207	409524	17905	A673	Bolton	PCM	38.4	26.0	18.1	46.1	20.3	27,757	31%	6%	8%	19%	36%	na
2799_3775_DW	2799_3775	371869	409735	8030	A666	Bolton	PCM	38.6	26.0	18.1	43.8	20.5	21,853	0%	6%	11%	34%	48%	na
2799_3118_DW	2799_3118	371751	409800	58048	A673	Bolton	PCM	40.0	26.0	18.1	49.7	21.9	27,724	0%	5%	33%	26%	36%	na
2650_2653_DW	2653_2650	372915	407622	7431	A666	Bolton	PCM	39.3	24.8	17.3	45.4	22.0	69,327	0%	6%	7%	44%	44%	na
2649_2650_DW	2650_2649	372622	408297	7431	A666	Bolton	PCM	36.6	23.4	16.5	41.1	20.2	71,606	0%	6%	6%	43%	44%	na
1986_2053_DW	1986_2053	372038	408749	74518	A575	Bolton	PCM	37.4	23.4	16.5	48.8	21.0	21,509	41%	4%	11%	17%	27%	na
2053_12949_DW	2053_12949	371997	408820	74518	A575	Bolton	PCM	37.7	26.6	18.4	45.6	19.3	15,317	58%	3%	3%	14%	22%	na
3064_15148_DW	3064_15148	371642	408705	7921	A579	Bolton	PCM	38.5	26.6	18.4	47.4	20.1	26,040	41%	4%	10%	16%	29%	na
2648_6404_DW	2648_6404	372355	408934	47988	A579	Bolton	PCM	38.1	23.4	16.5	46.0	21.6	32,046	8%	5%	14%	34%	38%	na
2407_6761_DW	2407_6761	374740	405143	73087	A667	Bolton	PCM	38.9	17.6	12.8	61.4	26.0	36,664	11%	4%	37%	19%	29%	na
NonPCM_307	6404_2648	372340	408924	N/A	A579 BRADFORD STREET	Bolton	LA	38.2	23.4	16.5	46.1	21.7	32,046	8%	5%	14%	34%	38%	na
Jct490	2113_2119	371155	409546	N/A		Bolton	LA	43.9	26.0	18.1	61.6	25.8	10,098	37%	4%	6%	25%	28%	na
Jct491	2490_14486	371909	409019	N/A		Bolton	LA	36.5	26.0	18.1	43.4	18.3	15,297	59%	3%	3%	13%	22%	na
4912_2244	4912_2244	381959	410596	73198	A58	Bury	PCM	36.7	21.1	15.1	47.6	21.5	23,901	11%	4%	29%	29%	27%	na
2244_2756_DW	2244_2756	381848	410697	N/A	B6221 WASH LANE	Bury	LA	37.0	21.1	15.1	49.0	21.8	19,616	0%	5%	43%	23%	30%	na
2244_4913_DW	2244_4913	381968	410627	73198	A58	Bury	PCM	42.9	21.1	15.1	64.1	27.8	24,297	12%	5%	21%	24%	38%	na
2552_3975_DW	2552_3975	380966	411188	N/A	B6222 MOORGATE	Bury	LA	37.2	20.1	14.5	52.9	22.7	25,046	8%	5%	40%	18%	30%	na
2243_4639_DW	2243_4639	381310	410749	16556	A58	Bury	PCM	38.0	21.1	15.1	51.3	22.9	28,583	23%	4%	13%	30%	29%	na
3790_3652	3790_2237	379874	410937	38354	A58	Bury	PCM	45.2	21.4	15.2	72.2	30.0	79,436	16%	5%	19%	24%	36%	na
2237_3790_DW	3790_2237	379830	410975	38354	A58	Bury	PCM	46.9	21.4	15.2	76.0	31.7	79,436	16%	5%	19%	24%	36%	na
3652_6021	3790_2237	379755	410929	38354	A58	Bury	PCM	42.6	21.4	15.2	64.5	27.4	79,436	16%	5%	19%	24%	36%	na
3089_5572_DW	3089_5572	379629	411052	N/A	B6214 CROSTONS ROAD	Bury	LA	40.6	23.0	16.3	55.2	24.3	46,139	22%	6%	13%	22%	37%	na
3089_5572	3089_5572	379597	411059	N/A	B6214 CROSTONS ROAD	Bury	LA	36.6	23.0	16.3	44.9	20.4	46,139	22%	6%	13%	22%	37%	na
4939_3424	4939_3424	380899	404868	17924	A56	Bury	PCM	39.7	17.0	12.4	61.5	27.3	22,924	8%	5%	26%	25%	36%	na
3424_4940_DW	3424_4940	380920	404881	17924	A56	Bury	PCM	44.8	17.0	12.4	76.9	32.4	19,908	11%	5%	32%	20%	32%	na
1742_9011_DW	1742_9011	381149	404182	46572	A56	Bury	PCM	41.5	20.4	14.6	66.0	26.9	37,586	21%	4%	30%	18%	27%	na
2483_2951_DW	2483_2951	380856	405206	17924	A56	Bury	PCM	39.2	17.9	13.0	58.7	26.1	45,775	12%	5%	20%	23%	39%	na
NonPCM_69	3424_4939	380931	404841	N/A	A56 BURY NEW ROAD	Bury	LA	44.6	17.0	12.4	75.6	32.2	42,832	10%	5%	29%	22%	34%	na
Jct495	3424_7436	380909	404951	N/A		Bury	LA	39.7	17.0	12.4	62.3	27.3	40,954	7%	6%	19%	28%	41%	na
1268_1269	1268_1269	383558	398278	27974	A34	Manchester	PCM	50.8	35.6	23.4	99.4	27.4	9,350	79%	2%	3%	6%	11%	na
1356_4539_DW	1356_4539	383054	398617	99519	A6042	Manchester	PCM	38.1	35.6	23.4	34.8	14.7	26,807	0%	7%	21%	28%	45%	na
1269_3272	1269_3272	383423	398312	27974	A34	Manchester	PCM	38.9	35.6	23.4	45.6	15.5	5,772	84%	1%	3%	4%	8%	na
1322_3273	1322_3273	383249	398058	27975	A34	Manchester	PCM	41.6	35.6	23.4	41.9	18.2	15,094	0%	8%	10%	25%	57%	na
1324_3276_DW	1324_3276	383489	397693	N/A	GREAT BRIDGEWATER STREET	Manchester	LA	41.0	29.6	20.1	52.2	20.9	8,452	16%	6%	23%	25%	30%	na
3272_8542_DW	3272_8542	383361	398267	N/A	GARTSIDE STREET	Manchester	LA	36.8	35.6	23.4	30.2	13.3	5,051	0%	9%	8%	18%	65%	na
1324_8570	1324_8570	383385	397701	7922	A6143	Manchester	PCM	36.7	29.6	20.1	39.3	16.6	13,083	10%	5%	21%	28%	36%	na
1312_5801_DW	1312_5801	383778	399163	36577	A56	Manchester	PCM	38.9	25.4	17.7	49.9	21.2	22,739	19%	4%	26%	25%	26%	na
1309_2291	1309_2291	384105	399123	17935	A665	Manchester	PCM	38.3	26.5	18.3	49.0	20.0	30,589	19%	5%	17%	26%	34%	na
2353_45005_DW	2353_45005	384492	398898	75248	A664	Manchester	PCM	37.4	35.8	23.6	34.7	13.8	6,562	80%	1%	8%	5%	7%	na
2353_45005	2353_45005	384467	398922	75248	A664	Manchester	PCM	39.3	35.8	23.6	40.8	15.7	6,562	80%	1%	8%	5%	7%	na
1472_1511_DW	1472_1511	385939	397630	27403	A635	Manchester	PCM	36.9	30.3	20.5	36.3	16.4	27,842	6%	4%	29%	31%	30%	na
1341_2939_DW	1341_2939	385618	397656	75239	A635	Manchester	PCM	41.7	30.3	20.5	50.6	21.2	25,055	8%	4%	40%	22%	27%	na
1341_2939	1341_2939	385616	397633	75239	A635	Manchester	PCM	36.3	30.3	20.5	35.9	15.8	25,055	8%	4%	40%	22%	27%	na
2608_4852_DW	2608_4852	385272	397130	26157	A6	Manchester	PCM	39.9	30.3	20.5	42.6	19.4	36,604	16%	6%	6%	32%	40%	na
2607_2608_DW	2607_2608	385142	397223	26157	A6	Manchester	PCM	37.1	30.3	20.5	35.8	16.7	36,484	15%	6%	5%	33%	41%	na
2607_3056_DW	2607_3056	384957	397311	26157	A6	Manchester	PCM	43.3	32.2	21.6	49.6	21.7	36,484	21%	6%	7%	27%	39%	na
2286_1286_DW	2286_1286	384598	398032	N/A	AUBURN STREET	Manchester	LA	38.7	35.8	23.6	38.2	15.2	7,178	14%	5%	26%	18%	37%	na

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
1242_1243	1242_1243	384483	398343	70154	A62	Manchester	PCM	50.4	35.8	23.6	116.6	26.8	1,446	100%	0%	0%	0%	0%	na
2293_6119_DW	2293_6119	384344	398215	N/A		Manchester	LA	41.7	35.8	23.6	60.1	18.1	2,316	100%	0%	0%	0%	0%	na
5429_8559_DW	5429_8559	384266	398150	N/A	NEW YORK STREET	Manchester	LA	36.6	35.8	23.6	32.2	13.0	6,293	31%	5%	4%	21%	39%	na
1338_2904_DW	1338_2904	384418	396982	N/A	B5117 OXFORD ROAD	Manchester	LA	40.1	30.6	20.7	56.7	19.4	2,560	100%	0%	0%	0%	0%	na
1338_4532_DW	1338_4532	384338	397135	75242	A34	Manchester	PCM	40.0	32.2	21.6	51.2	18.4	3,978	98%	0%	0%	0%	1%	na
2006_3292	2006_3292	384110	397858	56529	A5103	Manchester	PCM	43.0	32.2	21.6	70.8	21.5	5,945	90%	1%	1%	5%	3%	na
1336_16404	1336_16404	384137	397465	17929	A34	Manchester	PCM	44.5	32.2	21.6	80.9	23.0	4,853	95%	0%	1%	1%	3%	na
1336_16404_DW	1336_16404	384153	397473	17929	A34	Manchester	PCM	44.1	32.2	21.6	78.2	22.5	4,853	95%	0%	1%	1%	3%	na
1268_46301	1268_46301	383702	398229	7947	A34	Manchester	PCM	49.0	35.6	23.4	92.0	25.6	8,486	77%	1%	8%	6%	8%	na
8547_47130_DW	8547_47130	383976	398274	N/A	KING STREET	Manchester	LA	40.1	35.6	23.4	40.6	16.7	20,614	19%	6%	8%	23%	44%	na
8547_47130	8547_47130	383973	398256	N/A	KING STREET	Manchester	LA	43.3	35.6	23.4	49.4	19.9	20,614	19%	6%	8%	23%	44%	na
1259_1243	1259_1243	384409	398297	N/A	PICCADILLY	Manchester	LA	38.2	35.8	23.6	44.9	14.7	1,308	100%	0%	0%	0%	0%	na
2289_12835	2289_12835	384282	398507	70153	A6	Manchester	PCM	44.5	35.8	23.6	68.6	21.0	9,129	85%	1%	1%	4%	9%	na
3261_1302	3261_1302	384528	398779	75246	A665	Manchester	PCM	37.7	35.8	23.6	34.0	14.2	13,799	0%	6%	28%	26%	40%	na
8546_14050	8546_14050	384384	398801	57427	A664	Manchester	PCM	46.7	35.8	23.6	77.7	23.1	7,947	80%	2%	3%	4%	12%	na
5806_1304	5806_1304	384250	398668	57427	A664	Manchester	PCM	40.6	35.8	23.6	53.4	17.0	2,933	86%	1%	6%	4%	3%	na
2290_3027	2290_3027	384038	398775	48035	A6042	Manchester	PCM	40.7	35.8	23.6	54.0	17.1	2,994	94%	0%	1%	2%	2%	na
2290_3027_DW	2290_3027	384055	398767	48035	A6042	Manchester	PCM	42.7	35.8	23.6	63.0	19.1	2,994	94%	0%	1%	2%	2%	na
1305_2290_DW	1305_2290	384091	398691	N/A	WITHY GROVE	Manchester	LA	45.4	35.8	23.6	77.0	21.8	2,994	95%	0%	1%	2%	2%	na
1307_1317	1307_1317	383757	398717	36551	A6	Manchester	PCM	45.3	35.6	23.4	74.5	21.9	4,324	90%	1%	2%	4%	3%	na
1307_1317_DW	1307_1317	383771	398733	36551	A6	Manchester	PCM	42.0	35.6	23.4	58.7	18.5	4,324	90%	1%	2%	4%	3%	na
3056_3842	3056_3842	384855	397401	26157	A6	Manchester	PCM	38.9	32.2	21.6	39.5	17.3	38,674	29%	5%	13%	23%	30%	na
3056_3842_DW	3056_3842	384880	397418	26157	A6	Manchester	PCM	47.7	32.2	21.6	64.5	26.1	38,674	29%	5%	13%	23%	30%	na
3033_2293	3033_2293	384317	398195	N/A	PARKER STREET	Manchester	LA	46.9	35.8	23.6	89.2	23.4	2,455	100%	0%	0%	0%	0%	na
1261_6042_DW	1261_6042	384451	398215	77003	A6	Manchester	PCM	39.4	35.8	23.6	50.7	15.8	1,257	100%	0%	0%	0%	0%	na
1261_6042	1261_6042	384466	398201	77003	A6	Manchester	PCM	39.5	35.8	23.6	51.1	15.9	1,257	100%	0%	0%	0%	0%	na
3016_6022_DW	3016_6022	384639	397855	46165	A6	Manchester	PCM	40.1	32.2	21.6	53.3	18.5	7,294	66%	3%	5%	8%	18%	na
1302_8546	1302_8546	384428	398838	75248	A664	Manchester	PCM	42.1	35.8	23.6	57.6	18.5	8,013	72%	1%	14%	5%	8%	na
1302_8546_DW	1302_8546	384414	398854	75248	A664	Manchester	PCM	39.0	35.8	23.6	44.9	15.4	8,013	72%	1%	14%	5%	8%	na
2893_5074	2892_2890	384158	397155	75243	A57M	Manchester	PCM	36.8	32.2	21.6	34.5	15.2	63,126	0%	5%	10%	40%	45%	na
5409_5430_DW	5409_5430	384209	398072	N/A	CHARLOTTE STREET	Manchester	LA	38.1	35.8	23.6	34.3	14.6	12,878	2%	8%	5%	28%	57%	na
1263_5429	1263_5429	384207	398182	N/A	BACK GEORGE STREET	Manchester	LA	40.8	35.8	23.6	43.9	17.2	6,293	34%	5%	4%	20%	37%	na
2283_8544_DW	2283_8544	383791	398603	27992	A56	Manchester	PCM	47.5	35.6	23.4	83.9	24.1	4,324	85%	1%	4%	6%	4%	na
1267_1985	1267_1985	383672	398364	16536	A56	Manchester	PCM	44.0	35.6	23.4	57.0	20.6	8,714	49%	4%	8%	15%	25%	na
1267_1985_DW	1267_1985	383687	398358	16536	A56	Manchester	PCM	43.0	35.6	23.4	53.7	19.6	8,714	49%	4%	8%	15%	25%	na
1985_2283	1985_2283	383717	398477	16536	A56	Manchester	PCM	35.0	35.6	23.4	28.8	11.6	7,815	48%	4%	6%	17%	25%	na
1985_2283_DW	1985_2283	383734	398471	16536	A56	Manchester	PCM	36.0	35.6	23.4	31.5	12.6	7,815	48%	4%	6%	17%	25%	na
1685_1686_DW	1685_1686	387382	394221	73778	A6	Manchester	PCM	36.6	23.4	16.5	47.0	20.1	27,444	37%	4%	13%	17%	28%	na
1469_3669_DW	1469_3669	386578	395884	28695	A6	Manchester	PCM	37.1	24.5	17.1	45.6	20.0	27,563	36%	5%	6%	17%	35%	na
1684_4312_DW	1684_4312	387763	393475	73778	A6	Manchester	PCM	36.0	25.5	17.7	39.9	18.3	33,878	22%	6%	8%	21%	43%	na
4373_5121_DW	4373_5121	382333	389181	48339	A560	Manchester	PCM	36.3	18.5	13.4	49.0	22.9	33,288	3%	6%	26%	25%	40%	na
1846_2423	1846_2423	381858	388161	26047	M56	Manchester	PCM	38.6	18.9	13.7	51.8	24.9	14,146	18%	6%	5%	27%	44%	na
1846_2423_DW	1846_2423	381865	388177	26047	M56	Manchester	PCM	41.4	18.9	13.7	58.6	27.7	14,146	18%	6%	5%	27%	44%	na
2855_2218_DW	2856_2855	382356	390128	7701	A5103	Manchester	PCM	39.2	17.8	13.0	57.0	26.2	107,773	0%	7%	12%	30%	51%	na
2844_2848	2855_2847	382344	390388	7701	A5103	Manchester	PCM	40.8	17.8	13.0	60.2	27.8	130,549	2%	7%	14%	28%	50%	na
2847_2855_DW	2855_2847	382389	390376	7701	A5103	Manchester	PCM	40.5	17.8	13.0	59.0	27.5	130,549	2%	7%	14%	28%	50%	na
14951_17000_DW	14951_17000	381833	385986	N/A	THORLEY LANE	Manchester	LA	38.0	32.8	21.6	37.7	16.3	18,207	28%	5%	18%	17%	32%	na
7634_8756_DW	7634_8756	382361	385549	N/A	RINGWAY ROAD WEST	Manchester	LA	40.5	37.4	24.0	36.6	16.5	35,233	0%	5%	27%	22%	46%	na
12800_14480_DW	12800_14480	382038	385547	N/A	OUTWOOD LANE	Manchester	LA	41.9	37.4	24.0	39.6	17.8	35,021	0%	7%	24%	18%	52%	na

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
NonPCM_184	1336_16404	384110	397517	N/A	A34 OXFORD STREET	Manchester	LA	45.5	32.2	21.6	86.7	23.9	4,853	95%	0%	1%	1%	3%	na
NonPCM_207	4530_1268	383624	398258	N/A	A34 BRIDGE STREET	Manchester	LA	49.4	35.6	23.4	91.6	26.0	13,752	27%	6%	9%	22%	37%	na
NonPCM_216	5408_5432	384079	397954	N/A	GEORGE STREET	Manchester	LA	36.5	32.2	21.6	38.8	15.0	10,081	57%	4%	2%	12%	26%	na
Jct254	14490_5406	384292	398620	N/A		Manchester	LA	41.1	35.8	23.6	51.9	17.6	5,757	71%	2%	6%	7%	15%	na
Jct262	2006_3292	384156	397878	N/A		Manchester	LA	46.0	32.2	21.6	86.0	24.4	5,945	90%	1%	1%	5%	3%	na
Jct280	1402_5407	383617	397503	N/A		Manchester	LA	36.7	29.6	20.1	38.2	16.6	27,482	14%	7%	8%	25%	46%	na
Jct282	1275_1279	384116	398263	N/A		Manchester	LA	41.3	35.8	23.6	44.4	17.8	8,267	27%	6%	7%	22%	39%	na
Jct285	8546_14050	384363	398784	N/A		Manchester	LA	45.6	35.8	23.6	72.4	22.0	7,947	80%	2%	3%	4%	12%	na
Jct526	1275_1279	384116	398262	N/A		Manchester	LA	41.3	35.8	23.6	44.4	17.8	8,267	27%	6%	7%	22%	39%	na
3911_4112	3911_4112	389383	403282	99617	A663	Oldham	PCM	36.7	21.4	15.2	45.8	21.5	41,383	6%	6%	14%	26%	47%	na
1996_14524_DW	1996_14524	393502	405226	36632	A62	Oldham	PCM	39.7	25.7	17.8	48.6	21.9	33,085	17%	6%	14%	26%	37%	na
N14523_14524	14523_14524	393312	405043	36632	A62	Oldham	PCM	38.1	25.7	17.8	42.9	20.2	53,150	0%	7%	14%	32%	47%	na
1975_2466_DW	14523_7556	392991	404790	N/A	WATERLOO STREET	Oldham	LA	36.2	22.1	15.7	42.8	20.5	52,814	0%	6%	13%	33%	47%	na
7556_14523_DW	7556_14523	393092	404851	36632	A62	Oldham	PCM	38.8	24.5	17.1	46.1	21.7	24,908	1%	7%	18%	28%	47%	na
1295_1703	1295_1703	390482	402513	77008	A62	Oldham	PCM	38.3	22.3	15.8	49.1	22.5	37,170	9%	6%	20%	29%	37%	na
3914_5661_DW	3914_5661	390653	402743	6606	A62	Oldham	PCM	36.4	22.3	15.8	44.2	20.6	37,954	5%	5%	26%	31%	33%	na
3914_5661	3914_5661	390627	402753	6606	A62	Oldham	PCM	37.5	22.3	15.8	47.0	21.7	37,954	5%	5%	26%	31%	33%	na
1433_1615_DW	1433_1615	389260	401329	73781	A62	Oldham	PCM	36.4	20.2	14.5	52.3	21.9	17,450	28%	2%	31%	24%	15%	na
2202_2205_DW	2202_2205	389446	413627	27469	A680	Rochdale	PCM	37.2	27.0	18.6	40.1	18.6	24,051	8%	5%	21%	30%	36%	na
2210_14216_DW	2210_14216	388664	411856	17322	A664	Rochdale	PCM	43.7	17.9	13.0	75.0	30.7	34,377	0%	4%	44%	25%	27%	na
14220_14221	14220_14221	389004	412157	26586	A58	Rochdale	PCM	36.3	19.6	14.1	48.8	22.2	45,431	11%	5%	22%	24%	37%	na
2210_4463_DW	2210_4463	388729	411971	26586	A58	Rochdale	PCM	43.2	17.9	13.0	76.1	30.2	45,431	11%	4%	41%	20%	25%	na
2210_4463	2210_4463	388741	411950	26586	A58	Rochdale	PCM	37.2	17.9	13.0	57.3	24.2	45,431	11%	4%	41%	20%	25%	na
1345_1346_DW	1345_1346	380555	398426	56535	A5186	Salford	PCM	37.2	25.8	17.9	42.3	19.3	13,634	22%	4%	24%	20%	30%	na
1345_1346	1345_1346	380537	398426	56535	A5186	Salford	PCM	36.3	25.8	17.9	39.8	18.4	13,634	22%	4%	24%	20%	30%	na
1364_1366	1364_1366	381428	399804	17245	A576	Salford	PCM	38.5	24.5	17.1	50.2	21.4	30,856	25%	5%	22%	15%	34%	na
5249_7952	5249_7952	381205	399532	58028	A576	Salford	PCM	37.0	24.5	17.1	44.5	19.9	34,356	17%	6%	16%	19%	42%	na
5249_7952_DW	5249_7952	381224	399526	58028	A576	Salford	PCM	36.3	24.5	17.1	42.6	19.2	34,356	17%	6%	16%	19%	42%	na
2672_14311_DW	2299_14311	381434	399244	6161	A6	Salford	PCM	36.1	24.5	17.1	41.6	19.0	50,852	27%	6%	12%	17%	38%	na
14311_2299_DW	2299_14311	381488	399165	6161	A6	Salford	PCM	43.3	24.5	17.1	62.5	26.2	50,852	27%	6%	12%	17%	38%	na
3964_4732	3964_4732	382882	397222	99516	A56	Salford	PCM	35.3	24.7	17.2	38.1	18.1	42,568	4%	6%	16%	29%	44%	na
3964_4732_DW	3964_4732	382871	397244	99516	A56	Salford	PCM	40.2	24.7	17.2	49.6	22.9	42,568	4%	6%	16%	29%	44%	na
1867_4574_DW	1867_4574	382129	397840	36585	A57	Salford	PCM	42.6	24.7	17.2	57.4	25.4	51,621	2%	5%	26%	29%	38%	na
1232_1257	1232_1257	381738	398808	6161	A6	Salford	PCM	37.4	23.4	16.4	49.3	20.9	40,040	42%	4%	13%	14%	27%	na
1349_1867_DW	1349_1867	382371	397772	48023	A57	Salford	PCM	43.6	24.7	17.2	60.2	26.4	47,872	2%	5%	28%	27%	38%	na
3786_1233_DW	3968_1233	381517	398259	27751	A5063	Salford	PCM	35.6	23.4	16.4	40.9	19.1	32,911	6%	7%	18%	23%	46%	na
1349_2993_DW	1349_2993	382580	397716	73792	A57	Salford	PCM	45.7	24.7	17.2	64.6	28.5	57,405	2%	6%	22%	30%	41%	na
1349_2993	1349_2993	382574	397693	73792	A57	Salford	PCM	37.6	24.7	17.2	43.9	20.4	57,405	2%	6%	22%	30%	41%	na
5505_5507_DW	5505_5507	382099	398640	56160	A6	Salford	PCM	39.3	25.2	17.6	53.4	21.8	28,780	53%	4%	5%	13%	25%	na
3969_6612_DW	3969_6612	381512	398031	6562	A57	Salford	PCM	42.0	23.4	16.4	57.0	25.6	52,929	2%	5%	23%	30%	39%	na
4575_6612_DW	4575_6612	381692	397971	36585	A57	Salford	PCM	36.8	22.5	15.9	43.9	20.9	52,186	2%	6%	14%	37%	42%	na
3850_7895_DW	3850_7895	382754	398553	17926	A6	Salford	PCM	37.9	25.2	17.6	47.9	20.3	31,524	40%	5%	9%	17%	29%	na
4575_7897_DW	4575_7897	381821	397932	36585	A57	Salford	PCM	36.8	22.5	15.9	44.1	20.9	52,187	2%	6%	15%	36%	42%	na
3752_4897_DW	3752_4897	382876	398556	70151	A6	Salford	PCM	36.8	25.2	17.6	45.8	19.2	23,587	48%	4%	10%	15%	24%	na
3752_7895_DW	3752_7895	382815	398555	17926	A6	Salford	PCM	36.0	25.2	17.6	43.2	18.4	23,587	46%	4%	9%	16%	25%	na
12947_1223_DW	12947_1223	381649	398952	6161	A6	Salford	PCM	35.6	23.4	16.4	42.5	19.2	24,281	21%	7%	5%	22%	46%	na
12945_14431_DW	12945_14431	381917	398711	56160	A6	Salford	PCM	43.0	23.4	16.4	65.3	26.6	35,536	41%	5%	6%	16%	32%	na
1232_12945_DW	1232_12945	381825	398784	56160	A6	Salford	PCM	44.9	23.4	16.4	75.5	28.5	35,545	48%	3%	16%	13%	20%	na
3850_14502_DW	3850_14502	382685	398551	17926	A6	Salford	PCM	41.1	25.2	17.6	59.1	23.6	31,514	49%	4%	9%	14%	24%	na

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
5505_14310_DW	5505_14310	382293	398539	56160	A6	Salford	PCM	37.9	25.2	17.6	48.9	20.4	28,780	49%	4%	6%	14%	27%	na
1216_14503_DW	1216_14503	382565	398546	17926	A6	Salford	PCM	46.8	25.2	17.6	81.1	29.3	31,518	51%	3%	15%	13%	19%	na
1216_14503	1216_14503	382567	398523	17926	A6	Salford	PCM	41.1	25.2	17.6	60.0	23.5	31,518	51%	3%	15%	13%	19%	na
5179_5182_DW	5179_5182	374598	400597	74618	A572	Salford	PCM	39.5	14.7	10.9	61.1	28.6	34,629	3%	7%	15%	30%	46%	na
1579_17017_DW	1579_17017	377344	400951	37363	A580	Salford	PCM	37.8	17.8	13.0	55.4	24.8	39,545	9%	5%	24%	25%	37%	na
1589_14316_DW	1589_14316	378317	399184	7292	A576	Salford	PCM	37.5	23.0	16.3	53.7	21.2	18,778	46%	3%	26%	10%	16%	na
NonPCM_147	4951_4554	375357	397837	N/A	A57 LIVERPOOL ROAD	Salford	LA	37.9	15.6	11.5	57.3	26.4	18,335	20%	5%	6%	29%	39%	na
NonPCM_219	2993_1202	382678	397661	N/A	A57 REGENT ROAD	Salford	LA	41.8	24.7	17.2	56.4	24.5	57,405	2%	4%	37%	26%	31%	na
Jct205	4554_4951	375367	397806	N/A		Salford	LA	36.3	15.6	11.5	52.8	24.8	18,335	20%	5%	6%	29%	39%	na
Jct290	1216_7959	382540	398554	N/A		Salford	LA	40.4	25.2	17.6	57.5	22.9	5,285	0%	6%	24%	32%	39%	na
1859_14054_DW	1859_14054	389505	390884	N/A	B6167 LANCASHIRE HILL	Stockport	LA	36.1	23.9	16.8	40.6	19.3	15,325	15%	6%	11%	26%	42%	na
3620_5931_DW	3620_5931	390351	390720	37920	A626	Stockport	PCM	38.9	24.2	16.9	47.5	22.0	34,081	0%	6%	23%	32%	39%	na
2663_5015	2663_5015	390347	391028	N/A	B6104 CARRINGTON ROAD	Stockport	LA	37.0	19.0	13.7	53.5	23.2	17,721	22%	3%	37%	21%	17%	na
2663_5015_DW	2663_5015	390344	391047	N/A	B6104 CARRINGTON ROAD	Stockport	LA	42.9	19.0	13.7	71.4	29.1	17,721	22%	3%	37%	21%	17%	na
5021_6254_DW	5021_6254	390116	391212	37920	A626	Stockport	PCM	38.8	19.0	13.7	54.6	25.1	31,466	0%	4%	28%	38%	30%	na
1859_1860	1859_1860	389494	390731	58254	A560	Stockport	PCM	37.4	23.9	16.8	44.7	20.6	5,453	54%	3%	10%	15%	17%	na
3426_4162_DW	3426_4162	390357	390129	27384	A626	Stockport	PCM	37.1	24.2	16.9	43.6	20.1	31,953	9%	6%	17%	25%	43%	na
5160_6071_DW	5160_6071	392018	392010	27296	A560	Stockport	PCM	35.6	24.7	17.2	38.9	18.4	32,192	0%	7%	22%	24%	47%	na
1924_8878_DW	1924_8878	392443	391754	27296	A560	Stockport	PCM	37.9	20.2	14.5	55.9	23.4	33,348	13%	5%	36%	14%	32%	na
3973_14181_DW	3973_14181	388375	390354	58034	A5145	Stockport	PCM	42.0	20.9	14.9	61.0	27.1	26,281	14%	5%	21%	26%	34%	na
3973_14181	3973_14181	388376	390333	58034	A5145	Stockport	PCM	39.5	20.9	14.9	53.7	24.6	26,281	14%	5%	21%	26%	34%	na
2430_3710_DW	2430_3710	385097	388122	38735	A34	Stockport	PCM	36.8	19.0	13.8	48.0	23.1	67,771	0%	7%	13%	29%	51%	na
2887_2430_DW	2887_2430	385044	388518	26352	A34	Stockport	PCM	40.8	19.0	13.8	57.6	27.1	40,090	1%	6%	14%	27%	51%	na
2184_14428_DW	2184_14428	391822	387266	99018	A6	Stockport	PCM	37.7	19.6	14.1	53.9	23.7	33,655	13%	6%	26%	19%	36%	na
6055_14428_DW	6055_14428	391767	387344	99018	A6	Stockport	PCM	36.0	19.6	14.1	49.2	21.9	33,655	13%	6%	25%	20%	37%	na
NonPCM_273	6205_6055	391720	387414	N/A	A6 LONDON ROAD	Stockport	LA	36.8	19.6	14.1	52.7	22.8	33,655	16%	5%	29%	18%	31%	na
Jct355	1850_1864	389388	390175	N/A		Stockport	LA	39.3	23.9	16.8	56.4	22.5	24,280	14%	5%	17%	26%	37%	na
Jct539	3426_4162	390301	390159	N/A		Stockport	LA	37.6	24.2	16.9	45.0	20.6	31,953	9%	6%	17%	25%	43%	na
7637_2941_DW	7637_2941	393180	398661	99618	A635	Tameside	PCM	41.7	25.8	17.9	55.5	23.8	28,221	21%	5%	22%	24%	28%	na
2941_5978_DW	7638_5978	393398	398690	37451	A635	Tameside	PCM	37.9	25.8	17.9	42.0	20.0	53,025	0%	6%	14%	34%	46%	na
1695_14478_DW	1695_14478	392753	398494	99618	A635	Tameside	PCM	42.1	25.5	17.7	54.1	24.4	46,254	4%	5%	21%	31%	38%	na
1695_14478	1695_14478	392761	398476	99618	A635	Tameside	PCM	36.8	25.5	17.7	40.9	19.1	46,254	4%	5%	21%	31%	38%	na
3813_3812_DW	3813_3812	392978	398478	74561	A6017	Tameside	PCM	38.2	25.5	17.7	44.3	20.6	33,169	9%	6%	14%	31%	40%	na
7638_3813	7638_3813	393112	398511	74561	A6017	Tameside	PCM	37.7	25.8	17.9	43.5	19.8	30,841	12%	6%	20%	23%	39%	na
1695_5659	1695_5659	392588	398416	99618	A635	Tameside	PCM	36.3	25.5	17.7	39.3	18.7	47,556	4%	6%	17%	34%	39%	na
1695_5659_DW	1695_5659	392582	398435	99618	A635	Tameside	PCM	41.6	25.5	17.7	52.0	23.9	47,556	4%	6%	17%	34%	39%	na
5655_5656_DW	5655_5656	392042	398069	76074	A6140	Tameside	PCM	38.2	25.5	17.7	45.7	20.5	21,585	0%	4%	41%	26%	28%	na
3812_14478	3812_14478	392855	398516	74561	A6017	Tameside	PCM	37.1	25.5	17.7	42.2	19.4	41,257	7%	5%	24%	30%	34%	na
3812_14478_DW	3812_14478	392847	398534	99618	A635	Tameside	PCM	42.2	25.5	17.7	55.4	24.5	41,257	7%	5%	24%	30%	34%	na
3761_5653_DW	3761_5653	390802	395630	99512	A57	Tameside	PCM	35.6	18.6	13.5	47.9	22.2	19,933	8%	5%	26%	29%	33%	na
Jct449	3227_8517	391912	395574	N/A		Tameside	LA	36.5	20.5	14.6	46.0	21.9	18,957	2%	7%	9%	35%	48%	na
2305_5949_DW	2305_5949	380182	395145	36578	A56	Trafford	PCM	36.4	29.3	19.8	35.3	16.6	31,175	19%	6%	10%	21%	43%	na
1382_3622_DW	1382_3622	380628	395827	56499	A56	Trafford	PCM	36.9	29.3	19.8	36.6	17.1	35,391	16%	7%	9%	24%	44%	na
7603_7606_DW	7603_7606	376675	396960	N/A	B5214 TRAFFORD BOULEVARD	Trafford	LA	39.2	19.5	14.1	61.8	25.1	20,529	26%	4%	26%	14%	30%	na
7606_17100_DW	7606_17100	376759	397007	N/A	B5214 TRAFFORD BOULEVARD	Trafford	LA	40.5	19.6	14.1	66.9	26.4	28,968	36%	4%	23%	11%	25%	na
NonPCM_324	2833_2349	378901	392774	N/A	A56 CROSS STREET	Trafford	LA	37.7	19.0	13.7	51.6	24.0	46,299	8%	7%	13%	26%	46%	na
Jct225	3529_8101	377585	395102	N/A		Trafford	LA	35.9	19.0	13.7	45.5	22.1	8,257	0%	9%	6%	22%	62%	na
Jct231	3304_3529	377588	395133	N/A		Trafford	LA	36.5	19.0	13.7	47.1	22.8	6,653	0%	6%	31%	21%	42%	na
3492_3511_DW	3492_3511	358611	405310	8566	A577	Wigan	PCM	35.2	29.1	19.7	33.5	15.5	22,369	7%	5%	23%	26%	39%	na

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
3431_7687_DW	3431_7687	358110	405811	N/A	MARKET STREET	Wigan	LA	35.8	29.1	19.7	44.2	16.1	2,098	100%	0%	0%	0%	0%	na
3103_3435_DW	3103_3435	358085	405595	N/A	KING STREET WEST	Wigan	LA	40.1	29.1	19.7	57.5	20.4	7,335	77%	1%	9%	5%	7%	na
3396_3466_DW	3396_3466	358002	405379	8568	A49	Wigan	PCM	36.3	29.1	19.7	38.7	16.6	18,994	46%	4%	10%	14%	26%	na
3103_8156	3103_8156	358146	405514	N/A		Wigan	LA	38.0	29.1	19.7	47.5	18.3	7,996	53%	2%	23%	14%	9%	na
3431_3463	3431_3463	358038	405924	N/A	NEW MARKET STREET	Wigan	LA	36.9	29.1	19.7	43.4	17.1	12,534	63%	3%	7%	9%	18%	na
Jct485	3103_3435	358163	405546	N/A	KING STREET WEST	Wigan	LA	36.0	29.1	19.7	41.8	16.3	7,335	77%	1%	9%	5%	7%	na

Table B-4: Predicted annual mean NO₂ concentrations and source apportionment at exceedance links on the Greater Manchester road network – Consultation Option - 2023

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
2119_2564_DW	2119_2564	371207	409524	17905	A673	Bolton	PCM	33.1	26.0	18.1	31.3	15.0	27,824	13%	6%	5%	21%	55%	-5.3
2799_3775_DW	2799_3775	371869	409735	8030	A666	Bolton	PCM	34.9	26.0	18.1	34.6	16.8	21,831	0%	6%	5%	31%	58%	-3.7
2799_3118_DW	2799_3118	371751	409800	58048	A673	Bolton	PCM	35.8	26.0	18.1	38.3	17.7	27,717	0%	5%	26%	24%	45%	-4.2
2650_2653_DW	2653_2650	372915	407622	7431	A666	Bolton	PCM	35.7	24.8	17.3	37.2	18.3	69,221	0%	5%	3%	39%	52%	-3.6
2649_2650_DW	2650_2649	372622	408297	7431	A666	Bolton	PCM	33.3	23.4	16.5	33.9	16.9	71,428	0%	5%	3%	39%	53%	-3.3
1986_2053_DW	1986_2053	372038	408749	74518	A575	Bolton	PCM	31.3	23.4	16.5	31.4	14.8	21,546	24%	5%	8%	20%	44%	-6.1
2053_12949_DW	2053_12949	371997	408820	74518	A575	Bolton	PCM	31.8	26.6	18.4	29.1	13.4	15,412	40%	4%	2%	17%	36%	-5.9
3064_15148_DW	3064_15148	371642	408705	7921	A579	Bolton	PCM	33.3	26.6	18.4	32.6	14.9	26,066	31%	5%	6%	16%	42%	-5.2
2648_6404_DW	2648_6404	372355	408934	47988	A579	Bolton	PCM	33.7	23.4	16.5	35.2	17.2	31,987	2%	6%	7%	33%	52%	-4.4
2407_6761_DW	2407_6761	374740	405143	73087	A667	Bolton	PCM	33.9	17.6	12.8	46.8	21.1	36,642	7%	4%	31%	19%	38%	-5.0
NonPCM_307	6404_2648	372340	408924	N/A	A579 BRADFORD STREET	Bolton	LA	34.0	23.4	16.5	35.9	17.5	31,987	2%	6%	7%	33%	52%	-4.2
Jct490	2113_2119	371155	409546	N/A		Bolton	LA	37.1	26.0	18.1	40.7	19.0	10,084	9%	5%	4%	32%	49%	-6.8
Jct491	2490_14486	371909	409019	N/A		Bolton	LA	30.2	26.0	18.1	25.7	12.1	15,391	39%	4%	2%	16%	38%	-6.3
4912_2244	4912_2244	381959	410596	73198	A58	Bury	PCM	31.0	21.1	15.1	32.6	15.9	23,898	3%	5%	18%	33%	42%	-5.7
2244_2756_DW	2244_2756	381848	410697	N/A	B6221 WASH LANE	Bury	LA	31.5	21.1	15.1	34.4	16.4	19,613	0%	5%	27%	25%	44%	-5.5
2244_4913_DW	2244_4913	381968	410627	73198	A58	Bury	PCM	36.1	21.1	15.1	44.4	21.0	24,288	2%	6%	11%	25%	55%	-6.8
2552_3975_DW	2552_3975	380966	411188	N/A	B6222 MOORGATE	Bury	LA	32.7	20.1	14.5	40.3	18.2	25,052	6%	5%	34%	17%	39%	-4.5
2243_4639_DW	2243_4639	381310	410749	16556	A58	Bury	PCM	32.6	21.1	15.1	36.7	17.5	28,572	13%	4%	10%	31%	42%	-5.4
3790_3652	3790_2237	379874	410937	38354	A58	Bury	PCM	39.6	21.4	15.2	55.3	24.4	79,390	8%	5%	16%	23%	47%	-5.6
2237_3790_DW	3790_2237	379830	410975	38354	A58	Bury	PCM	40.9	21.4	15.2	57.4	25.7	79,390	8%	5%	16%	23%	47%	-6.0
3652_6021	3790_2237	379755	410929	38354	A58	Bury	PCM	37.4	21.4	15.2	49.4	22.2	79,390	8%	5%	16%	23%	47%	-5.2
3089_5572_DW	3089_5572	379629	411052	N/A	B6214 CROSTONS ROAD	Bury	LA	35.1	23.0	16.3	40.0	18.9	46,108	12%	6%	8%	23%	52%	-5.5
3089_5572	3089_5572	379597	411059	N/A	B6214 CROSTONS ROAD	Bury	LA	32.0	23.0	16.3	32.7	15.7	46,108	12%	6%	8%	23%	52%	-4.6
4939_3424	4939_3424	380899	404868	17924	A56	Bury	PCM	33.6	17.0	12.4	44.4	21.2	22,890	1%	6%	14%	27%	53%	-6.1
3424_4940_DW	3424_4940	380920	404881	17924	A56	Bury	PCM	37.8	17.0	12.4	55.0	25.4	19,874	3%	5%	23%	22%	47%	-7.0
1742_9011_DW	1742_9011	381149	404182	46572	A56	Bury	PCM	35.4	20.4	14.6	46.9	20.8	37,449	11%	4%	27%	19%	39%	-6.1
2483_2951_DW	2483_2951	380856	405206	17924	A56	Bury	PCM	32.9	17.9	13.0	41.0	19.9	45,680	2%	6%	11%	25%	57%	-6.3
NonPCM_69	3424_4939	380931	404841	N/A	A56 BURY NEW ROAD	Bury	LA	37.9	17.0	12.4	55.0	25.5	42,764	2%	6%	18%	24%	50%	-6.7
Jct495	3424_7436	380909	404951	N/A		Bury	LA	33.4	17.0	12.4	44.1	21.0	40,880	1%	6%	9%	29%	56%	-6.3
1268_1269	1268_1269	383558	398278	27974	A34	Manchester	PCM	41.5	35.6	23.4	53.5	18.0	9,268	67%	2%	3%	8%	20%	-9.3
1356_4539_DW	1356_4539	383054	398617	99519	A6042	Manchester	PCM	34.9	35.6	23.4	26.1	11.5	26,782	0%	6%	12%	26%	56%	-3.2
1269_3272	1269_3272	383423	398312	27974	A34	Manchester	PCM	32.3	35.6	23.4	22.9	8.8	5,642	72%	2%	3%	7%	16%	-6.6
1322_3273	1322_3273	383249	398058	27975	A34	Manchester	PCM	38.9	35.6	23.4	34.9	15.5	15,059	0%	7%	4%	21%	66%	-2.7
1324_3276_DW	1324_3276	383489	397693	N/A	GREAT BRIDGEWATER STREET	Manchester	LA	35.5	29.6	20.1	35.6	15.4	8,423	8%	6%	14%	28%	44%	-5.5
3272_8542_DW	3272_8542	383361	398267	N/A	GARTSIDE STREET	Manchester	LA	34.9	35.6	23.4	25.5	11.5	5,102	0%	8%	4%	15%	74%	-1.9
1324_8570	1324_8570	383385	397701	7922	A6143	Manchester	PCM	33.5	29.6	20.1	30.5	13.4	13,028	5%	5%	18%	27%	45%	-3.2
1312_5801_DW	1312_5801	383778	399163	36577	A56	Manchester	PCM	34.1	25.4	17.7	36.5	16.4	22,670	14%	4%	23%	24%	35%	-4.8
1309_2291	1309_2291	384105	399123	17935	A665	Manchester	PCM	32.2	26.5	18.3	30.9	13.9	30,480	3%	6%	10%	30%	52%	-6.1
2353_45005_DW	2353_45005	384492	398898	75248	A664	Manchester	PCM	31.8	35.8	23.6	18.7	8.2	6,493	69%	2%	8%	7%	14%	-5.6
2353_45005	2353_45005	384467	398922	75248	A664	Manchester	PCM	32.9	35.8	23.6	21.8	9.3	6,493	69%	2%	8%	7%	14%	-6.4
1472_1511_DW	1472_1511	385939	397630	27403	A635	Manchester	PCM	32.3	30.3	20.5	24.5	11.8	27,793	2%	5%	15%	34%	45%	-4.6
1341_2939_DW	1341_2939	385618	397656	75239	A635	Manchester	PCM	36.0	30.3	20.5	34.1	15.5	25,008	3%	4%	27%	24%	41%	-5.7
1341_2939	1341_2939	385616	397633	75239	A635	Manchester	PCM	31.9	30.3	20.5	24.3	11.4	25,008	3%	4%	27%	24%	41%	-4.4
2608_4852_DW	2608_4852	385272	397130	26157	A6	Manchester	PCM	35.7	30.3	20.5	31.6	15.2	36,483	6%	6%	3%	32%	53%	-4.2
2607_2608_DW	2607_2608	385142	397223	26157	A6	Manchester	PCM	33.4	30.3	20.5	26.5	12.9	36,364	6%	6%	3%	32%	53%	-3.7
2607_3056_DW	2607_3056	384957	397311	26157	A6	Manchester	PCM	38.5	32.2	21.6	36.1	16.9	36,365	11%	6%	4%	27%	52%	-4.8
2286_1286_DW	2286_1286	384598	398032	N/A	AUBURN STREET	Manchester	LA	36.1	35.8	23.6	30.7	12.6	7,092	17%	4%	22%	16%	41%	-2.6

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
1242_1243	1242_1243	384483	398343	70154	A62	Manchester	PCM	38.9	35.8	23.6	51.9	15.4	1,447	100%	0%	0%	0%	0%	-11.5
2293_6119_DW	2293_6119	384344	398215	N/A		Manchester	LA	28.2	35.8	23.6	11.9	4.7	2,316	100%	0%	0%	0%	0%	-13.5
5429_8559_DW	5429_8559	384266	398150	N/A	NEW YORK STREET	Manchester	LA	32.2	35.8	23.6	19.6	8.7	6,259	12%	6%	2%	23%	57%	-4.4
1338_2904_DW	1338_2904	384418	396982	N/A	B5117 OXFORD ROAD	Manchester	LA	26.1	30.6	20.7	12.1	5.5	2,561	100%	0%	0%	0%	0%	-14.0
1338_4532_DW	1338_4532	384338	397135	75242	A34	Manchester	PCM	27.8	32.2	21.6	13.5	6.3	3,964	88%	1%	0%	1%	10%	-12.2
2006_3292	2006_3292	384110	397858	56529	A5103	Manchester	PCM	28.9	32.2	21.6	17.9	7.3	5,942	64%	2%	2%	17%	15%	-14.1
1336_16404	1336_16404	384137	397465	17929	A34	Manchester	PCM	29.5	32.2	21.6	20.2	8.0	4,810	82%	1%	1%	4%	12%	-15.0
1336_16404_DW	1336_16404	384153	397473	17929	A34	Manchester	PCM	29.3	32.2	21.6	19.7	7.8	4,810	82%	1%	1%	4%	12%	-14.8
1268_46301	1268_46301	383702	398229	7947	A34	Manchester	PCM	41.1	35.6	23.4	54.6	17.7	8,471	68%	2%	9%	8%	13%	-7.9
8547_47130_DW	8547_47130	383976	398274	N/A	KING STREET	Manchester	LA	36.4	35.6	23.4	29.9	13.0	20,553	10%	6%	5%	22%	57%	-3.7
8547_47130	8547_47130	383973	398256	N/A	KING STREET	Manchester	LA	39.1	35.6	23.4	36.6	15.7	20,553	10%	6%	5%	22%	57%	-4.2
1259_1243	1259_1243	384409	398297	N/A	PICCADILLY	Manchester	LA	27.9	35.8	23.6	11.0	4.4	1,310	100%	0%	0%	0%	0%	-10.3
2289_12835	2289_12835	384282	398507	70153	A6	Manchester	PCM	35.1	35.8	23.6	31.0	11.5	9,182	70%	2%	1%	6%	21%	-9.4
3261_1302	3261_1302	384528	398779	75246	A665	Manchester	PCM	34.1	35.8	23.6	23.9	10.6	13,731	0%	6%	14%	26%	54%	-3.6
8546_14050	8546_14050	384384	398801	57427	A664	Manchester	PCM	37.4	35.8	23.6	38.5	13.9	7,934	66%	3%	2%	5%	24%	-9.3
5806_1304	5806_1304	384250	398668	57427	A664	Manchester	PCM	33.2	35.8	23.6	26.7	9.7	2,902	78%	1%	9%	6%	7%	-7.4
2290_3027	2290_3027	384038	398775	48035	A6042	Manchester	PCM	28.3	35.8	23.6	11.6	4.7	2,951	75%	2%	3%	7%	13%	-12.4
2290_3027_DW	2290_3027	384055	398767	48035	A6042	Manchester	PCM	28.9	35.8	23.6	13.2	5.3	2,951	75%	2%	3%	7%	13%	-13.8
1305_2290_DW	1305_2290	384091	398691	N/A	WITHY GROVE	Manchester	LA	31.4	35.8	23.6	20.8	7.8	2,951	83%	1%	2%	6%	8%	-14.0
1307_1317	1307_1317	383757	398717	36551	A6	Manchester	PCM	34.6	35.6	23.4	31.3	11.2	4,303	81%	1%	2%	8%	8%	-10.7
1307_1317_DW	1307_1317	383771	398733	36551	A6	Manchester	PCM	32.7	35.6	23.4	25.0	9.3	4,303	81%	1%	2%	8%	8%	-9.3
3056_3842	3056_3842	384855	397401	26157	A6	Manchester	PCM	32.4	32.2	21.6	22.2	10.8	38,483	7%	6%	4%	27%	56%	-6.5
3056_3842_DW	3056_3842	384880	397418	26157	A6	Manchester	PCM	38.0	32.2	21.6	34.8	16.4	38,483	7%	6%	4%	27%	56%	-9.7
3033_2293	3033_2293	384317	398195	N/A	PARKER STREET	Manchester	LA	30.0	35.8	23.6	17.2	6.5	2,455	100%	0%	0%	0%	0%	-16.9
1261_6042_DW	1261_6042	384451	398215	77003	A6	Manchester	PCM	33.2	35.8	23.6	27.8	9.6	1,257	100%	0%	0%	0%	0%	-6.2
1261_6042	1261_6042	384466	398201	77003	A6	Manchester	PCM	33.3	35.8	23.6	28.1	9.7	1,257	100%	0%	0%	0%	0%	-6.2
3016_6022_DW	3016_6022	384639	397855	46165	A6	Manchester	PCM	35.8	32.2	21.6	37.9	14.2	7,279	59%	3%	5%	8%	25%	-4.3
1302_8546	1302_8546	384428	398838	75248	A664	Manchester	PCM	34.9	35.8	23.6	30.8	11.3	7,884	58%	2%	18%	7%	14%	-7.2
1302_8546_DW	1302_8546	384414	398854	75248	A664	Manchester	PCM	32.8	35.8	23.6	24.1	9.2	7,884	58%	2%	18%	7%	14%	-6.2
2893_5074	2892_2890	384158	397155	75243	A57M	Manchester	PCM	33.8	32.2	21.6	26.8	12.2	62,922	0%	5%	4%	36%	55%	-3.0
5409_5430_DW	5409_5430	384209	398072	N/A	CHARLOTTE STREET	Manchester	LA	34.9	35.8	23.6	25.5	11.4	12,823	2%	7%	2%	24%	65%	-3.2
1263_5429	1263_5429	384207	398182	N/A	BACK GEORGE STREET	Manchester	LA	35.5	35.8	23.6	27.3	11.9	6,259	13%	6%	2%	22%	57%	-5.3
2283_8544_DW	2283_8544	383791	398603	27992	A56	Manchester	PCM	36.6	35.6	23.4	37.5	13.2	4,303	73%	2%	4%	11%	10%	-10.9
1267_1985	1267_1985	383672	398364	16536	A56	Manchester	PCM	38.2	35.6	23.4	37.2	14.7	8,692	37%	4%	5%	17%	37%	-5.8
1267_1985_DW	1267_1985	383687	398358	16536	A56	Manchester	PCM	37.4	35.6	23.4	35.0	14.0	8,692	37%	4%	5%	17%	37%	-5.6
1985_2283	1985_2283	383717	398477	16536	A56	Manchester	PCM	30.4	35.6	23.4	15.8	7.0	7,772	21%	6%	4%	23%	46%	-4.6
1985_2283_DW	1985_2283	383734	398471	16536	A56	Manchester	PCM	31.0	35.6	23.4	17.3	7.6	7,772	21%	6%	4%	23%	46%	-5.0
1685_1686_DW	1685_1686	387382	394221	73778	A6	Manchester	PCM	31.4	23.4	16.5	32.2	14.9	27,414	23%	5%	12%	19%	41%	-5.2
1469_3669_DW	1469_3669	386578	395884	28695	A6	Manchester	PCM	32.3	24.5	17.1	32.3	15.2	27,499	23%	6%	4%	17%	51%	-4.8
1684_4312_DW	1684_4312	387763	393475	73778	A6	Manchester	PCM	31.7	25.5	17.7	28.4	13.9	33,873	6%	7%	4%	22%	61%	-4.3
4373_5121_DW	4373_5121	382333	389181	48339	A560	Manchester	PCM	31.9	18.5	13.4	38.0	18.6	33,245	1%	6%	15%	24%	53%	-4.4
1846_2423	1846_2423	381858	388161	26047	M56	Manchester	PCM	34.7	18.9	13.7	42.5	21.0	14,131	3%	7%	3%	27%	61%	-3.9
1846_2423_DW	1846_2423	381865	388177	26047	M56	Manchester	PCM	37.0	18.9	13.7	47.7	23.3	14,131	3%	7%	3%	27%	61%	-4.4
2855_2218_DW	2856_2855	382356	390128	7701	A5103	Manchester	PCM	34.7	17.8	13.0	45.0	21.7	107,696	0%	6%	5%	28%	61%	-4.5
2844_2848	2855_2847	382344	390388	7701	A5103	Manchester	PCM	36.5	17.8	13.0	48.9	23.5	130,443	0%	6%	7%	26%	61%	-4.3
2847_2855_DW	2855_2847	382389	390376	7701	A5103	Manchester	PCM	36.3	17.8	13.0	48.2	23.3	130,443	0%	6%	7%	26%	61%	-4.2
14951_17000_DW	14951_17000	381833	385986	N/A	THORLEY LANE	Manchester	LA	34.0	32.8	21.6	26.8	12.3	18,200	18%	5%	13%	18%	46%	-4.0
7634_8756_DW	7634_8756	382361	385549	N/A	RINGWAY ROAD WEST	Manchester	LA	38.4	37.4	24.0	31.5	14.4	35,210	0%	4%	23%	19%	54%	-2.1
12800_14480_DW	12800_14480	382038	385547	N/A	OUTWOOD LANE	Manchester	LA	38.9	37.4	24.0	31.6	14.9	35,026	0%	7%	11%	17%	65%	-3.0

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
NonPCM_184	1336_16404	384110	397517	N/A	A34 OXFORD STREET	Manchester	LA	28.8	32.2	21.6	18.0	7.2	4,810	82%	1%	1%	4%	12%	-16.7
NonPCM_207	4530_1268	383624	398258	N/A	A34 BRIDGE STREET	Manchester	LA	40.4	35.6	23.4	49.5	17.0	13,767	21%	6%	5%	20%	48%	-9.0
NonPCM_216	5408_5432	384079	397954	N/A	GEORGE STREET	Manchester	LA	30.1	32.2	21.6	19.4	8.6	10,040	22%	6%	1%	18%	53%	-6.4
Jct254	14490_5406	384292	398620	N/A		Manchester	LA	34.9	35.8	23.6	29.8	11.3	5,754	58%	3%	7%	8%	24%	-6.2
Jct262	2006_3292	384156	397878	N/A		Manchester	LA	30.2	32.2	21.6	21.4	8.6	5,942	64%	2%	2%	17%	15%	-15.8
Jct280	1402_5407	383617	397503	N/A		Manchester	LA	33.6	29.6	20.1	29.9	13.5	27,364	7%	7%	4%	24%	58%	-3.1
Jct282	1275_1279	384116	398263	N/A		Manchester	LA	36.4	35.8	23.6	29.3	12.8	8,214	10%	6%	4%	23%	57%	-4.9
Jct285	8546_14050	384363	398784	N/A		Manchester	LA	36.6	35.8	23.6	35.8	13.1	7,934	66%	3%	2%	5%	24%	-9.0
Jct526	1275_1279	384116	398262	N/A		Manchester	LA	36.4	35.8	23.6	29.3	12.8	8,214	10%	6%	4%	23%	57%	-4.9
3911_4112	3911_4112	389383	403282	99617	A663	Oldham	PCM	33.0	21.4	15.2	36.5	17.8	41,337	4%	6%	7%	24%	59%	-3.7
1996_14524_DW	1996_14524	393502	405226	36632	A62	Oldham	PCM	34.4	25.7	17.8	34.5	16.6	33,061	6%	6%	8%	27%	53%	-5.3
N14523_14524	14523_14524	393312	405043	36632	A62	Oldham	PCM	34.4	25.7	17.8	33.9	16.5	53,087	0%	6%	7%	29%	58%	-3.7
1975_2466_DW	14523_7556	392991	404790	N/A	WATERLOO STREET	Oldham	LA	32.7	22.1	15.7	34.7	17.1	52,744	0%	6%	7%	30%	57%	-3.5
7556_14523_DW	7556_14523	393092	404851	36632	A62	Oldham	PCM	35.1	24.5	17.1	37.1	18.0	24,900	0%	6%	10%	25%	58%	-3.7
1295_1703	1295_1703	390482	402513	77008	A62	Oldham	PCM	33.4	22.3	15.8	36.6	17.7	37,122	6%	6%	11%	28%	49%	-4.9
3914_5661_DW	3914_5661	390653	402743	6606	A62	Oldham	PCM	31.6	22.3	15.8	32.2	15.8	37,934	1%	5%	14%	33%	47%	-4.8
3914_5661	3914_5661	390627	402753	6606	A62	Oldham	PCM	32.5	22.3	15.8	34.3	16.8	37,934	1%	5%	14%	33%	47%	-5.0
1433_1615_DW	1433_1615	389260	401329	73781	A62	Oldham	PCM	31.0	20.2	14.5	37.3	16.5	17,436	21%	3%	31%	25%	21%	-5.4
2202_2205_DW	2202_2205	389446	413627	27469	A680	Rochdale	PCM	34.0	27.0	18.6	32.3	15.4	24,008	5%	5%	18%	27%	45%	-3.2
2210_14216_DW	2210_14216	388664	411856	17322	A664	Rochdale	PCM	38.3	17.9	13.0	58.7	25.3	34,374	0%	4%	38%	24%	34%	-5.4
14220_14221	14220_14221	389004	412157	26586	A58	Rochdale	PCM	30.9	19.6	14.1	34.4	16.8	45,408	3%	6%	12%	25%	53%	-5.4
2210_4463_DW	2210_4463	388729	411971	26586	A58	Rochdale	PCM	37.4	17.9	13.0	57.4	24.4	45,408	6%	4%	37%	20%	34%	-5.8
2210_4463	2210_4463	388741	411950	26586	A58	Rochdale	PCM	32.2	17.9	13.0	43.1	19.2	45,408	6%	4%	37%	20%	34%	-5.0
1345_1346_DW	1345_1346	380555	398426	56535	A5186	Salford	PCM	32.5	25.8	17.9	30.2	14.7	13,589	11%	5%	15%	22%	46%	-4.7
1345_1346	1345_1346	380537	398426	56535	A5186	Salford	PCM	32.0	25.8	17.9	28.8	14.1	13,589	11%	5%	15%	22%	46%	-4.3
1364_1366	1364_1366	381428	399804	17245	A576	Salford	PCM	33.5	24.5	17.1	35.8	16.5	30,802	13%	5%	19%	16%	47%	-5.0
5249_7952	5249_7952	381205	399532	58028	A576	Salford	PCM	31.8	24.5	17.1	30.2	14.7	34,308	4%	7%	9%	20%	61%	-5.2
5249_7952_DW	5249_7952	381224	399526	58028	A576	Salford	PCM	31.1	24.5	17.1	28.7	14.0	34,308	4%	7%	9%	20%	61%	-5.2
2672_14311_DW	2299_14311	381434	399244	6161	A6	Salford	PCM	31.5	24.5	17.1	29.5	14.4	50,776	13%	6%	7%	18%	56%	-4.6
14311_2299_DW	2299_14311	381488	399165	6161	A6	Salford	PCM	37.1	24.5	17.1	43.5	20.0	50,776	13%	6%	7%	18%	56%	-6.2
3964_4732	3964_4732	382882	397222	99516	A56	Salford	PCM	31.9	24.7	17.2	29.9	14.7	42,431	2%	6%	9%	27%	56%	-3.4
3964_4732_DW	3964_4732	382871	397244	99516	A56	Salford	PCM	36.0	24.7	17.2	39.1	18.8	42,431	2%	6%	9%	27%	56%	-4.2
1867_4574_DW	1867_4574	382129	397840	36585	A57	Salford	PCM	37.4	24.7	17.2	43.0	20.2	51,506	1%	5%	16%	29%	50%	-5.2
1232_1257	1232_1257	381738	398808	6161	A6	Salford	PCM	31.0	23.4	16.4	31.0	14.6	40,002	21%	5%	10%	18%	46%	-6.4
1349_1867_DW	1349_1867	382371	397772	48023	A57	Salford	PCM	38.1	24.7	17.2	44.7	20.9	47,740	0%	5%	16%	27%	51%	-5.5
3786_1233_DW	3968_1233	381517	398259	27751	A5063	Salford	PCM	31.7	23.4	16.4	31.1	15.2	32,851	1%	7%	9%	22%	61%	-3.9
1349_2993_DW	1349_2993	382580	397716	73792	A57	Salford	PCM	40.3	24.7	17.2	49.3	23.0	57,259	0%	6%	12%	29%	53%	-5.4
1349_2993	1349_2993	382574	397693	73792	A57	Salford	PCM	33.4	24.7	17.2	33.5	16.2	57,259	0%	6%	12%	29%	53%	-4.2
5505_5507_DW	5505_5507	382099	398640	56160	A6	Salford	PCM	31.5	25.2	17.6	29.8	14.0	28,744	26%	6%	4%	18%	47%	-7.8
3969_6612_DW	3969_6612	381512	398031	6562	A57	Salford	PCM	37.0	23.4	16.4	43.3	20.5	52,805	0%	5%	13%	30%	51%	-5.0
4575_6612_DW	4575_6612	381692	397971	36585	A57	Salford	PCM	32.7	22.5	15.9	34.2	16.8	52,057	0%	5%	6%	35%	53%	-4.1
3850_7895_DW	3850_7895	382754	398553	17926	A6	Salford	PCM	30.7	25.2	17.6	27.4	13.1	31,492	12%	6%	6%	23%	53%	-7.2
4575_7897_DW	4575_7897	381821	397932	36585	A57	Salford	PCM	32.8	22.5	15.9	34.3	16.9	52,057	0%	5%	7%	34%	54%	-4.0
3752_4897_DW	3752_4897	382876	398556	70151	A6	Salford	PCM	29.4	25.2	17.6	24.5	11.8	23,600	16%	6%	7%	22%	49%	-7.4
3752_7895_DW	3752_7895	382815	398555	17926	A6	Salford	PCM	28.9	25.2	17.6	23.5	11.4	23,600	15%	6%	7%	23%	49%	-7.1
12947_1223_DW	12947_1223	381649	398952	6161	A6	Salford	PCM	30.7	23.4	16.4	29.3	14.3	24,264	6%	7%	2%	22%	63%	-4.9
12945_14431_DW	12945_14431	381917	398711	56160	A6	Salford	PCM	34.6	23.4	16.4	38.5	18.2	35,524	12%	7%	4%	21%	57%	-8.4
1232_12945_DW	1232_12945	381825	398784	56160	A6	Salford	PCM	37.5	23.4	16.4	49.7	21.1	35,533	34%	4%	17%	15%	31%	-7.4
3850_14502_DW	3850_14502	382685	398551	17926	A6	Salford	PCM	33.0	25.2	17.6	33.7	15.5	31,482	25%	5%	7%	19%	44%	-8.1

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
5505_14310_DW	5505_14310	382293	398539	56160	A6	Salford	PCM	30.2	25.2	17.6	26.4	12.7	28,744	17%	6%	5%	20%	52%	-7.7
1216_14503_DW	1216_14503	382565	398546	17926	A6	Salford	PCM	38.6	25.2	17.6	50.7	21.0	31,487	36%	4%	16%	15%	30%	-8.2
1216_14503	1216_14503	382567	398523	17926	A6	Salford	PCM	34.0	25.2	17.6	37.6	16.5	31,487	36%	4%	16%	15%	30%	-7.1
5179_5182_DW	5179_5182	374598	400597	74618	A572	Salford	PCM	34.9	14.7	10.9	49.4	24.0	34,630	1%	6%	7%	28%	58%	-4.6
1579_17017_DW	1579_17017	377344	400951	37363	A580	Salford	PCM	32.8	17.8	13.0	41.6	19.8	39,511	4%	5%	15%	25%	50%	-5.0
1589_14316_DW	1589_14316	378317	399184	7292	A576	Salford	PCM	30.6	23.0	16.3	32.5	14.4	18,756	27%	3%	30%	12%	27%	-6.9
NonPCM_147	4951_4554	375357	397837	N/A	A57 LIVERPOOL ROAD	Salford	LA	32.3	15.6	11.5	42.5	20.8	18,329	4%	6%	3%	30%	57%	-5.6
NonPCM_219	2993_1202	382678	397661	N/A	A57 REGENT ROAD	Salford	LA	37.3	24.7	17.2	44.1	20.1	57,259	1%	4%	32%	24%	39%	-4.5
Jct205	4554_4951	375367	397806	N/A		Salford	LA	31.2	15.6	11.5	39.7	19.7	18,329	4%	6%	3%	30%	57%	-5.1
Jct290	1216_7959	382540	398554	N/A		Salford	LA	33.6	25.2	17.6	36.1	16.0	5,253	0%	6%	12%	31%	52%	-6.8
1859_14054_DW	1859_14054	389505	390884	N/A	B6167 LANCASHIRE HILL	Stockport	LA	32.2	23.9	16.8	31.0	15.4	15,303	5%	7%	5%	26%	57%	-3.9
3620_5931_DW	3620_5931	390351	390720	37920	A626	Stockport	PCM	34.9	24.2	16.9	37.2	17.9	34,160	0%	6%	13%	31%	50%	-4.0
2663_5015	2663_5015	390347	391028	N/A	B6104 CARRINGTON ROAD	Stockport	LA	30.6	19.0	13.7	35.5	16.8	17,681	9%	3%	30%	27%	30%	-6.4
2663_5015_DW	2663_5015	390344	391047	N/A	B6104 CARRINGTON ROAD	Stockport	LA	35.0	19.0	13.7	46.6	21.3	17,681	9%	3%	30%	27%	30%	-7.9
5021_6254_DW	5021_6254	390116	391212	37920	A626	Stockport	PCM	34.2	19.0	13.7	43.0	20.4	31,394	0%	4%	23%	35%	38%	-4.6
1859_1860	1859_1860	389494	390731	58254	A560	Stockport	PCM	32.5	23.9	16.8	32.0	15.7	5,465	25%	5%	11%	23%	36%	-4.9
3426_4162_DW	3426_4162	390357	390129	27384	A626	Stockport	PCM	33.2	24.2	16.9	33.7	16.3	31,975	3%	6%	11%	24%	56%	-3.9
5160_6071_DW	5160_6071	392018	392010	27296	A560	Stockport	PCM	32.5	24.7	17.2	31.4	15.3	32,185	0%	6%	14%	22%	58%	-3.1
1924_8878_DW	1924_8878	392443	391754	27296	A560	Stockport	PCM	33.9	20.2	14.5	44.1	19.4	33,313	7%	4%	34%	14%	41%	-4.0
3973_14181_DW	3973_14181	388375	390354	58034	A5145	Stockport	PCM	37.2	20.9	14.9	48.2	22.4	26,267	10%	5%	18%	25%	43%	-4.8
3973_14181	3973_14181	388376	390333	58034	A5145	Stockport	PCM	35.1	20.9	14.9	42.5	20.2	26,267	10%	5%	18%	25%	43%	-4.4
2430_3710_DW	2430_3710	385097	388122	38735	A34	Stockport	PCM	33.8	19.0	13.8	40.6	20.0	67,758	0%	6%	6%	28%	61%	-3.0
2887_2430_DW	2887_2430	385044	388518	26352	A34	Stockport	PCM	37.1	19.0	13.8	48.2	23.4	40,051	0%	6%	7%	25%	62%	-3.7
2184_14428_DW	2184_14428	391822	387266	99018	A6	Stockport	PCM	32.1	19.6	14.1	37.8	18.0	33,733	4%	6%	17%	20%	53%	-5.6
6055_14428_DW	6055_14428	391767	387344	99018	A6	Stockport	PCM	30.8	19.6	14.1	35.0	16.8	33,733	4%	6%	17%	21%	52%	-5.2
NonPCM_273	6205_6055	391720	387414	N/A	A6 LONDON ROAD	Stockport	LA	31.7	19.6	14.1	38.2	17.6	33,733	11%	5%	22%	18%	43%	-5.1
Jct355	1850_1864	389388	390175	N/A		Stockport	LA	32.7	23.9	16.8	35.9	15.8	24,289	5%	6%	9%	28%	53%	-6.6
Jct539	3426_4162	390301	390159	N/A		Stockport	LA	33.6	24.2	16.9	34.8	16.7	31,975	3%	6%	11%	24%	56%	-4.0
7637_2941_DW	7637_2941	393180	398661	99618	A635	Tameside	PCM	36.4	25.8	17.9	40.2	18.5	28,186	15%	5%	17%	24%	39%	-5.3
2941_5978_DW	7638_5978	393398	398690	37451	A635	Tameside	PCM	34.4	25.8	17.9	33.9	16.6	52,961	0%	6%	7%	31%	56%	-3.5
1695_14478_DW	1695_14478	392753	398494	99618	A635	Tameside	PCM	37.2	25.5	17.7	41.0	19.5	46,220	1%	6%	12%	31%	50%	-4.9
1695_14478	1695_14478	392761	398476	99618	A635	Tameside	PCM	32.8	25.5	17.7	31.0	15.1	46,220	1%	6%	12%	31%	50%	-4.0
3813_3812_DW	3813_3812	392978	398478	74561	A6017	Tameside	PCM	33.9	25.5	17.7	33.3	16.2	33,146	2%	6%	8%	30%	54%	-4.3
7638_3813	7638_3813	393112	398511	74561	A6017	Tameside	PCM	33.2	25.8	17.9	31.7	15.3	30,824	3%	6%	12%	23%	55%	-4.5
1695_5659	1695_5659	392588	398416	99618	A635	Tameside	PCM	32.6	25.5	17.7	30.3	14.9	47,555	1%	6%	10%	33%	51%	-3.7
1695_5659_DW	1695_5659	392582	398435	99618	A635	Tameside	PCM	36.9	25.5	17.7	40.1	19.3	47,555	1%	6%	10%	33%	51%	-4.7
5655_5656_DW	5655_5656	392042	398069	76074	A6140	Tameside	PCM	33.7	25.5	17.7	33.9	16.0	21,537	0%	4%	29%	27%	39%	-4.5
3812_14478	3812_14478	392855	398516	74561	A6017	Tameside	PCM	33.0	25.5	17.7	31.8	15.3	41,228	4%	5%	16%	30%	45%	-4.1
3812_14478_DW	3812_14478	392847	398534	99618	A635	Tameside	PCM	37.2	25.5	17.7	41.8	19.5	41,228	4%	5%	16%	30%	45%	-5.0
3761_5653_DW	3761_5653	390802	395630	99512	A57	Tameside	PCM	30.6	18.6	13.5	35.0	17.2	19,934	3%	5%	14%	31%	46%	-5.0
Jct449	3227_8517	391912	395574	N/A		Tameside	LA	32.7	20.5	14.6	36.7	18.0	18,953	0%	6%	4%	32%	58%	-3.8
2305_5949_DW	2305_5949	380182	395145	36578	A56	Trafford	PCM	33.0	29.3	19.8	26.7	13.2	31,142	5%	7%	6%	22%	61%	-3.4
1382_3622_DW	1382_3622	380628	395827	56499	A56	Trafford	PCM	32.9	29.3	19.8	26.4	13.0	35,353	3%	7%	4%	25%	61%	-4.0
7603_7606_DW	7603_7606	376675	396960	N/A	B5214 TRAFFORD BOULEVARD	Trafford	LA	31.3	19.5	14.1	37.1	17.2	20,509	7%	6%	17%	18%	52%	-7.9
7606_17100_DW	7606_17100	376759	397007	N/A	B5214 TRAFFORD BOULEVARD	Trafford	LA	32.7	19.6	14.1	41.2	18.6	28,919	23%	5%	16%	14%	42%	-7.8
NonPCM_324	2833_2349	378901	392774	N/A	A56 CROSS STREET	Trafford	LA	33.1	19.0	13.7	39.5	19.4	46,223	1%	7%	7%	25%	60%	-4.6
Jct225	3529_8101	377585	395102	N/A		Trafford	LA	32.4	19.0	13.7	37.4	18.7	8,218	0%	8%	2%	18%	71%	-3.5
Jct231	3304_3529	377588	395133	N/A		Trafford	LA	32.9	19.0	13.7	38.4	19.1	6,617	0%	6%	15%	21%	58%	-3.6
3492_3511_DW	3492_3511	358611	405310	8566	A577	Wigan	PCM	31.7	29.1	19.7	24.7	12.0	22,353	2%	6%	14%	26%	52%	-3.5

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
3431_7687_DW	3431_7687	358110	405811	N/A	MARKET STREET	Wigan	LA	26.8	29.1	19.7	16.8	7.1	2,098	100%	0%	0%	0%	0%	-9.0
3103_3435_DW	3103_3435	358085	405595	N/A	KING STREET WEST	Wigan	LA	32.6	29.1	19.7	32.1	12.9	7,333	68%	2%	9%	7%	13%	-7.5
3396_3466_DW	3396_3466	358002	405379	8568	A49	Wigan	PCM	30.6	29.1	19.7	23.0	10.9	18,984	21%	5%	7%	19%	47%	-5.7
3103_8156	3103_8156	358146	405514	N/A		Wigan	LA	32.1	29.1	19.7	29.6	12.4	7,980	41%	3%	26%	17%	14%	-5.9
3431_3463	3431_3463	358038	405924	N/A	NEW MARKET STREET	Wigan	LA	30.4	29.1	19.7	24.1	10.7	12,512	47%	3%	6%	12%	32%	-6.5
Jct485	3103_3435	358163	405546	N/A	KING STREET WEST	Wigan	LA	30.3	29.1	19.7	25.1	10.6	7,333	68%	2%	9%	7%	13%	-5.7

Table B-5: Predicted annual mean NO₂ concentrations and source apportionment at exceedance links on the Greater Manchester road network – Do Minimum – 2025

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
2119_2564_DW	2119_2564	371207	409524	17905	A673	Bolton	PCM	34.2	24.3	17.0	38.1	17.2	28,324	31%	5%	6%	20%	38%	na
2799_3775_DW	2799_3775	371869	409735	8030	A666	Bolton	PCM	34.3	24.3	17.0	36.3	17.3	22,250	0%	6%	9%	36%	49%	na
2799_3118_DW	2799_3118	371751	409800	58048	A673	Bolton	PCM	35.6	24.3	17.0	41.1	18.6	28,010	0%	5%	32%	27%	36%	na
2650_2653_DW	2653_2650	372915	407622	7431	A666	Bolton	PCM	35.4	23.5	16.5	38.6	18.9	71,142	0%	5%	5%	45%	44%	na
2649_2650_DW	2650_2649	372622	408297	7431	A666	Bolton	PCM	33.0	22.0	15.6	35.0	17.3	73,482	0%	6%	5%	45%	45%	na
1986_2053_DW	1986_2053	372038	408749	74518	A575	Bolton	PCM	32.8	22.0	15.6	38.6	17.2	21,850	38%	4%	10%	19%	29%	na
2053_12949_DW	2053_12949	371997	408820	74518	A575	Bolton	PCM	33.4	25.2	17.5	36.5	15.9	15,571	56%	3%	3%	15%	23%	na
3064_15148_DW	3064_15148	371642	408705	7921	A579	Bolton	PCM	34.7	25.2	17.5	39.7	17.1	26,408	43%	4%	8%	16%	29%	na
2648_6404_DW	2648_6404	372355	408934	47988	A579	Bolton	PCM	33.8	22.0	15.6	38.0	18.2	32,520	7%	5%	12%	35%	41%	na
2407_6761_DW	2407_6761	374740	405143	73087	A667	Bolton	PCM	34.4	16.5	12.1	51.0	22.3	37,412	10%	4%	36%	21%	30%	na
NonPCM_307	6404_2648	372340	408924	N/A	A579 BRADFORD STREET	Bolton	LA	34.0	22.0	15.6	38.5	18.4	32,520	7%	5%	12%	35%	41%	na
Jct490	2113_2119	371155	409546	N/A		Bolton	LA	39.1	24.3	17.0	51.3	22.1	10,249	38%	4%	5%	26%	28%	na
Jct491	2490_14486	371909	409019	N/A		Bolton	LA	32.1	24.3	17.0	34.5	15.1	15,550	56%	3%	3%	14%	24%	na
4912_2244	4912_2244	381959	410596	73198	A58	Bury	PCM	31.9	19.7	14.2	37.9	17.7	24,343	10%	4%	25%	31%	29%	na
2244_2756_DW	2244_2756	381848	410697	N/A	B6221 WASH LANE	Bury	LA	33.0	19.7	14.2	41.4	18.8	19,775	0%	4%	40%	25%	31%	na
2244_4913_DW	2244_4913	381968	410627	73198	A58	Bury	PCM	37.3	19.7	14.2	51.2	23.1	24,606	10%	5%	18%	26%	40%	na
2552_3975_DW	2552_3975	380966	411188	N/A	B6222 MOORGATE	Bury	LA	33.1	18.8	13.6	44.5	19.5	25,523	8%	4%	38%	19%	30%	na
2243_4639_DW	2243_4639	381310	410749	16556	A58	Bury	PCM	33.6	19.7	14.2	42.4	19.4	29,172	22%	4%	12%	31%	31%	na
3790_3652	3790_2237	379874	410937	38354	A58	Bury	PCM	40.3	20.1	14.4	61.1	25.9	80,297	16%	5%	18%	25%	36%	na
2237_3790_DW	3790_2237	379830	410975	38354	A58	Bury	PCM	41.7	20.1	14.4	63.9	27.3	80,297	16%	5%	18%	25%	36%	na
3652_6021	3790_2237	379755	410929	38354	A58	Bury	PCM	38.0	20.1	14.4	54.5	23.6	80,297	16%	5%	18%	25%	36%	na
3089_5572_DW	3089_5572	379629	411052	N/A	B6214 CROSTONS ROAD	Bury	LA	35.9	21.5	15.3	45.8	20.6	46,613	23%	5%	10%	23%	38%	na
3089_5572	3089_5572	379597	411059	N/A	B6214 CROSTONS ROAD	Bury	LA	32.5	21.5	15.3	37.3	17.2	46,613	23%	5%	10%	23%	38%	na
4939_3424	4939_3424	380899	404868	17924	A56	Bury	PCM	34.8	16.0	11.7	50.4	23.1	23,452	8%	5%	22%	26%	38%	na
3424_4940_DW	3424_4940	380920	404881	17924	A56	Bury	PCM	39.3	16.0	11.7	62.9	27.5	20,054	11%	5%	29%	21%	34%	na
1742_9011_DW	1742_9011	381149	404182	46572	A56	Bury	PCM	37.4	19.2	13.8	56.8	23.6	38,060	23%	4%	29%	18%	27%	na
2483_2951_DW	2483_2951	380856	405206	17924	A56	Bury	PCM	34.1	16.9	12.3	47.3	21.8	46,505	12%	5%	17%	25%	41%	na
NonPCM_69	3424_4939	380931	404841	N/A	A56 BURY NEW ROAD	Bury	LA	39.0	16.0	11.7	61.7	27.3	43,507	10%	5%	26%	24%	36%	na
Jct495	3424_7436	380909	404951	N/A		Bury	LA	34.8	16.0	11.7	50.9	23.1	41,628	6%	6%	15%	30%	43%	na
1268_1269	1268_1269	383558	398278	27974	A34	Manchester	PCM	44.6	33.2	22.1	74.2	22.5	9,454	76%	2%	3%	7%	12%	na
1356_4539_DW	1356_4539	383054	398617	99519	A6042	Manchester	PCM	34.3	33.2	22.1	28.3	12.2	27,110	0%	6%	18%	29%	46%	na
1269_3272	1269_3272	383423	398312	27974	A34	Manchester	PCM	34.1	33.2	22.1	33.3	12.1	5,811	81%	1%	3%	5%	10%	na
1322_3273	1322_3273	383249	398058	27975	A34	Manchester	PCM	37.4	33.2	22.1	34.8	15.3	15,258	0%	8%	8%	26%	58%	na
1324_3276_DW	1324_3276	383489	397693	N/A	GREAT BRIDGEWATER STREET	Manchester	LA	36.7	27.6	18.9	43.1	17.7	8,549	18%	5%	19%	27%	31%	na
3272_8542_DW	3272_8542	383361	398267	N/A	GARTSIDE STREET	Manchester	LA	33.4	33.2	22.1	25.3	11.3	5,146	0%	9%	7%	19%	65%	na
1324_8570	1324_8570	383385	397701	7922	A6143	Manchester	PCM	33.2	27.6	18.9	33.4	14.3	13,184	11%	5%	20%	29%	35%	na
1312_5801_DW	1312_5801	383778	399163	36577	A56	Manchester	PCM	35.2	23.8	16.7	42.7	18.5	22,953	21%	4%	25%	25%	25%	na
1309_2291	1309_2291	384105	399123	17935	A665	Manchester	PCM	33.7	24.8	17.3	38.8	16.4	31,009	17%	5%	14%	29%	36%	na
2353_45005_DW	2353_45005	384492	398898	75248	A664	Manchester	PCM	33.6	33.2	22.1	27.9	11.5	6,675	80%	1%	7%	5%	7%	na
2353_45005	2353_45005	384467	398922	75248	A664	Manchester	PCM	35.3	33.2	22.1	33.0	13.1	6,675	80%	1%	7%	5%	7%	na
1472_1511_DW	1472_1511	385939	397630	27403	A635	Manchester	PCM	32.8	28.5	19.4	28.7	13.4	28,315	5%	4%	24%	34%	33%	na
1341_2939_DW	1341_2939	385618	397656	75239	A635	Manchester	PCM	37.2	28.5	19.4	41.2	17.8	25,442	11%	4%	34%	23%	28%	na
1341_2939	1341_2939	385616	397633	75239	A635	Manchester	PCM	32.6	28.5	19.4	29.2	13.2	25,442	11%	4%	34%	23%	28%	na
2608_4852_DW	2608_4852	385272	397130	26157	A6	Manchester	PCM	35.5	28.5	19.4	34.4	16.1	36,889	13%	6%	5%	34%	42%	na
2607_2608_DW	2607_2608	385142	397223	26157	A6	Manchester	PCM	33.2	28.5	19.4	29.0	13.8	36,765	12%	6%	4%	35%	43%	na
2607_3056_DW	2607_3056	384957	397311	26157	A6	Manchester	PCM	38.4	30.0	20.3	40.0	18.1	36,765	18%	6%	6%	29%	41%	na
2286_1286_DW	2286_1286	384598	398032	N/A	AUBURN STREET	Manchester	LA	35.4	33.2	22.1	32.9	13.2	7,268	16%	4%	25%	19%	35%	na

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
1242_1243	1242_1243	384483	398343	70154	A62	Manchester	PCM	45.4	33.2	22.1	92.2	23.2	1,444	100%	0%	0%	0%	0%	na
2293_6119_DW	2293_6119	384344	398215	N/A		Manchester	LA	35.9	33.2	22.1	41.3	13.7	2,316	100%	0%	0%	0%	0%	na
5429_8559_DW	5429_8559	384266	398150	N/A	NEW YORK STREET	Manchester	LA	32.4	33.2	22.1	24.4	10.3	6,336	23%	6%	3%	24%	44%	na
1338_2904_DW	1338_2904	384418	396982	N/A	B5117 OXFORD ROAD	Manchester	LA	34.6	28.6	19.5	40.4	15.0	2,560	100%	0%	0%	0%	0%	na
1338_4532_DW	1338_4532	384338	397135	75242	A34	Manchester	PCM	34.6	30.0	20.3	36.9	14.3	4,026	98%	0%	0%	0%	2%	na
2006_3292	2006_3292	384110	397858	56529	A5103	Manchester	PCM	37.4	30.0	20.3	51.1	17.1	6,012	88%	1%	1%	7%	4%	na
1336_16404	1336_16404	384137	397465	17929	A34	Manchester	PCM	38.7	30.0	20.3	58.3	18.4	4,899	95%	0%	1%	1%	3%	na
1336_16404_DW	1336_16404	384153	397473	17929	A34	Manchester	PCM	38.3	30.0	20.3	56.4	18.0	4,899	95%	0%	1%	1%	3%	na
1268_46301	1268_46301	383702	398229	7947	A34	Manchester	PCM	44.3	33.2	22.1	75.2	22.2	8,544	76%	1%	8%	7%	8%	na
8547_47130_DW	8547_47130	383976	398274	N/A	KING STREET	Manchester	LA	35.8	33.2	22.1	32.5	13.7	20,694	15%	6%	7%	25%	46%	na
8547_47130	8547_47130	383973	398256	N/A	KING STREET	Manchester	LA	38.5	33.2	22.1	39.5	16.4	20,694	15%	6%	7%	25%	46%	na
1259_1243	1259_1243	384409	398297	N/A	PICCADILLY	Manchester	LA	33.3	33.2	22.1	31.7	11.1	1,305	100%	0%	0%	0%	0%	na
2289_12835	2289_12835	384282	398507	70153	A6	Manchester	PCM	39.8	33.2	22.1	54.4	17.7	9,102	84%	1%	1%	4%	10%	na
3261_1302	3261_1302	384528	398779	75246	A665	Manchester	PCM	33.8	33.2	22.1	27.3	11.7	14,041	0%	6%	23%	29%	43%	na
8546_14050	8546_14050	384384	398801	57427	A664	Manchester	PCM	42.0	33.2	22.1	62.8	19.8	8,004	80%	2%	2%	4%	12%	na
5806_1304	5806_1304	384250	398668	57427	A664	Manchester	PCM	36.8	33.2	22.1	44.0	14.7	3,002	85%	1%	6%	5%	3%	na
2290_3027	2290_3027	384038	398775	48035	A6042	Manchester	PCM	35.6	33.2	22.1	39.3	13.4	3,056	93%	0%	1%	2%	3%	na
2290_3027_DW	2290_3027	384055	398767	48035	A6042	Manchester	PCM	37.3	33.2	22.1	45.8	15.1	3,056	93%	0%	1%	2%	3%	na
1305_2290_DW	1305_2290	384091	398691	N/A	WITHY GROVE	Manchester	LA	40.1	33.2	22.1	57.9	17.9	3,056	94%	0%	1%	3%	2%	na
1307_1317	1307_1317	383757	398717	36551	A6	Manchester	PCM	41.1	33.2	22.1	61.7	19.0	4,325	90%	1%	1%	5%	3%	na
1307_1317_DW	1307_1317	383771	398733	36551	A6	Manchester	PCM	38.1	33.2	22.1	48.6	16.0	4,325	90%	1%	1%	5%	3%	na
3056_3842	3056_3842	384855	397401	26157	A6	Manchester	PCM	35.0	30.0	20.3	32.7	14.7	39,030	27%	4%	13%	24%	31%	na
3056_3842_DW	3056_3842	384880	397418	26157	A6	Manchester	PCM	42.8	30.0	20.3	53.9	22.5	39,030	27%	4%	13%	24%	31%	na
3033_2293	3033_2293	384317	398195	N/A	PARKER STREET	Manchester	LA	40.4	33.2	22.1	61.2	18.3	2,455	100%	0%	0%	0%	0%	na
1261_6042_DW	1261_6042	384451	398215	77003	A6	Manchester	PCM	35.7	33.2	22.1	41.6	13.6	1,257	100%	0%	0%	0%	0%	na
1261_6042	1261_6042	384466	398201	77003	A6	Manchester	PCM	35.8	33.2	22.1	41.9	13.6	1,257	100%	0%	0%	0%	0%	na
3016_6022_DW	3016_6022	384639	397855	46165	A6	Manchester	PCM	36.2	30.0	20.3	44.3	15.9	7,335	66%	3%	5%	8%	18%	na
1302_8546	1302_8546	384428	398838	75248	A664	Manchester	PCM	38.1	33.2	22.1	47.3	15.9	8,141	71%	1%	14%	6%	8%	na
1302_8546_DW	1302_8546	384414	398854	75248	A664	Manchester	PCM	35.3	33.2	22.1	36.9	13.1	8,141	71%	1%	14%	6%	8%	na
2893_5074	2892_2890	384158	397155	75243	A57M	Manchester	PCM	33.1	30.0	20.3	28.5	12.7	64,228	0%	5%	7%	41%	47%	na
5409_5430_DW	5409_5430	384209	398072	N/A	CHARLOTTE STREET	Manchester	LA	34.3	33.2	22.1	28.2	12.2	12,926	2%	8%	4%	30%	56%	na
1263_5429	1263_5429	384207	398182	N/A	BACK GEORGE STREET	Manchester	LA	35.7	33.2	22.1	32.8	13.6	6,335	25%	5%	4%	23%	43%	na
2283_8544_DW	2283_8544	383791	398603	27992	A56	Manchester	PCM	43.2	33.2	22.1	69.9	21.1	4,325	85%	1%	3%	7%	4%	na
1267_1985	1267_1985	383672	398364	16536	A56	Manchester	PCM	39.9	33.2	22.1	48.3	17.8	8,803	51%	3%	6%	16%	24%	na
1267_1985_DW	1267_1985	383687	398358	16536	A56	Manchester	PCM	39.0	33.2	22.1	45.5	16.9	8,803	51%	3%	6%	16%	24%	na
1985_2283	1985_2283	383717	398477	16536	A56	Manchester	PCM	31.7	33.2	22.1	23.3	9.6	7,818	47%	4%	5%	19%	25%	na
1985_2283_DW	1985_2283	383734	398471	16536	A56	Manchester	PCM	32.5	33.2	22.1	25.5	10.4	7,818	47%	4%	5%	19%	25%	na
1685_1686_DW	1685_1686	387382	394221	73778	A6	Manchester	PCM	32.4	21.8	15.5	38.5	16.9	27,593	36%	4%	13%	18%	29%	na
1469_3669_DW	1469_3669	386578	395884	28695	A6	Manchester	PCM	32.6	22.9	16.1	36.3	16.4	27,852	33%	5%	6%	18%	38%	na
1684_4312_DW	1684_4312	387763	393475	73778	A6	Manchester	PCM	31.8	24.1	16.8	31.6	14.9	34,488	17%	6%	7%	23%	47%	na
4373_5121_DW	4373_5121	382333	389181	48339	A560	Manchester	PCM	32.0	17.3	12.6	40.6	19.4	33,861	3%	6%	23%	27%	42%	na
1846_2423	1846_2423	381858	388161	26047	M56	Manchester	PCM	33.9	17.6	12.8	43.1	21.1	14,521	15%	6%	4%	28%	46%	na
1846_2423_DW	1846_2423	381865	388177	26047	M56	Manchester	PCM	36.3	17.6	12.8	48.7	23.5	14,521	15%	6%	4%	28%	46%	na
2855_2218_DW	2856_2855	382356	390128	7701	A5103	Manchester	PCM	34.6	16.5	12.1	47.8	22.5	111,593	0%	6%	9%	31%	53%	na
2844_2848	2855_2847	382344	390388	7701	A5103	Manchester	PCM	35.8	16.5	12.1	50.1	23.7	134,387	2%	6%	11%	29%	52%	na
2847_2855_DW	2855_2847	382389	390376	7701	A5103	Manchester	PCM	35.7	16.5	12.1	49.6	23.6	134,387	2%	6%	11%	29%	52%	na
14951_17000_DW	14951_17000	381833	385986	N/A	THORLEY LANE	Manchester	LA	34.6	31.6	21.0	30.8	13.6	19,044	27%	5%	15%	17%	36%	na
7634_8756_DW	7634_8756	382361	385549	N/A	RINGWAY ROAD WEST	Manchester	LA	37.2	35.9	23.3	30.4	14.0	37,205	0%	5%	21%	23%	50%	na
12800_14480_DW	12800_14480	382038	385547	N/A	OUTWOOD LANE	Manchester	LA	38.2	35.9	23.3	32.6	15.0	36,013	0%	7%	19%	18%	55%	na

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
NonPCM_184	1336_16404	384110	397517	N/A	A34 OXFORD STREET	Manchester	LA	39.3	30.0	20.3	61.2	19.0	4,899	95%	0%	1%	1%	3%	na
NonPCM_207	4530_1268	383624	398258	N/A	A34 BRIDGE STREET	Manchester	LA	43.4	33.2	22.1	68.5	21.3	14,036	27%	5%	8%	23%	37%	na
NonPCM_216	5408_5432	384079	397954	N/A	GEORGE STREET	Manchester	LA	32.2	30.0	20.3	29.8	11.9	10,141	52%	4%	1%	13%	29%	na
Jct254	14490_5406	384292	398620	N/A		Manchester	LA	37.1	33.2	22.1	42.6	15.0	5,762	70%	2%	6%	7%	15%	na
Jct262	2006_3292	384156	397878	N/A		Manchester	LA	40.0	30.0	20.3	62.1	19.7	6,012	88%	1%	1%	7%	4%	na
Jct280	1402_5407	383617	397503	N/A		Manchester	LA	32.8	27.6	18.9	31.4	13.9	27,667	12%	7%	7%	27%	47%	na
Jct282	1275_1279	384116	398263	N/A		Manchester	LA	36.3	33.2	22.1	33.8	14.2	8,340	20%	6%	6%	25%	44%	na
Jct285	8546_14050	384363	398784	N/A		Manchester	LA	40.9	33.2	22.1	58.5	18.8	8,004	80%	2%	2%	4%	12%	na
Jct526	1275_1279	384116	398262	N/A		Manchester	LA	36.3	33.2	22.1	33.8	14.2	8,340	20%	6%	6%	25%	44%	na
3911_4112	3911_4112	389383	403282	99617	A663	Oldham	PCM	32.6	20.2	14.5	37.8	18.1	41,929	6%	6%	12%	27%	49%	na
1996_14524_DW	1996_14524	393502	405226	36632	A62	Oldham	PCM	35.0	24.4	17.0	38.9	18.0	33,492	15%	6%	11%	28%	40%	na
N14523_14524	14523_14524	393312	405043	36632	A62	Oldham	PCM	34.0	24.4	17.0	35.3	16.9	54,143	0%	6%	12%	33%	49%	na
1975_2466_DW	14523_7556	392991	404790	N/A	WATERLOO STREET	Oldham	LA	32.0	20.9	14.9	35.3	17.1	53,705	0%	6%	11%	35%	48%	na
7556_14523_DW	7556_14523	393092	404851	36632	A62	Oldham	PCM	34.4	23.1	16.3	37.9	18.2	25,082	1%	6%	16%	29%	49%	na
1295_1703	1295_1703	390482	402513	77008	A62	Oldham	PCM	33.7	21.2	15.1	39.6	18.6	37,785	8%	6%	17%	30%	39%	na
3914_5661_DW	3914_5661	390653	402743	6606	A62	Oldham	PCM	32.1	21.2	15.1	35.5	17.0	38,879	4%	5%	21%	34%	36%	na
3914_5661	3914_5661	390627	402753	6606	A62	Oldham	PCM	33.1	21.2	15.1	37.8	18.0	38,879	4%	5%	21%	34%	36%	na
1433_1615_DW	1433_1615	389260	401329	73781	A62	Oldham	PCM	32.2	19.1	13.7	42.9	18.5	17,648	26%	2%	32%	25%	15%	na
2202_2205_DW	2202_2205	389446	413627	27469	A680	Rochdale	PCM	33.6	25.4	17.7	34.1	16.0	24,444	8%	5%	20%	30%	36%	na
2210_14216_DW	2210_14216	388664	411856	17322	A664	Rochdale	PCM	38.8	17.0	12.4	62.5	26.4	34,632	0%	4%	42%	27%	27%	na
14220_14221	14220_14221	389004	412157	26586	A58	Rochdale	PCM	31.5	18.4	13.3	38.6	18.1	45,741	10%	6%	19%	26%	40%	na
2210_4463_DW	2210_4463	388729	411971	26586	A58	Rochdale	PCM	38.3	17.0	12.4	63.1	25.9	45,741	10%	4%	40%	21%	26%	na
2210_4463	2210_4463	388741	411950	26586	A58	Rochdale	PCM	33.0	17.0	12.4	47.4	20.5	45,741	10%	4%	40%	21%	26%	na
1345_1346_DW	1345_1346	380555	398426	56535	A5186	Salford	PCM	33.2	24.4	17.0	34.6	16.2	13,779	21%	4%	21%	22%	32%	na
1345_1346	1345_1346	380537	398426	56535	A5186	Salford	PCM	32.4	24.4	17.0	32.5	15.4	13,779	21%	4%	21%	22%	32%	na
1364_1366	1364_1366	381428	399804	17245	A576	Salford	PCM	29.2	23.1	16.2	40.9	13.0	30,873	23%	5%	22%	16%	35%	na
5249_7952	5249_7952	381205	399532	58028	A576	Salford	PCM	27.9	23.1	16.2	35.2	11.6	34,431	15%	6%	14%	21%	44%	na
5249_7952_DW	5249_7952	381224	399526	58028	A576	Salford	PCM	27.5	23.1	16.2	33.6	11.2	34,431	15%	6%	14%	21%	44%	na
2672_14311_DW	2299_14311	381434	399244	6161	A6	Salford	PCM	27.3	23.1	16.2	33.0	11.1	51,386	23%	6%	11%	19%	42%	na
14311_2299_DW	2299_14311	381488	399165	6161	A6	Salford	PCM	30.9	23.1	16.2	49.3	14.7	51,386	23%	6%	11%	19%	42%	na
3964_4732	3964_4732	382882	397222	99516	A56	Salford	PCM	31.5	23.2	16.3	31.4	15.2	43,183	4%	6%	14%	30%	45%	na
3964_4732_DW	3964_4732	382871	397244	99516	A56	Salford	PCM	35.6	23.2	16.3	41.0	19.3	43,183	4%	6%	14%	30%	45%	na
1867_4574_DW	1867_4574	382129	397840	36585	A57	Salford	PCM	37.6	23.2	16.3	46.9	21.3	52,109	3%	5%	22%	31%	39%	na
1232_1257	1232_1257	381738	398808	6161	A6	Salford	PCM	32.6	22.1	15.6	38.5	17.0	40,508	38%	4%	12%	16%	30%	na
1349_1867_DW	1349_1867	382371	397772	48023	A57	Salford	PCM	38.2	23.2	16.3	48.5	21.9	48,075	3%	5%	23%	29%	39%	na
3786_1233_DW	3968_1233	381517	398259	27751	A5063	Salford	PCM	31.6	22.1	15.6	33.4	15.9	33,194	6%	6%	15%	25%	48%	na
1349_2993_DW	1349_2993	382580	397716	73792	A57	Salford	PCM	41.7	23.2	16.3	57.1	25.4	57,890	2%	5%	21%	31%	40%	na
1349_2993	1349_2993	382574	397693	73792	A57	Salford	PCM	34.3	23.2	16.3	38.5	18.0	57,890	2%	5%	21%	31%	40%	na
5505_5507_DW	5505_5507	382099	398640	56160	A6	Salford	PCM	34.0	23.7	16.6	40.3	17.4	29,163	47%	4%	5%	15%	29%	na
3969_6612_DW	3969_6612	381512	398031	6562	A57	Salford	PCM	37.1	22.1	15.6	46.7	21.5	53,386	2%	5%	20%	32%	40%	na
4575_6612_DW	4575_6612	381692	397971	36585	A57	Salford	PCM	32.7	21.2	15.1	36.4	17.6	52,687	2%	5%	11%	39%	43%	na
3850_7895_DW	3850_7895	382754	398553	17926	A6	Salford	PCM	32.8	23.7	16.6	36.4	16.2	31,984	33%	5%	8%	20%	34%	na
4575_7897_DW	4575_7897	381821	397932	36585	A57	Salford	PCM	32.7	21.2	15.1	36.4	17.6	52,687	2%	5%	12%	38%	43%	na
3752_4897_DW	3752_4897	382876	398556	70151	A6	Salford	PCM	31.8	23.7	16.6	34.1	15.1	24,002	42%	4%	9%	18%	28%	na
3752_7895_DW	3752_7895	382815	398555	17926	A6	Salford	PCM	31.1	23.7	16.6	32.4	14.5	24,002	40%	4%	8%	19%	29%	na
12947_1223_DW	12947_1223	381649	398952	6161	A6	Salford	PCM	31.2	22.1	15.6	33.3	15.6	24,572	15%	7%	4%	24%	50%	na
12945_14431_DW	12945_14431	381917	398711	56160	A6	Salford	PCM	37.1	22.1	15.6	49.6	21.4	35,884	34%	5%	6%	18%	37%	na
1232_12945_DW	1232_12945	381825	398784	56160	A6	Salford	PCM	39.6	22.1	15.6	60.5	24.0	35,894	45%	3%	16%	14%	21%	na
3850_14502_DW	3850_14502	382685	398551	17926	A6	Salford	PCM	36.1	23.7	16.6	46.1	19.4	31,971	43%	4%	10%	17%	27%	na

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
5505_14310_DW	5505_14310	382293	398539	56160	A6	Salford	PCM	32.7	23.7	16.6	36.4	16.0	29,145	42%	4%	6%	16%	31%	na
1216_14503_DW	1216_14503	382565	398546	17926	A6	Salford	PCM	41.2	23.7	16.6	64.2	24.6	31,974	48%	3%	15%	14%	20%	na
1216_14503	1216_14503	382567	398523	17926	A6	Salford	PCM	36.1	23.7	16.6	47.3	19.5	31,974	48%	3%	15%	14%	20%	na
5179_5182_DW	5179_5182	374598	400597	74618	A572	Salford	PCM	34.5	13.8	10.3	50.5	24.2	35,241	3%	6%	13%	31%	47%	na
1579_17017_DW	1579_17017	377344	400951	37363	A580	Salford	PCM	33.4	16.7	12.2	45.9	21.1	40,762	8%	5%	22%	26%	39%	na
1589_14316_DW	1589_14316	378317	399184	7292	A576	Salford	PCM	33.3	21.7	15.4	43.6	17.9	18,926	44%	2%	27%	10%	17%	na
NonPCM_147	4951_4554	375357	397837	N/A	A57 LIVERPOOL ROAD	Salford	LA	33.2	14.7	10.9	47.0	22.3	19,059	17%	5%	5%	32%	41%	na
NonPCM_219	2993_1202	382678	397661	N/A	A57 REGENT ROAD	Salford	LA	37.4	23.2	16.3	47.5	21.1	57,890	2%	4%	36%	27%	31%	na
Jct205	4554_4951	375367	397806	N/A		Salford	LA	31.9	14.7	10.9	43.6	21.0	19,059	17%	5%	5%	32%	41%	na
Jct290	1216_7959	382540	398554	N/A		Salford	LA	35.5	23.7	16.6	45.4	18.9	5,371	0%	6%	18%	33%	42%	na
1859_14054_DW	1859_14054	389505	390884	N/A	B6167 LANCASHIRE HILL	Stockport	LA	32.2	22.4	15.9	33.7	16.3	15,867	13%	6%	9%	28%	44%	na
3620_5931_DW	3620_5931	390351	390720	37920	A626	Stockport	PCM	35.1	22.9	16.1	40.5	19.0	34,491	0%	5%	23%	34%	38%	na
2663_5015	2663_5015	390347	391028	N/A	B6104 CARRINGTON ROAD	Stockport	LA	32.2	17.9	13.0	42.4	19.2	18,037	20%	3%	34%	24%	19%	na
2663_5015_DW	2663_5015	390344	391047	N/A	B6104 CARRINGTON ROAD	Stockport	LA	37.2	17.9	13.0	56.4	24.2	18,037	20%	3%	34%	24%	19%	na
5021_6254_DW	5021_6254	390116	391212	37920	A626	Stockport	PCM	34.4	17.9	13.0	45.6	21.4	31,855	0%	4%	25%	41%	30%	na
1859_1860	1859_1860	389494	390731	58254	A560	Stockport	PCM	33.2	22.4	15.9	36.6	17.3	5,725	48%	3%	11%	18%	20%	na
3426_4162_DW	3426_4162	390357	390129	27384	A626	Stockport	PCM	32.9	22.9	16.1	35.6	16.8	32,474	7%	6%	15%	27%	45%	na
5160_6071_DW	5160_6071	392018	392010	27296	A560	Stockport	PCM	31.8	23.7	16.6	31.7	15.3	32,415	0%	6%	19%	25%	49%	na
1924_8878_DW	1924_8878	392443	391754	27296	A560	Stockport	PCM	33.7	19.1	13.7	46.4	19.9	33,442	12%	4%	36%	14%	33%	na
3973_14181_DW	3973_14181	388375	390354	58034	A5145	Stockport	PCM	37.3	19.7	14.1	51.0	23.2	26,487	13%	4%	21%	27%	34%	na
3973_14181	3973_14181	388376	390333	58034	A5145	Stockport	PCM	35.0	19.7	14.1	44.7	20.9	26,487	13%	4%	21%	27%	34%	na
2430_3710_DW	2430_3710	385097	388122	38735	A34	Stockport	PCM	33.1	17.8	13.0	41.4	20.2	70,579	0%	6%	10%	31%	53%	na
2887_2430_DW	2887_2430	385044	388518	26352	A34	Stockport	PCM	36.7	17.8	13.0	49.8	23.8	41,082	1%	6%	13%	28%	52%	na
2184_14428_DW	2184_14428	391822	387266	99018	A6	Stockport	PCM	33.3	18.4	13.3	44.5	20.0	34,160	16%	6%	22%	20%	37%	na
6055_14428_DW	6055_14428	391767	387344	99018	A6	Stockport	PCM	31.8	18.4	13.3	40.4	18.4	34,160	14%	6%	21%	21%	38%	na
NonPCM_273	6205_6055	391720	387414	N/A	A6 LONDON ROAD	Stockport	LA	32.7	18.4	13.3	43.9	19.4	34,160	18%	5%	26%	19%	32%	na
Jct355	1850_1864	389388	390175	N/A		Stockport	LA	34.7	22.4	15.9	45.5	18.8	24,643	10%	6%	15%	29%	40%	na
Jct539	3426_4162	390301	390159	N/A		Stockport	LA	33.3	22.9	16.1	36.6	17.2	32,474	7%	6%	15%	27%	45%	na
7637_2941_DW	7637_2941	393180	398661	99618	A635	Tameside	PCM	37.0	24.6	17.1	45.0	19.9	28,383	21%	4%	20%	25%	29%	na
2941_5978_DW	7638_5978	393398	398690	37451	A635	Tameside	PCM	34.2	24.6	17.1	35.3	17.0	53,423	0%	6%	12%	35%	47%	na
1695_14478_DW	1695_14478	392753	398494	99618	A635	Tameside	PCM	37.3	24.5	17.0	43.7	20.3	46,559	4%	5%	18%	33%	40%	na
1695_14478	1695_14478	392761	398476	99618	A635	Tameside	PCM	32.8	24.5	17.0	33.1	15.8	46,559	4%	5%	18%	33%	40%	na
3813_3812_DW	3813_3812	392978	398478	74561	A6017	Tameside	PCM	34.1	24.5	17.0	36.1	17.1	33,534	8%	6%	11%	33%	42%	na
7638_3813	7638_3813	393112	398511	74561	A6017	Tameside	PCM	33.4	24.6	17.1	34.8	16.2	31,121	10%	6%	17%	25%	42%	na
1695_5659	1695_5659	392588	398416	99618	A635	Tameside	PCM	32.5	24.5	17.0	31.9	15.4	47,813	3%	6%	14%	36%	41%	na
1695_5659_DW	1695_5659	392582	398435	99618	A635	Tameside	PCM	36.9	24.5	17.0	42.3	19.9	47,813	3%	6%	14%	36%	41%	na
5655_5656_DW	5655_5656	392042	398069	76074	A6140	Tameside	PCM	34.3	24.5	17.0	37.5	17.3	22,271	0%	4%	37%	29%	30%	na
3812_14478	3812_14478	392855	398516	74561	A6017	Tameside	PCM	33.1	24.5	17.0	34.1	16.0	41,442	7%	5%	21%	32%	35%	na
3812_14478_DW	3812_14478	392847	398534	99618	A635	Tameside	PCM	37.4	24.5	17.0	44.7	20.4	41,442	7%	5%	21%	32%	35%	na
3761_5653_DW	3761_5653	390802	395630	99512	A57	Tameside	PCM	31.5	17.4	12.7	39.7	18.8	20,116	6%	5%	24%	31%	35%	na
Jct449	3227_8517	391912	395574	N/A		Tameside	LA	32.1	19.5	14.0	37.4	18.1	19,088	1%	7%	7%	37%	48%	na
2305_5949_DW	2305_5949	380182	395145	36578	A56	Trafford	PCM	32.6	27.9	19.0	28.6	13.7	31,543	16%	6%	9%	23%	46%	na
1382_3622_DW	1382_3622	380628	395827	56499	A56	Trafford	PCM	33.0	27.9	19.0	29.4	14.0	35,767	13%	7%	7%	26%	47%	na
7603_7606_DW	7603_7606	376675	396960	N/A	B5214 TRAFFORD BOULEVARD	Trafford	LA	33.8	18.2	13.2	48.0	20.6	20,975	23%	5%	22%	16%	34%	na
7606_17100_DW	7606_17100	376759	397007	N/A	B5214 TRAFFORD BOULEVARD	Trafford	LA	35.2	18.3	13.3	52.8	21.9	29,452	36%	4%	20%	13%	27%	na
NonPCM_324	2833_2349	378901	392774	N/A	A56 CROSS STREET	Trafford	LA	26.5	17.6	12.9	42.2	13.7	47,042	6%	7%	11%	28%	48%	na
Jct225	3529_8101	377585	395102	N/A		Trafford	LA	31.7	17.7	12.9	38.1	18.9	8,180	0%	9%	5%	23%	63%	na
Jct231	3304_3529	377588	395133	N/A		Trafford	LA	32.2	17.7	12.9	39.3	19.4	6,874	0%	6%	25%	23%	46%	na
3492_3511_DW	3492_3511	358611	405310	8566	A577	Wigan	PCM	31.8	27.5	18.8	27.4	13.0	22,910	5%	5%	21%	29%	40%	na

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
3431_7687_DW	3431_7687	358110	405811	N/A	MARKET STREET	Wigan	LA	30.6	27.5	18.8	30.1	11.8	2,097	100%	0%	0%	0%	0%	na
3103_3435_DW	3103_3435	358085	405595	N/A	KING STREET WEST	Wigan	LA	34.8	27.5	18.8	42.4	16.0	7,314	75%	1%	10%	6%	8%	na
3396_3466_DW	3396_3466	358002	405379	8568	A49	Wigan	PCM	31.6	27.5	18.8	28.5	12.8	19,304	38%	4%	10%	17%	31%	na
3103_8156	3103_8156	358146	405514	N/A		Wigan	LA	33.7	27.5	18.8	37.1	14.9	8,031	48%	2%	25%	16%	9%	na
3431_3463	3431_3463	358038	405924	N/A	NEW MARKET STREET	Wigan	LA	32.6	27.5	18.8	33.6	13.8	12,793	62%	3%	6%	10%	19%	na
Jct485	3103_3435	358163	405546	N/A	KING STREET WEST	Wigan	LA	31.7	27.5	18.8	31.9	13.0	7,314	75%	1%	10%	6%	8%	na

Table B-6: Predicted annual mean NO₂ concentrations and source apportionment at exceedance links on the Greater Manchester road network – Consultation Option – 2025

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
2119_2564_DW	2119_2564	371207	409524	17905	A673	Bolton	PCM	30.4	24.3	17.0	28.0	13.4	28,295	15%	6%	5%	21%	52%	-3.8
2799_3775_DW	2799_3775	371869	409735	8030	A666	Bolton	PCM	31.8	24.3	17.0	30.3	14.8	22,228	0%	6%	5%	32%	57%	-2.5
2799_3118_DW	2799_3118	371751	409800	58048	A673	Bolton	PCM	32.8	24.3	17.0	34.2	15.8	28,010	0%	5%	29%	24%	42%	-2.8
2650_2653_DW	2653_2650	372915	407622	7431	A666	Bolton	PCM	32.8	23.5	16.5	32.9	16.3	71,089	0%	5%	3%	41%	51%	-2.6
2649_2650_DW	2650_2649	372622	408297	7431	A666	Bolton	PCM	30.6	22.0	15.6	30.0	15.0	73,396	0%	5%	3%	40%	52%	-2.4
1986_2053_DW	1986_2053	372038	408749	74518	A575	Bolton	PCM	28.9	22.0	15.6	28.2	13.3	21,882	26%	5%	8%	20%	41%	-3.9
2053_12949_DW	2053_12949	371997	408820	74518	A575	Bolton	PCM	29.7	25.2	17.5	26.3	12.1	15,581	44%	4%	2%	17%	34%	-3.7
3064_15148_DW	3064_15148	371642	408705	7921	A579	Bolton	PCM	30.9	25.2	17.5	29.5	13.4	26,360	34%	4%	6%	16%	40%	-3.8
2648_6404_DW	2648_6404	372355	408934	47988	A579	Bolton	PCM	30.8	22.0	15.6	31.0	15.2	32,494	2%	5%	8%	34%	51%	-3.0
2407_6761_DW	2407_6761	374740	405143	73087	A667	Bolton	PCM	31.3	16.5	12.1	42.9	19.3	37,355	8%	4%	34%	19%	35%	-3.1
NonPCM_307	6404_2648	372340	408924	N/A	A579 BRADFORD STREET	Bolton	LA	31.1	22.0	15.6	31.6	15.5	32,494	2%	5%	8%	34%	51%	-2.9
Jct490	2113_2119	371155	409546	N/A		Bolton	LA	34.4	24.3	17.0	37.7	17.4	10,243	21%	4%	4%	29%	41%	-4.7
Jct491	2490_14486	371909	409019	N/A		Bolton	LA	28.1	24.3	17.0	23.7	11.1	15,560	43%	4%	2%	16%	35%	-4.0
4912_2244	4912_2244	381959	410596	73198	A58	Bury	PCM	28.3	19.7	14.2	28.9	14.1	24,316	3%	4%	19%	33%	40%	-3.6
2244_2756_DW	2244_2756	381848	410697	N/A	B6221 WASH LANE	Bury	LA	29.6	19.7	14.2	32.4	15.3	19,765	0%	5%	32%	24%	39%	-3.4
2244_4913_DW	2244_4913	381968	410627	73198	A58	Bury	PCM	32.9	19.7	14.2	39.2	18.7	24,587	3%	6%	12%	27%	53%	-4.4
2552_3975_DW	2552_3975	380966	411188	N/A	B6222 MOORGATE	Bury	LA	30.2	18.8	13.6	36.7	16.6	25,471	7%	4%	36%	18%	36%	-2.9
2243_4639_DW	2243_4639	381310	410749	16556	A58	Bury	PCM	29.9	19.7	14.2	32.8	15.7	29,137	14%	4%	10%	31%	40%	-3.7
3790_3652	3790_2237	379874	410937	38354	A58	Bury	PCM	36.3	20.1	14.4	49.6	21.9	80,223	9%	5%	18%	24%	45%	-4.0
2237_3790_DW	3790_2237	379830	410975	38354	A58	Bury	PCM	37.4	20.1	14.4	51.2	23.0	80,223	9%	5%	18%	24%	45%	-4.3
3652_6021	3790_2237	379755	410929	38354	A58	Bury	PCM	34.3	20.1	14.4	44.2	19.9	80,223	9%	5%	18%	24%	45%	-3.7
3089_5572_DW	3089_5572	379629	411052	N/A	B6214 CROSTONS ROAD	Bury	LA	32.0	21.5	15.3	35.2	16.7	46,541	13%	6%	8%	23%	49%	-3.9
3089_5572	3089_5572	379597	411059	N/A	B6214 CROSTONS ROAD	Bury	LA	29.1	21.5	15.3	28.7	13.8	46,541	13%	6%	8%	23%	49%	-3.4
4939_3424	4939_3424	380899	404868	17924	A56	Bury	PCM	30.5	16.0	11.7	39.0	18.8	23,417	1%	6%	14%	28%	51%	-4.3
3424_4940_DW	3424_4940	380920	404881	17924	A56	Bury	PCM	34.3	16.0	11.7	48.5	22.6	20,002	3%	5%	25%	22%	45%	-5.0
1742_9011_DW	1742_9011	381149	404182	46572	A56	Bury	PCM	32.7	19.2	13.8	42.8	18.9	37,946	12%	4%	30%	19%	36%	-4.7
2483_2951_DW	2483_2951	380856	405206	17924	A56	Bury	PCM	29.8	16.9	12.3	36.0	17.5	46,388	2%	6%	12%	26%	55%	-4.3
NonPCM_69	3424_4939	380931	404841	N/A	A56 BURY NEW ROAD	Bury	LA	34.4	16.0	11.7	48.4	22.6	43,419	2%	5%	20%	25%	48%	-4.6
Jct495	3424_7436	380909	404951	N/A		Bury	LA	30.4	16.0	11.7	38.9	18.6	41,530	1%	6%	9%	30%	55%	-4.4
1268_1269	1268_1269	383558	398278	27974	A34	Manchester	PCM	39.3	33.2	22.1	50.9	17.2	9,419	70%	2%	3%	8%	18%	-5.3
1356_4539_DW	1356_4539	383054	398617	99519	A6042	Manchester	PCM	32.2	33.2	22.1	22.9	10.1	27,034	0%	6%	13%	27%	54%	-2.1
1269_3272	1269_3272	383423	398312	27974	A34	Manchester	PCM	30.5	33.2	22.1	21.8	8.4	5,802	75%	2%	3%	6%	15%	-3.6
1322_3273	1322_3273	383249	398058	27975	A34	Manchester	PCM	35.5	33.2	22.1	30.1	13.4	15,111	1%	7%	5%	22%	65%	-1.9
1324_3276_DW	1324_3276	383489	397693	N/A	GREAT BRIDGEWATER STREET	Manchester	LA	32.7	27.6	18.9	31.6	13.7	8,481	8%	6%	15%	29%	41%	-4.0
3272_8542_DW	3272_8542	383361	398267	N/A	GARTSIDE STREET	Manchester	LA	32.0	33.2	22.1	22.0	9.9	5,098	0%	8%	4%	16%	72%	-1.4
1324_8570	1324_8570	383385	397701	7922	A6143	Manchester	PCM	30.8	27.6	18.9	27.1	11.9	13,108	5%	5%	20%	27%	43%	-2.4
1312_5801_DW	1312_5801	383778	399163	36577	A56	Manchester	PCM	31.7	23.8	16.7	33.5	15.0	22,904	15%	4%	25%	25%	32%	-3.5
1309_2291	1309_2291	384105	399123	17935	A665	Manchester	PCM	29.6	24.8	17.3	27.2	12.3	30,892	3%	5%	10%	31%	50%	-4.1
2353_45005_DW	2353_45005	384492	398898	75248	A664	Manchester	PCM	29.8	33.2	22.1	17.5	7.6	6,553	71%	1%	8%	7%	12%	-3.8
2353_45005	2353_45005	384467	398922	75248	A664	Manchester	PCM	30.9	33.2	22.1	20.4	8.7	6,553	71%	1%	8%	7%	12%	-4.4
1472_1511_DW	1472_1511	385939	397630	27403	A635	Manchester	PCM	29.9	28.5	19.4	21.8	10.5	28,239	2%	5%	16%	35%	43%	-2.9
1341_2939_DW	1341_2939	385618	397656	75239	A635	Manchester	PCM	33.7	28.5	19.4	31.6	14.3	25,366	8%	4%	27%	24%	37%	-3.5
1341_2939	1341_2939	385616	397633	75239	A635	Manchester	PCM	29.9	28.5	19.4	22.4	10.5	25,366	8%	4%	27%	24%	37%	-2.7
2608_4852_DW	2608_4852	385272	397130	26157	A6	Manchester	PCM	32.8	28.5	19.4	27.7	13.4	36,876	7%	6%	3%	33%	52%	-2.7
2607_2608_DW	2607_2608	385142	397223	26157	A6	Manchester	PCM	30.8	28.5	19.4	23.3	11.4	36,753	6%	6%	3%	33%	52%	-2.4
2607_3056_DW	2607_3056	384957	397311	26157	A6	Manchester	PCM	35.2	30.0	20.3	31.8	14.9	36,753	12%	6%	4%	28%	50%	-3.2
2286_1286_DW	2286_1286	384598	398032	N/A	AUBURN STREET	Manchester	LA	33.6	33.2	22.1	28.1	11.5	7,178	18%	4%	23%	16%	38%	-1.8

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
1242_1243	1242_1243	384483	398343	70154	A62	Manchester	PCM	37.5	33.2	22.1	51.4	15.3	1,445	100%	0%	0%	0%	0%	-7.9
2293_6119_DW	2293_6119	384344	398215	N/A		Manchester	LA	26.6	33.2	22.1	11.4	4.5	2,316	100%	0%	0%	0%	0%	-9.3
5429_8559_DW	5429_8559	384266	398150	N/A	NEW YORK STREET	Manchester	LA	29.8	33.2	22.1	17.4	7.7	6,308	13%	6%	2%	24%	55%	-2.6
1338_2904_DW	1338_2904	384418	396982	N/A	B5117 OXFORD ROAD	Manchester	LA	24.6	28.6	19.5	11.4	5.1	2,561	100%	0%	0%	0%	0%	-10.0
1338_4532_DW	1338_4532	384338	397135	75242	A34	Manchester	PCM	26.1	30.0	20.3	12.5	5.8	4,004	89%	1%	0%	1%	9%	-8.5
2006_3292	2006_3292	384110	397858	56529	A5103	Manchester	PCM	27.2	30.0	20.3	16.8	6.9	5,938	66%	2%	2%	18%	12%	-10.2
1336_16404	1336_16404	384137	397465	17929	A34	Manchester	PCM	27.9	30.0	20.3	19.2	7.6	4,848	84%	1%	1%	3%	10%	-10.8
1336_16404_DW	1336_16404	384153	397473	17929	A34	Manchester	PCM	27.7	30.0	20.3	18.8	7.4	4,848	84%	1%	1%	3%	10%	-10.6
1268_46301	1268_46301	383702	398229	7947	A34	Manchester	PCM	39.2	33.2	22.1	52.7	17.1	8,529	70%	1%	10%	8%	11%	-5.1
8547_47130_DW	8547_47130	383976	398274	N/A	KING STREET	Manchester	LA	33.6	33.2	22.1	26.4	11.5	20,642	11%	6%	5%	23%	54%	-2.2
8547_47130	8547_47130	383973	398256	N/A	KING STREET	Manchester	LA	36.0	33.2	22.1	32.4	13.9	20,642	11%	6%	5%	23%	54%	-2.5
1259_1243	1259_1243	384409	398297	N/A	PICCADILLY	Manchester	LA	26.3	33.2	22.1	10.6	4.2	1,307	100%	0%	0%	0%	0%	-7.0
2289_12835	2289_12835	384282	398507	70153	A6	Manchester	PCM	33.0	33.2	22.1	29.4	10.9	9,171	73%	2%	1%	6%	18%	-6.8
3261_1302	3261_1302	384528	398779	75246	A665	Manchester	PCM	31.5	33.2	22.1	21.2	9.4	13,916	0%	6%	15%	27%	52%	-2.3
8546_14050	8546_14050	384384	398801	57427	A664	Manchester	PCM	35.2	33.2	22.1	36.3	13.1	7,963	70%	2%	2%	5%	21%	-6.8
5806_1304	5806_1304	384250	398668	57427	A664	Manchester	PCM	31.6	33.2	22.1	26.1	9.5	2,979	79%	1%	9%	6%	6%	-5.2
2290_3027	2290_3027	384038	398775	48035	A6042	Manchester	PCM	26.7	33.2	22.1	11.2	4.6	3,053	75%	1%	3%	10%	10%	-8.9
2290_3027_DW	2290_3027	384055	398767	48035	A6042	Manchester	PCM	27.3	33.2	22.1	12.7	5.1	3,053	75%	1%	3%	10%	10%	-10.0
1305_2290_DW	1305_2290	384091	398691	N/A	WITHY GROVE	Manchester	LA	29.8	33.2	22.1	20.3	7.7	3,053	84%	1%	1%	7%	7%	-10.3
1307_1317	1307_1317	383757	398717	36551	A6	Manchester	PCM	32.9	33.2	22.1	30.3	10.8	4,323	83%	1%	2%	8%	7%	-8.2
1307_1317_DW	1307_1317	383771	398733	36551	A6	Manchester	PCM	31.0	33.2	22.1	24.1	9.0	4,323	83%	1%	2%	8%	7%	-7.1
3056_3842	3056_3842	384855	397401	26157	A6	Manchester	PCM	29.8	30.0	20.3	19.5	9.5	38,966	7%	6%	4%	28%	54%	-5.2
3056_3842_DW	3056_3842	384880	397418	26157	A6	Manchester	PCM	34.8	30.0	20.3	30.5	14.5	38,966	7%	6%	4%	28%	54%	-8.0
3033_2293	3033_2293	384317	398195	N/A	PARKER STREET	Manchester	LA	28.4	33.2	22.1	16.7	6.3	2,455	100%	0%	0%	0%	0%	-12.0
1261_6042_DW	1261_6042	384451	398215	77003	A6	Manchester	PCM	31.7	33.2	22.1	27.4	9.5	1,257	100%	0%	0%	0%	0%	-4.0
1261_6042	1261_6042	384466	398201	77003	A6	Manchester	PCM	31.8	33.2	22.1	27.7	9.6	1,257	100%	0%	0%	0%	0%	-4.0
3016_6022_DW	3016_6022	384639	397855	46165	A6	Manchester	PCM	33.6	30.0	20.3	35.6	13.3	7,302	63%	2%	5%	8%	22%	-2.6
1302_8546	1302_8546	384428	398838	75248	A664	Manchester	PCM	33.0	33.2	22.1	29.5	10.8	7,974	60%	1%	19%	7%	13%	-5.1
1302_8546_DW	1302_8546	384414	398854	75248	A664	Manchester	PCM	30.9	33.2	22.1	23.1	8.8	7,974	60%	1%	19%	7%	13%	-4.4
2893_5074	2892_2890	384158	397155	75243	A57M	Manchester	PCM	31.3	30.0	20.3	24.0	10.9	64,071	0%	5%	4%	37%	55%	-1.8
5409_5430_DW	5409_5430	384209	398072	N/A	CHARLOTTE STREET	Manchester	LA	32.1	33.2	22.1	22.4	10.0	12,874	2%	7%	2%	26%	63%	-2.2
1263_5429	1263_5429	384207	398182	N/A	BACK GEORGE STREET	Manchester	LA	32.7	33.2	22.1	24.2	10.5	6,308	14%	6%	2%	23%	55%	-3.0
2283_8544_DW	2283_8544	383791	398603	27992	A56	Manchester	PCM	34.8	33.2	22.1	36.1	12.7	4,324	75%	1%	4%	11%	8%	-8.4
1267_1985	1267_1985	383672	398364	16536	A56	Manchester	PCM	36.4	33.2	22.1	36.7	14.3	8,760	42%	3%	7%	17%	31%	-3.5
1267_1985_DW	1267_1985	383687	398358	16536	A56	Manchester	PCM	35.6	33.2	22.1	34.6	13.5	8,760	42%	3%	7%	17%	31%	-3.4
1985_2283	1985_2283	383717	398477	16536	A56	Manchester	PCM	28.4	33.2	22.1	14.2	6.3	7,796	23%	5%	5%	24%	43%	-3.3
1985_2283_DW	1985_2283	383734	398471	16536	A56	Manchester	PCM	28.9	33.2	22.1	15.5	6.8	7,796	23%	5%	5%	24%	43%	-3.6
1685_1686_DW	1685_1686	387382	394221	73778	A6	Manchester	PCM	28.9	21.8	15.5	29.1	13.4	27,552	26%	4%	13%	19%	38%	-3.5
1469_3669_DW	1469_3669	386578	395884	28695	A6	Manchester	PCM	29.7	22.9	16.1	28.8	13.6	27,740	25%	5%	4%	18%	48%	-2.9
1684_4312_DW	1684_4312	387763	393475	73778	A6	Manchester	PCM	29.1	24.1	16.8	24.9	12.2	34,386	7%	7%	4%	23%	59%	-2.7
4373_5121_DW	4373_5121	382333	389181	48339	A560	Manchester	PCM	29.2	17.3	12.6	33.8	16.6	33,829	2%	6%	16%	25%	51%	-2.8
1846_2423	1846_2423	381858	388161	26047	M56	Manchester	PCM	31.3	17.6	12.8	37.1	18.5	14,514	3%	6%	3%	28%	60%	-2.6
1846_2423_DW	1846_2423	381865	388177	26047	M56	Manchester	PCM	33.4	17.6	12.8	41.7	20.5	14,514	3%	6%	3%	28%	60%	-2.9
2855_2218_DW	2856_2855	382356	390128	7701	A5103	Manchester	PCM	31.5	16.5	12.1	40.1	19.4	111,461	0%	6%	5%	29%	60%	-3.1
2844_2848	2855_2847	382344	390388	7701	A5103	Manchester	PCM	32.9	16.5	12.1	43.0	20.8	134,277	0%	6%	7%	27%	60%	-2.9
2847_2855_DW	2855_2847	382389	390376	7701	A5103	Manchester	PCM	32.9	16.5	12.1	42.7	20.8	134,277	0%	6%	7%	27%	60%	-2.8
14951_17000_DW	14951_17000	381833	385986	N/A	THORLEY LANE	Manchester	LA	32.1	31.6	21.0	24.1	11.1	19,041	20%	5%	12%	17%	46%	-2.5
7634_8756_DW	7634_8756	382361	385549	N/A	RINGWAY ROAD WEST	Manchester	LA	35.9	35.9	23.3	27.1	12.6	37,198	0%	5%	19%	20%	56%	-1.3
12800_14480_DW	12800_14480	382038	385547	N/A	OUTWOOD LANE	Manchester	LA	36.4	35.9	23.3	27.9	13.1	36,006	0%	7%	11%	17%	64%	-1.8

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
NonPCM_184	1336_16404	384110	397517	N/A	A34 OXFORD STREET	Manchester	LA	27.1	30.0	20.3	17.0	6.8	4,848	84%	1%	1%	3%	10%	-12.2
NonPCM_207	4530_1268	383624	398258	N/A	A34 BRIDGE STREET	Manchester	LA	38.2	33.2	22.1	47.1	16.2	13,901	24%	5%	5%	21%	45%	-5.2
NonPCM_216	5408_5432	384079	397954	N/A	GEORGE STREET	Manchester	LA	28.0	30.0	20.3	17.4	7.7	10,135	24%	6%	1%	18%	50%	-4.2
Jct254	14490_5406	384292	398620	N/A		Manchester	LA	32.8	33.2	22.1	28.0	10.6	5,759	60%	2%	7%	8%	22%	-4.3
Jct262	2006_3292	384156	397878	N/A		Manchester	LA	28.4	30.0	20.3	20.2	8.1	5,938	66%	2%	2%	18%	12%	-11.6
Jct280	1402_5407	383617	397503	N/A		Manchester	LA	30.8	27.6	18.9	26.2	11.8	27,524	8%	7%	5%	25%	55%	-2.0
Jct282	1275_1279	384116	398263	N/A		Manchester	LA	33.5	33.2	22.1	25.9	11.4	8,303	11%	6%	4%	25%	55%	-2.8
Jct285	8546_14050	384363	398784	N/A		Manchester	LA	34.4	33.2	22.1	33.8	12.3	7,963	70%	2%	2%	5%	21%	-6.5
Jct526	1275_1279	384116	398262	N/A		Manchester	LA	33.5	33.2	22.1	25.9	11.4	8,303	11%	6%	4%	25%	55%	-2.8
3911_4112	3911_4112	389383	403282	99617	A663	Oldham	PCM	30.1	20.2	14.5	32.0	15.6	41,899	4%	6%	8%	25%	58%	-2.5
1996_14524_DW	1996_14524	393502	405226	36632	A62	Oldham	PCM	31.6	24.4	17.0	30.3	14.6	33,486	6%	6%	8%	28%	52%	-3.4
N14523_14524	14523_14524	393312	405043	36632	A62	Oldham	PCM	31.5	24.4	17.0	29.7	14.5	54,109	0%	6%	7%	30%	57%	-2.5
1975_2466_DW	14523_7556	392991	404790	N/A	WATERLOO STREET	Oldham	LA	29.8	20.9	14.9	30.3	14.9	53,678	0%	6%	7%	31%	56%	-2.2
7556_14523_DW	7556_14523	393092	404851	36632	A62	Oldham	PCM	32.0	23.1	16.3	32.3	15.7	25,079	0%	6%	11%	26%	57%	-2.4
1295_1703	1295_1703	390482	402513	77008	A62	Oldham	PCM	30.8	21.2	15.1	32.4	15.7	37,778	7%	5%	12%	29%	48%	-2.9
3914_5661_DW	3914_5661	390653	402743	6606	A62	Oldham	PCM	29.2	21.2	15.1	28.6	14.1	38,835	2%	5%	14%	34%	45%	-2.9
3914_5661	3914_5661	390627	402753	6606	A62	Oldham	PCM	30.0	21.2	15.1	30.4	14.9	38,835	2%	5%	14%	34%	45%	-3.1
1433_1615_DW	1433_1615	389260	401329	73781	A62	Oldham	PCM	29.0	19.1	13.7	34.6	15.3	17,624	22%	2%	33%	24%	19%	-3.2
2202_2205_DW	2202_2205	389446	413627	27469	A680	Rochdale	PCM	31.4	25.4	17.7	28.8	13.7	24,385	5%	5%	19%	28%	43%	-2.2
2210_14216_DW	2210_14216	388664	411856	17322	A664	Rochdale	PCM	35.3	17.0	12.4	52.9	22.9	34,622	0%	4%	40%	24%	32%	-3.5
14220_14221	14220_14221	389004	412157	26586	A58	Rochdale	PCM	28.1	18.4	13.3	30.0	14.7	45,719	3%	6%	13%	26%	52%	-3.4
2210_4463_DW	2210_4463	388729	411971	26586	A58	Rochdale	PCM	34.6	17.0	12.4	52.0	22.2	45,719	6%	3%	39%	20%	31%	-3.7
2210_4463	2210_4463	388741	411950	26586	A58	Rochdale	PCM	29.8	17.0	12.4	39.0	17.4	45,719	6%	3%	39%	20%	31%	-3.2
1345_1346_DW	1345_1346	380555	398426	56535	A5186	Salford	PCM	30.0	24.4	17.0	26.8	13.0	13,762	13%	5%	16%	24%	43%	-3.2
1345_1346	1345_1346	380537	398426	56535	A5186	Salford	PCM	29.5	24.4	17.0	25.5	12.5	13,762	13%	5%	16%	24%	43%	-2.9
1364_1366	1364_1366	381428	399804	17245	A576	Salford	PCM	30.9	23.1	16.2	31.9	14.7	30,903	14%	5%	21%	16%	44%	1.7
5249_7952	5249_7952	381205	399532	58028	A576	Salford	PCM	29.1	23.1	16.2	26.4	12.9	34,405	4%	6%	10%	21%	59%	1.2
5249_7952_DW	5249_7952	381224	399526	58028	A576	Salford	PCM	28.5	23.1	16.2	25.1	12.3	34,405	4%	6%	10%	21%	59%	1.0
2672_14311_DW	2299_14311	381434	399244	6161	A6	Salford	PCM	28.9	23.1	16.2	25.9	12.7	51,354	14%	6%	8%	19%	53%	1.6
14311_2299_DW	2299_14311	381488	399165	6161	A6	Salford	PCM	34.0	23.1	16.2	38.5	17.8	51,354	14%	6%	8%	19%	53%	3.1
3964_4732	3964_4732	382882	397222	99516	A56	Salford	PCM	29.2	23.2	16.3	26.3	12.9	43,054	2%	6%	10%	28%	54%	-2.3
3964_4732_DW	3964_4732	382871	397244	99516	A56	Salford	PCM	32.9	23.2	16.3	34.4	16.6	43,054	2%	6%	10%	28%	54%	-2.7
1867_4574_DW	1867_4574	382129	397840	36585	A57	Salford	PCM	34.2	23.2	16.3	37.9	17.9	52,007	1%	5%	16%	30%	48%	-3.4
1232_1257	1232_1257	381738	398808	6161	A6	Salford	PCM	28.7	22.1	15.6	27.7	13.0	40,405	24%	5%	10%	18%	43%	-3.9
1349_1867_DW	1349_1867	382371	397772	48023	A57	Salford	PCM	34.7	23.2	16.3	39.1	18.4	48,002	0%	5%	17%	29%	49%	-3.5
3786_1233_DW	3968_1233	381517	398259	27751	A5063	Salford	PCM	29.0	22.1	15.6	27.1	13.3	33,142	1%	6%	10%	23%	59%	-2.6
1349_2993_DW	1349_2993	382580	397716	73792	A57	Salford	PCM	37.9	23.2	16.3	46.7	21.6	57,809	0%	5%	15%	30%	49%	-3.8
1349_2993	1349_2993	382574	397693	73792	A57	Salford	PCM	31.4	23.2	16.3	31.5	15.1	57,809	0%	5%	15%	30%	49%	-2.9
5505_5507_DW	5505_5507	382099	398640	56160	A6	Salford	PCM	29.1	23.7	16.6	26.7	12.5	29,040	28%	5%	5%	18%	44%	-4.9
3969_6612_DW	3969_6612	381512	398031	6562	A57	Salford	PCM	33.7	22.1	15.6	38.0	18.1	53,278	1%	5%	14%	31%	49%	-3.4
4575_6612_DW	4575_6612	381692	397971	36585	A57	Salford	PCM	29.9	21.2	15.1	29.9	14.8	52,570	0%	5%	6%	37%	52%	-2.8
3850_7895_DW	3850_7895	382754	398553	17926	A6	Salford	PCM	28.3	23.7	16.6	24.3	11.7	31,864	13%	6%	6%	24%	51%	-4.5
4575_7897_DW	4575_7897	381821	397932	36585	A57	Salford	PCM	29.9	21.2	15.1	30.0	14.8	52,570	0%	5%	7%	36%	52%	-2.8
3752_4897_DW	3752_4897	382876	398556	70151	A6	Salford	PCM	27.2	23.7	16.6	21.9	10.5	23,927	18%	5%	8%	23%	46%	-4.6
3752_7895_DW	3752_7895	382815	398555	17926	A6	Salford	PCM	26.8	23.7	16.6	21.0	10.1	23,927	16%	6%	7%	24%	47%	-4.3
12947_1223_DW	12947_1223	381649	398952	6161	A6	Salford	PCM	28.2	22.1	15.6	25.8	12.6	24,518	6%	7%	3%	23%	61%	-3.0
12945_14431_DW	12945_14431	381917	398711	56160	A6	Salford	PCM	31.7	22.1	15.6	34.0	16.1	35,777	13%	6%	4%	21%	55%	-5.4
1232_12945_DW	1232_12945	381825	398784	56160	A6	Salford	PCM	34.9	22.1	15.6	45.5	19.3	35,786	36%	3%	18%	14%	28%	-4.7
3850_14502_DW	3850_14502	382685	398551	17926	A6	Salford	PCM	30.6	23.7	16.6	30.4	13.9	31,852	28%	5%	7%	19%	41%	-5.5

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
5505_14310_DW	5505_14310	382293	398539	56160	A6	Salford	PCM	27.9	23.7	16.6	23.4	11.3	29,024	19%	6%	5%	20%	50%	-4.8
1216_14503_DW	1216_14503	382565	398546	17926	A6	Salford	PCM	36.0	23.7	16.6	46.7	19.4	31,855	38%	3%	17%	15%	27%	-5.2
1216_14503	1216_14503	382567	398523	17926	A6	Salford	PCM	31.7	23.7	16.6	34.4	15.1	31,855	38%	3%	17%	15%	27%	-4.4
5179_5182_DW	5179_5182	374598	400597	74618	A572	Salford	PCM	31.4	13.8	10.3	43.1	21.1	35,298	1%	6%	8%	29%	56%	-3.1
1579_17017_DW	1579_17017	377344	400951	37363	A580	Salford	PCM	30.1	16.7	12.2	37.5	17.9	40,708	5%	5%	16%	26%	48%	-3.3
1589_14316_DW	1589_14316	378317	399184	7292	A576	Salford	PCM	28.6	21.7	15.4	30.1	13.2	18,913	29%	3%	32%	12%	25%	-4.7
NonPCM_147	4951_4554	375357	397837	N/A	A57 LIVERPOOL ROAD	Salford	LA	29.6	14.7	10.9	38.0	18.7	19,035	6%	5%	4%	31%	54%	-3.6
NonPCM_219	2993_1202	382678	397661	N/A	A57 REGENT ROAD	Salford	LA	34.5	23.2	16.3	39.9	18.2	57,810	1%	4%	34%	25%	36%	-2.9
Jct205	4554_4951	375367	397806	N/A		Salford	LA	28.6	14.7	10.9	35.6	17.7	19,035	6%	5%	4%	31%	54%	-3.3
Jct290	1216_7959	382540	398554	N/A		Salford	LA	31.3	23.7	16.6	33.1	14.6	5,342	0%	6%	12%	31%	51%	-4.2
1859_14054_DW	1859_14054	389505	390884	N/A	B6167 LANCASHIRE HILL	Stockport	LA	29.6	22.4	15.9	27.6	13.7	15,833	5%	6%	6%	27%	56%	-2.6
3620_5931_DW	3620_5931	390351	390720	37920	A626	Stockport	PCM	32.4	22.9	16.1	34.1	16.3	34,505	0%	5%	18%	31%	45%	-2.7
2663_5015	2663_5015	390347	391028	N/A	B6104 CARRINGTON ROAD	Stockport	LA	28.1	17.9	13.0	31.8	15.1	18,028	10%	3%	31%	27%	29%	-4.1
2663_5015_DW	2663_5015	390344	391047	N/A	B6104 CARRINGTON ROAD	Stockport	LA	32.1	17.9	13.0	41.7	19.1	18,028	10%	3%	31%	27%	29%	-5.1
5021_6254_DW	5021_6254	390116	391212	37920	A626	Stockport	PCM	31.3	17.9	13.0	38.2	18.3	31,846	0%	4%	23%	37%	36%	-3.1
1859_1860	1859_1860	389494	390731	58254	A560	Stockport	PCM	29.9	22.4	15.9	28.6	14.1	5,712	26%	4%	12%	24%	33%	-3.3
3426_4162_DW	3426_4162	390357	390129	27384	A626	Stockport	PCM	30.4	22.9	16.1	29.6	14.3	32,440	3%	6%	12%	25%	54%	-2.5
5160_6071_DW	5160_6071	392018	392010	27296	A560	Stockport	PCM	30.0	23.7	16.6	27.5	13.4	32,439	0%	6%	14%	23%	57%	-1.8
1924_8878_DW	1924_8878	392443	391754	27296	A560	Stockport	PCM	31.2	19.1	13.7	39.4	17.4	33,433	8%	4%	36%	13%	39%	-2.5
3973_14181_DW	3973_14181	388375	390354	58034	A5145	Stockport	PCM	34.1	19.7	14.1	43.0	20.0	26,482	11%	4%	20%	25%	40%	-3.2
3973_14181	3973_14181	388376	390333	58034	A5145	Stockport	PCM	32.1	19.7	14.1	37.8	18.0	26,482	11%	4%	20%	25%	40%	-2.9
2430_3710_DW	2430_3710	385097	388122	38735	A34	Stockport	PCM	31.1	17.8	13.0	36.6	18.1	70,551	0%	6%	6%	29%	60%	-2.0
2887_2430_DW	2887_2430	385044	388518	26352	A34	Stockport	PCM	34.1	17.8	13.0	43.6	21.2	41,074	0%	6%	8%	26%	60%	-2.6
2184_14428_DW	2184_14428	391822	387266	99018	A6	Stockport	PCM	29.2	18.4	13.3	33.3	15.9	34,135	5%	6%	18%	21%	51%	-4.1
6055_14428_DW	6055_14428	391767	387344	99018	A6	Stockport	PCM	28.1	18.4	13.3	30.8	14.8	34,135	5%	6%	17%	21%	51%	-3.7
NonPCM_273	6205_6055	391720	387414	N/A	A6 LONDON ROAD	Stockport	LA	29.1	18.4	13.3	34.1	15.8	34,135	12%	5%	23%	19%	41%	-3.6
Jct355	1850_1864	389388	390175	N/A		Stockport	LA	30.4	22.4	15.9	33.1	14.6	24,660	5%	6%	9%	28%	51%	-4.3
Jct539	3426_4162	390301	390159	N/A		Stockport	LA	30.8	22.9	16.1	30.5	14.7	32,440	3%	6%	12%	25%	54%	-2.5
7637_2941_DW	7637_2941	393180	398661	99618	A635	Tameside	PCM	33.6	24.6	17.1	35.7	16.4	28,388	17%	4%	17%	25%	37%	-3.4
2941_5978_DW	7638_5978	393398	398690	37451	A635	Tameside	PCM	31.9	24.6	17.1	30.1	14.7	53,441	0%	6%	8%	32%	55%	-2.3
1695_14478_DW	1695_14478	392753	398494	99618	A635	Tameside	PCM	34.1	24.5	17.0	35.6	17.0	46,538	1%	5%	13%	32%	49%	-3.2
1695_14478	1695_14478	392761	398476	99618	A635	Tameside	PCM	30.2	24.5	17.0	27.0	13.2	46,538	1%	5%	13%	32%	49%	-2.6
3813_3812_DW	3813_3812	392978	398478	74561	A6017	Tameside	PCM	31.3	24.5	17.0	29.2	14.3	33,524	2%	6%	8%	32%	52%	-2.8
7638_3813	7638_3813	393112	398511	74561	A6017	Tameside	PCM	30.5	24.6	17.1	27.7	13.4	31,116	4%	6%	13%	24%	54%	-2.9
1695_5659	1695_5659	392588	398416	99618	A635	Tameside	PCM	30.0	24.5	17.0	26.3	13.0	47,803	1%	6%	10%	34%	50%	-2.5
1695_5659_DW	1695_5659	392582	398435	99618	A635	Tameside	PCM	33.9	24.5	17.0	34.8	16.8	47,803	1%	6%	10%	34%	50%	-3.0
5655_5656_DW	5655_5656	392042	398069	76074	A6140	Tameside	PCM	31.5	24.5	17.0	30.6	14.5	22,232	0%	4%	31%	28%	37%	-2.8
3812_14478	3812_14478	392855	398516	74561	A6017	Tameside	PCM	30.4	24.5	17.0	27.7	13.4	41,431	5%	5%	16%	30%	44%	-2.7
3812_14478_DW	3812_14478	392847	398534	99618	A635	Tameside	PCM	34.1	24.5	17.0	36.4	17.1	41,431	5%	5%	16%	30%	44%	-3.3
3761_5653_DW	3761_5653	390802	395630	99512	A57	Tameside	PCM	28.3	17.4	12.7	31.8	15.6	20,111	3%	5%	17%	31%	45%	-3.2
Jct449	3227_8517	391912	395574	N/A		Tameside	LA	29.7	19.5	14.0	31.7	15.7	19,118	0%	6%	4%	33%	56%	-2.4
2305_5949_DW	2305_5949	380182	395145	36578	A56	Trafford	PCM	30.4	27.9	19.0	23.2	11.5	31,480	6%	7%	6%	23%	59%	-2.2
1382_3622_DW	1382_3622	380628	395827	56499	A56	Trafford	PCM	30.5	27.9	19.0	23.4	11.5	35,725	3%	7%	5%	26%	59%	-2.5
7603_7606_DW	7603_7606	376675	396960	N/A	B5214 TRAFFORD BOULEVARD	Trafford	LA	28.7	18.2	13.2	33.3	15.5	20,951	7%	6%	18%	18%	51%	-5.1
7606_17100_DW	7606_17100	376759	397007	N/A	B5214 TRAFFORD BOULEVARD	Trafford	LA	30.1	18.3	13.3	37.3	16.8	29,412	26%	4%	16%	14%	40%	-5.1
NonPCM_324	2833_2349	378901	392774	N/A	A56 CROSS STREET	Trafford	LA	29.9	17.6	12.9	34.7	17.1	46,966	1%	7%	7%	27%	58%	3.4
Jct225	3529_8101	377585	395102	N/A		Trafford	LA	29.5	17.7	12.9	33.1	16.6	8,149	0%	8%	3%	20%	69%	-2.2
Jct231	3304_3529	377588	395133	N/A		Trafford	LA	29.9	17.7	12.9	34.0	17.0	6,860	0%	6%	15%	22%	58%	-2.3
3492_3511_DW	3492_3511	358611	405310	8566	A577	Wigan	PCM	29.6	27.5	18.8	22.3	10.8	22,884	2%	5%	16%	27%	50%	-2.2

Point ID	Rd Link ID	x	y	Census ID	Road name	Local Authority	PCM / LA	Annual mean NO ₂ conc (µg/m ³)	BG NOx conc (µg/m ³)	BG NO ₂ conc (µg/m ³)	Road NOx contrib (µg/m ³)	Road NO ₂ contrib (µg/m ³)	AADT	NOx contribution by vehicle type (%)					Change NO ₂ conc (µg/m ³)
														Bus	Taxi	HGV	LGV	Car	
3431_7687_DW	3431_7687	358110	405811	N/A	MARKET STREET	Wigan	LA	25.6	27.5	18.8	16.1	6.8	2,097	100%	0%	0%	0%	0%	-5.0
3103_3435_DW	3103_3435	358085	405595	N/A	KING STREET WEST	Wigan	LA	31.0	27.5	18.8	30.5	12.2	7,317	71%	2%	9%	6%	12%	-3.8
3396_3466_DW	3396_3466	358002	405379	8568	A49	Wigan	PCM	28.5	27.5	18.8	20.6	9.7	19,294	24%	5%	8%	19%	45%	-3.1
3103_8156	3103_8156	358146	405514	N/A		Wigan	LA	30.5	27.5	18.8	28.1	11.7	8,034	42%	2%	27%	16%	12%	-3.2
3431_3463	3431_3463	358038	405924	N/A	NEW MARKET STREET	Wigan	LA	28.7	27.5	18.8	22.4	9.9	12,772	50%	3%	6%	11%	29%	-3.9
Jct485	3103_3435	358163	405546	N/A	KING STREET WEST	Wigan	LA	28.8	27.5	18.8	23.8	10.0	7,317	71%	2%	9%	6%	12%	-2.9

Appendix C – Sensitivity Testing

6.1.14 To be completed for Full Business Case.