Department for Environment Food & Rural Affairs

Department for Transport

Air Quality Plan for tackling roadside nitrogen dioxide concentrations in Sheffield Urban Area (UK0007)

July 2017

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Contents

1 Introduction

1.1 This document

This document is the Sheffield Urban Area agglomeration zone (UK0007) updated air quality plan for tackling roadside nitrogen dioxide (NO_2) concentrations. This is an update to the air quality plan published in December 2015 (https://www.gov.uk/government/collections/air-quality-plan-for-nitrogen- dioxide-no2-in-uk-2015).

This plan presents the following information:

- General information regarding the Sheffield Urban Area agglomeration zone
- Details of NO_2 exceedance situation within the Sheffield Urban Area agglomeration zone
- Details of local air quality measures that have been implemented, will be implemented or are being considered for implementation in this agglomeration zone

This air quality plan for the Sheffield Urban Area agglomeration zone should be read in conjunction with the separate UK Air Quality Plan for tackling roadside nitrogen dioxide concentrations (hereafter referred to as the overview document) which sets out, amongst other things, the authorities responsible for delivering air quality improvements and the list of UK and national measures that are applied in some or all UK zones. The measures presented in this zone plan, and the accompanying UK overview document show how the UK will ensure that compliance with the NO_2 limit values is achieved in the shortest possible time.

This plan should also be read in conjunction with the supporting UK Technical Report which presents information on assessment methods, input data and emissions inventories used in the analysis presented in this plan.

1.2 Context

Two NO_2 limit values for the protection of human health have been set in the Air Quality Directive (2008/50/EC). These are:

- The annual mean limit value: an annual mean concentration of no more than 40 μgm^{-3}
- The hourly limit value: no more than 18 exceedances of 200 μgm^{-3} in a calendar year

The Air Quality Directive stipulates that compliance with the NO_2 limit values will be achieved by 01/01/2010.

1.3 Zone status

The assessment undertaken for the Sheffield Urban Area agglomeration zone indicates that the annual limit value was exceeded in 2015 but is likely to be achieved by 2023 through the introduction of measures included in the baseline. When combined with the measures outlined in the overview document for the UK we expect this zone to be compliant by 2021.

1.4 Plan structure

General administrative information regarding this agglomeration zone is presented in Section 2.

Section 3 then presents the overall picture with respect to NO_2 levels in this agglomeration zone for the 2015 reference year of this air quality plan. This includes a declaration of exceedance situations within the agglomeration zone and presentation of a detailed source apportionment for each exceedance situation.

An overview of the measures already taken and to be taken within the agglomeration zone both before and after 2015 is given in Section 4.

Baseline modelled projections for each year from 2017 to 2030 for each exceedance situation are presented in Section 5. The baseline projections presented here include, where possible, the impact of measures that have already been taken and measures for which the relevant authority has made a firm commitment to implement. However, it has not been possible to quantify the impact of all the measures. This section therefore also explains which measures have been quantified, and hence included in the model projections, and which measures have not been quantified.

2 General Information About the Zone

2.1 Administrative information

Zone name: Sheffield Urban Area
Zone code: UK0007
Type of zone: agglomeration zone
Reference year: 2015
Extent of zone: Figure 1 shows the area covered by the Sheffield Urban Area agglomeration zone.
Local Authorities within the zone: Figure 2 shows the location of Local Authorities within the agglomeration zone. A list of these Local Authorities is also given below. The numbers in the list correspond to the numbers in Figure 2.

1. North East Derbyshire District Council
2. Rotherham Metropolitan Borough Council
3. Sheffield City Council

(Note: Local Authority boundaries do not necessarily coincide with zone boundaries. Hence Local Authorities may be listed within more than one zone plan.)

Figure 1: Map showing the extent of the Sheffield Urban Area agglomeration zone (UK0007).

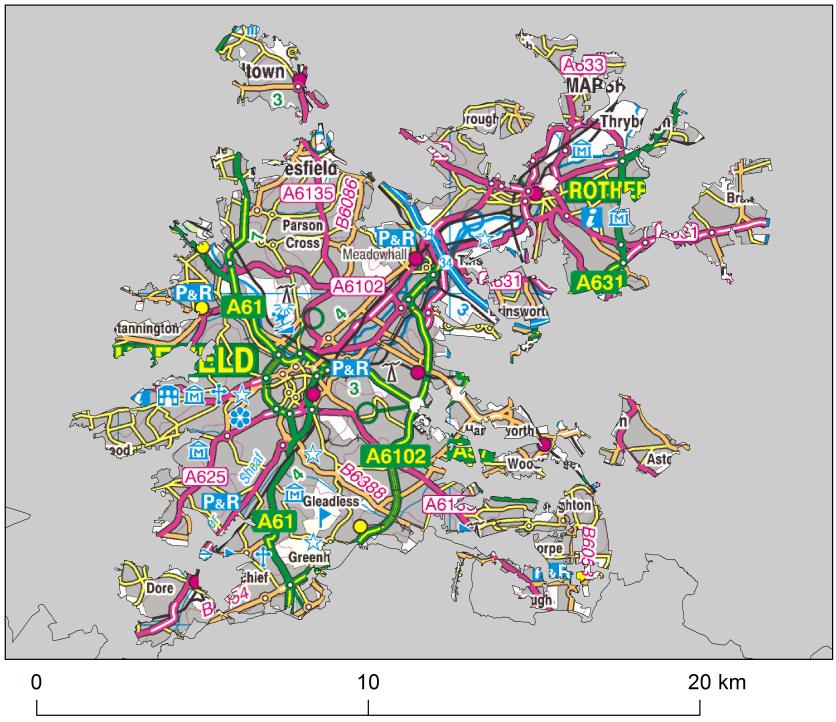
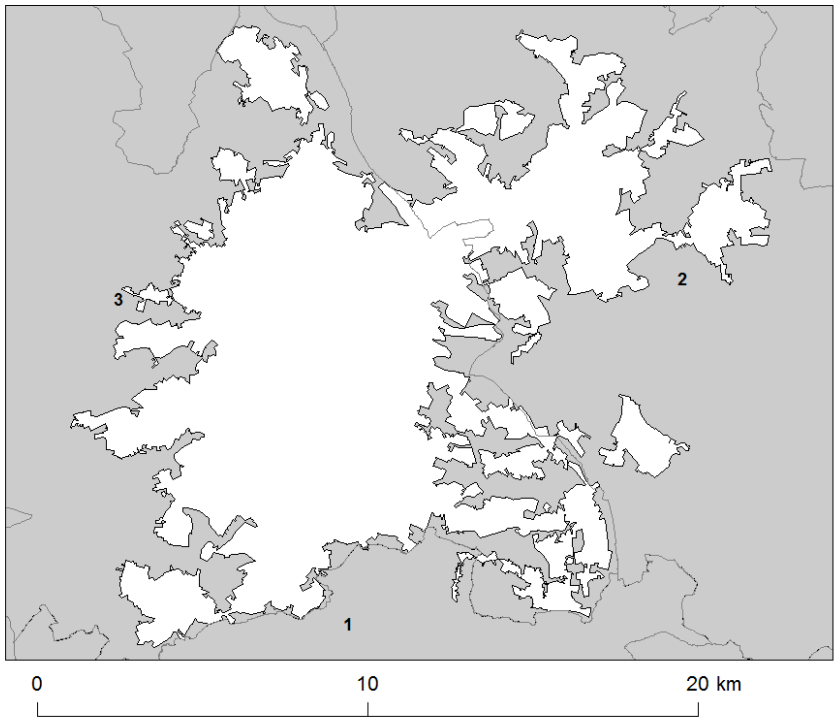


Figure 2: Map showing Local Authorities within the Sheffield Urban Area agglomeration zone (UK0007).



2.2 Assessment details

Measurements

NO_2 measurements in this zone were available in 2015 from the following national network monitoring stations (NO_2 data capture[1] for each station in 2015 shown in brackets):

1. Sheffield Devonshire Green GB1027A (75%)
2. Sheffield Tinsley GB0538A (85%)

Full details of monitoring stations within the Sheffield Urban Area agglomeration zone are available from http://uk-air.defra.gov.uk/networks/network-info?view=aurn.

Modelling

Modelling for the 2015 reference year has been carried out for the whole of the UK. This modelling covers the following extent within this zone:

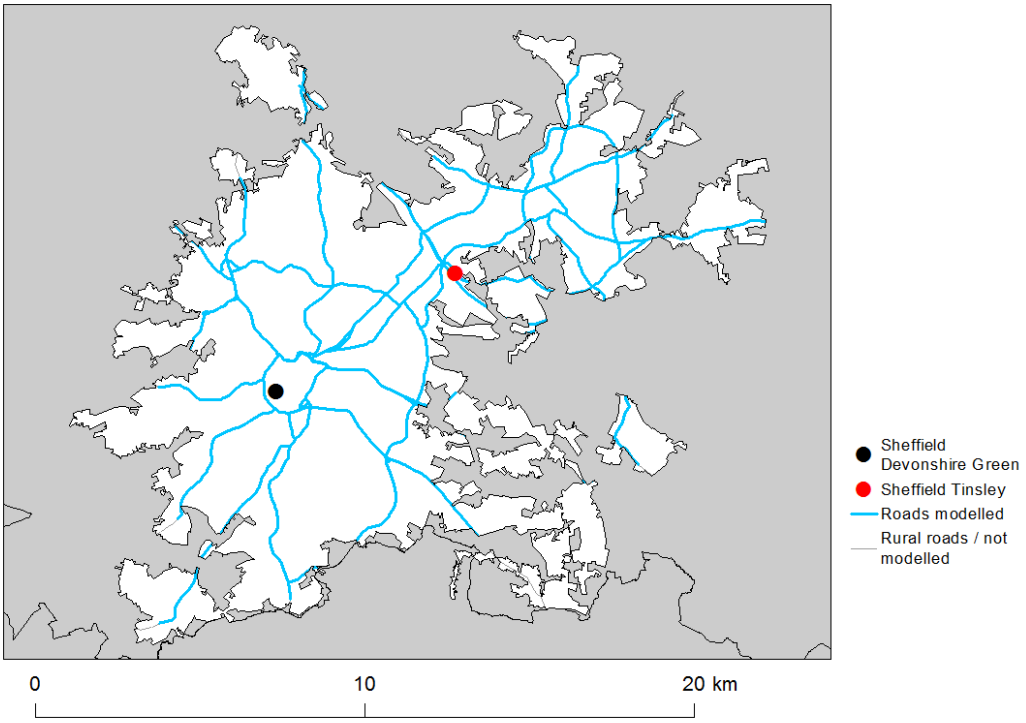
- Total background area within zone (approx): 163 km^2
- Total population within zone (approx): 577,551 people

Zone maps

Figure 3 presents the location of the NO_2 monitoring stations within this zone for 2015 and the roads for which NO_2 concentrations have been modelled. NO_2 concentrations at background locations have been modelled across the entire zone at a 1 km x 1 km resolution.

[1] Annual data capture is the proportion of hours in a year for which there are valid measurements at a monitoring station, expressed in this document as a percentage. The Implementing Provisions on Reporting (IPR) guidance requires that a minimum data capture of 85% is required for compliance reporting (that is 90% valid data, plus a 5% allowance for data loss due to planned maintenance and calibration). Monitoring stations with at least 75% data capture have been included in the modelling analysis to ensure that a greater number of operational monitoring sites have been used for model calibration and verification purposes. For more information on compliance reporting under European Directives see Section 2.3.

Figure 3: Map showing the location of the NO_2 monitoring stations with valid data in 2015 and roads where concentrations have been modelled within the Sheffield Urban Area (UK0007) agglomeration zone.



2.3 Air quality reporting

From 2001 to 2012 the UK has reported annually on air quality concentrations using a standard Excel questionnaire (Decision 2004/461/EC). These questionnaires are available online from http://cdr.eionet.europa.eu/gb/eu/annualair. Since 2013 reporting has been via an e-reporting system (Decision 2011/850/EU) http://cdr.eionet.europa.eu/gb/eu/.

In addition, the UK has reported on air quality plans and programmes (Decision 2004/224/EC) since 2003. The most recent previous UK air quality plan for nitrogen dioxide was published in 2015. The plan and supporting documents are available at https://www.gov.uk/government/collections/air-quality-plan-for-nitrogen-dioxide-no2-in-uk-2015 and the submission of this plan via e-reporting is published at http://cdr.eionet.europa.eu/gb/eu/aqd/h/envvryhbq/. Historic plans and programmes are available on http://cdr.eionet.europa.eu/gb/eu/aqpp.

3 Overall Picture for 2015 Reference Year

3.1 Introduction

There are two limit values for the protection of health for NO_2. These are:

- The annual limit value (annual mean concentration of no more than 40 μgm^{-3})
- The hourly limit value (no more than 18 hourly exceedances of 200 μgm^{-3} in a calendar year)

Within the Sheffield Urban Area agglomeration zone the annual limit value was exceeded in 2015. Hence, one exceedance situation for this zone has been defined, NO_2_UK0007_Annual_1, which covers exceedances of the annual limit value. This exceedance situation is described below.

3.2 Reference year: NO_2_UK0007_Annual_1

The NO_2_UK0007_Annual_1 exceedance situation covers all exceedances of the annual mean limit value in the Sheffield Urban Area agglomeration zone in 2015.

Compliance with the annual limit value in this exceedance situation has been assessed using a combination of air quality measurements and modelling. Table 1 presents measured annual concentrations at national network stations in this exceedance situation since the 1st Daughter Directive (1999/30/EC) came into force in 2001. This shows that there were no measured exceedances of the annual limit value in this zone in 2015. Table 2 summarises modelled annual mean NO_2 concentrations in this exceedance situation for the same time period. This table shows that, in 2015, 29.8 km of road length was modelled to exceed the annual limit value. There were no modelled background exceedances of the annual limit value. The maximum measured concentration in the zone varies due to changes in emissions and varying meteorology in different years. However, the models are also updated each year to take into account the most up-to-date science, so the modelled results for different years may not be directly comparable. Maps showing the modelled annual mean NO_2 concentrations for 2015 at background and at roadside locations are presented in Figures 4 and 5 respectively. All modelled exceedances of the annual limit value are coloured orange or red in the maps.

The modelling carried out for this exceedance situation has also been used to determine the annual mean NO_X source apportionment for all modelled locations. Emissions to air are regulated in terms of oxides of nitrogen

(NO_X), which is the term used to describe the sum of nitrogen dioxide (NO_2) and nitric oxide (NO). Ambient NO_2 concentrations include contributions from both directly emitted primary NO_2 and secondary NO_2 formed in the atmosphere by the oxidation of NO. As such, it is not possible to calculate an unambiguous source apportionment specifically for NO_2 concentrations; therefore the source apportionment in this plan is presented for NO_X, rather than for NO_2 (for further details please see the UK Technical Report). Table 3 summarises the modelled NO_X source apportionment for the section of road with the highest NO_2 concentration in this exceedance situation in 2015. This is important information because it shows which sources need to be tackled at the location with the largest compliance gap in the exceedance situation.

Figure B.1 in Annex B presents the annual mean NO_X source apportionment for each section of road within the NO_2_UK0007_Annual_1 exceedance situation (i.e. the source apportionment for all exceeding roads only) in 2015.

Table 1: Measured annual mean NO_2 concentrations at national network stations in NO2_UK0007_Annual_1 for 2001 onwards, μgm^{-3} (a). Data capture shown in brackets.

Site name (EOI code)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Rotherham Centre (GB0677A)	34 (95)	34 (95)	35 (97)	35 (97)	34 (93)	37 (78)	32 (67)								
Sheffield Centre (GB0615A)	37 (97)	34 (98)	39 (95)	31 (97)	35 (66)	36 (53)	34 (94)	30 (98)	37 (94)	39 (94)	34 (95)	37 (51)	32 (61)		
Sheffield Devonshire Green (GB1027A)													36 (16)	29 (98)	25 (75)
Sheffield Tinsley (GB0538A)	45 (99)	41 (97)	46 (97)	40 (96)	32 (97)	40 (99)	35 (69)	38 (34)	34 (85)	35 (99)	34 (99)	35 (99)	32 (79)	34 (95)	33 (85)

(a) Annual Mean Limit Value = 40 μgm^{-3}

Table 2: Annual mean NO_2 model results in NO_2_UK0007_Annual_1 for 2001 onwards.

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Road length exceeding (km)	128.3	76.4	141.0	112.7	111.3	104.4	105.1	58.2	65.0	102.6	56.1	63.7	34.9	36.0	29.8
Background exceeding (km^2)	38	0	9	2	3	0	0	0	1	5	0	0	0	1	0
Maximum modelled concentration (μgm^{-3}) (a)	65.6	64.4	76.4	68.6	72.8	67.9	72.0	72.9	67.8	73.9	65	67	57	58	57

(a) Annual Mean Limit Value = 40 μgm^{-3}

Table 3: Modelled annual mean NO_X source apportionment at the location with the highest NO_2 concentration in 2015 in NO2_UK0007_Annual_1 (μgm^{-3}) traffic count point 73910 on the A630; OS grid (m): 442410, 388750) .

Spatial scale	Component	Concentration at highest road link (a)
Regional background sources NOx (i.e. contributions from distant sources of > 30 km from the receptor).	Total	7.3
	From within the UK	4.7
	From transboundary sources (includes shipping and other EU member states)	2.7
Urban background sources NOx (i.e. sources located within 0.3 - 30 km from the receptor).	Total	21.0
	From road traffic sources	12.2
	From industry (including heat and power generation)	3.2
	From agriculture	NA
	From commercial/residential sources	2.6
	From shipping	0.0
	From off road mobile machinery	1.4
	From natural sources	NA
	From transboundary sources	NA
	From other urban background sources	1.6
Local sources NOx (i.e. contributions from sources < 0.3 km from the receptor).	Total	117.7
	From petrol cars	9.6
	From diesel cars	41.9
	From HGV rigid (b)	21.4
	From HGV articulated (b)	11.3
	From buses	3.1
	From petrol LGVs (c)	0.1
	From diesel LGVs (c)	30.3
	From motorcycles	0.1
	From London taxis	0.0
Total NOx (i.e. regional background + urban background + local components)		146.1
Total NO_2 (i.e. regional background + urban background + local components)		57

(a) Components are listed with NO_X concentration of NA when there is no source from this sector.

(b) HGV = heavy goods vehicle

(c) LGV = light goods vehicle

Figure 4: Map of modelled background annual mean NO_2 concentrations 2015. Modelled exceedances of the annual limit value are shown in orange and red.

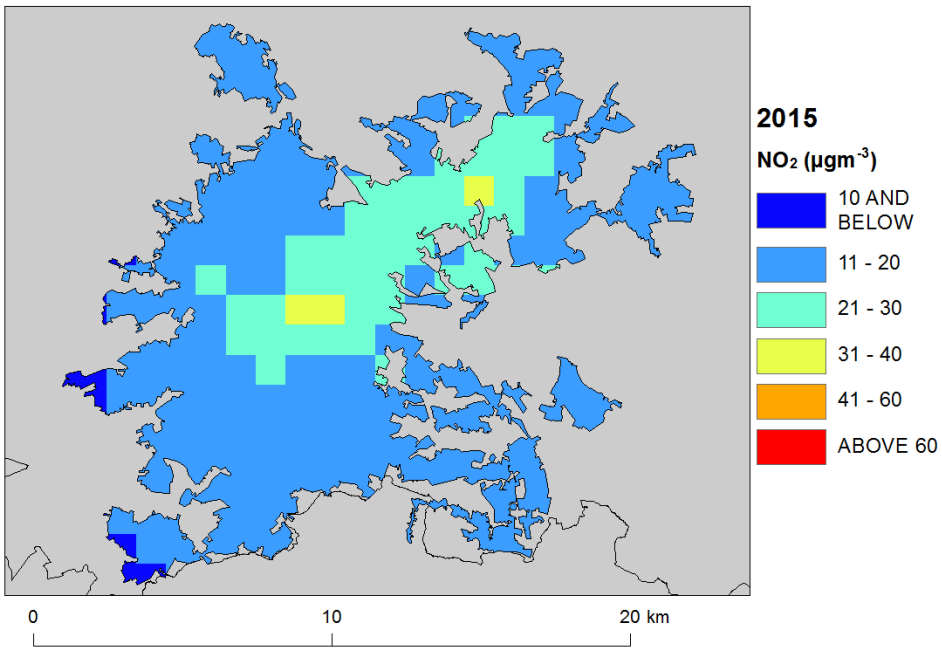
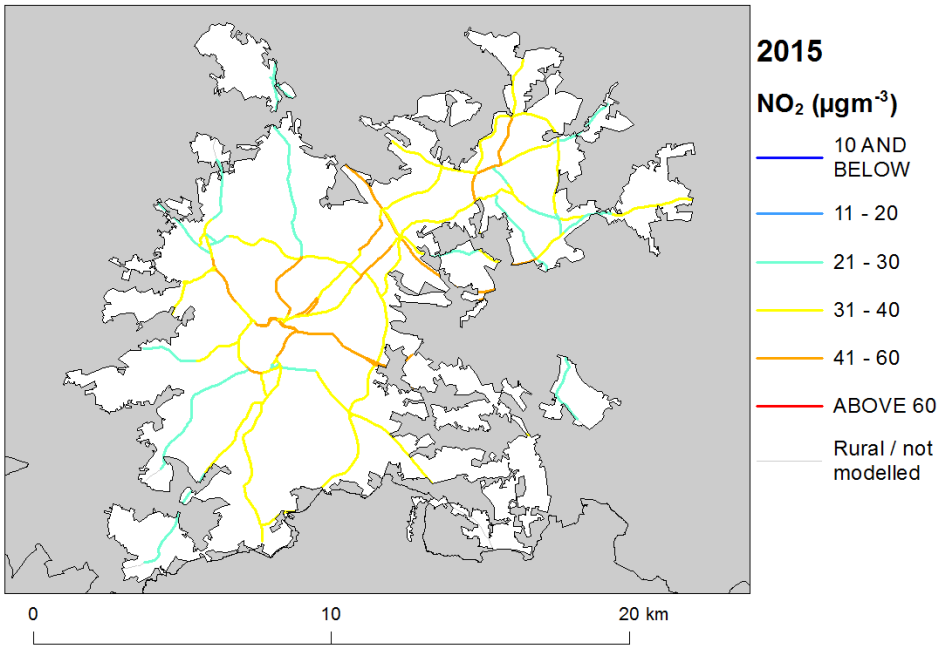


Figure 5: Map of modelled roadside annual mean NO_2 concentrations 2015. Modelled exceedances of the annual limit value are shown in orange and red.



4 Measures

4.1 Introduction

This section gives details of measures that address exceedances of the NO_2 limit values within Sheffield Urban Area agglomeration zone. This includes both measures that have already been taken and measures for which there is a firm commitment that they will be taken.

Section 5 then explains the extent to which it has been possible to incorporate the impacts of these measures into the baseline modelling carried out for this assessment.

4.2 Source apportionment

It is important to understand which sources are responsible for causing the exceedance in order to most effectively tailor measures to address the NO_2 exceedance situation described in Section 3 above. This can be achieved by considering the source apportionment for the exceedance situation, also presented in Section 3. A summary of what the source apportionment shows and the implications for which measures would therefore be appropriate is given here.

Local road traffic was the dominant source in this exceedance location in the reference year. The largest contribution was from diesel cars at the location of maximum exceedance with a contribution of 41.9 μgm^{-3} of NO_X out of a total of 146.1 μgm^{-3} of NO_X. Diesel cars and diesel LGVs were important sources on the motorway roads with the highest concentrations in this exceedance situation. Diesel cars, diesel LGVs, rigid HGVs and on some roads buses were important sources on the primary roads with the highest concentrations.

This indicates that appropriate measures should impact on local road traffic sources in this zone. Other measures to address the urban background sources may also be beneficial.

4.3 Measures

Measures potentially affecting NO_2 in this agglomeration zone have been taken and/or are planned at a range of administrative levels. These are:

- European Union
- National (i.e. England, Scotland, Wales, Northern Ireland or whole UK)
- Local (i.e. UK Local Authorities)

Details of European Union measures (e.g. Euro Standards, Fuel Quality Directives, Integrated Pollution Prevention and Control) can be found on the European Commission's website (http://ec.europa.eu/environment/air/index_en.htm). Details of national measures are given in the UK overview document.

Relevant Local Authority measures within this exceedance situation are listed in Table C.1 (see Annex C). Table C.1 lists measures which a local authority has carried out or is in the process of carrying out, plus additional measures which the local authority is committed to carrying out or is investigating with the expectation of carrying out in the future.

Sheffield's key air quality improvement strategy is to reduce pollutant emissions at source, by way of actively encouraging the switching of vehicle fuel from diesel to low polluting ones, traffic management and modal shift.

The emerging Sheffield Transport Strategy is intended to ensure that a robust, fit for purpose transport network is in place which is able to support the future economic growth and development of the city. It is important to ensure that new development is accessible to all, by a choice of modes, and with a keen emphasis on providing infrastructure which encourages the use of the most economically efficient and advantageous modes of transport. This is critical to reducing congestion, improving air quality and contributing to improving the health of the population, whilst providing for growth of the city and increases in trips associated with this.

The emerging strategy envisages a legible, fast, high frequency public transport network, ultimately based on trams/light rail as far as is sustainable, that provides for a turn-up-and-go service that makes a much greater proportion of journeys in the city region practicable by public transport by opening up convenient interchange possibilities. This is to be complemented with world class walking infrastructure and cycling infrastructure, both to serve the public transport system and to serve trips in its own right. To achieve this, a defined network of routes for private motor traffic is to be developed so as to manage private traffic in a manner that does not cause undue disruption to public transport, walking and cycling trips (and vice versa). The intention is to improve the speed, comfort and capacity of the public transport system and of walking and cycling networks so as to support development of the city, and so as to out-compete the private car for existing trips, tempting passengers onto these modes so as to reduce traffic congestion. The networks are also intended to provide the transport systems to support the development and cohesion of the wider City Region. This approach has been adopted to allow for growth in trips to be accommodated whilst maximizing air quality, availability and accessibility of land for economic development and to allow for an accessible, inclusive transport system.

By 2025 Sheffield intends that a healthier population will be living for longer thanks in part to the way their transport network operates. Improved air quality will see fewer people in the City dying from the effects of air pollution. Raising awareness is another important aspect of reducing air pollution. The “AirAware in Sheffield” media campaign, which aims to encourage everyone to do their bit to help reduce pollution and protect themselves from the health risks, has been awarded funding from the Air Quality Grant Fund programme to continue this campaign.

The area is developing infrastructure for refuelling Low Emission Vehicles and to secure suitable site/s. Local Sustainability Transport Fund and Office for Low Emission Vehicles (OLEV) funding are used to support SMEs to switch to electric vehicles and for the installation of rapid charging points across South Yorkshire. Sheffield has been short-listed for the OLEV Go Ultra Low Cities and Taxis Schemes and is working with bus and taxi operators and other partners to develop their bids.

4.4 Measures timescales

Timescales for national measures are given in the UK overview document.

Local Authorities report on progress with the implementation of their action plans annually and review action plan measures regularly. Information on local measures was collected in February/March 2015. Local authorities were asked to review and, where necessary, provide updates to measures in March/April 2017. Hence, any Local Authority action plans and measures adopted by Local Authorities after this time have not been included in this air quality plan, unless additional information was provided during the consultation process.

The reference year for this air quality plan is 2015. Where measures started and finished before 2015, then the improvement in air quality resulting from these measures will have already taken place before the reference year and the impact of these measures will have been included in the assessment where the measure has had an impact on the statistics used to compile the emission inventory. Many measures started before the reference year and will continue to have a beneficial impact on air quality well beyond the reference year. Measures with a start date before 2015 and an end date after 2015 may have an impact on concentrations in the reference year and a further impact in subsequent years. Where the Status column in Annex C is ‘Implementation’, this shows that this measure is already underway or that there is a commitment for this measure to go ahead. Where the

Status is ‘Planning’, ‘Preparation’ or ‘Other’ the level of commitment is less clear and it is possible some of these measures may not go ahead.

5 Baseline Model Projections

5.1 Overview of model projections

Model projections for each year from 2017 to 2030, starting from the 2015 reference year described in Section 3, have been calculated in order to determine when compliance with the NO_2 limit values is likely to be achieved on the basis of EU, regional and local measures currently planned. Details of the methods used for the baseline emissions and projections modelling are provided in the UK technical report.

For national measures, it has not been possible to quantify the impact of all measures on emissions and ambient concentrations. The impact for all quantifiable measures has been included in the baseline projections.

The impacts of the individual Local Authority measures have not been explicitly included in the baseline model projections. However, measures may have been included implicitly if they have influenced the traffic counts for 2015 (used as a basis for the compilation of the emission inventory) or in the traffic activity projections to 2020 and beyond (used to calculate the emissions projections). It should be recognised that these measures will have a beneficial impact on air quality, even if it has not been possible to quantify this impact here.

5.2 Baseline projections: NO_2_UK0007_Annual_1

Table 4 presents summary results for the baseline model projections for each year from 2017 to 2030 for the NO_2_UK0007_Annual_1 exceedance situation. This shows that the maximum modelled annual mean NO_2 concentration predicted for 2020 in this exceedance situation is 46 μgm^{-3}. By 2023, the maximum modelled annual mean NO_2 concentration is predicted to drop to 39 μgm^{-3}. Hence, the model results suggest that compliance with the NO_2 annual limit value is likely to be achieved by 2023 under baseline conditions.

Figure 6 and 7 presents maps of projected annual mean NO_2 concentrations at background and roadside locations respectively in 2023, the year at which compliance is achieved. For reference Figures 8 and 9 show maps of projected annual mean NO_2 concentrations in 2020, 2025 and 2030 for background and roadside locations respectively.

It should be noted that the baseline projections presented here include the impacts of some measures, where they can be quantified, that have already been or will be implemented.

Table 4: Annual mean NO_2 model results in NO_2_UK0007_Annual_1.

	2015	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Road length exceeding (km)	29.8	20.8	11.7	6.8	6.2	3.4	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Background exceeding (km^2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum modelled concentration NO_2 (μgm^{-3}) (a)	57	53	51	49	46	44	41	39	37	36	34	33	31	30	29
Corresponding modelled concentration NOx (μgm^{-3}) (b)	146	132	123	118	111	103	96	90	85	80	75	71	68	65	62

(a) Annual Mean Limit Value = 40 μgm^{-3}

(b) NO_X is recorded here for comparison with the NO_X source apportionment graphs for 2015 presented in Annex B of this plan. Limit values for EU directive purposes are based on NO_2.

Figure 6: Background baseline projections of annual mean NO_2 concentrations in 2023, the year at which compliance is achieved under baseline conditions. Modelled exceedances of the annual limit value are shown in orange and red.

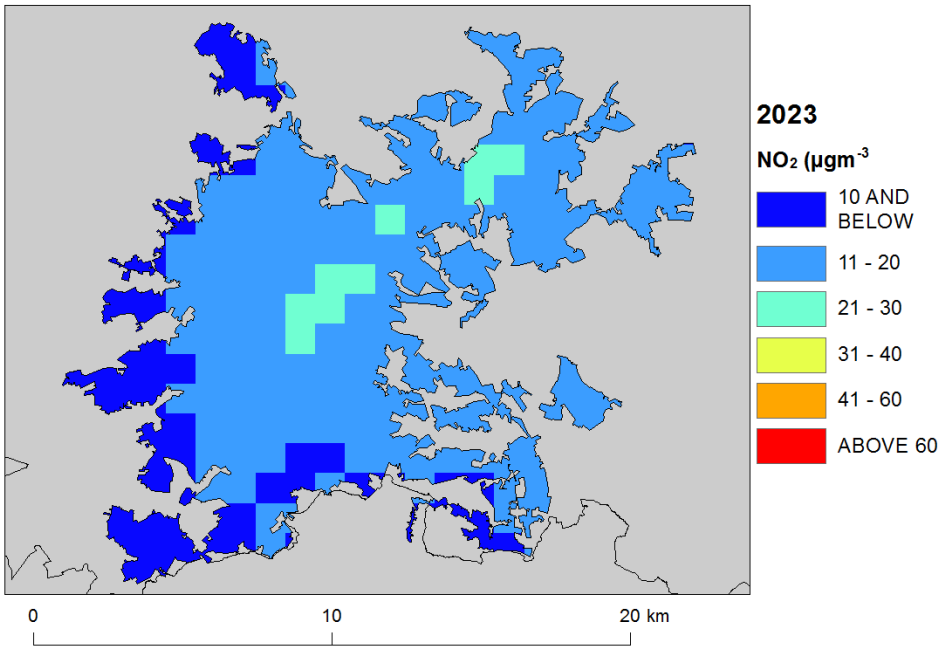


Figure 7: Roadside baseline projections of annual mean NO_2 concentrations in 2023, the year at which compliance is achieved under baseline conditions. Modelled exceedances of the annual limit value are shown in orange and red.

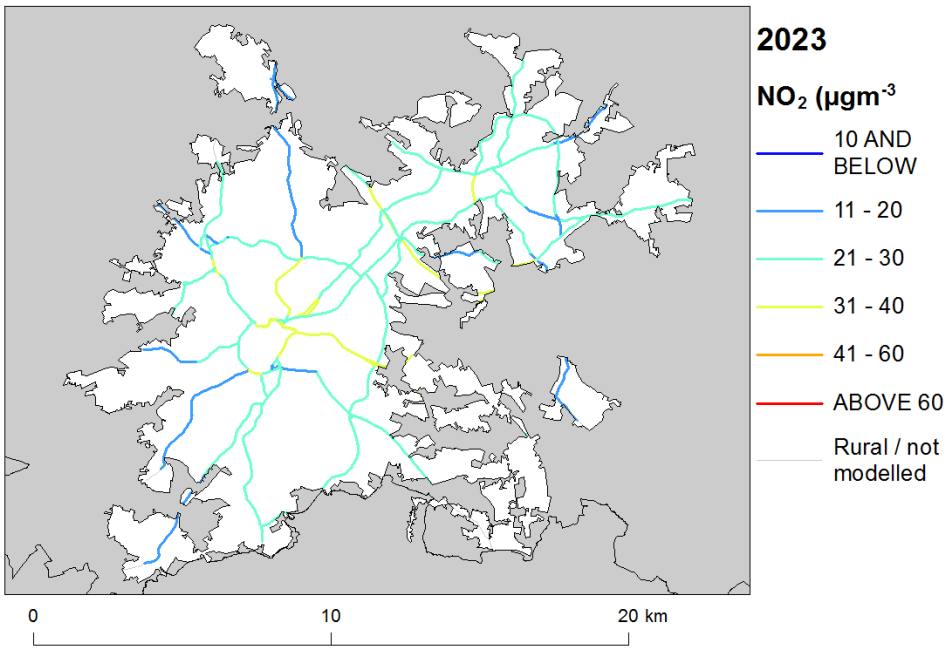


Figure 8: Background baseline projections of annual mean NO_2 concentrations in 2020, 2025 and 2030. 2015 is also included here for reference. Modelled exceedances of the annual limit value are shown in orange and red.

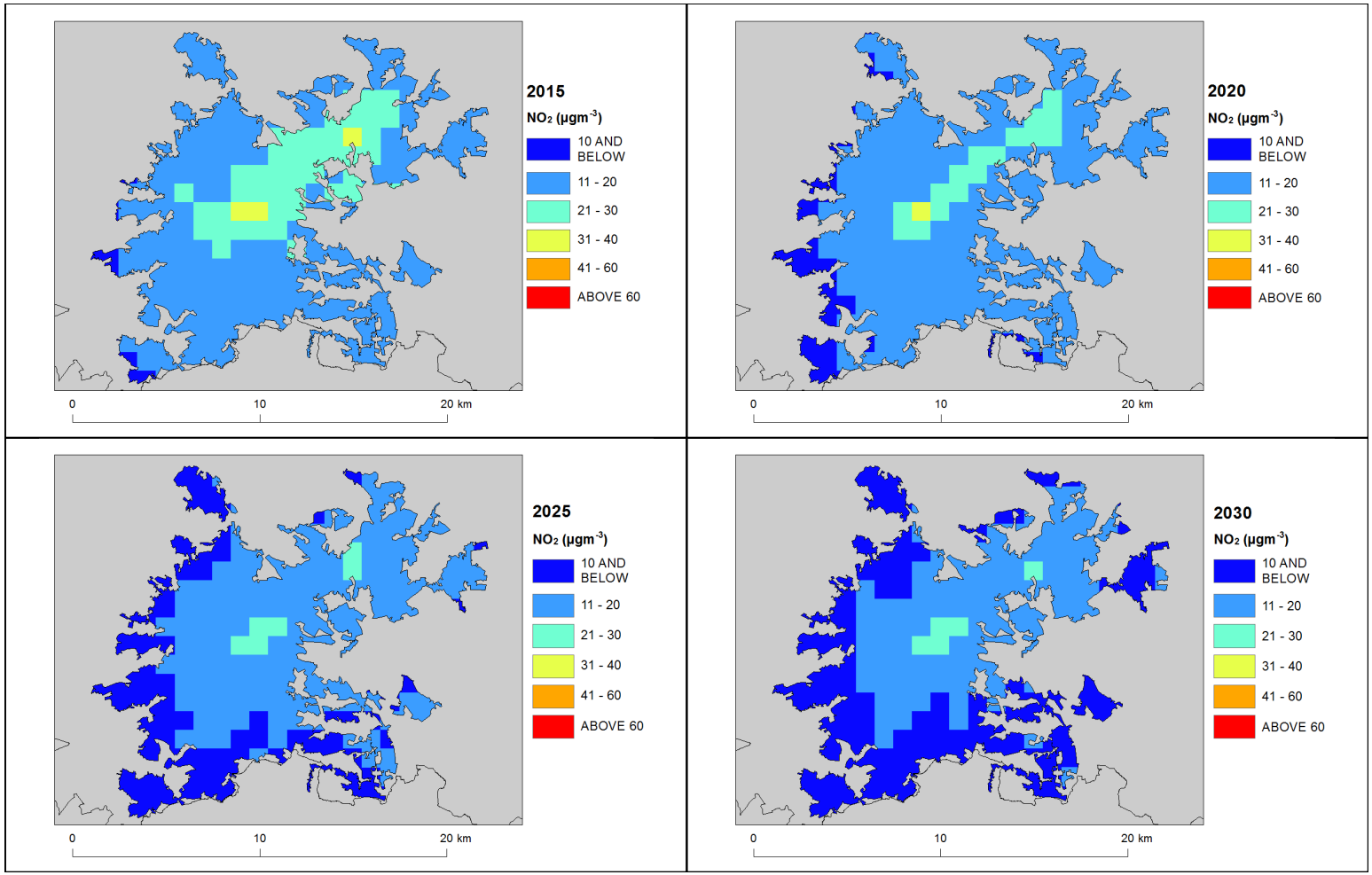
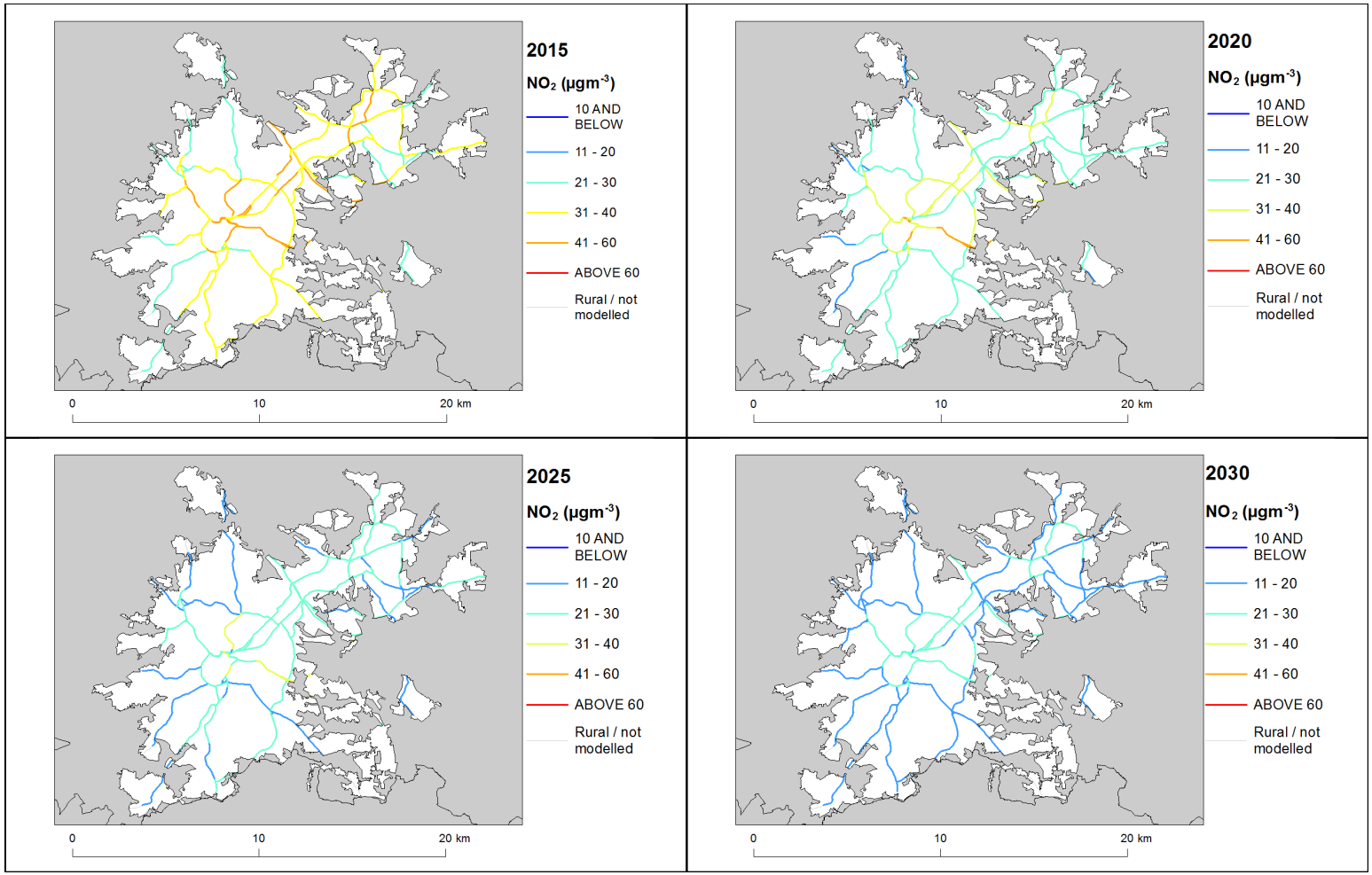


Figure 9: Roadside baseline projections of annual mean NO_2 concentrations in 2020, 2025 and 2030. 2015 is also included here for reference. Modelled exceedances of the annual limit value are shown in orange and red.



Annexes

A References

1st Daughter Directive 1999/30/EC. Council Directive 1999/30/EC, of 22 April 1999 relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air (The First Daughter Directive). From the Official Journal of the European Communities, 29.6.1999, En Series, L163/41.

Air Quality Directive 2008/50/EC. Council Directive 2008/50/EC, of 21 May 2008. On ambient air quality and cleaner air for Europe. From the Official Journal of the European Union, 11.6.2008, En Series, L152/1

Air Quality Expert Group (AQEG, 2004). Nitrogen Dioxide in the United Kingdom. http://uk-air.defra.gov.uk/library/aqeg/publications

CDR Central Data Repository. http://cdr.eionet.europa.eu/

Decision 2004/224/EC. Commission Decision of 20 February 2004 laying down arrangements for the submission of information on plans or programmes required under Council Directive 96/62/EC in relation to limit values for certain pollutants in ambient air. From the Official Journal of the European Union, 6.3.2004, En Series, L68/27

Decision 2004/461/EC. Commission Decision of 29 April 2004 laying down a questionnaire to be used for annual reporting on ambient air quality assessment under Council Directives 96/62/EC and 1999/30/EC and under Directives 2000/69/EC and 2002/3/EC of the European Parliament and of the Council. From the Official Journal of the European Union, 30.4.2004, En Series, L156/78

Decision 2011/850/EU. Commission Implementing Decision of 12 December 2011 laying down rules for Directives 2004/107/EC and 2008/50/EC of the European Parliament and of the Council as regards the reciprocal exchange of information and reporting on ambient air quality. From the Official Journal of the European Union, 17.12.2011, En Series, L335/86

IPR 2013. Guidance on the Commission Implementing Decision laying down rules for Directives 2004/107/EC and 2008/50/EC of the European Parliament and of the Council as regards the reciprocal exchange of information and reporting on ambient air (Decision 2011/850/EU). http://ec.europa.eu/environment/air/quality/legislation/pdf/IPR_guidance1.pdf

UK Air Quality Plan for tackling roadside nitrogen dioxide concentrations and the UK technical report are available at: http://www.gov.uk/defra.

B Source apportionment graphs

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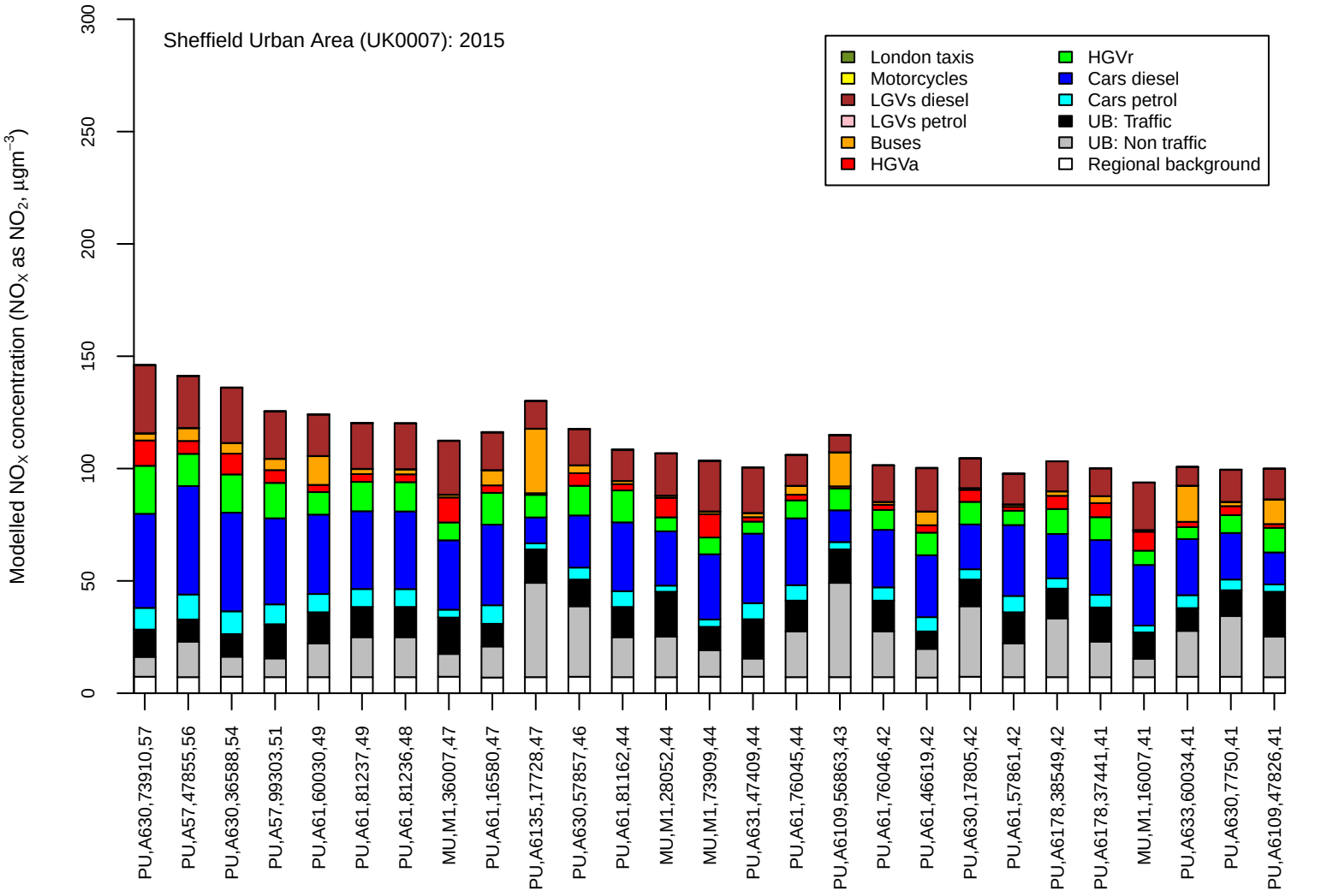
Figure B.1: Annual mean roadside NO_X source apportionment plots for all roads exceeding the annual mean NO_2 limit value in 2015.



Road class (MU = motorway, PU = primary road, TU = trunk road), road number, census id 15 and modelled NO_2 concentration (μgm^{-3})

C Tables of measures

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Table C.1 Relevant Local Authority measures within Sheffield Urban Area (UK0007)

Measure code	Description	Focus	Classification	Status	Other information
North East Derbyshire District Council_1	Liaison with Highways Agency regarding M1 motorway	Liaison with Highways Agency regarding M1 motorway	Traffic planning and management: Other measure	Implementation	Start date: 2014 Expected end date: 2014 Spatial scale: Local Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Rotherham Metropolitan Borough Council_1	Low emission strategy	Development of Rotherham MBC's Low Emission Strategy	Public procurement: Other measure	Preparation	Start date: 2015 Expected end date: 2020 Spatial scale: Whole town or city Source affected: Transport Indicator: Not available Target emissions reduction: N/A
Rotherham Metropolitan Borough Council_2	M1 smart motorway scheme	Highways Agency Scheme. Speed limits may be imposed for mitigation of the air quality impact of the scheme	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2015 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: Not available Target emissions reduction: 0
Rotherham Metropolitan Borough Council_3	ECO Stars	South Yorkshire ECO Stars Fleet Recognition Scheme, provides a 'road map' to each member to reduce emissions	Other measure: Other measure	Implementation	Start date: 2008 Expected end date: 2017 Spatial scale: Whole town or city Source affected: Transport Indicator: Not available Target emissions reduction: N/A
Rotherham Metropolitan Borough Council_4	Infrastructure for refuelling low emission vehicles (1) 'Inmotion' Electric Vehicle Project	Scheme targets SMEs in South Yorkshire to provide charging points and leasing of electric vehicles (LSTF)	Public procurement: Other measure	Implementation	Start date: 2014 Expected end date: 2016 Spatial scale: Local Source affected: Transport Indicator: Not available Target emissions reduction: N/A
Rotherham Metropolitan Borough Council_5	Develop the infrastructure for refuelling low emission vehicles (2) CNG refuelling infrastructure	Develop the infrastructure for CNG refuelling - feasibility	Public procurement: Other measure	Preparation	Start date: 2014 Expected end date: 2014 Spatial scale: Local Source affected: Transport Indicator: Not available Target emissions reduction: N/A
Rotherham Metropolitan Borough Council_6	Develop the infrastructure for refuelling low emission vehicles (3) Hydrogen vehicle refuelling infrastructure and vehicle trial	Hydrogen refuelling infrastructure and vehicle trial in partnership with ITM Power	Public procurement: Other measure	Implementation	Start date: 2014 Expected end date: 2016 Spatial scale: Local Source affected: Transport Indicator: Not available Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Rotherham Metropolitan Borough Council_7	Public Health/Community Protection PM2.5 Project to develop a Health Improvement Plan	PM2.5 action plan and communication strategy	Public information and Education: Other mechanisms	Planning	Start date: 2015 Expected end date: 2017 Spatial scale: Local Source affected: Transport Indicator: Not available Target emissions reduction: N/A
Rotherham Metropolitan Borough Council_8	Care4air	South Yorkshire Care4air campaign	Public information and Education: Internet	Implementation	Start date: 2005 Expected end date: 2020 Spatial scale: Whole town or city Source affected: Transport Indicator: Not available Target emissions reduction: N/A
Rotherham Metropolitan Borough Council_9	Clean energy generation from Transport Assets. Photo-voltaic installation, wind turbine, timers in bus shelters	Clean energy generation schemes	Traffic planning and management: Improvement of public transport	Implementation	Start date: 2013 Expected end date: 2016 Spatial scale: Whole town or city Source affected: Transport Indicator: Not available Target emissions reduction: N/A
Rotherham Metropolitan Borough Council_10	Improvements to Rotherham Bus Services	Rotherham Bus Partnership	Traffic planning and management: Improvement of public transport	Implementation	Start date: 2014 Expected end date: 2016 Spatial scale: Whole town or city Source affected: Transport Indicator: Not available Target emissions reduction: N/A
Rotherham Metropolitan Borough Council_11	Local road schemes - Waverley link road/ Halfpenny Link	Road schemes to alleviate congestion	Traffic planning and management: Other measure	Implementation	Start date: 2015 Expected end date: 2017 Spatial scale: Local Source affected: Transport Indicator: Not available Target emissions reduction: N/A
Rotherham Metropolitan Borough Council_12	Emissions and Air Quality Planning Guidance	Development Control	Other measure: Other measure	Implementation	Start date: 2015 Expected end date: 2020 Spatial scale: Whole town or city Source affected: Transport Indicator: Not available Target emissions reduction: N/A
Rotherham Metropolitan Borough Council_13	Promoting green infrastructure	Green infrastructure project to protect human health	Traffic planning and management: Other measure	Planning	Start date: 2015 Expected end date: 2020 Spatial scale: Local Source affected: Transport Indicator: Not available Target emissions reduction: N/A
Rotherham Metropolitan Borough Council_14	Rotherham MBC Fleet Improvement Programme	Rotherham MBC Fleet Improvement	Other measure: Other measure	Implementation	Start date: 2015 Expected end date: 2018 Spatial scale: Local Source affected: Transport Indicator: Not available Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Rotherham Metropolitan Borough Council_15	CVTF - Turning up the Heat on NOx	CVTF project - retrofitting technology to reduce NOx emissions in AQMAs	Retrofitting: Retrofitting emission control equipment to vehicles	Implementation	Start date: 2014 Expected end date: 2015 Spatial scale: Local Source affected: Transport Indicator: Annual mean nitrogen dioxide at AQMA monitoring sites Target emissions reduction: 0.03
Rotherham Metropolitan Borough Council_16	Taxi Licensing	Standards for licensed taxis	Other measure: Other measure	Preparation	Start date: 2015 Expected end date: 2020 Spatial scale: Whole town or city Source affected: Transport Indicator: Not available Target emissions reduction: N/A
Sheffield City Council_1	Assess feasibility of a low emission zone	Undertake study to establish feasibility	Other measure: Other measure	Other	Start date: 2014 Expected end date: 2015 Spatial scale: Whole town or city Source affected: Transport Indicator: Recommendation: 30% traffic emissions reduction by 2015 Target emissions reduction: Task and Finish Work Packages and Leads setup
Sheffield City Council_2	Develop Infrastructure for Refuelling Low Emission Vehicles	Identify funding / partner / investor to establish infrastructure	Public procurement: Other measure	Planning	Start date: 2015 Expected end date: 2020 Spatial scale: Whole town or city Source affected: Transport Indicator: Secure suitable site/s Target emissions reduction: 20% reduction in NOx
Sheffield City Council_3	Promote Smarter Travel Choices	Reduce private car emissions	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2008 Expected end date: 2020 Spatial scale: Whole town or city Source affected: Transport Indicator: Achieve reduction from private car by 2020 Target emissions reduction: 0.05
Sheffield City Council_4	Improve Engine Performance of Commercial Diesel Vehicles	Reduce diesel emissions from commercial vehicles	Retrofitting: Retrofitting emission control equipment to vehicles	Other	Start date: 2012 Expected end date: 2020 Spatial scale: Whole town or city Source affected: Transport Indicator: Achieve reduction from commercial vehicles by 2020 Target emissions reduction: 0.2

Measure code	Description	Focus	Classification	Status	Other information
Sheffield City Council_5	Mitigate the Impact of the M1 motorway (particularly in the Tinsley Area)	Reduce vehicle emissions from the motorway through partnership working with the Highways Agency (HA)	Traffic planning and management: Other measure	Implementation	Start date: 2014 Expected end date: 2018 Spatial scale: Local Source affected: Transport Indicator: Construct Smart Motorway and barrier along M1 J34 south slip Target emissions reduction: Up to 5% of annual EU limit value
Sheffield City Council_6	Develop Policies to Support Better Air Quality	Restrict new sensitive uses (homes, schools etc.) from being developed in areas where national air quality objectives are being exceeded, unless significant mitigation measures are included within those developments.	Other measure: Other measure	Other	Start date: 2013 Expected end date: 2020 Spatial scale: Whole town or city Source affected: Other, please specify Indicator: Sheffield Local Plan will have policies aimed at improving air quality Target emissions reduction: Up to 2% of annual EU limit value
Sheffield City Council_7	Control Industrial Emissions	Regulate installations which are permitted under the Environmental Permitting Regulations	Permit systems and economic instruments: IPPC permits	Implementation	Start date: 2013 Expected end date: 2020 Spatial scale: Whole town or city Source affected: Industry including heat and power production Indicator: Install abatement equipment and employ the best available techniques to control emissions Target emissions reduction: 1-2%