Department for Environment Food & Rural Affairs

Department for Transport

Air Quality Plan for tackling roadside nitrogen dioxide concentrations in The Potteries (UK0014)

July 2017

Scottish Government
Riaghaltas na h-Alba
gov.scot

Department of Agriculture, Environment and Rural Affairs
www.daera-ni.gov.uk

Llywodraeth Cymru
Welsh Government

Any enquiries regarding this publication should be sent to us at:

air.quality@defra.gsi.gov.uk

www.gov.uk/defra

Contents

1 Introduction

1.1 This document

This document is The Potteries agglomeration zone (UK0014) 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 Potteries agglomeration zone
- Details of NO_2 exceedance situation within The Potteries 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 Potteries 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 Potteries agglomeration zone indicates that the annual limit value was exceeded in 2015 but is likely to be achieved by 2022 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: The Potteries
Zone code: UK0014
Type of zone: agglomeration zone
Reference year: 2015
Extent of zone: Figure 1 shows the area covered by The Potteries agglomeration zone.
Local Authorities within the zone: Figure 2 shows the location of Local Authorities within 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. Cheshire East
2. Newcastle-under-Lyme Borough Council
3. Stafford Borough Council
4. Staffordshire Moorlands District Council
5. Stoke-on-Trent 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 Potteries agglomeration zone (UK0014).

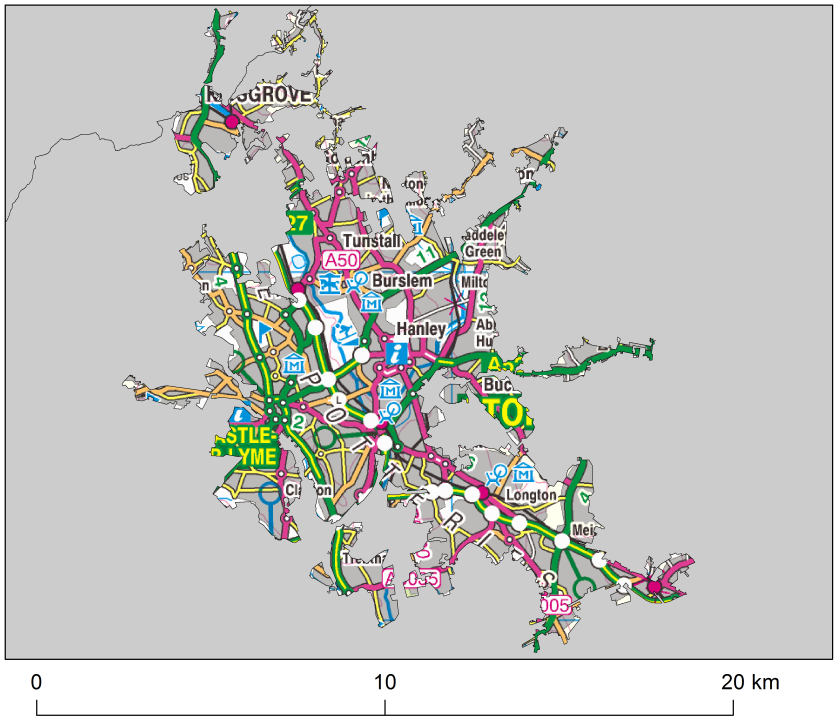
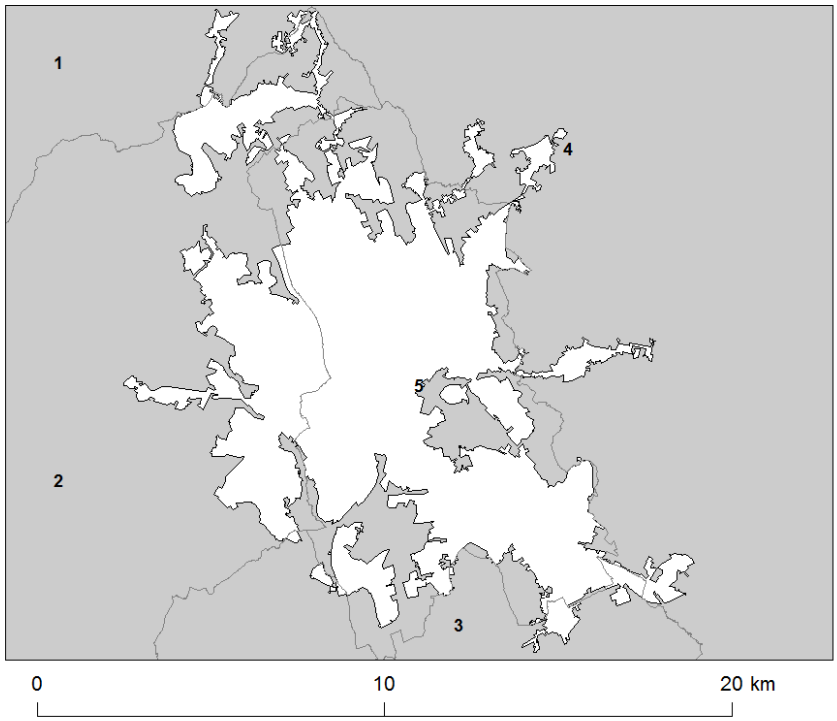


Figure 2: Map showing Local Authorities within The Potteries agglomeration zone (UK0014).



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. Stoke-on-Trent Centre GB0658A (98%)
2. Stoke-on-Trent A50 Roadside GB1052A (57%)

Full details of monitoring stations within The Potteries 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:

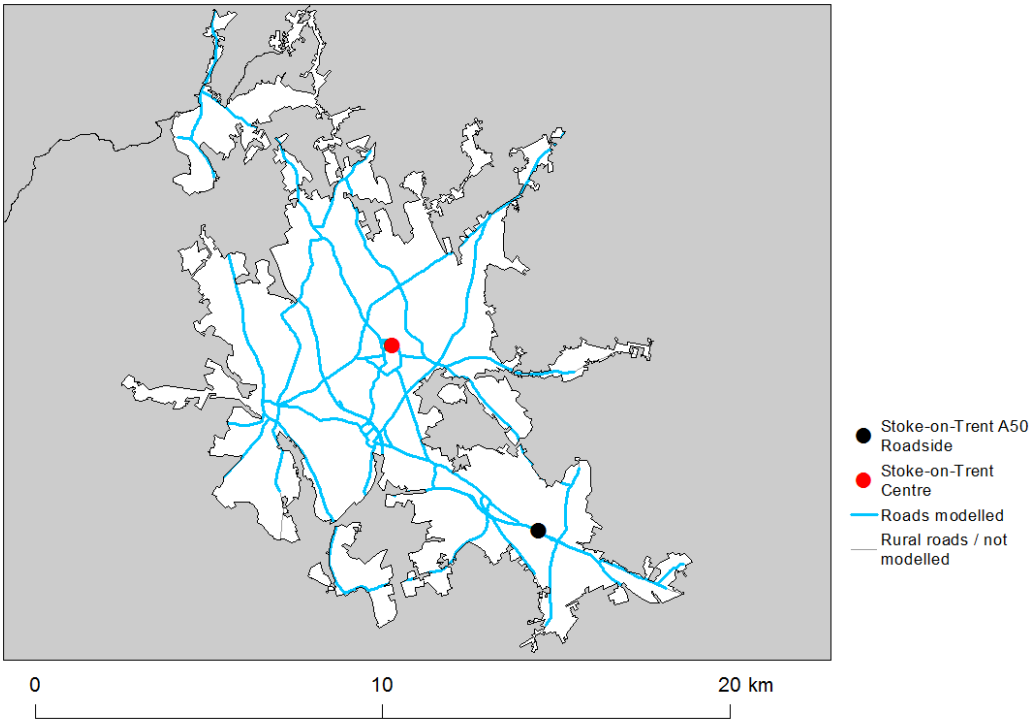
- Total background area within zone (approx): 91 km^2
- Total population within zone (approx): 285,366 people

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 Potteries (UK0014) 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 Potteries agglomeration zone the annual limit value was exceeded in 2015. Hence, one exceedance situation for this zone has been defined, NO_2_UK0014_Annual_1, which covers exceedances of the annual limit value. This exceedance situation is described below.

3.2 Reference year: NO_2_UK0014_Annual_1

The NO_2_UK0014_Annual_1 exceedance situation covers all exceedances of the annual mean limit value in The Potteries 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, 15.7 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_UK0014_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_UK0014_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
Stoke-on-Trent Centre (GB0658A)	33 (97)	30 (96)	31 (95)	30 (93)	33 (96)	32 (93)	26 (97)	26 (96)	30 (91)	35 (97)	31 (98)	31 (99)	29 (92)	28 (96)	28 (98)
Stoke-on-Trent A50 Roadside (GB1052A)															61 (57)

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

Table 2: Annual mean NO_2 model results in NO_2_UK0014_Annual_1 for 2001 onwards.

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Road length exceeding (km)	61.3	25.1	50.9	30.2	32.9	29.0	34.0	23.0	20.7	33.2	19.1	18.4	19.9	19.4	15.7
Background exceeding (km^2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum modelled concentration (μgm^{-3}) (a)	73.1	63.6	75.7	77.3	85.2	77.9	79.5	80.9	86.3	92.3	72	76	58	58	59

(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_UK0014_Annual_1 (μgm^{-3}) traffic count point 38230 on the A500; OS grid (m): 386726, 346280) .

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	5.4
	From within the UK	3.2
	From transboundary sources (includes shipping and other EU member states)	2.2
Urban background sources NOx (i.e. sources located within 0.3 - 30 km from the receptor).	Total	26.8
	From road traffic sources	18.1
	From industry (including heat and power generation)	1.9
	From agriculture	NA
	From commercial/residential sources	3.2
	From shipping	0.0
	From off road mobile machinery	2.0
	From natural sources	NA
	From transboundary sources	NA
	From other urban background sources	1.5
Local sources NOx (i.e. contributions from sources < 0.3 km from the receptor).	Total	124.9
	From petrol cars	9.2
	From diesel cars	36.9
	From HGV rigid (b)	24.9
	From HGV articulated (b)	26.8
	From buses	1.2
	From petrol LGVs (c)	0.1
	From diesel LGVs (c)	25.6
	From motorcycles	0.2
	From London taxis	0.0
Total NOx (i.e. regional background + urban background + local components)		157.0
Total NO_2 (i.e. regional background + urban background + local components)		59

(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.

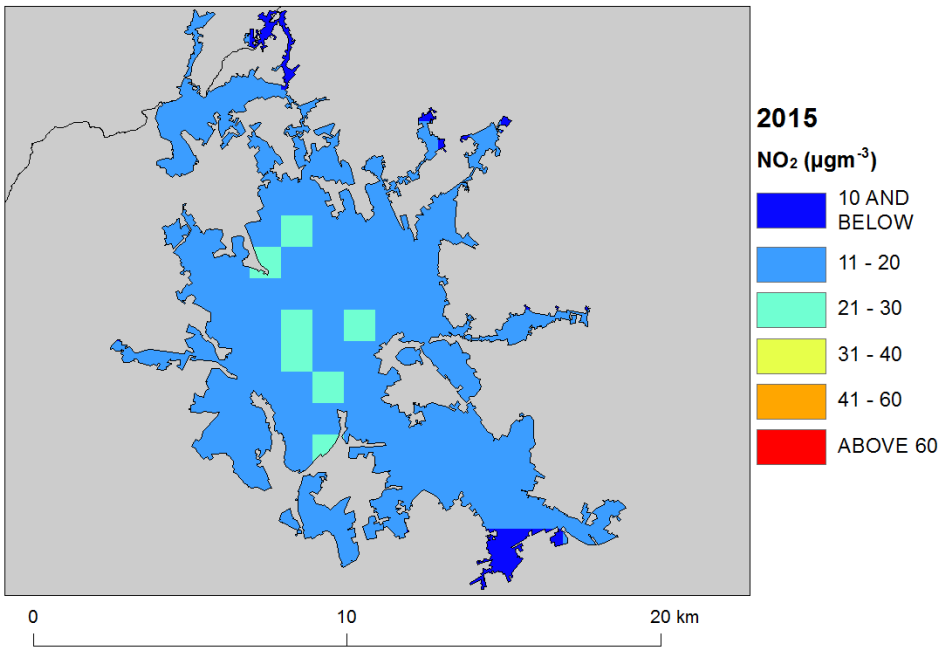
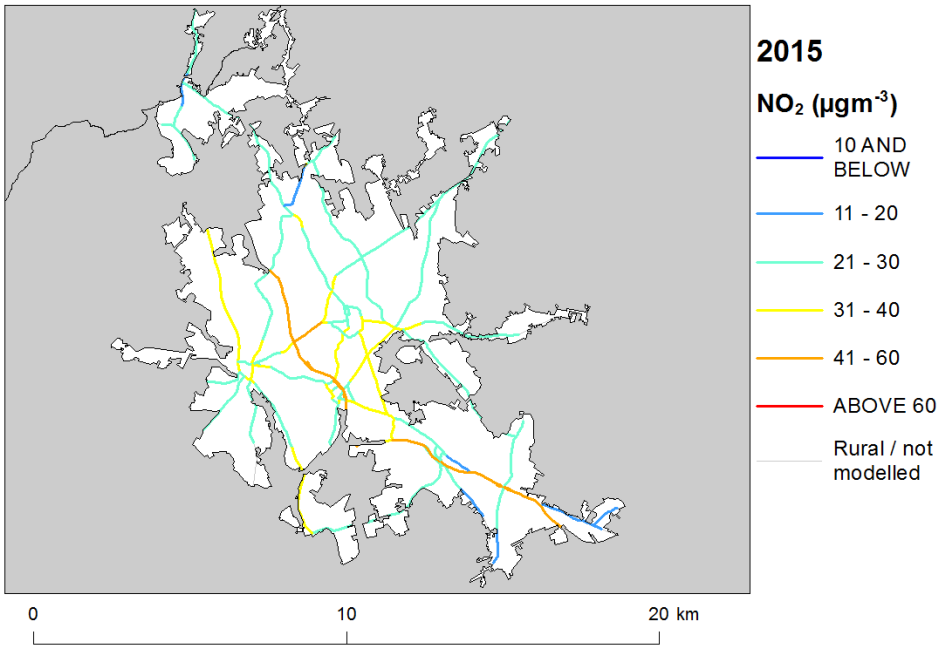


Figure 5: Map of modelled roadside annual mean NO_2 concentrations 2015. Modelled exceedances of the annual limit value are shown in orange and red.



4 Measures

4.1 Introduction

This section gives details of measures that address exceedances of the NO_2 limit values within The Potteries 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 36.9 μgm^{-3} of NO_X out of a total of 157 μgm^{-3} of NO_X. Diesel cars, diesel LGVs and rigid HGVs were important sources on the primary roads with the highest concentrations. Diesel cars, articulated HGVs, diesel LGVs and rigid HGVs were important sources on the trunk 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.

Activities within the zone focus on reducing vehicle emissions and therefore improving air quality.

The types of measures that are being undertaken include parking restrictions outside schools, tackling congestion, shift to alternative forms of transport other than cars e.g. walking, cycling and using greener public transport and so deliver a reduction in harmful emissions and recharging points for hybrid or electric vehicles.

The overarching aim in this zone is to lower emissions so that air quality can improve. In line with this, a number of traffic congestion initiatives are expected to be implemented in 2015 through to 2030 to reduce NO_2 emissions. This will include road widening, improvements to junctions and roundabouts. Building on these policies, a rail-based park and ride is also expected to be introduced in the next two years. A major scheme is being planned to link across the steelworks to the City Centre, which should result in a reduction of traffic.

The Potteries are working hard in providing information to the public which includes details on walking and cycling initiatives which will also help to provide safer routes to school.

At present, measures are in place to improve links to pedestrians and cyclists and improve bus links and bus priority measures. This will provide sustainable transport choices and this measure will continue into 2017.

In January 2017 funding of £7.498 million was awarded by the Access Fund for Sustainable Travel to a conglomeration of ten local authorities, including Stoke-on-Trent City Council, for the "Walk To 2017-2020" initiative. The project aims to contribute to economic, health and environmental outcomes by: supporting more people to access employment, education and training through walking and cycling; increasing walking and cycling journeys for education and commuting; and, delivering a legacy for walking and cycling in schools and workplaces.

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_UK0014_Annual_1

Table 4 presents summary results for the baseline model projections for each year from 2017 to 2030 for the NO_2_UK0014_Annual_1 exceedance situation. This shows that the maximum modelled annual mean NO_2 concentration predicted for 2020 in this exceedance situation is 44 μgm^{-3}. By 2022, 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 2022 under baseline conditions.

Figure 6 and 7 presents maps of projected annual mean NO_2 concentrations at background and roadside locations respectively in 2022, 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_UK0014_Annual_1.

	2015	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Road length exceeding (km)	15.7	15.7	15.7	11.4	9.7	3.6	0.0	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)	59	53	50	47	44	41	39	37	35	33	31	30	29	28	27
Corresponding modelled concentration NOx (μgm^{-3}) (b)	157	135	124	114	105	96	88	82	76	71	67	63	60	58	55

(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 2022, the year at which compliance is achieved under baseline conditions. Modelled exceedances of the annual limit value are shown in orange and red.

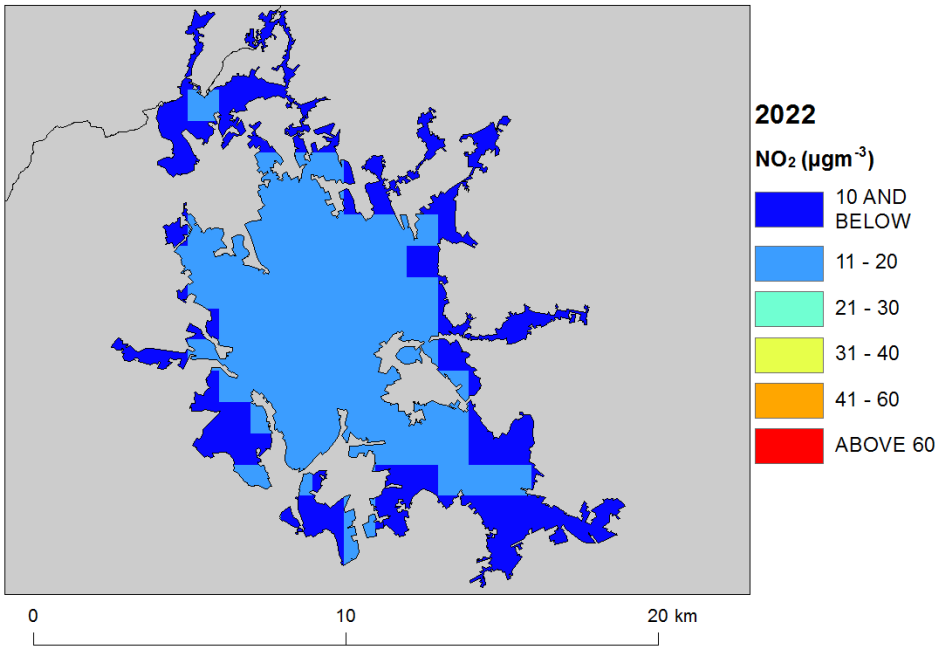


Figure 7: Roadside baseline projections of annual mean NO_2 concentrations in 2022, the year at which compliance is achieved under baseline conditions. Modelled exceedances of the annual limit value are shown in orange and red.

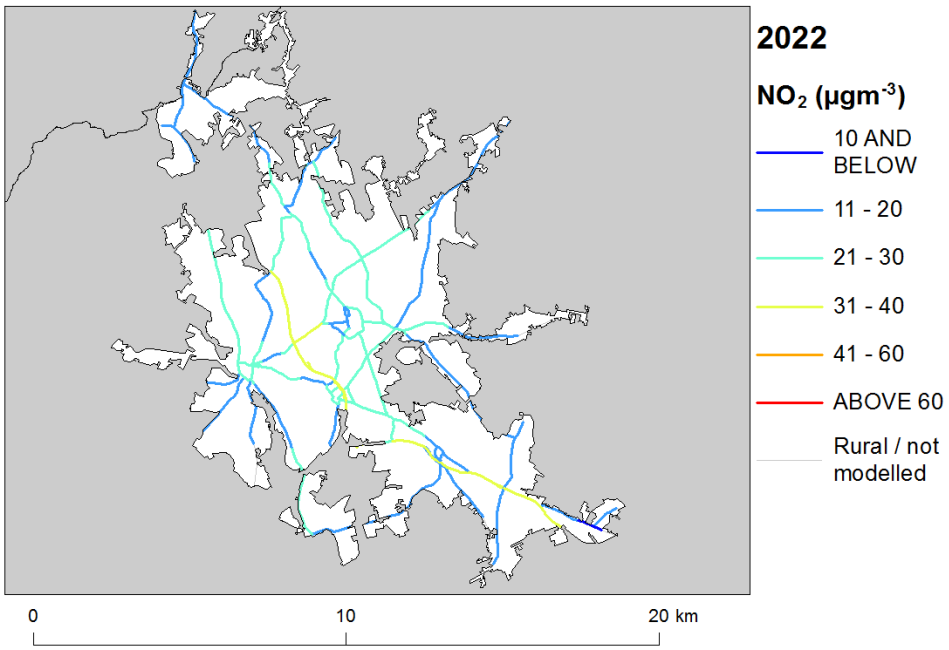


Figure 8: Background baseline projections of annual mean NO_2 concentrations in 2020, 2025 and 2030. 2015 is also included here for reference. Modelled exceedances of the annual limit value are shown in orange and red.

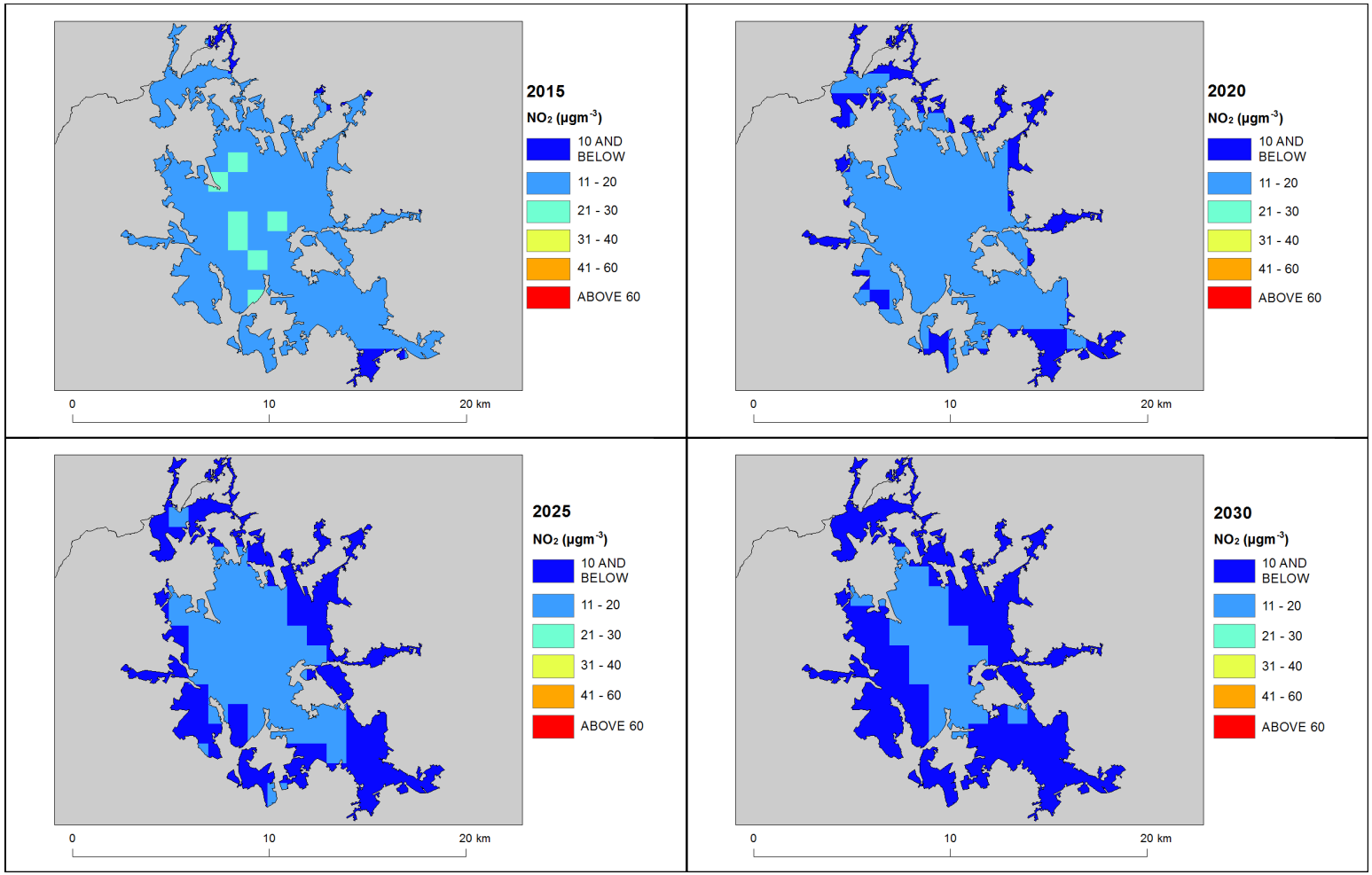
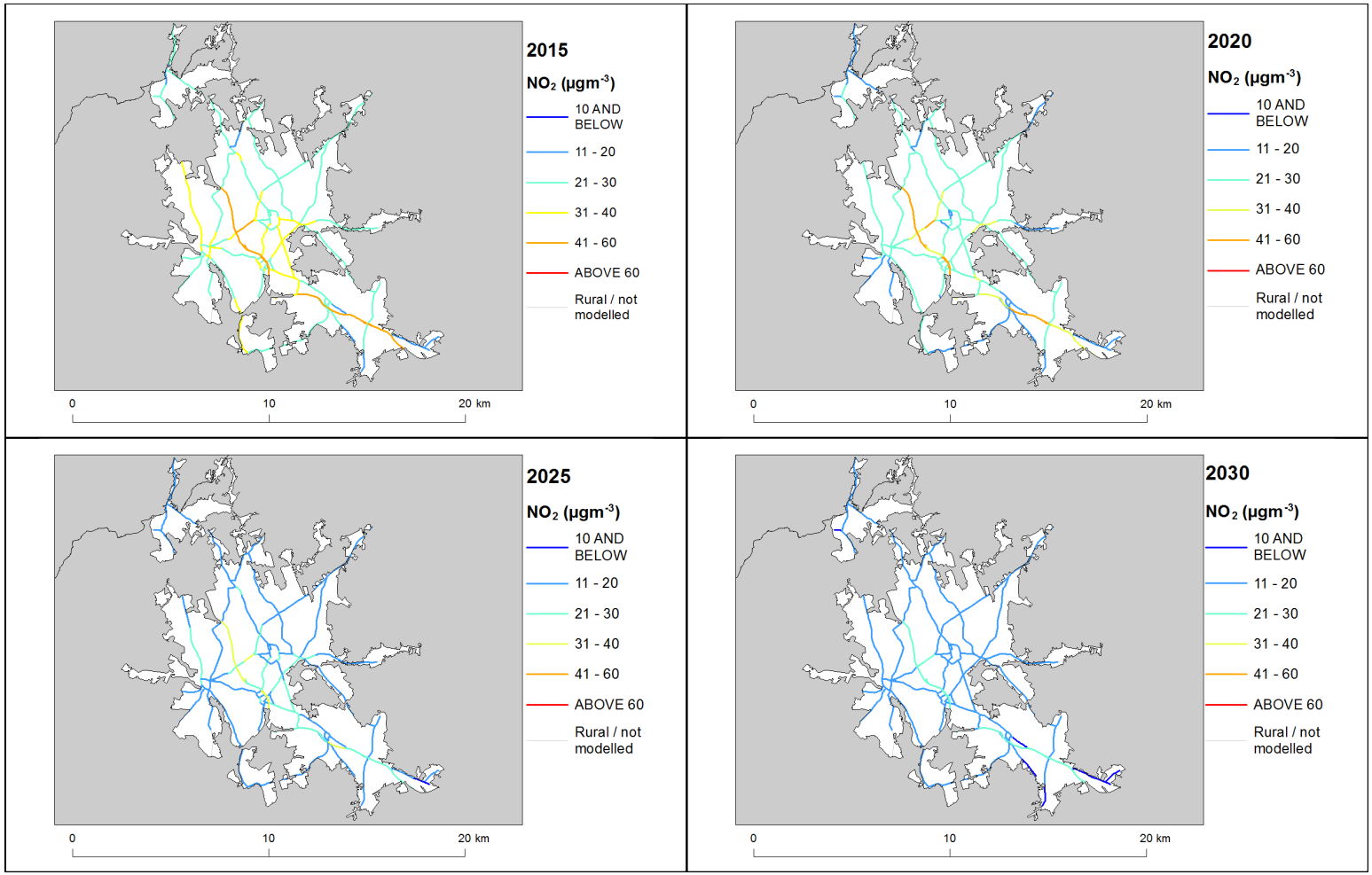


Figure 9: Roadside baseline projections of annual mean NO_2 concentrations in 2020, 2025 and 2030. 2015 is also included here for reference. Modelled exceedances of the annual limit value are shown in orange and red.



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

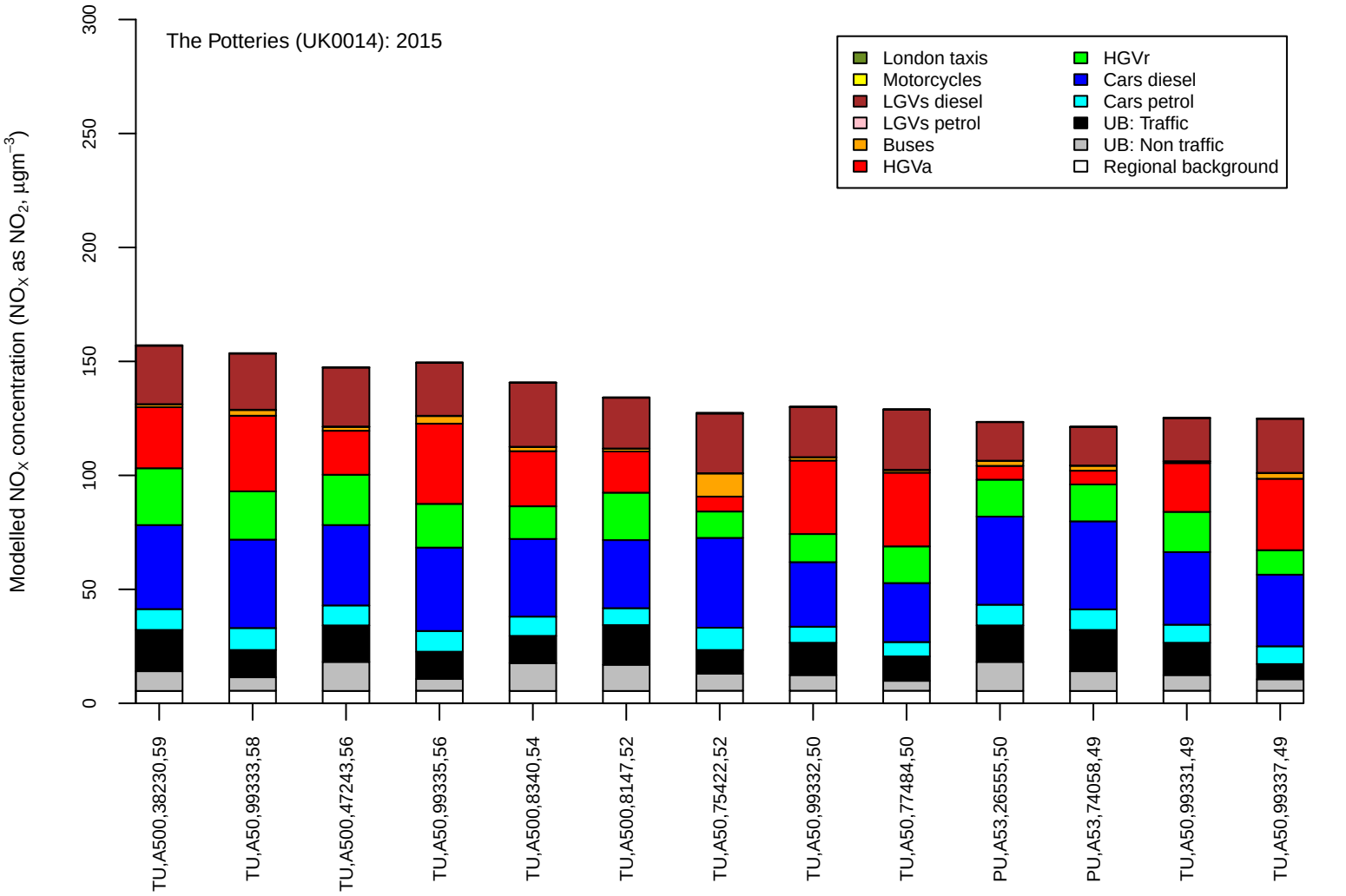
IPR 2013. Guidance on the Commission Implementing Decision laying down rules for Directives 2004/107/EC and 2008/50/EC of the European Parliament and of the Council as regards the reciprocal exchange of information and reporting on ambient air (Decision 2011/850/EU). http://ec.europa.eu/environment/air/quality/legislation/pdf/IPR_guidance1.pdf

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

Page left blank.

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

Page left blank.

Table C.1 Relevant Local Authority measures within The Potteries (UK0014)

Measure code	Description	Focus	Classification	Status	Other information
Cheshire East_AQM4	Develop and implement an Air Quality Strategy	Strategy	Other measure: Other measure	Implementation	Start date: 2011 Expected end date: 2015 Spatial scale: Local Source affected: Other, please specify Indicator: Publication Target emissions reduction: N/A
Cheshire East_AQM5	Update Local Emissions Inventory	Data	Other measure: Other measure	Implementation	Start date: 2013 Expected end date: 2013 Spatial scale: Local Source affected: Other, please specify Indicator: EI Updated Target emissions reduction: N/A
Cheshire East_AQM8	Newsletter to EPR Processes	EPR	Permit systems and economic instruments: Other measure	Implementation	Start date: 2008 Expected end date: 2020 Spatial scale: Local Source affected: Industry including heat and power production Indicator: Newsletter produced x2 annually Target emissions reduction: N/A
Cheshire East_AQM9	Work with partner agencies	Partnership working	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2008 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: Identification of site specific initiatives Target emissions reduction: N/A
Cheshire East_AQM10	Establish steering group	Internal cohesive working	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2012 Expected end date: 2025 Spatial scale: Local Source affected: Transport Indicator: 2 meetings per year Target emissions reduction: N/A
Cheshire East_AR1	Developer Guidance	Development Control	Other measure: Other measure	Implementation	Start date: 2011 Expected end date: 2030 Spatial scale: Local Source affected: Other, please specify Indicator: Guidance produced Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Cheshire East_AR2	Website	Public	Public information and Education: Internet	Implementation	Start date: 2010 Expected end date: 2030 Spatial scale: Local Source affected: Other, please specify Indicator: Website up to date Target emissions reduction: N/A
Cheshire East_AR3	Schools education pack	Schools	Public information and Education: Other mechanisms	Implementation	Start date: 2011 Expected end date: 2015 Spatial scale: Local Source affected: Transport Indicator: Education pack produced Target emissions reduction: N/A
Cheshire East_TR1	Undertake travel planning support	Development Control	Traffic planning and management: Other measure	Implementation	Start date: 2010 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: No. Travel plans implemented Target emissions reduction: N/A
Cheshire East_TR5	Improve public transport	Sustainable Transport	Other measure: Other measure	Implementation	Start date: 2010 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: Implementation of Passenger Transport Strategy Target emissions reduction: N/A
Cheshire East_TR9	Ensure Taxi's comply with emission limits and consider EURO standards for fleet	Taxi's	Permit systems and economic instruments: Introduction/increase of environment taxes	Preparation	Start date: 2015 Expected end date: 2020 Spatial scale: Local Source affected: Transport Indicator: Taxi Licensing Strategy Review Target emissions reduction: N/A
Cheshire East_TR10	Work to coordinate roadworks on the network	Congestion reduction	Traffic planning and management: Other measure	Implementation	Start date: 2010 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: Network Management Plan Target emissions reduction: N/A
Cheshire East_TRF1	Freight operator efficiency	Freight emissions	Traffic planning and management: Freight transport measure	Planning	Start date: 2010 Expected end date: 2020 Spatial scale: Local Source affected: Transport Indicator: Freight Strategy Implementation Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Cheshire East_CEC1	Council travel plan and car share scheme	Own emissions	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2010 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: Staff travel plan Target emissions reduction: N/A
Cheshire East_CEC2	Introduce E-Government reducing the need for people to travel	Public	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2010 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: Customer First programmes Target emissions reduction: N/A
Cheshire East_DC1	Ensure AQ has recognition in all Council Strategies	Air Quality	Other measure: Other measure	Implementation	Start date: 2011 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: Links to strategic documents Target emissions reduction: N/A
Cheshire East_DC6	Develop Low Emission Strategy	Emissions	Other measure: Other measure	Planning	Start date: 2011 Expected end date: 2025 Spatial scale: Local Source affected: Transport Indicator: Implementation of LES Target emissions reduction: N/A
Cheshire East_WR1/RH1/LH1/	Congleton Bypass	Transport	Traffic planning and management: Encouragement of shift of transport modes	Planning	Start date: 2014 Expected end date: 2024 Spatial scale: Whole town or city Source affected: Transport Indicator: Bypass built Target emissions reduction: YES
Cheshire East_WR3/RH2/NANT14/LH4/SAND4	Study effectiveness of NO2 busting coatings	Innovative solutions	Other measure: Other measure	Implementation	Start date: 2008 Expected end date: 2016 Spatial scale: Whole town or city Source affected: Transport Indicator: Study completed Target emissions reduction: YES
Cheshire East_WR5/RH5/NANT3/LH5	Parking Enforcement	Air Quality	Traffic planning and management: Other measure	Implementation	Start date: 2009 Expected end date: 2020 Spatial scale: Whole town or city Source affected: Transport Indicator: No. FPN issues in / near AQMA Target emissions reduction: YES

Measure code	Description	Focus	Classification	Status	Other information
Cheshire East_WR8/RH7/LH8	LEZ for Congleton	Air Quality	Traffic planning and management: Low emission zones	Implementation	Start date: 2024 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: LEZ implemented Target emissions reduction: YES
Cheshire East_RH6	Junction improvement Rood Hill AQMA	Congestion reduction	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2020 Expected end date: 2023 Spatial scale: Local Source affected: Transport Indicator: Works completed Target emissions reduction: YES
Cheshire East_NANT1	Resigning of town	Air Quality	Traffic planning and management: Encouragement of shift of transport modes	Evaluation	Start date: 2010 Expected end date: 2011 Spatial scale: Whole town or city Source affected: Transport Indicator: Project completed Target emissions reduction: YES
Cheshire East_NANT4	Deliveries in Nantwich	Air Quality	Traffic planning and management: Freight transport measure	Evaluation	Start date: 2011 Expected end date: 2013 Spatial scale: Whole town or city Source affected: Transport Indicator: Project Completed Target emissions reduction: YES
Cheshire East_NANT10	UTC Traffic Management System	Air Quality	Traffic planning and management: Other measure	Preparation	Start date: 2018 Expected end date: 2020 Spatial scale: Whole town or city Source affected: Transport Indicator: UTC Introduced Target emissions reduction: YES
Cheshire East_NANT11	Contact Sat-Nav companies updating maps for Nantwich	Air Quality	Traffic planning and management: Other measure	Evaluation	Start date: 2013 Expected end date: 2013 Spatial scale: Local Source affected: Transport Indicator: Completed Target emissions reduction: N/A
Cheshire East_NANT15	Cycleway Crewe to Nantwich	Air Quality	Traffic planning and management: Expansion of bicycle and pedestrian infrastructure	Evaluation	Start date: 2013 Expected end date: 2014 Spatial scale: Local Source affected: Transport Indicator: Completed Target emissions reduction: N/A
Cheshire East_NANT22	Junction changes in AQMA	Air Quality	Traffic planning and management: Encouragement of shift of transport modes	Planning	Start date: 2018 Expected end date: 2020 Spatial scale: Local Source affected: Transport Indicator: Junction changed Target emissions reduction: YES

Measure code	Description	Focus	Classification	Status	Other information
Cheshire East_NANT23	Keep Clear sign to allow flowing traffic	Congestion reduction	Traffic planning and management: Other measure	Evaluation	Start date: 2013 Expected end date: 2013 Spatial scale: Local Source affected: Transport Indicator: Sign completed Target emissions reduction: YES
Cheshire East_SAND3	Junction improvements at M6 J17	N/A	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2015 Expected end date: 2015 Spatial scale: Local Source affected: Transport Indicator: Completed Target emissions reduction: YES
Cheshire East_MERE1	A556 Bypass	Transport	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2015 Expected end date: 2017 Spatial scale: Local Source affected: Transport Indicator: Bypass completed Target emissions reduction: YES
Cheshire East_MERE5	Signal / Junction improvements to A556	Congestion reduction	Traffic planning and management: Encouragement of shift of transport modes	Evaluation	Start date: 2009 Expected end date: 2015 Spatial scale: Local Source affected: Transport Indicator: Completed Target emissions reduction: YES
Cheshire East_DIS1	A6 / SEMMMS SCHEME / A6 Managed Route	Congestion reduction	Traffic planning and management: Other measure	Implementation	Start date: 2014 Expected end date: 2025 Spatial scale: Whole town or city Source affected: Transport Indicator: Works completed Target emissions reduction: YES
Cheshire East_KNU1	Junction improvements near AQMA	Congestion reduction	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2016 Expected end date: 2017 Spatial scale: Whole town or city Source affected: Transport Indicator: Works completed Target emissions reduction: YES
Cheshire East_CRE1	Crewe Green Link Road	Congestion reduction	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2014 Expected end date: 2016 Spatial scale: Whole town or city Source affected: Transport Indicator: Road Built Target emissions reduction: YES
Cheshire East_CRE4	Box junction enforcement	Congestion reduction	Traffic planning and management: Other measure	Implementation	Start date: 2014 Expected end date: 2016 Spatial scale: Local Source affected: Transport Indicator: No. Tickets Issued Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Cheshire East_CRE3	Relocate Crewe Railway Station	Congestion reduction	Traffic planning and management: Other measure	Implementation	Start date: 2013 Expected end date: 2020 Spatial scale: Local Source affected: Transport Indicator: Station relocated Target emissions reduction: YES
Cheshire East_MISC1	Introduction of Electric Vehicle Charging Infrastructure	Low Emission Transport	Public procurement: Other measure	Planning	Start date: 2014 Expected end date: 2015 Spatial scale: Whole agglomeration Source affected: Transport Indicator: Project completed Target emissions reduction: N/A
Cheshire East_MISC2	Workplace Electric Vehicles	Low Emission Transport	Public procurement: Other measure	Planning	Start date: 2014 Expected end date: 2015 Spatial scale: Local Source affected: Transport Indicator: Project completed Target emissions reduction: N/A
Cheshire East_MISC3	Sustainable Travel Campaign in Congleton	Low Emission Transport	Traffic planning and management: Encouragement of shift of transport modes	Preparation	Start date: 2015 Expected end date: 2016 Spatial scale: Whole town or city Source affected: Transport Indicator: Project completed Target emissions reduction: N/A
Cheshire East_MISC4	Congleton Link Road	Congestion reduction and improvement in AQ in AQMA's	Traffic planning and management: Encouragement of shift of transport modes	Preparation	Start date: 2015 Expected end date: 2018 Spatial scale: Whole town or city Source affected: Transport Indicator: Project completed Target emissions reduction: YES
Cheshire East_LTP/ROWIP 2014/15	Active Travel Capital Investment	Walking and Cycling Infrastructure	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2014 Expected end date: 2015 Spatial scale: Whole agglomeration Source affected: Transport Indicator: Installation of infrastructure Target emissions reduction: N/A
Cheshire East_LTP/ROWIP 2015/16	Active Travel Capital Investment	Walking and Cycling Infrastructure	Traffic planning and management: Encouragement of shift of transport modes	Preparation	Start date: 2015 Expected end date: 2016 Spatial scale: Whole agglomeration Source affected: Transport Indicator: Installation of infrastructure Target emissions reduction: N/A
Newcastle-under-Lyme Borough Council_1	Staffordshire ECO-Stars Scheme	Fleet operators	Other measure: Other measure	Preparation	Start date: 2015 Expected end date: 2017 Spatial scale: Whole town or city Source affected: Transport Indicator: N/A Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Newcastle-under-Lyme Borough Council_2	Air Quality action plan - Newcastle under Lyme Town Centre	NO2 reduction	Traffic planning and management: Other measure	Preparation	Start date: 2015 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Newcastle-under-Lyme Borough Council_3	Air Quality Action plan - Kidsgrove Town Centre	NO2 reduction	Traffic planning and management: Other measure	Preparation	Start date: 2015 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Newcastle-under-Lyme Borough Council_4	Air Quality action plan - Maybank, Wolstanton, Porthill	N02 reduction	Traffic planning and management: Other measure	Preparation	Start date: 2015 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Newcastle-under-Lyme Borough Council_5	Air Quality action plan - Little Madeley	N02 reduction	Traffic planning and management: Other measure	Preparation	Start date: 2015 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Newcastle-under-Lyme Borough Council_6	Identification of premises requiring an Environmental Permit	Compliance with statutory obligations	Permit systems and economic instruments: Other measure	Other	Start date: 2015 Expected end date: 2030 Spatial scale: National Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Newcastle-under-Lyme Borough Council_7	Development of Air Quality Strategy for Newcastle under Lyme	Compliance and improvement and maintenance of aq	Other measure: Other measure	Preparation	Start date: 2015 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Newcastle-under-Lyme Borough Council_8	Supplementary planning guidance / developers guidance relating to AQ including potential damage cost mitigation formula	Compliance	Other measure: Other measure	Preparation	Start date: 2015 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Newcastle-under-Lyme Borough Council_9	Identification of AQ related policies supported by evidence for inclusion in New Newcastle under Lyme and Stoke on Trent joint local plan	Compliance and improvement and maintenance of aq	Other measure: Other measure	Other	Start date: 2018 Expected end date: 2030 Spatial scale: Local Source affected: Agriculture Indicator: N/A Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Newcastle-under-Lyme Borough Council_10	Improving access to rail services at Kidsgrove by installing an accessible to all footbridge/ Improved Bus / Rail Interchange and waiting facilities with RTPI, safer pedestrian and cycle access routes and taxi facilities	Rail users	Traffic planning and management: Improvement of public transport	Planning	Start date: 2017 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Newcastle-under-Lyme Borough Council_11	Barracks Road Bus Priority	Bus users	Public information and Education: Other mechanisms	Other	Start date: 2014 Expected end date: 2014 Spatial scale: Local Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Newcastle-under-Lyme Borough Council_12	Improved bus facilities at Keele University	N/A	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2014 Expected end date: 2014 Spatial scale: Local Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Newcastle-under-Lyme Borough Council_13	SMART Bus Ticket Multi-operator)	Bus users	Other measure: Other measure	Implementation	Start date: 2010 Expected end date: 2014 Spatial scale: Whole town or city Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Newcastle-under-Lyme Borough Council_14	Real Time Passenger information system at Bus Stops on Keele to Hanley Route	Bus users	Public information and Education: Other mechanisms	Implementation	Start date: 2014 Expected end date: 2014 Spatial scale: Local Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Newcastle-under-Lyme Borough Council_15	Bus service improvements across the Borough	Bus users	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2014 Expected end date: 2014 Spatial scale: Whole town or city Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Newcastle-under-Lyme Borough Council_16	Stoking Employment in North Staffordshire to improve sustainable transport in the major employment sites at Keele University Science and Business Park, Chatterley Valley and Etruria Valley including enhanced traffic management, bus priority, passenger information, safe pedestrian environments. LSTF funded measures	Sustainable transport choices	Traffic planning and management: Improvement of public transport	Planning	Start date: 2015 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: N/A Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Newcastle-under-Lyme Borough Council_17	Availability of information and implementation of walking / cycling initiatives	N/A	Traffic planning and management: Encouragement of shift of transport modes	Other	Start date: 2014 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Newcastle-under-Lyme Borough Council_18	Newcastle Greenway improvements to support and encourage walking and cycling along a connected network of walking and cycling routes	N/A	Traffic planning and management: Encouragement of shift of transport modes	Other	Start date: 2014 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Newcastle-under-Lyme Borough Council_19	Safer Routes to School - enforcement and engineering measures to reduce reliance on cars and encourage sustainable transport	N/A	Traffic planning and management: Encouragement of shift of transport modes	Other	Start date: 2014 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Newcastle-under-Lyme Borough Council_20	Discretionary Travel Allowance scheme free 24/7 bus transport to people of pensionable age or with a disability, plus carer and under 20's travel for 1 per journey	Bus users	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2010 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Newcastle-under-Lyme Borough Council_21	Etruria Valley Link Road and Etruria Valley Development Enterprise Zone which will in part reduce congestion on the local highway network and reduce severance for transport users. This will involve four phases 1. A new bridge over the west coast mainline from the Wolstanton Junction of the A500. 2. Improvements to existing roundabouts on the A500 at Wolstanton. 3. Widening the A500 to three lanes between Porthill and Wolstanton	Sustainable transport choices	Traffic planning and management: Other measure	Other	Start date: 2015 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Newcastle-under-Lyme Borough Council_22	(Cycle Network : National and Local) Improving and closing gaps in the National Cycle Network 5 / 555 and links to employment and services around Keele University which currently forces people onto the A525 Keele Road and closing the gap North of Chatterley Valley employment area on Lowland's Road	Sustainable transport choices	Traffic planning and management: Other measure	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: N/A Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Newcastle-under-Lyme Borough Council_25	Newcastle Town Centre Local Transport Package: Package of measures to improve the public realm and improve links to pedestrians and cyclists across the ring road and to accommodate residual traffic and improve bus links and bus priority measures.	Sustainable transport choices	Other measure: Other measure	Implementation	Start date: 2013 Expected end date: 2017 Spatial scale: Local Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Newcastle-under-Lyme Borough Council_26	Chatterley Valley sustainable transport package: To utilise a developer funding pot once the Chatterley Valley site is developed, supported to improve access by cycle, walking and facilitate travel planning and smarter choice projects.	N/A	Other measure: Other measure	Implementation	Start date: 2010 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Stafford Borough Council_1	ECO Stars Fleet Recognition Scheme	Reduce commercial fleet emissions	Other measure: Other measure	Preparation	Start date: 2015 Expected end date: 2017 Spatial scale: Local Source affected: Transport Indicator: Membership Target emissions reduction: Based on other ECO Stars schemes, estimated emission reductions of 14 tonnes NOx / yr 0.55 tonnes PM10 / yr 1428 tonnes CO2 /yr can be expected for borough.
Stafford Borough Council_2	Publicise VOSA Smoky Vehicle Hotline	Addressing excessive vehicle emissions	Public information and Education: Internet	Implementation	Start date: 2001 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: None Target emissions reduction: Small -Not Quantified
Stafford Borough Council_3	Staffordshire Share a Lift Scheme	Encourage car sharing at peak times	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2001 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: None Target emissions reduction: Small -Not Quantified
Stafford Borough Council_4	Provision of Cycleways	Modal Shift from cars	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2001 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: None Target emissions reduction: Small -Not Quantified

Measure code	Description	Focus	Classification	Status	Other information
Staffordshire Moorlands District Council_0	Manage Commercial Fleet Vehicle Emissions	Reduce emissions from commercial fleet vehicles using ECO Stars Fleet Recognition Scheme	Other measure: Other measure	Planning	Start date: 2015 Expected end date: 2017 Spatial scale: Whole town or city Source affected: Transport Indicator: Number of members of Eco Stars Scheme Target emissions reduction: 14 tonnes NOx/yr ; 0.55 Tons PM10 / yr; 1428 CO2 /yr
Staffordshire Moorlands District Council_1	Reduce air quality impacts from development. SMDC Adopted Core Strategy SP4	Ensure that the effects of pollution (air, land, noise, water, light) are avoided or mitigated by refusing schemes which are deemed to be (individually or cumulatively) environmentally unacceptable and by avoiding unacceptable amenity impacts by refusing schemes which are pollution-sensitive adjacent to polluting developments, or polluting schemes adjacent to pollution sensitive areas, in accordance with national guidance.	Other measure: Other measure	Implementation	Start date: 2015 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: Number of planning consultations regarding AQ Target emissions reduction: N/A
Staffordshire Moorlands District Council_2	Reduce our own road transport emissions (SMDC Environmental Policy)	Reduce fleet vehicle emissions	Other measure: Other measure	Implementation	Start date: 2012 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: Mileage /Per capita road transport emissions (CO2) Target emissions reduction: N/A
Staffordshire Moorlands District Council_3	Promote alternatives to private motor vehicles (LTP Policy 5.2)	Reduce emissions from road transport & Respond to current and future climatic conditions	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2011 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: Bus patronage numbers/ Per capita road transport emissions (CO2) Target emissions reduction: N/A
Staffordshire Moorlands District Council_4	Promote the use of low-emitting vehicles and vehicle efficiency (LTP Policy 5.3)	Reduce emissions from road transport & Respond to current and future climatic conditions	Public procurement: Cleaner vehicle transport services	Implementation	Start date: 2012 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Staffordshire Moorlands District Council_5	Reduce our own road transport emissions LTP (Policy 5.4)	Reduce emissions from road transport & Respond to current and future climatic conditions	Other measure: Other measure	Implementation	Start date: 2013 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: Road mileage travelled Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Staffordshire Moorlands District Council_6	Raise awareness of environmental issues and encourage people to lead more sustainable lifestyles helping to reduce carbon emission	Promoting sustainable travel and school travel planning	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: Bus patronage numbers/ Per capita road transport emissions (CO2) Target emissions reduction: N/A
Staffordshire Moorlands District Council_7	Local Transport Plan Freight Strategy	Careful consideration of any requests to restrict lorry movements in line with actions and priorities in the Local Transport Plan Freight Strategy (2011)	Other measure: Other measure	Implementation	Start date: 2015 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: Per capita road transport emissions (CO2) Target emissions reduction: N/A
Staffordshire Moorlands District Council_8	Staffordshire Moorlands District Council's Leek Town Centre Masterplan	Improve Traffic Flows through Leek town Centre : reconfigured bus station with associated access improvements to key town centre routes, improved pedestrian links into the town centre, public realm enhancements within the retail core, further junction modifications and potential new highway capacity south of the town centre to unlock the Cornhill and Barnfields regeneration area	Other measure: Other measure	Implementation	Start date: 2012 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: Traffic Flows / Congestion Target emissions reduction: N/A
Staffordshire Moorlands District Council_9	A50 growth Corridor improvements	Improve road flows through the A50 truck road (major road in south of district)	Other measure: Other measure	Planning	Start date: 2015 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: Traffic Flows / Congestion Target emissions reduction: N/A
Stoke-on-Trent City Council_AQ1	Burslem Town Centre Traffic Management Improvements	Reduce unit emissions in the AQMA using traffic management improvements	Traffic planning and management: Other measure	Evaluation	Start date: 2014 Expected end date: 2017 Spatial scale: Local Source affected: Transport Indicator: Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute) Target emissions reduction: Calculated Annual NOx Reductions 299 kg/yr

Measure code	Description	Focus	Classification	Status	Other information
Stoke-on-Trent City Council_AQ2	Cobridge Traffic Management Improvements (including Waterloo Road Corridor)	Reduce unit emissions in the AQMA by improved traffic flow along a strategic road corridor.	Traffic planning and management: Other measure	Implementation	Start date: 2012 Expected end date: 2013 Spatial scale: Local Source affected: Transport Indicator: Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute) Target emissions reduction: Calculated Annual NOx Reductions 389 kg/yr
Stoke-on-Trent City Council_AQ3	Victoria Road Corridor Improvements	Reduce unit emissions on Victoria Road, Fenton	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2012 Expected end date: 2013 Spatial scale: Local Source affected: Transport Indicator: Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute) Target emissions reduction: Calculated Annual NOx Reductions 297 kg/yr
Stoke-on-Trent City Council_AQ4a	Lichfield Street Improvements	Reduce unit emissions in the AQMA through improved traffic flow and improved sustainable transport offer.	Traffic planning and management: Improvement of public transport	Preparation	Start date: 2015 Expected end date: 2016 Spatial scale: Local Source affected: Transport Indicator: Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute) Target emissions reduction: Calculated Annual NOx Reductions 322 kg/yr
Stoke-on-Trent City Council_AQ4b	Leek Road / Victoria Road Junction - Safety Scheme	21 road traffic incidents in three years resulted in this scheme being assessed for possible intervention measures.	Traffic planning and management: Encouragement of shift of transport modes	Evaluation	Start date: 2015 Expected end date: 2016 Spatial scale: Local Source affected: Transport Indicator: N/A Target emissions reduction: Calculated Annual NOx Reductions 321 kg/yr

Measure code	Description	Focus	Classification	Status	Other information
Stoke-on-Trent City Council_AQ4c	City Road Corridor Improvements	Reduce unit emissions in the AQMA by improved traffic flow, improved measures for walking/cycling and improved road safety between Leek Road & Victoria Road.	Traffic planning and management: Encouragement of shift of transport modes	Evaluation	Start date: 2015 Expected end date: 2016 Spatial scale: Local Source affected: Transport Indicator: Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute) Target emissions reduction: Calculated Annual NOx Reductions 266 kg/yr
Stoke-on-Trent City Council_AQ5a	Station Gateway (Phase 1), University Quarter (Phase 2) and Uni Boulevard (Phase 3)	N/A	Traffic planning and management: Encouragement of shift of transport modes	Evaluation	Start date: 2014 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: N/A Target emissions reduction: Calculated Annual NOx Reductions 480 kg/yr
Stoke-on-Trent City Council_AQ5b	Leek Road Traffic Management Improvements	Reduce unit emissions in the AQMA through improved vehicular flow. This project will complement the proposed improvements to the Investment Plan project for the Station Gateway.	Traffic planning and management: Other measure	Evaluation	Start date: 2014 Expected end date: 2030 Spatial scale: Local Source affected: Transport Indicator: N/A Target emissions reduction: Calculated Annual NOx Reductions 480 kg/yr
Stoke-on-Trent City Council_AQ6	Victoria Street / Shelton New Road Junction Improvement	Reduce unit emissions in the AQMA through a junction improvement scheme which introduces pedestrian crossing facilities & traffic management improvements including banned right turns on all arms.	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2012 Expected end date: 2013 Spatial scale: Local Source affected: Transport Indicator: Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute) Target emissions reduction: Calculated Annual NOx Reductions 21 kg/yr
Stoke-on-Trent City Council_AQ7a	Parking restrictions outside schools	Reduce unit emissions in the AQMA by improving peak period traffic flows, average congestion (miles per minute), journey times, mode share of journey, access by public transport, bus punctuality times.	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2012 Expected end date: 2014 Spatial scale: Whole town or city Source affected: Transport Indicator: Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute) Target emissions reduction: Calculated Annual NOx Reductions 272 kg/yr

Measure code	Description	Focus	Classification	Status	Other information
Stoke-on-Trent City Council_AQ7b	Walk to School Outreach- Living Streets	Reduce unit emissions in the AQMA by reducing negative impact of the 'school run' on congestion, journey times and economic growth, by removing barriers to walking and delivery of proven school-based interventions for schools in the south and east of Stoke-on-Trent which have large numbers of children driven short distances to school by car.	Traffic planning and management: Encouragement of shift of transport modes	Planning	Start date: 2012 Expected end date: 2015 Spatial scale: Whole town or city Source affected: Transport Indicator: Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute) Target emissions reduction: Calculated Annual NOx Reductions 272 kg/yr
Stoke-on-Trent City Council_AQ7c	Access to Education - Sustrans	Reduce unit emissions in the AQMA through work with Sustrans to support economic growth by tackling local congestion problems caused by journeys to schools. It includes funding to promote walking and cycling to 21 primary schools and 7 secondary schools in the north and east of Stoke-on-Trent.	Traffic planning and management: Encouragement of shift of transport modes	Planning	Start date: 2012 Expected end date: 2015 Spatial scale: Whole town or city Source affected: Transport Indicator: Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute) Target emissions reduction: Calculated Annual NOx Reductions 272 kg/yr
Stoke-on-Trent City Council_AQ8	Stoking Employment in North Staffordshire	Reduce unit emissions in the AQMA by assisting shift to sustainable transport modes on the existing and growing employment areas at Chatterley Valley, Etruria Valley, Trentham Lakes, the University Quarter (UniQ) and Keele University & Science and Business Park. These sites currently provide 13,700 jobs with the potential to unlock a further 8,000 jobs by April 2015.	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2012 Expected end date: 2015 Spatial scale: Whole town or city Source affected: Transport Indicator: Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute) Target emissions reduction: Calculated Annual NOx Reductions 17,750 kg/yr
Stoke-on-Trent City Council_AQ9	Clean Air Grant	Reduce unit emissions in the AQMA by providing additional support to business for staff travel plans, growing the existing Workplace Travel Plan Grant into a local Clean Air Grant.	Public procurement: Other measure	Implementation	Start date: 2014 Expected end date: 2014 Spatial scale: Local Source affected: Transport Indicator: Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute) Target emissions reduction: Calculated Annual NOx Reductions 57 kg/yr

Measure code	Description	Focus	Classification	Status	Other information
Stoke-on-Trent City Council_AQ10	Staffordshire ECO Stars Fleet Recognition Scheme	Reduce unit emissions in the conurbation - specifically targeting commercial vehicles (HGV, vans, buses and coaches) to reduce vehicle emissions and, ultimately, air quality problems that are directly related to their contribution to road traffic.	Other measure: Other measure	Preparation	Start date: 2015 Expected end date: 2016 Spatial scale: Whole agglomeration Source affected: Transport Indicator: Reduced emissions Target emissions reduction: Expected emission reduction 7 tonne NOx/yr, 2.22 tonne PM10/yr, 11615 tonne CO2/yr
Stoke-on-Trent City Council_HDS1	Real Time Bus Information	Reduce unit emissions in the AQMA by assisting shift to sustainable transport modes on the existing and growing employment areas	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2014 Expected end date: 2018 Spatial scale: Whole town or city Source affected: Transport Indicator: Improved journey times. Improved mode share of journey. Target emissions reduction: Not calculated
Stoke-on-Trent City Council_HDS2	Improved Access to Health and Leisure facilities	Reduce unit emissions in the AQMA through improved pedestrian and cyclist accessibility to the City's Health & Leisure Facilities, e.g. Parks, Health Centres, Sports Centres, Museums, Libraries etc.	Traffic planning and management: Other measure	Implementation	Start date: 2014 Expected end date: 2018 Spatial scale: Whole town or city Source affected: Transport Indicator: Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute) Target emissions reduction: Not calculated
Stoke-on-Trent City Council_HDS3	Programme of Bus Stop Improvements	Reduce unit emissions in the AQMA through improved accessibility to public transport, higher quality infrastructure	Traffic planning and management: Improvement of public transport	Implementation	Start date: 2014 Expected end date: 2018 Spatial scale: Whole town or city Source affected: Transport Indicator: Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute) Target emissions reduction: Not calculated
Stoke-on-Trent City Council_HDS4	Wilson Road / New Inn Lane Junction Improvement	Reduce unit emissions in the AQMA through improved pedestrian and cyclist accessibility to the City's Health & Leisure Facilities, e.g. Parks, Health Centres, Sports Centres, Museums, Libraries etc.	Traffic planning and management: Other measure	Planning	Start date: 2015 Expected end date: 2016 Spatial scale: Local Source affected: Transport Indicator: Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute) Target emissions reduction: Not calculated

Measure code	Description	Focus	Classification	Status	Other information
Stoke-on-Trent City Council_HDS5	Etruria Valley Major Highway & Transport Scheme	Reduce unit emissions in the AQMA through major new transport infrastructure scheme linking the A500 to the City Centre, reducing congestion on the A53, the A500 and the wider conurbation	Traffic planning and management: Other measure	Planning	Start date: 2015 Expected end date: 2019 Spatial scale: Local Source affected: Transport Indicator: Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute) Target emissions reduction: Not calculated
Stoke-on-Trent City Council_HDS6	Leek Road Corridor Improvements(Growth Deal)	Reduce unit emissions in the AQMA through a new junction improvement and traffic management measures along this arterial route through the City	Traffic planning and management: Other measure	Planning	Start date: 2016 Expected end date: 2018 Spatial scale: Local Source affected: Transport Indicator: Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute) Target emissions reduction: Not calculated
Stoke-on-Trent City Council_HDS7	Etruria Road Corridor Improvements(Growth Deal)	Reduce unit emissions in the AQMA through re-allocation of road space, traffic management and public realm measures along this arterial route into the City Centre	Traffic planning and management: Other measure	Planning	Start date: 2016 Expected end date: 2018 Spatial scale: Local Source affected: Transport Indicator: Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute) Target emissions reduction: Not calculated
Stoke-on-Trent City Council_HDS8	City Centre Ring Road (completion)	Reduce unit emissions in the AQMA through the delivery of the final ‘quarter’ of the City Centre Ring Road. This will reduce congestion on the routes into the City Centre by re-directing through traffic onto the Ring Road	Traffic planning and management: Other measure	Planning	Start date: 2017 Expected end date: 2019 Spatial scale: Local Source affected: Transport Indicator: Improved journey times. Improved average congestion (miles/minute) Target emissions reduction: Not calculated
Stoke-on-Trent City Council_HDS9	Arbourfield Drive / Dividy Rd Junction Improvement	Reduce unit emissions in the AQMA through a junction improvement scheme, with UTC measures aimed at reducing congestion on the approaches to this junction and traffic flow overall by linking existing traffic signal installations	Traffic planning and management: Other measure	Implementation	Start date: 2014 Expected end date: 2015 Spatial scale: Local Source affected: Transport Indicator: Improved journey times. Improved average congestion (miles/minute) Target emissions reduction: Not calculated

Measure code	Description	Focus	Classification	Status	Other information
Stoke-on-Trent City Council_HDS10	Trentham Lakes / A50 Strategic Signing	Reduce unit emissions in the AQMA through a change to the Strategic Signing from the A50 Trunk Road, reducing HGV traffic using the local road network.	Traffic planning and management: Other measure	Planning	Start date: 2015 Expected end date: 2015 Spatial scale: Local Source affected: Transport Indicator: Improved journey times. Improved average congestion (miles/minute) Target emissions reduction: Not calculated
Stoke-on-Trent City Council_HDS11	Potteries Way / Bucknall Rd Junction Improvement	Reduce unit emissions in the AQMA through a major new junction improvement on the Potteries Way City Centre Ring Road, updating the operation of the signalling arrangements, introduction of UTC and improved junction capacity.	Traffic planning and management: Other measure	Evaluation	Start date: 2017 Expected end date: 2019 Spatial scale: Local Source affected: Transport Indicator: Improved journey times. Improved average congestion (miles/minute) Target emissions reduction: Not calculated
Stoke-on-Trent City Council_HBE1	Community Rail Partnership	Encouraging more use of local rail services by improving service and station quality, awareness and promotion campaigns	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2005 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: Increased use of local rail services Target emissions reduction: Not calculated
Stoke-on-Trent City Council_HBE2	Concessionary Bus Pass Scheme	Providing free bus travel to those eligible	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: Maintaining use of local bus services Target emissions reduction: Not calculated
Stoke-on-Trent City Council_HBE3	Home to Work Scheme	Providing transport assistance to those with job offers	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2011 Expected end date: 2015 Spatial scale: Whole town or city Source affected: Transport Indicator: Number of clients assisted Target emissions reduction: Not calculated
Stoke-on-Trent City Council_FP1	Fleet Renewal	First Potteries	Public procurement: Cleaner vehicle transport services	Implementation	Start date: 2016 Expected end date: 2017 Spatial scale: Whole town or city Source affected: Transport Indicator: Reduced emissions Target emissions reduction: Not calculated

Measure code	Description	Focus	Classification	Status	Other information
Stoke-on-Trent City Council_Sot1	Participation in Rail North Association	Encouraging more use of local rail services by working with DfT and train operating company to improve Northern franchise services, quality, awareness and promotion campaigns	Traffic planning and management: Encouragement of shift of transport modes	N/A	Start date: 2016 Expected end date: 2018 Spatial scale: Whole town or city Source affected: Transport Indicator: Increased use of local rail services Target emissions reduction: Not calculated
Stoke-on-Trent City Council_Sot2	Wayfinding Programme	Reduce unit emissions in the AQMA by encouraging walking and cycling through delivery of wayfinding scheme in the centre of Stoke-on-Trent.	Traffic planning and management: Encouragement of shift of transport modes	Planning	Start date: 2017 Expected end date: 2018 Spatial scale: Whole town or city Source affected: Transport Indicator: Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute) Target emissions reduction: Not calculated