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Air Quality Plan for the achievement of EU air quality limit values for nitrogen dioxide (NO_2) in Yorkshire & Humberside (UK0034)

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1. Introduction

1.1. This document

This document is the Yorkshire & Humberside (UK0034) air quality plan for the achievement of the EU air quality limit values for nitrogen dioxide (NO_2).

This plan presents the following information:

• General information regarding the Yorkshire & Humberside non-agglomeration zone
• Details of NO_2 exceedence situation(s) within the Yorkshire & Humberside non-agglomeration zone
• Details of local air quality measures that have been implemented, will be implemented or are being considered for implementation in this non-agglomeration zone.

This air quality plan for Yorkshire & Humberside should be read in conjunction with the separate UK overview document and the list of UK and national measures that are available on the Defra website (http://www.defra.gov.uk/environment/quality/air/air-quality/eu/). The UK overview document sets out, amongst other things, the authorities responsible for delivering air quality improvements and the national measures that are applied in some or all UK zones. The measures presented in this plan and the accompanying UK overview and list of UK measures show how the UK will ensure that compliance with the NO_2 limit values is achieved as soon as possible.

This plan should also be read in conjunction with the supporting UK technical report (http://www.defra.gov.uk/environment/quality/air/air-quality/eu/), 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 limit value: an 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

The Air Quality Directive stipulates that compliance with the NO_2 limit values will be achieved by 01/01/2010. However, where the limit values cannot be achieved by then, the Directive also allows Member States to postpone this attainment date until 01/01/2015 provided air quality plans are established demonstrating how the limit values will be met by this extended deadline.

1.3. Zone status

The assessment undertaken for the Yorkshire & Humberside non-agglomeration zone indicates that the annual limit value is likely to be exceeded in 2010 and in 2015 but achieved by 2020 through introduction of measures included in the baseline modelling, a low emission zone (LEZ) scenario (if applied) and the non-quantifiable local measures outlined in this plan.

The assessment undertaken for the Yorkshire & Humberside non-agglomeration zone indicates that the hourly limit value not exceeded in this non-agglomeration zone in 2008.

1.4. Plan structure

General administrative information regarding this non-agglomeration zone is presented in section 2.

Section 3 then presents the overall picture with respect to NO_2 levels in this non-agglomeration zone for the 2008 reference year of this air quality plan. This includes the declaration of exceedance situations within the non-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 non-agglomeration zone both before and after 2010 is given in section 4.

Baseline modelled projections for 2010, 2015 and 2020 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 take the measure(s). However, it has not been possible to quantify the impact of all 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.

Details of an LEZ scenario under consideration as part of our investigation of additional measures to achieve the NO_2 limit values is presented in section 6.

2. General Information about the Zone

2.1. Administrative information

Zone name: Yorkshire & Humberside
Zone code: UK0034
Type of zone: non-agglomeration zone
Reference year: 2008
Extent of zone: Figure 1 shows the area covered by the Yorkshire & Humberside non-agglomeration zone

Local Authorities within the non-agglomeration zone: Figure 2 shows the location of Local Authorities within the non-agglomeration zone. A list of these Local Authorities is also given below. The numbers in this list correspond to the numbers in Figure 2.

1. Barnsley Metropolitan Borough Council
2. Bradford Metropolitan District Council
3. Calderdale Metropolitan Borough Council
4. Craven District Council
5. Doncaster Metropolitan Borough Council
6. East Riding of Yorkshire Council
7. Hambleton District Council
8. Harrogate Borough Council
9. Kingston upon Hull City Council
10. Kirklees Council
11. Leeds City Council
12. North East Lincolnshire Council
13. North Lincolnshire Council
14. Richmondshire District Council
15. Rotherham Metropolitan Borough Council
16. Ryedale District Council
17. Scarborough Borough Council
18. Selby District Council
19. Sheffield City Council
20. Wakefield Council
21. York 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 Yorkshire & Humberside non-agglomeration zone (UK0034).

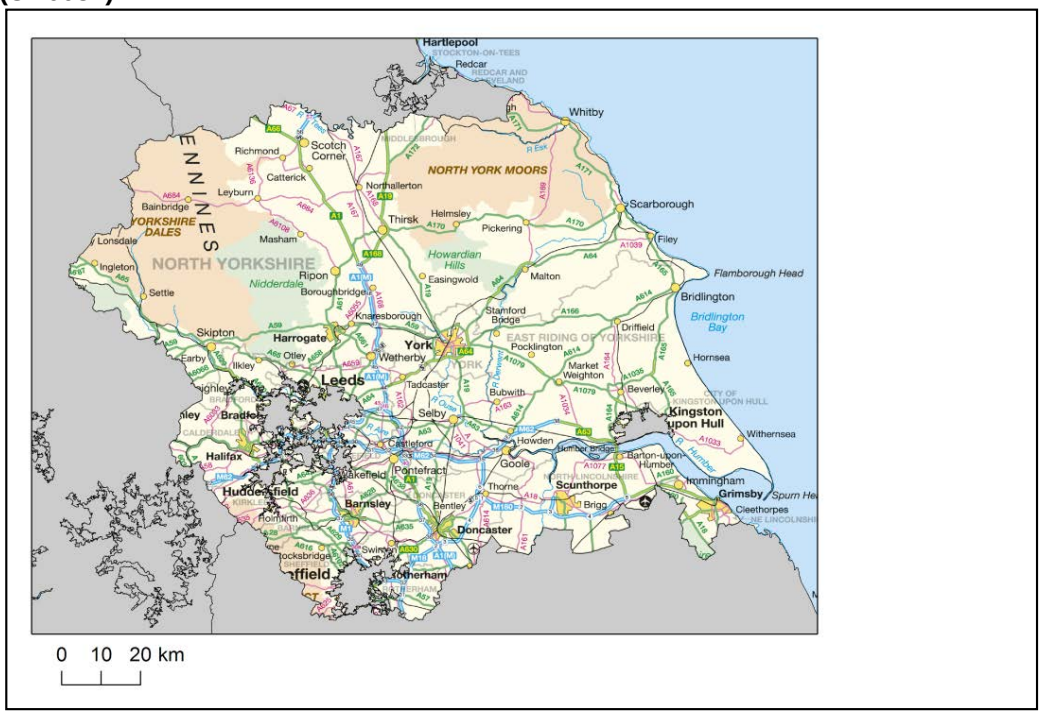
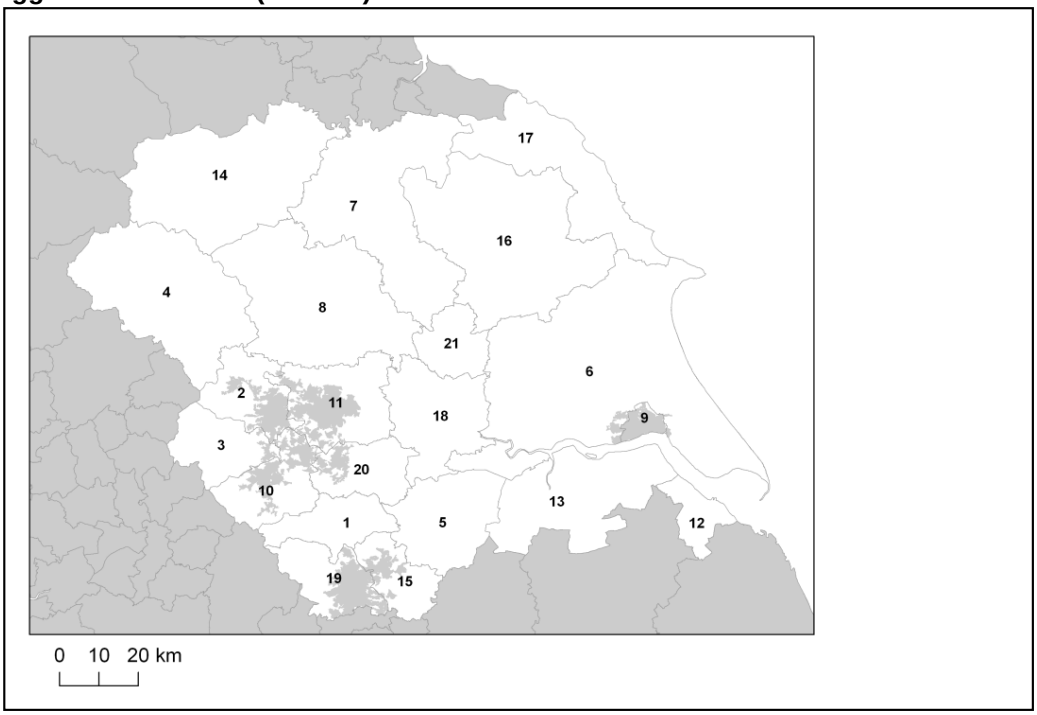


Figure 2. Map showing Local Authorities within the Yorkshire & Humberside non-agglomeration zone (UK0034).



2.2. Assessment details

Measurements
NO_2 measurements in this zone were available in 2008 from the following national network monitoring stations (NO_2 data capture for each station in 2008 shown in brackets):

• Barnsley Gawber GB0681A (90.9%)
• High Muffles GB0014R (97.9%)
• Scunthorpe Town GB0841A (96.2%)
• York Fishergate GB0919A (99.6%)

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

Modelling
Modelling for the 2008 reference year has been carried out for the whole of the UK (see the UK technical report). This modelling covers the following extent within this zone:

• Total background area within zone (approx): 14997 km^2
• Total population within zone (approx): 3022575 people
• Total road length where an assessment of NO_2 concentrations have been made: 752.2 km in 2008 (and similar lengths in previous years).

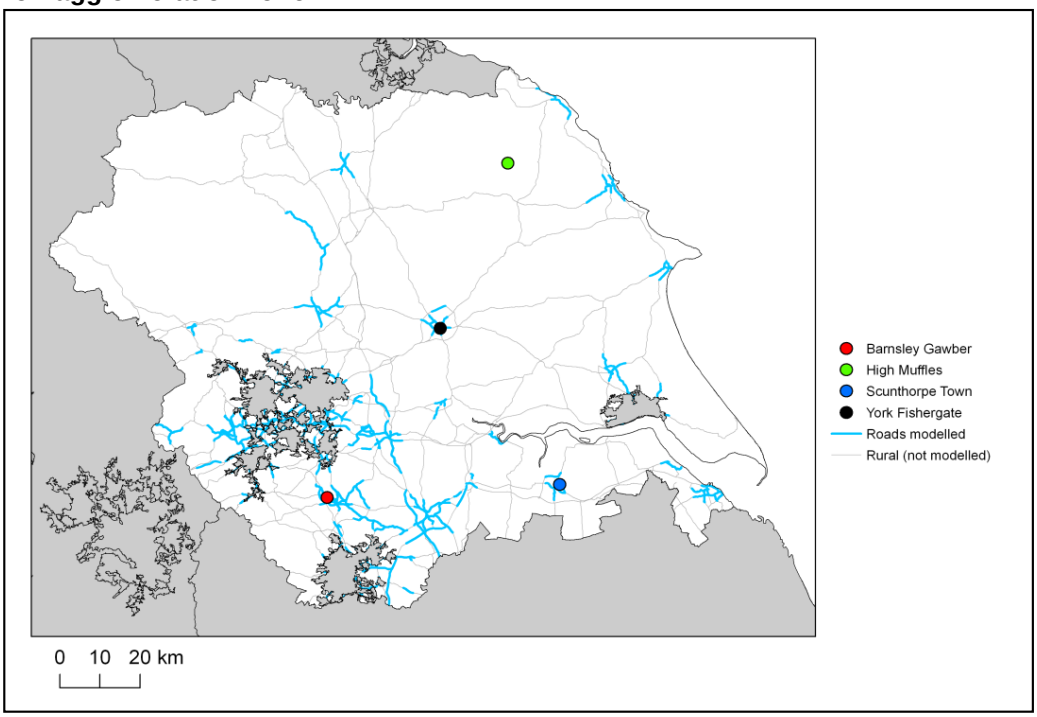
Zone maps
Figure 3 presents the location of the NO_2 monitoring stations within this zone for 2008 and the roads for which NO_2 concentrations have been modelled. NO_2 concentrations at background locations have been modelled across the entire zone at a 1 x 1 km^2 resolution.

2.3. Reporting Under European Directives

Since 2001 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

In addition, the UK has reported on air quality plans and programmes (Decision 2004/224/EC) on an annual basis depending on the reported concentrations in the previous year. Plans and programmes were first reported in this zone in 2003. Plans and programmes for 2003 and all other years for which they have been required are available from http://cdr.eionet.europa.eu/gb/eu/aqpp.

Figure 3. Map showing the location of the NO_2 monitoring sites with valid data in 2008 and roads where concentrations have been modelled within the Yorkshire & Humberside (UK0034) non-agglomeration zone.



3. Overall Picture for 2008 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 Yorkshire & Humberside non-agglomeration zone only the annual limit value was exceeded in 2008. Hence, one exceedance situation for this zone has been defined, NO_2_UK0034_Annual_1, which covers the exceedance of the annual limit value. This exceedance situation is described below.

For both NO_2 limit values, a margin of tolerance for 2008 and other years has been defined in the Air Quality Directive (2008/50/EC). Data comparing assessed concentrations at locations within this non-agglomeration zone with the 2008 margin of tolerance are presented in the annual reporting questionnaire for 2008 (http://cdr.eionet.europa.eu/gb/eu/annualair).

3.2. Reference year: NO_2_UK0034_Annual_1

The NO_2_UK0034_Annual_1 exceedance situation covers all exceedances of the annual mean limit value in the Yorkshire & Humberside non-agglomeration zone in 2008.

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 mean 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 2008. Table 2 summarises modelled annual mean NO_2 results in this exceedance situation for the same time period. This table shows that, in 2008, 227.8 km of road length was modelled to exceed the annual limit value. There were no modelled background exceedances of this limit value. Table 2 also shows that the maximum modelled annual mean NO_2 concentration in 2008 was 117.4 μgm^{-3}. Maps showing the modelled annual mean NO_2 concentrations for 2008 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 these maps.

The maximum measured concentration in the zone varies due to changes 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.The decrease in the maximum modelled annual mean NO_2 concentration between 2008 and 2009 (117.4 μgm^{-3} to 71.4 μgm^{-3}) occurred because the location with highest concentration in 2008 was excluded in the assessment for 2009, when this road link was assessed as being rural.

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, along with an indicative annual mean NO_2 source apportionment. Table 3 presents summary source apportionment information in this exceedance situation for 2008, including:

• The modelled NO_X and indicative NO_2 source apportionment for the section of road with the highest modelled NO_2 concentration in this exceedance situation in 2008. This is important information because it shows which sources need to be tackled at the point with the largest compliance gap in the exceedance situation. It is not possible to calculate an unambiguous source apportionment for annual mean NO_2 concentrations for the reasons discussed in the UK Technical Report. We have, however, developed a method to provide an indicative source apportionment for annual mean NO_2 concentrations for these air quality plans. This method involves calculating the maximum and minimum possible contribution from each source to the NO_2 concentration. The final source apportionment has been calculated as the average of the minimum and maximum contributions for each source, with the results normalised so that the contributions sum to the total modelled NO_2 concentration. Further information on the methods used for source apportionment are provided in the UK Technical Report.

• The maximum NO_X contribution from each source from across all the roads included in this exceedance situation in 2008. This is important information because it highlights all the key sources that need to be tackled within the exceedance situation in order to achieve compliance across the entire area of the exceedance situation.

Figure A1.1 in Annex 1 presents the annual mean NO_X source apportionment for each section of road within the NO_2_UK0034_Annual_1 exceedance situation (i.e. the source apportionment for all exceeding roads only) in 2008. Roads have been grouped into motorways, trunk roads and primary road in this figure.

Table 1. Measured annual mean concentrations at national network stations in NO_2_UK0034_Annual_1 for 2001 onwards, μgm^{-3}. (Data capture shown in brackets) (a)

Site name (EOI code)	2001	2002	2003	2004	2005	2006	2007	2008	2009
Barnsley Gawber (GB0681A)	30 (83%)	25 (86%)	25 (97%)	22 (96%)	20 (81%)	19 (77%)	18 (91%)	19 (91%)	19 (93%)
High Muffles (GB0014R)			14.4 (19%)	9 (70%)	7.5 (89%)	7.5 (88%)	6.4 (98%)	6.6 (98%)	7.5 (56%)
Scunthorpe Town (GB0841A)								19 (96%)	18 (98%)
York Fishergate (GB0919A)								33 (100%)	37 (99%)

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

Table 2. Annual mean NO_2 model results in NO_2_UK0034_Annual_1 for 2001 onwards

	2001	2002	2003	2004	2005	2006	2007	2008	2009
Road length exceeding (km)	300.3	176.2	404.6	244.9	318.4	237.4	253.8	227.8	69.1
Background area exceeding (km^2)	62	0	18	0	0	0	0	0	0
Maximum modelled concentration (μgm^{-3}) (a)	69.0	75.5	96.3	86.6	95.8	90.9	102.4	117.4	71.4

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

Table 3. Source apportionment summary information for 2008 in NO_2_UK0034_Annual_1 (μgm^{-3}).

Spatial scale	Component	Highest road link (a)		Maximum (b)
		NOx	NO2 (d)	NOx
Regional background sources (i.e. contributions from distant sources of > 30 km from the receptor)	Total	7.8	(c)	
	From within the UK	5.7	(c)	6.1
	From transboundary sources (includes shipping and other EU Member States)	2.1	(c)	4.4
Urban background sources (i.e. sources located within 0.3 - 30 km from the receptor)	Total	14.8	8.3	-
	From road traffic sources	10.6	4.2	38.4
	From industry (including heat and power generation)	1.9	(c)	31.8
	From agriculture	0.0	(c)	0.0
	From commercial/residential sources	1.1	(c)	7.1
	From shipping	0.0	(c)	5.9
	From off road mobile machinery	0.7	(c)	10.1
	From natural sources	0.0	(c)	0.0
	From transboundary sources	0.0	(c)	0.0
	From other urban background sources	0.5	(c)	4.9
Local sources (i.e. contributions from sources < 0.3 km from the receptor)	Total	299.6	109.1	-
	From cars	47.3	18	47.3
	From HGV rigid	40.5	14.7	40.5
	From HGV articulated	181.8	62.8	181.8
	From Buses	2.2	0.8	46.6
	From LGVs	27.3	12.7	27.3
	From motorcycles	0.5	0.2	0.5
Total (i.e. regional background + urban background + local components)		322.3	117.4	-

(a) The road with the highest modelled annual mean NO_2 concentration in this exceedance situation in 2008 is a section of the A1(T), traffic count point id 81550 (OS grid (m): 449700, 416000).
(b) This column gives the maximum contribution for each component from all the roads included in the exceedence situation.
(c) The combined modelled annual mean NO_2 concentration contribution for these components is 4.1 μgm^{-3}. A more detailed NO_2 source apportionment is currently unavailable for these sectors.
(d) Source apportionment for NO_2 is indicative, see UK Technical Report.

Figure 4. Map of modelled background annual mean NO_2 concentrations 2008. Modelled exceedances of the annual limit value are shown in orange and red.

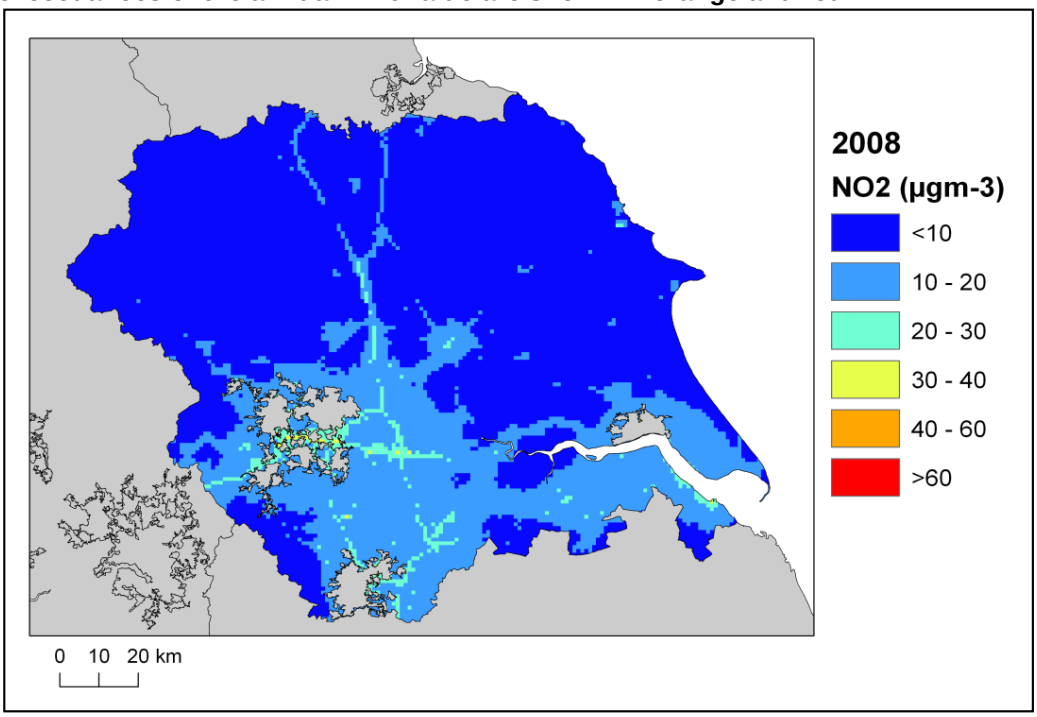
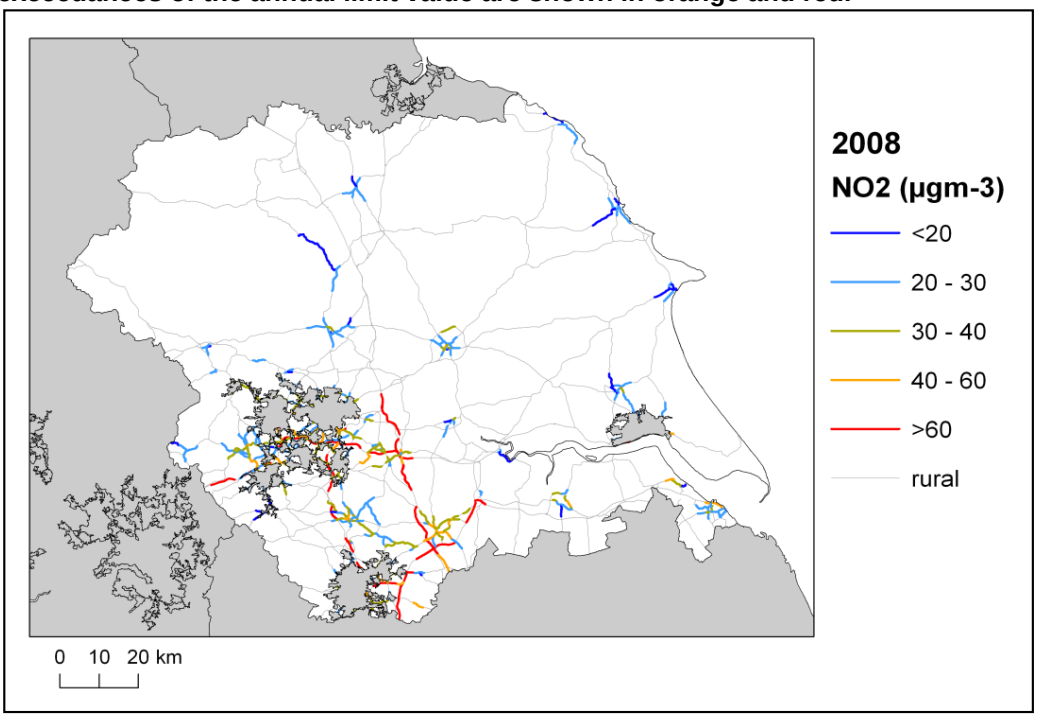


Figure 5. Map of modelled roadside annual mean NO_2 concentrations 2008. Modelled exceedances of the annual limit value are shown in orange and red.



4. Measures

4.1. Introduction

This section (section 4) gives details of measures that address exceedances of the NO_2 limit values within Yorkshire & Humberside non-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(s) 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 articulated HGVs at the location of maximum exceedance with a contribution of 181.8 ugm^{-3} of NO_X out of a total of 322.3 ugm^{-3} of NO_X. Articulated HGVs were important sources on the motorway roads with the highest concentrations in this exceedance situation. All vehicle types were important sources on the trunk roads with the highest concentrations. Articulated HGVs, rigid HGVs, cars 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 may also be beneficial depending on the source apportionment for the urban background.

4.3. Measures

Measures potentially affecting NO_2 in this non-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 and list of UK and National measures.

Relevant Local Authority measures within this exceedance situation are listed in Table A2.1 (see Annex 2). Relevant Local Authority measures are considered to be those measures which directly target, or are in close geographical proximity to roads and/or background grid squares in exceedance of one or other of the NO_2 limit values. Other Local Authority measures may also have been taken in this zone, but they are not listed in this table. All the measures listed in Table A2.1 have been carried out, are in the process of being carried out or a firm commitment had been made to carry them out on the timetables listed at the point at which information on local measures was collected.

4.4. Measures timescales

Timescales for national measures are given in the UK overview document and list of UK and National measures.

Information on local measures was collected in autumn 2009. Hence, any Local Authority action plans and measures adopted by Local Authorities after this time have not been included in this air quality plan. Many of the measures listed in Annex 2 will either have happened before autumn 2009 or have been planned for implementation before or during 2010. Others will be planned for after 2010. It should be noted that many of the measures taken before or during 2010 will continue to have a beneficial impact on air quality after the end of 2010.

Local Authorities report on progress with the implementation of their action plans annually and review action plan measures regularly. Where future Local Authority measures to improve air quality are under consideration these would be included in future local authority action plans and published by the local authority.

5. Baseline Model Projections

5.1. Overview of model projections

Baseline projections for 2010
Model projections for 2010, starting from the 2008 reference year described in section 3, have been calculated in order to determine whether compliance with the NO_2 limit values is likely to be achieved for each exceedance situation by the original deadline for compliance of 01/01/2010. Details of the methods used for the baseline emissions and concentration projections modelling are provided in the 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 2007 (used as a basis for the compilation of the emission inventory) or in the traffic activity projections to 2010 and beyond (used to calculate the emission 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.

A number of the local measures in Table A2.1 can be considered to be 'smarter choices' measures (see http://www.dft.gov.uk/pgr/sustainable/smarterchoices/ctwwt/ for a detailed description of this type of measure). We have quantified the impact of this group of measures on a national scale within the projections. Details of how this has been done can be found in the UK technical report. Table A2.1 indicates which local measures we have considered to be 'smarter choices'.

Baseline projections for 2015
Model projections for 2015, starting from the 2008 reference year described above, have been calculated in order to determine whether compliance with the NO_2 limit values is likely to be achieved for each exceedance situation by the revised deadline for compliance of 01/01/2015 on the basis of EU-wide measures and the measures currently planned. This modelling is described in detail in the UK technical report. Many of the measures listed in annex 2 of this document and the supporting list of UK and national measures will continue or will continue to have an impact beyond the original deadline for compliance of 01/01/2010.

5.2. Baseline projections: NO_2_UK0034_Annual_1

Table 4 presents summary results for the baseline model projections for 2010, 2015 and 2020 for the NO_2_UK0034_Annual_1 exceedance situation. This shows that the maximum modelled annual mean NO_2 concentration predicted for 2010 in this exceedance situation is 104.1 μgm^{-3}. By 2015, the maximum modelled annual mean NO_2 concentration is predicted to drop to 63.6 μgm^{-3}. Hence, the model results suggest that compliance with the NO_2 annual limit value is unlikely to be achieved by 2015 under baseline conditions in this exceedance situation.

The projected modelled NO_X and indicative NO_2 annual mean source apportionments for 2010, 2015 and 2020 at the location with the biggest compliance gap in 2008 are presented in Table 5. The model results suggest that this location will continue to have the highest annual mean NO_2 concentration within this exceedance situation in 2010, 2015 and 2020.This source apportionment information is useful because it shows which sources need to be tackled at the point with the largest compliance gap in the exceedance situation.

Table 6 shows the maximum NO_X contribution from each source apportionment component from any road across the whole exceedance situation. This source apportionment information is useful because it highlights all the key sources that need to be tackled within the exceedance situation in order to achieve compliance across the entire area of the exceedance situation. It should be noted that this table only includes roads which continue to be in exceedance in the relevant year. Hence, for

example, the road with the largest contribution from cars in 2010 may no longer be included in the table in 2015 if the road is predicted to be compliant in 2015.

Figures 6 and 7 show maps of projected annual mean NO_2 concentrations in 2010, 2015 and 2020 at background and roadside locations respectively. Maps for 2008 are also presented here for reference.

It should be noted that the baseline projections presented here include the impacts of 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_UK0034_Annual_1

	2008	2010	2015	2020
Road length exceeding (km)	227.8	181.7	89.4	0.0
Background area exceeding (km^2)	0	0	0	0
Maximum modelled concentration (μgm^{-3}) (a)	117.4	104.1	63.6	31.5

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

Table 5. Modelled source apportionment for 2010, 2015 and 2020 under baseline conditions for traffic count point 81550 on the A1(T) (the road section with the maximum modelled annual mean NO_2 concentration in 2008 in NO_2_UK0034_Annual_1. OS grid (m): 449700, 416000). 2008 results are also presented here for reference (units: μgm^{-3}).

Spatial scale	Component	NOx				NO2 (indicative)			
		2008	2010	2015	2020	2008	2010	2015	2020
Regional background sources (i.e. contributions from distant sources of > 30 km from the receptor)	Total	7.8	6.7	5.8	4.6	(a)	(b)	(c)	(d)
	From within the UK	5.7	4.9	4.2	3.3	(a)	(b)	(c)	(d)
	From transboundary sources (includes shipping and other EU Member States)	2.1	1.8	1.6	1.3	(a)	(b)	(c)	(d)
Urban background sources (i.e. sources located within 0.3 - 30 km from the receptor)	Total	14.8	12.3	8.4	5.4	8.3	7.5	6.1	4.6
	From road traffic sources	10.6	8.5	5.1	2.5	4.2	4.0	3.8	3.4
	From industry (including heat and power generation)	1.9	1.7	1.6	1.4	(a)	(b)	(c)	(d)
	From agriculture	0.0	0.0	0.0	0.0	(a)	(b)	(c)	(d)
	From commercial/residential sources	1.1	1.1	1.0	0.9	(a)	(b)	(c)	(d)
	From shipping	0.0	0.0	0.0	0.0	(a)	(b)	(c)	(d)
	From off road mobile machinery	0.7	0.6	0.3	0.2	(a)	(b)	(c)	(d)
	From natural sources	0.0	0.0	0.0	0.0	(a)	(b)	(c)	(d)
	From transboundary sources	0.0	0.0	0.0	0.0	(a)	(b)	(c)	(d)
	From other urban background sources	0.5	0.4	0.4	0.4	(a)	(b)	(c)	(d)
Local sources (i.e. contributions from sources < 0.3 km from the receptor)	Total	299.6	252.1	137.2	56.8	109.1	96.6	57.6	26.9
	From cars	47.3	32.2	22.6	15.1	18.0	13.6	10.6	7.4
	From HGV rigid	40.5	35.9	18.5	6.6	14.7	13.7	7.7	3.0
	From HGV articulated	181.8	158.1	79.6	26.0	62.8	56.6	30.6	11.7
	From Buses	2.2	2.0	1.2	0.5	0.8	0.8	0.5	0.2
	From LGVs	27.3	23.5	15.0	8.4	12.7	11.9	8.0	4.4
	From motorcycles	0.5	0.4	0.3	0.3	0.2	0.2	0.1	0.1
Total (i.e. regional background + urban background + local components)		322.3	271.2	151.4	66.8	117.4	104.1	63.6	31.5

(a) The total annual mean NO_2 contribution for all components labelled (a) in 2008 was modelled to be 4.1 μgm^{-3}.
(b) The total annual mean NO_2 contribution for all components labelled (b) in 2010 is predicted to be 3.5 μgm^{-3}.
(c) The total annual mean NO_2 contribution for all components labelled (c) in 2015 is predicted to be 2.3 μgm^{-3}.
(d) The total annual mean NO_2 contribution for all components labelled (d) in 2020 is predicted to be 1.2 μgm^{-3}.

Table 6. The maximum NO_X contribution from each source from across all the roads included in the exceedance situation on which exceedances remain in 2010, 2015 and 2020 under baseline conditions. Zeros indicate that there are no exceedances in the relevant year.

Spatial scale	Component	NOx			
		2008	2010	2015	2020
Regional background sources (i.e. contributions from distant sources of > 30 km from the receptor)	From within the UK	6.1	5.3	4.4	0.0
	From transboundary sources (includes shipping and other EU Member States)	4.4	3.8	2.5	0.0
Urban background sources (i.e. sources located within 0.3 - 30 km from the receptor)	From road traffic sources	38.4	30.4	18.1	0.0
	From industry (including heat and power generation)	31.8	24.1	11.2	0.0
	From agriculture	0.0	0.0	0.0	0.0
	From commercial/residential sources	7.1	7.0	4.0	0.0
	From shipping	5.9	2.7	0.0	0.0
	From off road mobile machinery	10.1	9.4	4.1	0.0
	From natural sources	0.0	0.0	0.0	0.0
	From transboundary sources	0.0	0.0	0.0	0.0
	From other urban background sources	4.9	2.9	2.9	0.0
Local sources (i.e. contributions from sources < 0.3 km from the receptor)	From cars	47.3	33.5	24.1	0.0
	From HGV rigid	40.5	35.9	18.5	0.0
	From HGV articulated	181.8	158.1	79.6	0.0
	From Buses	46.6	41.7	5.1	0.0
	From LGVs	27.3	23.5	15.0	0.0
	From motorcycles	0.5	0.4	0.3	0.0

Figure 6. Background baseline projections of annual mean NO_2 concentrations in 2010, 2015 and 2020. 2008 is also included here for reference. Modelled exceedances of the annual limit value are shown in orange and red.

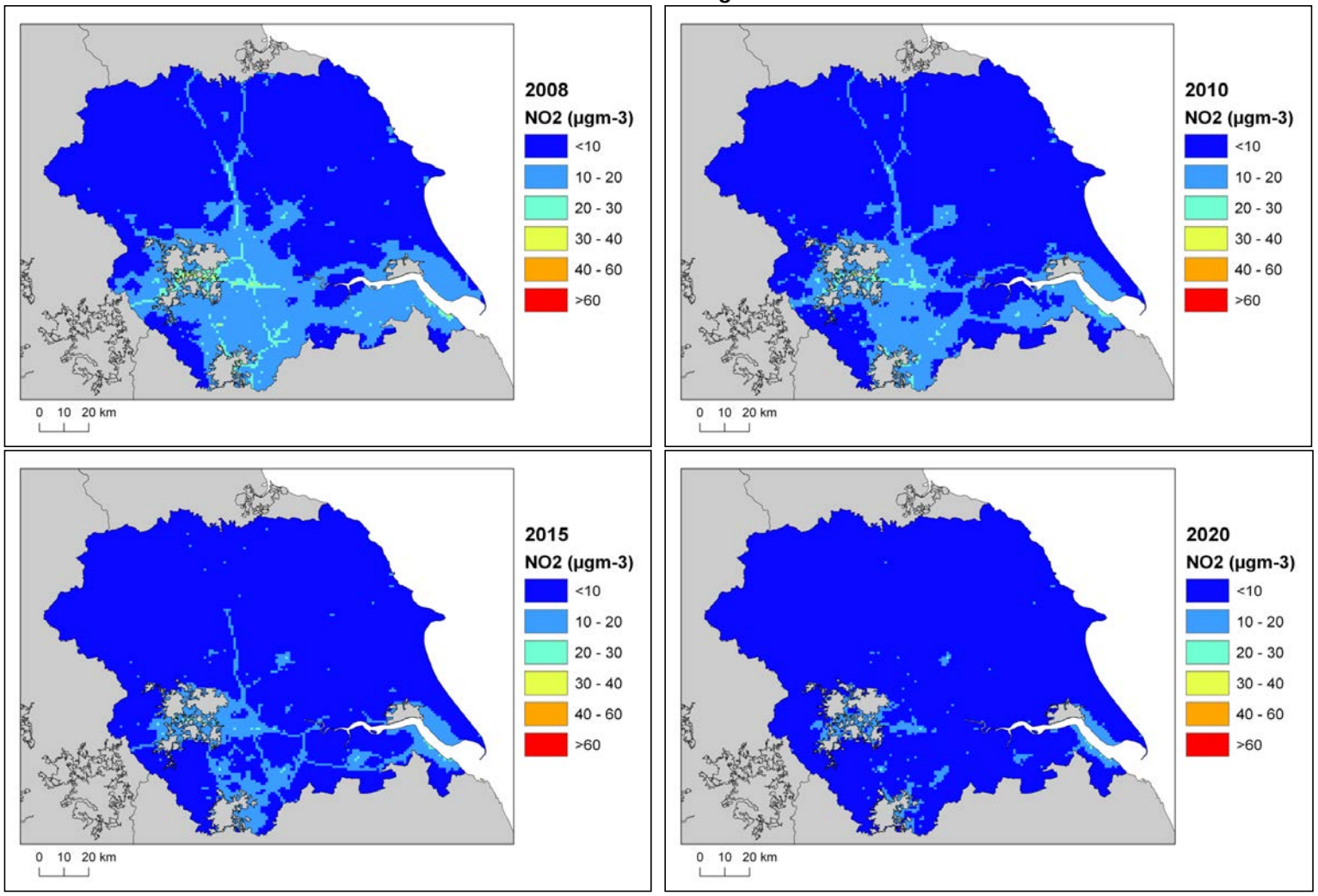
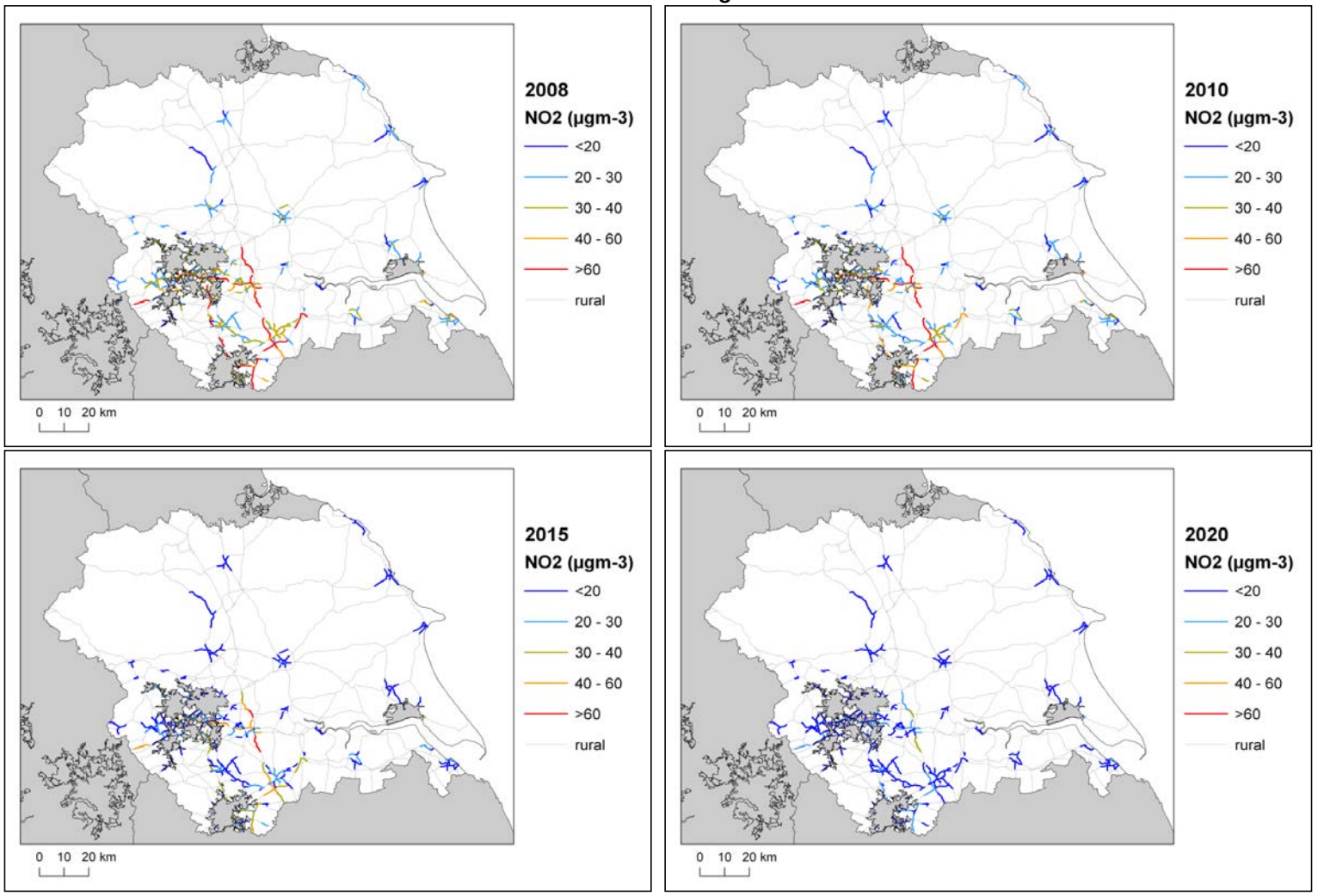


Figure 7. Roadside baseline projections of annual mean NO_2 concentrations in 2010, 2015 and 2020. 2008 is also included here for reference. Modelled exceedances of the annual limit value are shown in orange and red.



6. Projections including the impact of the low emissions zone (LEZ) scenario

6.1. Overview of model projections

Further model projections for 2015 and 2020 have also been calculated that include the impact of the LEZ scenario. This scenario is under consideration as part of our investigation of additional measures to achieve the NO_2 limit values. The scenario modelled here would require all HGVs and buses to meet at least Euro IV emission standards for NO_X and PM_{10} in 2015 in order to travel on roads other than the strategic long distance road network within the selected Local Authority boundaries. More details of the work underway to explore the feasibility and costs of a national LEZ framework are provided in the UK overview document and a description of the modelling assumptions included in the LEZ scenario is available in the UK technical report.

The LEZ scenario has been modelled for this zone because initial screening work indicated that, should it be applied, it would be effective at either reducing the gap to or achieving compliance with the limit value. The model results for these projections are presented in this section.

Further work is underway to investigate the feasibility and practicality of a national framework for LEZ as an additional measure to reduce concentrations of NO_2. These investigations include:

• the likely effectiveness of any scheme at controlling air pollutant emissions and delivering increased compliance with European air quality standards within the timescales specified by the EU Ambient Air Quality Directive;
• the effectiveness and reliability of available NO_X abatement equipment, taking into account evidence on the performance of Euro standards;
• the cost and resource such a measure might place upon national and/or local government;
• administrative and enforcement considerations for the scheme and the implications of this for Government Executive Agencies;
• the likely take-up of the scheme by local authorities and others;
• how any scheme would relate to ongoing certification work at EU and UNECE level.

These investigations will continue over the coming months and decisions will be made following the investigation as to whether or not it is feasible to introduce a national LEZ Framework and the details of any scheme. Should a local authority decide to introduce an LEZ, final decisions on the nature and extent of such a measure would be for the local authority to make taking into account local circumstances and any national arrangements put in place. These might not reflect what has been modelled in the scenario.

The LEZ scenario examines the impact of a LEZ applied within the selected local authorities listed in the supporting technical report. The local authorities relevant to this zone are

• Barnsley Metropolitan Borough Council
• Bradford Metropolitan District Council
• Calderdale Metropolitan Borough Council
• Kirklees Council
• Leeds City Council
• Rotherham Metropolitan Borough Council
• Sheffield City Council
• Wakefield Council

The impact of the LEZ scenario on projected NO_2 concentrations in 2015 will be greatest in these local authorities. There are also expected to be smaller benefits in other areas as a result of the changes to the national HGV fleets required to ensure LEZ compliance within the LEZ locations. The impact of these fleet changes on projected NO_2 concentrations in 2015 have been assessed in all zones for which the baseline projections do not show compliance with the annual mean limit value in 2015.

6.2. LEZ scenario projections: NO_2_UK0034_Annual_1

Table 7 presents summary results for the LEZ scenario model projections for 2015 and 2020 for the NO_2_UK0034_Annual_1 exceedance situation. This shows that the maximum modelled annual mean NO_2 concentration predicted for 2015 for the LEZ scenario in this exceedance situation is 60.4 μgm^{-3}. Hence, the model results suggest that compliance with the NO_2 annual limit value is unlikely to be achieved by 2015 for the LEZ scenario in this exceedance situation. The model results do, however, show that the NO_2 annual mean limit value is likely to be achieved in this exceedance situation in 2020, when the maximum modelled annual mean NO_2 concentration predicted to be 31.1 μgm^{-3}.

The projected modelled NO_X and indicative NO_2 annual mean source apportionments for 2010, 2015 and 2020 at the location with the biggest compliance gap in 2008 are presented in Table 8. In 2010 and 2020, the model results suggest that this location will continue to have the highest annual mean NO_2 concentration within this exceedance situation. However, in 2015 the model indicates that the location with the highest annual mean NO_2 concentration within this exceedance situation will be elsewhere. Information regarding the new location with the highest NO_2 concentration, including the source apportionment is given in Table 9. The locations of maximum concentration in each year are given in teh footnote to this table. This source apportionment information is useful because it shows which sources need to be tackled at the point with the largest compliance gap in the exceedance situation.

Table 10 shows the maximum NO_X contribution from each source apportionment component from any road across the whole exceedance situation. This source apportionment information is useful because it highlights all the key sources that need to be tackled within the exceedance situation in order to achieve compliance across the entire area of the exceedance situation. It should be noted that this table only includes roads that continue to be in exceedance in the relevant year. Hence, for example, the road with the largest contribution from cars in 2010 may no longer be included in the table in 2015 if the road is predicted to be compliant in 2015.

Figures 8 and 9 show maps of projected annual mean NO_2 concentrations for the LEZ scenario in 2015 and 2020 at background and roadside locations respectively. Maps for 2008 and baseline projections for 2010 are also presented here for reference.

Table 7. Annual mean NO_2 model results in NO_2_UK0034_Annual_1. 2015 and 2020 results are for the LEZ scenario. Results for 2008 and baseline projections for 2010 are also shown

	2008	2010	2015	2020
Road length exceeding (km)	227.8	181.7	83.8	0.0
Background area exceeding (km^2)	0	0	0	0
Maximum modelled concentration (μgm^{-3}) (a)	117.4	104.1	60.4	31.1

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

Table 8. Modelled source apportionment for 2015 and 2020 for the LEZ scenario for traffic count point 81550 on the A1(T) (the road section with the maximum modelled annual mean NO_2 concentration in 2008 in NO_2_UK0034_Annual_1 OS grid (m): 449700, 416000). 2008 and 2010 baseline projections results are also presented here for reference (units: μgm^{-3}).

Spatial scale	Component	NOx				NO2 (indicative)			
		2008	2010	2015	2020	2008	2010	2015	2020
Regional background sources (i.e. contributions from distant sources of > 30 km from the receptor)	Total	7.8	6.7	5.8	4.6	(a)	(b)	(c)	(d)
	From within the UK	5.7	4.9	4.2	3.3	(a)	(b)	(c)	(d)
	From transboundary sources (includes shipping and other EU Member States)	2.1	1.8	1.6	1.2	(a)	(b)	(c)	(d)
Urban background sources (i.e. sources located within 0.3 - 30 km from the receptor)	Total	14.8	12.3	7.9	5.4	8.3	7.5	5.9	4.6
	From road traffic sources	10.6	8.5	4.6	2.4	4.2	4.0	3.8	3.4
	From industry (including heat and power generation)	1.9	1.7	1.6	1.4	(a)	(b)	(c)	(d)
	From agriculture	0.0	0.0	0.0	0.0	(a)	(b)	(c)	(d)
	From commercial/residential sources	1.1	1.1	1.0	0.9	(a)	(b)	(c)	(d)
	From shipping	0.0	0.0	0.0	0.0	(a)	(b)	(c)	(d)
	From off road mobile machinery	0.7	0.6	0.3	0.2	(a)	(b)	(c)	(d)
	From natural sources	0.0	0.0	0.0	0.0	(a)	(b)	(c)	(d)
	From transboundary sources	0.0	0.0	0.0	0.0	(a)	(b)	(c)	(d)
	From other urban background sources	0.5	0.4	0.4	0.4	(a)	(b)	(c)	(d)
Local sources (i.e. contributions from sources < 0.3 km from the receptor)	Total	299.6	252.1	117.7	56.0	109.1	96.6	50.5	26.5
	From cars	47.3	32.2	22.6	15.1	18.0	13.6	10.6	7.4
	From HGV rigid	40.5	35.9	14.2	6.3	14.7	13.7	6.0	2.9
	From HGV articulated	181.8	158.1	64.9	25.6	62.8	56.6	25.6	11.5
	From Buses	2.2	2.0	0.7	0.4	0.8	0.8	0.3	0.2
	From LGVs	27.3	23.5	15.0	8.4	12.7	11.9	7.9	4.4
	From motorcycles	0.5	0.4	0.3	0.3	0.2	0.2	0.1	0.1
Total (i.e. regional background + urban background + local components)		322.3	271.2	131.3	65.9	117.4	104.1	56.3	31.1

(a) The total annual mean NO_2 contribution for all components labelled (a) in 2008 was modelled to be 4.1 μgm^{-3}.
(b) The total annual mean NO_2 contribution for all components labelled (b) in 2010 is predicted to be 3.5 μgm^{-3}.
(c) The total annual mean NO_2 contribution for all components labelled (c) in 2015 is predicted to be 2.1 μgm^{-3}.
(d) The total annual mean NO_2 contribution for all components labelled (d) in 2020 is predicted to be 1.2 μgm^{-3}.

Table 9. Modelled source apportionment for 2015 and 2020 for the LEZ scenario for traffic count point with the highest concentration in these years in NO_2_UK0034_Annual_1. (a) 2008 and 2010 baseline projections results are also presented here for reference (units: μgm^{-3}).

Spatial scale	Component	NOx				NO2 (indicative)			
		2008	2010	2015	2020	2008	2010	2015	2020
Regional background sources (i.e. contributions from distant sources of > 30 km from the receptor)	Total	7.8	6.7	5.6	4.6	(b)	(c)	(d)	(e)
	From within the UK	5.7	4.9	4.1	3.3	(b)	(c)	(d)	(e)
	From transboundary sources (includes shipping and other EU Member States)	2.1	1.8	1.5	1.2	(b)	(c)	(d)	(e)
Urban background sources (i.e. sources located within 0.3 - 30 km from the receptor)	Total	14.8	12.3	12.1	5.4	8.3	7.5	7.7	4.6
	From road traffic sources	10.6	8.5	8.7	2.4	4.2	4.0	3.8	3.4
	From industry (including heat and power generation)	1.9	1.7	1.7	1.4	(b)	(c)	(d)	(e)
	From agriculture	0.0	0.0	0.0	0.0	(b)	(c)	(d)	(e)
	From commercial/residential sources	1.1	1.1	0.8	0.9	(b)	(c)	(d)	(e)
	From shipping	0.0	0.0	0.0	0.0	(b)	(c)	(d)	(e)
	From off road mobile machinery	0.7	0.6	0.4	0.2	(b)	(c)	(d)	(e)
	From natural sources	0.0	0.0	0.0	0.0	(b)	(c)	(d)	(e)
	From transboundary sources	0.0	0.0	0.0	0.0	(b)	(c)	(d)	(e)
	From other urban background sources	0.5	0.4	0.5	0.4	(b)	(c)	(d)	(e)
Local sources (i.e. contributions from sources < 0.3 km from the receptor)	Total	299.6	252.1	124.8	56.0	109.1	96.6	52.7	26.5
	From cars	47.3	32.2	24.1	15.1	18.0	13.6	11.7	7.4
	From HGV rigid	40.5	35.9	14.3	6.3	14.7	13.7	6.0	2.9
	From HGV articulated	181.8	158.1	75.4	25.6	62.8	56.6	29.3	11.5
	From Buses	2.2	2.0	1.3	0.4	0.8	0.8	0.6	0.2
	From LGVs	27.3	23.5	9.4	8.4	12.7	11.9	5.0	4.4
	From motorcycles	0.5	0.4	0.3	0.3	0.2	0.2	0.1	0.1
Total (i.e. regional background + urban background + local components)		322.3	271.2	142.6	65.9	117.4	104.1	60.4	31.1

(a) The road with the maximum annual mean NO_2 concentration in different years is as follows. 2008: A section of the A1(T) (count point id 81550). 2010: A section of the A1(T) (count point id 81550). 2015: A section of the A1(T) (count point id 81550). 2020: A section of the A1(T) (count point id 81550). (OS grid (m): 449700, 416000; 449700, 416000; 449700, 416000; 449700, 416000).

(b) The total annual mean NO_2 contribution for all components labelled (b) in 2008 was modelled to be 4.1 μgm^{-3}.

(c) The total annual mean NO_2 contribution for all components labelled (c) in 2010 is predicted to be 3.5 μgm^{-3}.

(d) The total annual mean NO_2 contribution for all components labelled (d) in 2015 is predicted to be 4 μgm^{-3}.

(e) The total annual mean NO_2 contribution for all components labelled (e) in 2020 is predicted to be 1.2 μgm^{-3}.

Table 10. The maximum NO_X contribution from each source from across all the roads included in the exceedance situation on which exceedances remain in 2010, 2015 and 2020 under baseline conditions. Zeros indicate that there are no exceedances in the relevant year.

Spatial scale	Component	NOx			
		2008	2010	2015	2020
Regional background sources (i.e. contributions from distant sources of > 30 km from the receptor)	From within the UK	6.1	5.3	4.4	0.0
	From transboundary sources (includes shipping and other EU Member States)	4.4	3.8	2.5	0.0
Urban background sources (i.e. sources located within 0.3 - 30 km from the receptor)	From road traffic sources	38.4	30.4	15.6	0.0
	From industry (including heat and power generation)	31.8	24.1	11.2	0.0
	From agriculture	0.0	0.0	0.0	0.0
	From commercial/residential sources	7.1	7.0	4.0	0.0
	From shipping	5.9	2.7	0.0	0.0
	From off road mobile machinery	10.1	9.4	4.1	0.0
	From natural sources	0.0	0.0	0.0	0.0
	From transboundary sources	0.0	0.0	0.0	0.0
	From other urban background sources	4.9	2.9	2.9	0.0
Local sources (i.e. contributions from sources < 0.3 km from the receptor)	From cars	47.3	33.5	24.1	0.0
	From HGV rigid	40.5	35.9	14.3	0.0
	From HGV articulated	181.8	158.1	75.4	0.0
	From Buses	46.6	41.7	3.4	0.0
	From LGVs	27.3	23.5	15.0	0.0
	From motorcycles	0.5	0.4	0.3	0.0

Figure 8. Background projections of annual mean NO_2 concentrations in 2015 and 2020 for the LEZ scenario. 2008 and baseline projections for 2010 are also included here for reference. Modelled exceedances of the annual limit value are shown in orange and red.

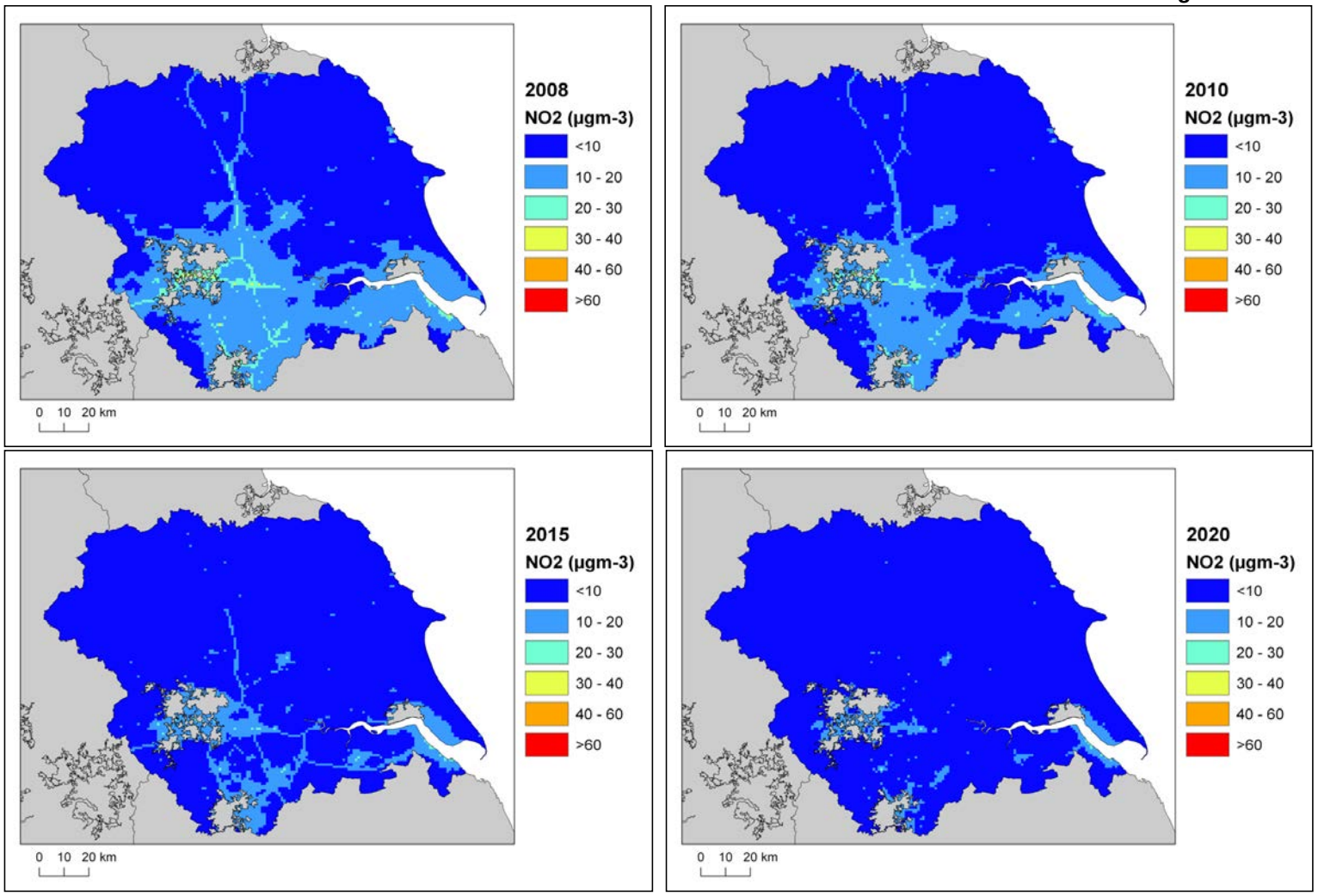
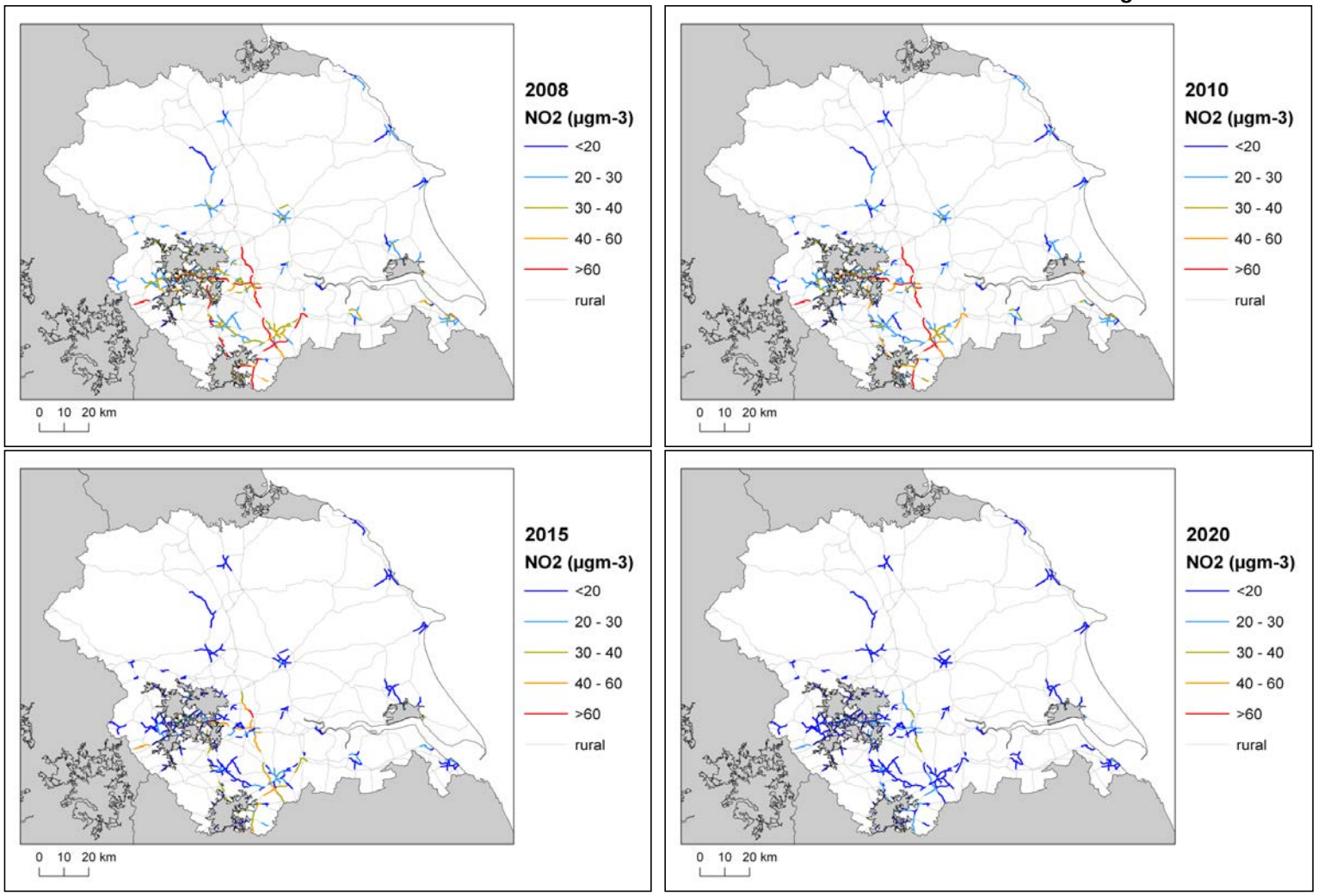


Figure 9. Roadside projections of annual mean NO_2 concentrations in 2015 and 2020 for the LEZ scenario. 2008 and baseline projections for 2010 are also included here for reference. Modelled exceedances of the annual limit value are shown in orange and red.



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

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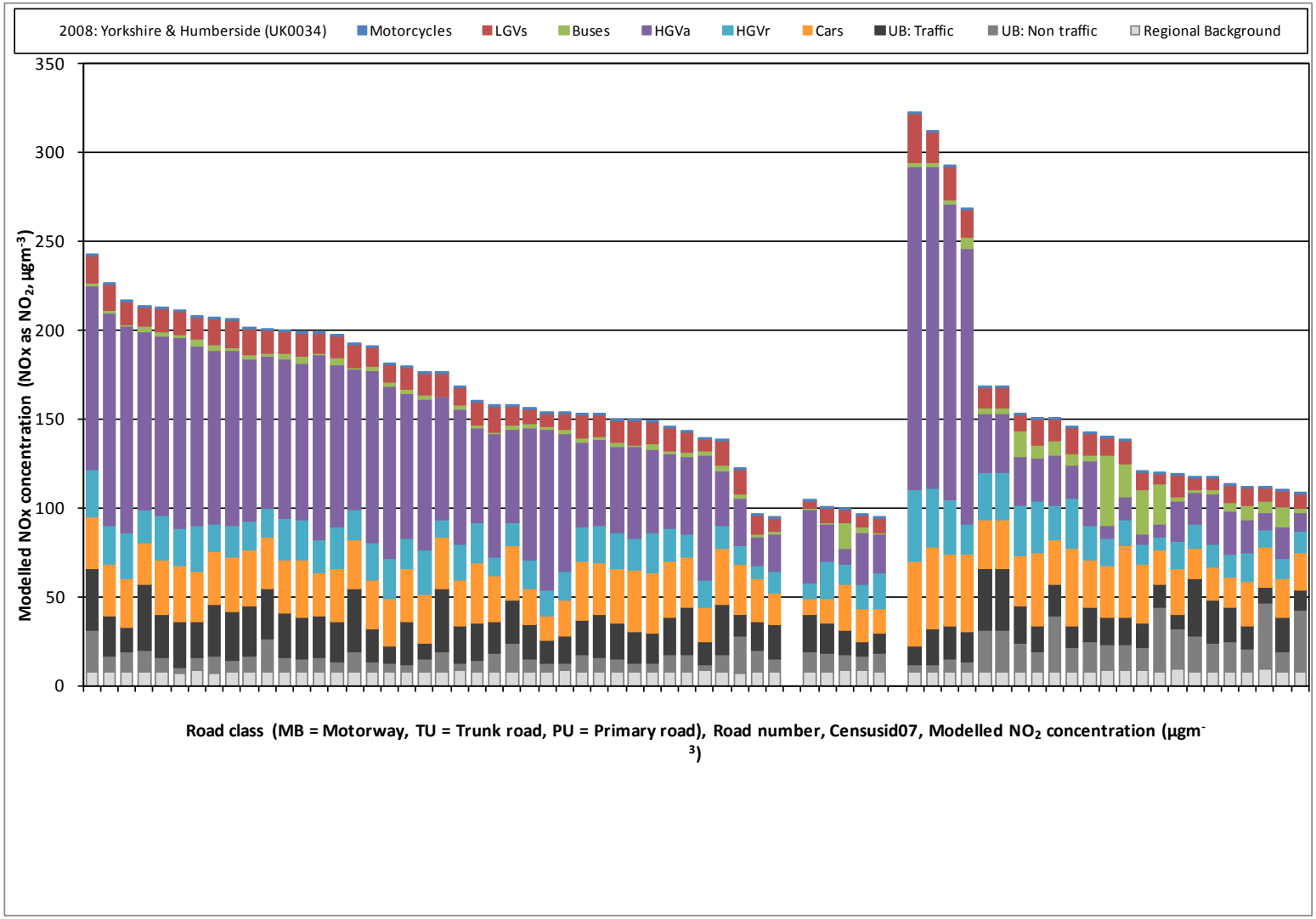
1st Daughter Directive 1999/30/EC. Council Directive 1999/30/EC, of 22 April 1999 relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air (The First Daughter Directive). From the Official Journal of the European Communities, 29.6.1999,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

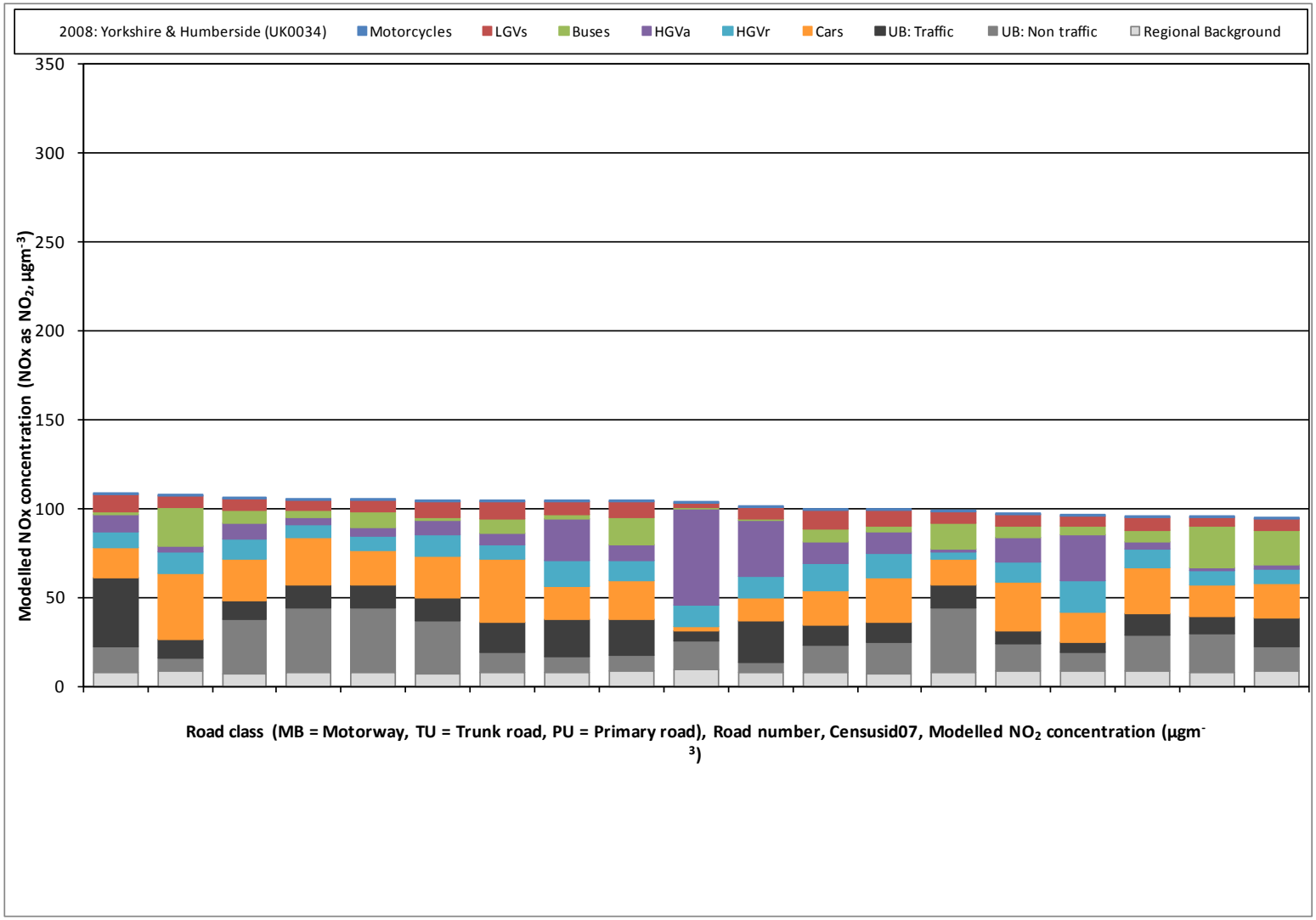
List of Annexes

Annex 1: Source apportionment graphs
Annex 2: Tables of measures

Annex 1: Source apportionment graphs

Figure A1.1 Annual mean roadside NO_X source apportionment plots for all roads exceeding the annual mean NO_2 limit value in 2008




2008: Yorkshire & Humberside (UK0034)
Motorcycles
LGVs
Buses
HGVa
HGVr
Cars
UB: Traffic
UB: Non traffic
Regional Background
350
300
250
200
150
100
50
0
Modelled NOx concentration (NOx as NO2, µgm-3)
Road class (MB = Motorway, TU = Trunk road, PU = Primary road), Road number, Censusid07, Modelled NO2 concentration (µgm-3)

Annex 2: Tables of measures

Table A2.1 Relevant Local Authority measures taken before or during 2010 within Yorkshire & Humberside (UK0034)

LA (a)	Measure code (b)	Title	Description	Other information
Kirklees	Local_Kirklees_H1	Local Air Quality Strategy	Local Air Quality Strategy	• Type: Education/information • Sources affected: Transport; Industry including heating and power production; Commercial and residential sources; Other • Spatial scale: local • Implementation date: 2007 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_kirklees_AQActionplan_1
Kirklees	Local_Kirklees_B2	Approval of new combustion plant	The Clean Air Act requires local authority approval of new or altered combustion plant above a certain power rating (where it is outside the regime of industrial pollution control).	• Type: Technical; Education/information • Sources affected: Industry including heating and power production; Commercial and residential sources • Spatial scale: local • Implementation date: 2007 • Reduction timescale: Long term • Regulatory: Yes • Smarter Choices (c) : No • Reference (d): Local_zone34_kirklees_AQActionplan_1
Kirklees	Local_Kirklees_E1	LTP - Land use planning, transport assessments	Where a Transport Assessment is required for a development in an air quality “Area of Concern” or any Air Quality Management Area then an air quality assessment will be required, as a matter of course, as part of that Transport Assessment.	• Type: Technical; Education/information • Sources affected: Transport; Industry including heating and power production; Commercial and residential sources • Spatial scale: local • Implementation date: 2007 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_kirklees_AQActionplan_1
Kirklees	Local_Kirklees_E2	Development Planning Control	Examine all planning applications and determine if air quality is a material consideration in that application	• Type: Technical; Education/information • Sources affected: Transport; Industry including heating and power production; Commercial and residential sources • Spatial scale: local • Implementation date: 2007 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_kirklees_AQActionplan_1

LA (a)	Measure code (b)	Title	Description	Other information
Kirklees	Local_Kirklees_E3	REGENERATION	Proposals for regeneration projects or schemes will include air quality impact assessments and air quality mitigation measures.	• Type: Technical; Education/information • Sources affected: Transport; Industry including heating and power production; Commercial and residential sources • Spatial scale: local • Implementation date: 2007 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_kirklees_AQActionplan_1
Leeds	Local_Leeds_B1	Enforce Clean Air Act	Enforce Clean Air Act	• Type: Economic/fiscal; Technical; Education/information • Sources affected: Commercial and residential sources • Spatial scale: local • Implementation date: 1993 • Reduction timescale: Long term • Regulatory: Yes • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_B2	Continue purchase of 'green electricity'	Continue purchase of 'green electricity'	• Type: Technical; Education/information • Sources affected: Transport; Commercial and residential sources • Spatial scale: local • Implementation date: 2004 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_B3	Promote energy efficiency schemes	The Council will continue to implement its energy efficiency plans for both public and private sector housing to achieve improvements in energy efficiency which will result in improving air quality.	• Type: Technical; Education/information • Sources affected: Transport; Commercial and residential sources • Spatial scale: local • Implementation date: 1996 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_H1	Enforce EPA 1990	Enforce EPA 1990	• Type: Economic/fiscal; Technical; Education/information • Sources affected: Industry including heating and power production • Spatial scale: local • Implementation date: 1990 • Reduction timescale: Long term

LA (a)	Measure code (b)	Title	Description	Other information
				• Regulatory: Yes • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_G1	Cycling and Walking Strategies	Both the Leeds Action Plans were implemented through the West Yorkshire Strategies and the LTP.	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_H2	Access Strategy	A new method of providing for DDA requirements has been introduced. This has resulted in requests for dropped kerbs and for disabled parking bays to be rapidly progressed and implementation to be undertaken more quickly than hitherto.	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2004 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_A1	Fleet Vehicle emissions	Ensure all new HGV are Euro 3 standard	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2005 • Reduction timescale: Medium/long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_A2	Driver training	Introduce driver training (SAFED)	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2007 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_A3	Council vehicle fleet management	Plan re-fuelling point use to minimise additional mileage	• Type: Economic/fiscal; Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 1998 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No

LA (a)	Measure code (b)	Title	Description	Other information
				• Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_G2	Workplace / Travel Plans	Workplace / Travel Plans for private sector business and public sector organisations.	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2000 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_G3	School Travel Plans	School Travel Plans. In January 2007, 55 schools successfully applied for a one-off, 3-year grant to introduce a walking bus or other walking initiative. 41 of these schools initiated a walking bus In 9 primary schools, a statistically significant shift from car use to walking, where an intervention to encourage walking has occurred.	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2002 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_E1	UDP measures	UDP measures, powers and note of revised PPG13 etc	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2001 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_G4	Departmental Travel Plan	Corporate Travel Plan Strategy approved February 2005. Corporate Travel Plan Officer employed July 2007 to implement strategy.	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2002-2003 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_E2	Environmental Impact Assessment - Planning	Request use of EIA where appropriate	• Type: Technical; Education/information • Sources affected: Transport; Commercial and residential sources • Spatial scale: local • Implementation date: 2001-2007 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1

LA (a)	Measure code (b)	Title	Description	Other information
Leeds	Local_Leeds_H3	LEZ Feasibility study	LEZ Feasibility study	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2001 & 2009 • Reduction timescale: Short term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_D1	Parking restraints	Parking restraints and price signals to discourage long-stay parking	• Type: Economic/fiscal; Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: NA • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_D2	Parking Guidelines	UDP max parking guidelines	• Type: Economic/fiscal; Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2001 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_F1	Travel Plan ‘tool-kit’	Travel Plan ‘tool-kit’ through EC funded project	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2001/02 • Reduction timescale: Short term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_F2	Trial of “work/life balance”	Trial of “work/life balance” in various departments	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: NA • Reduction timescale: Short term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_F3	Travelwise	Travelwise Campaign includes: awareness, green vehicle trials; alternative fuel trials.	• Type: Education/information • Sources affected: Transport

LA (a)	Measure code (b)	Title	Description	Other information
				• Spatial scale: local • Implementation date: • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_A4	Efficient Driving Campaigns	Publicity campaign on more fuel efficient driving	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2007 • Reduction timescale: Short term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_F4	Air Quality Website	Air quality information on website	• Type: Education/information • Sources affected: Transport; Industry including heating and power production; Commercial and residential sources; Other • Spatial scale: local • Implementation date: 2004/2008 • Reduction timescale: Short term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_H4	Quality Bus Initiatives	Quality Bus Initiatives (8 schemes / locations)	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_D3	Discount travel cards	Discounts on company travel cards (trial)	• Type: Economic/fiscal; Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2002 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_E3	High Occupancy	High Occupancy Vehicle Lane (Stanningly lane): existing	• Type: Technical; Education/information • Sources affected: Transport

LA (a)	Measure code (b)	Title	Description	Other information
		Vehicle lane		• Spatial scale: local • Implementation date: 1999 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_E4	Link Road	East Leeds Link Road (inc. HOV and HGV lanes)	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2009 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_E5	Inner Ring Road	Completion of inner ring road	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_E6	Urban Traffic Control System	Phase 2 upgrade of UTC	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2001 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Leeds	Local_Leeds_G5	Bus Rapid Transit (replaces Supertram)	Metro has developed plans for a 20km bus based rapid transit network consisting of three routes running north, south and east of Leeds. At present the technology of the buses is not decided, but it is hoped to be either Diesel Electric Hybrid or Electric trolleybus.	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: Ongoing • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Leeds_AQActionplan_1
Rotherham	Local_Rotherham_H1	Advancing / speeding up Quality Bus Partnership	£2.5m was spent on developing and delivering 9 QBCs, forming the single largest aspect of the first South Yorkshire LTP Programme.Rotherham to M1 QBC – further work completed included new bus	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2006

LA (a)	Measure code (b)	Title	Description	Other information
		initiative	shelters. Rotherham to Dearne QBC: north bound-completed 2006. South bound – works programmed to commence 2007. A feasibility study is being carried out to determine the possibilities of a number of short right turn lanes on this route to reduce congestion. Rotherham-Thrybergh – Phase 1 complteed 05/06. Phase 2 roundabout improvements due for completion May 2007.	• Reduction timescale: Medium/long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Rotherham_AQActionplan_1
Rotherham	Local_Rotherham_E1	Major expansion of Park and Ride	South Yorkshire Vehicle Emission Testing ran from 2003-2004.	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2003 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Rotherham_AQActionplan_2
Rotherham	Local_Rotherham_E2	Strict enforcement of bus priority scheme	Strict enforcement of bus priority scheme	• Type: Economic/fiscal; Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2006 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Rotherham_AQActionplan_2
Rotherham	Local_Rotherham_E3	Investigate further options for UTC etc	Assessed through further feasibility studies	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2006 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Rotherham_AQActionplan_2
Rotherham	Local_Rotherham_G1	South Yorkshire Car Club	Sheffield Car Club:The Sheffield Car Club, operated by WhizzGo, was launched in 2007.	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2007 • Reduction timescale: Short term • Regulatory: No • Smarter Choices (c) : Yes

LA (a)	Measure code (b)	Title	Description	Other information
				• Reference (d): Local_zone34_Rotherham_AQActionplan_1
Rotherham	Local_Rotherham_F1	South YorkshireCare4 air Campaign	A South Yorkshire media campaign. The campaign has now gained a commitment to funding from the South Yorkshire Second Local Transport Plan partners The South Yorkshire Care4air campaign has had success getting coverage in a range of local media.Major issues covered during 2006-07 are Eco-driving and web site development included a Young People's Section.	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2006 • Reduction timescale: Short term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Rotherham_AQActionplan_1
Rotherham	Local_Rotherham_G2	Travel Plans	Further work has been commissioned by the Highways Agency in partnership with the Local Authorities on the development of an Area Travel Plan for the Lower Don Valley. This includes Templeborough and Centurion Business Park, which has the potential to impact on to the M1 AQMA in Rotherham.	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2007 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Rotherham_AQActionplan_1
Rotherham	Local_Rotherham_E4	Planning and Air Quality Guidance	New air quality guidance developed as part of the Local Development Framework for Rotherham.	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2006 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Rotherham_AQActionplan_1
Rotherham	Local_Rotherham_E5	Assess proposed major schemes for air quality impact	Major schemes with the potential to impact on air quality within the M1 AQMA are assessed by Neighbourhood Services.On-going	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Rotherham_AQActionplan_1
Rotherham	Local_Rotherham_H2	Reducing Emissions from the M1 and Traffic Using the	The Highways Agency is working on proposals to widen the M1 motorway including the stretch from J32-J35 through Rotherham.Air Quality Assessment will be part of the work for the expected Public	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008

LA (a)	Measure code (b)	Title	Description	Other information
		Motorway	Enquiry.Mitigation measures could include speed restrictions. Ramp-metering has been introduced at some M1 junctions e.g. J34, within the M1 AQMA.	• Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Rotherham_AQActionplan_1
Rotherham	Local_Rotherham_H3	Vehicle emission testing	Awareness raising of air quality problems as a result of emissions from vehicles including vehicle emission testing. South Yorkshire Vehicle Emission Testing ran from 2003-2004.	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2003 • Reduction timescale: Short term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Rotherham_AQActionplan_1
Sheffield	Local_Sheffield_A1	Establish minimum emissions standards for Council vehicles entering AQMA	Set minimum emissions standards for own fleet, and for vehicles entering AQAZs (new measure). Majority of council fleet now under Kier Sheffield LLP. 1)Kier committed to improving the environment and reducing the amount of pollution from vehicle emissions 2)Kier have demonstrated their commitment by upgrading the existing fleet; currently 100% of their 500 vehicles are to Euro 3 standard or above 3)Future vehicle purchases will also meet with current government guidelines on vehicle emissions or be to a minimum Euro 4 level. 4)Kier is also seeking a commitment from their suppliers and contractors. SCC has invested in alternative fuelled vehicles such as LPG and hybrid electric powered vehicles. Transport Services are constantly researching the market with regards to environmentally friendly vehicles All new vehicles to be Euro4; Euro5 when available Work towards reducing the age profile of the SCC fleet Take part in Smart EV Project - battery powered Zero emission vehicles Take part in Sustainable Procurement task group	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2007 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Sheffield_AQActionplan_1
Sheffield	Local_Sheffield_E1	Infrastructure developments	Two major infrastructure developments are planned / in hand through other plans / policies: The Sheffield Northern Inner Relief Road and the Halfpenny Bridge initiative. New 1.5 km dual carriageway between the	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2005

LA (a)	Measure code (b)	Title	Description	Other information
			Wicker and Penistone Road now open. Unnecessary through traffic can now pass around the city centre, which should improve air quality. Reduced likelihood of congestion should improve access to the city centre however you choose to travel. The Inner Relief Road has supported sustainable transport use by constructing 4,625m of cycle lane, 680m of pedestrian/cycle path and 11 toucan crossings.	• Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Sheffield_AQActionplan_2
Sheffield	Local_Sheffield_H1	Signage	Plans are already being actioned to direct motorists to nearest car parks with spaces. The use of Variable Message Signing and other improved signage should provide tangible benefits in air quality and congestion terms. Improved techniques to manage traffic signal timings will also reduce congestion and stop/start flow and so achieve air quality improvements.	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2005 • Reduction timescale: Medium/long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Sheffield_AQActionplan_3
Sheffield	Local_Sheffield_G1	School and business travel plans	Encourage school and business travel plans. Package of practical measures to encourage staff to choose alternatives to single occupancy car use, to reduce the environmental impact of travel and to reduce the need to undertake business travel. Modal shift and reduced business travel should contribute to the desired improvements in air quality. The Council Travel Plan is about how Sheffield City Council takes responsibility for the impact its own travel has and looks at how it can change it for the better. Package of practical measures to encourage parents and children to choose alternatives to using cars for transporting children to school, to reduce the environmental impact of travel.	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Sheffield_AQActionplan_4
Sheffield	Local_Sheffield_H2	Speed Controls	Reduction of speed on M1 proposed as an option. Reducing traffic speeds and volume on city centre roads to encourage more pedestrian movement.	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2007 • Reduction timescale: Medium term • Regulatory: No • Smarter Choices (c) : No

LA (a)	Measure code (b)	Title	Description	Other information
				• Reference (d): Local_zone34_Sheffield_AQActionplan_5
Sheffield	Local_Sheffield_H3	Awareness Raising	Encourage model shift through awareness raising. Campaigns collaborated to change attitudes to public transport use. Care4Air campaign has highlighted the fact that through walking, cycling or using public transport we can all do our bit to help improve air quality. Currently working on revised and updated website Highly successful 'Carbon Quids' promotional campaign, held as part of European Mobility Week. Promoting sustainable and alternative modes of transport	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2004 • Reduction timescale: Short term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Sheffield_AQActionplan_6
Sheffield	Local_Sheffield_E2	Quality Bus Corridor Programme	Quality Bus Corridor Programme. S10 Corridor QBC - Finished and operational - bus priority traffic signals and 24hr bus lane on A57 Western Bank. Sheaf Valley - Finished and operational - substantial scheme in Woodseats Bus priority signals and 24hr bus lane on A61. Now part of marketing and promotional campaign to raise awareness of improved routes. North Sheffield Better Buses - Spital Hill traffic management for bus priority. First Statutory Quality Partnership Scheme in England. Provision of high quality Euro 3 buses required. Now part of marketing and promotional campaign to raise awareness of improved routes.	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2005 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Sheffield_AQActionplan_7
Sheffield	Local_Sheffield_H4	Improved public transport	Improvement of passenger facilities. Improve journeys from Ecclesfield to the City centre.	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Sheffield_AQActionplan_8
Sheffield	Local_Sheffield_G2	Improved Public Transport	Improvement of reliability. The North Sheffield Better Buses project is already delivering increased use of public transport along this route, particularly in Ecclesfield, Fir Vale and Sheffield Lane Top. Bus priority measures have now been installed along the whole route and are now	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No

LA (a)	Measure code (b)	Title	Description	Other information
			being tuned to maximise their effectiveness. This will benefit local residents as well as the 260,000 passengers that travel through the area every week.	• Smarter Choices (c) : No • Reference (d): Local_zone34_Sheffield_AQActionplan_9
Sheffield	Local_Sheffield_E3	Expand Park & Ride provision	Expand Park & Ride provision. Since the last update a new tram based Park & Ride site has been developed at Malin Bridge and the existing Middlewood Park & Ride facility has been extended to double it's capacity. SCC, SYPTE and the other 3 South Yorkshire Districts have an approved South Yorkshire Park and Ride Strategy, which was developed to grow provision within the County in an organised and co-ordinated way. The Strategy was adopted by the Passenger Transport Authority and partnership work is continuing to put together a work programme of new sites in the County, including a number of possible sites in Sheffield. The route of the bus service from the existing site at the Tesco store on Abbeydale Road has been changed to now serve the University and Hospital areas where there is increasing pressure on parking. The Major Scheme Business cases which are being developed for submission to the DfT are inclusive of Park & Ride sites and so will contribute to the P&R Strategy.	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Sheffield_AQActionplan_10
Sheffield	Local_Sheffield_F1	Variable message signs	VMS signs already in place / being actioned. This Plan proposes additional traffic control measures (without being specific), and suggest VMS signing for access / egress to / from M1	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Medium term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Sheffield_AQActionplan_11
Sheffield	Local_Sheffield_G3	Promoting Walking	To encourage walking a number of initiatives have been promoted 1)Reducing traffic speeds and volume on city centre roads to encourage more pedestrian movement 2)Creation of high quality public spaces such as the	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Short term • Regulatory: No

LA (a)	Measure code (b)	Title	Description	Other information
			pedestrian link from the station to the city centre 3)Increasing number of 'at grade' pedestrian crossings 4)Developing a Walking Strategy 5)Ensure walking routes are included in new residential developments eg. Cut throughs to public transport routes 6)Introduction of audit to cover needs for disabled people, walking and cycling for transport and highway schemes 7)Development of Upper Don Valley Walking and Cycling Route 8)Sheffield Healthy Walks - continuing programme of walks of varying lengths across the city 9)Round health walks (2km) being developed in the city centre, targeting city centre employees. 10)Festival 'Walk Sheffield' (30th May - 8th June 2008) supported by SCC with a week of events to encourage more walking 11)SCC has adopted the Public Rights of Way Improvement Plan to which funding has been allotted	• Smarter Choices (c) : Yes • Reference (d): Local_zone34_Sheffield_AQActionplan_12
Sheffield	Local_Sheffield_G4	Promoting cycling	Promotion & Education 1)Continuing provision of free cycle training- increasing confidence in cyclists so increasing the amount of cycling 3)Sport, Community & Recreation rangers have undergone cycle leader training giving a new resource for training & promotion 4)Cycling information has been collated into a 'Sheffield Travel Pack' and a mailing list of interested members of the public has been created. 5)One-stop-shop for cycling information created on Council website Cycling Infrastructure 1)Experiment in improving conspicuity of signing and lining of existing routes aimed at University students new to the area 2)Numerous toucan crossings around the city	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2009 • Reduction timescale: Short term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Sheffield_AQActionplan_13

LA (a)	Measure code (b)	Title	Description	Other information
			3)Segregated pedestrian/cycle route along Riverside Exchange and new puffin crossing linking new residential development with the north of the city. 4)SCC developed 2.5km of cycle route on disused railway between Meadowhall and Ecclesfield 5)Remodelling of Eyre St. dual carriageways to include on and off road cycle facilities leading to 790% increase in cyclists per day 6)Inclusion of cycle routes through the new housing developments on the sites of Middlewood and Lodgemoor Hospitals 7)Cycle lanes implemented as part of resurfacing schemes e.g. Bramall La. 8) Northern Inner Relief Road has comprehensive cycle facilities included such as 5km cycle lanes and advanced stop lines 9)On-going program of improved cycle parking funded by LTP has seen 100% increase in cycle parking in the City Centre Developments 1)Continue to work towards a joined up network of cycle routes 2)Upper Don Valley walking and cycling route 3)Off road cycle route on Penistone Road 4)Improve working with companies with travel plans to encourage cycling 5)Area wide improvements to cycle routes in Housing Market Renewal Areas 6)Increase and formalise cycle audit	
Sheffield	Local_Sheffield_E4	a) South Yorkshire Intelligent Transport System (ITS)	SCC is the lead partner in InnovITS project-working towards improving control of road traffic and providing better travel information to allow travellers to make intelligent choices about mode, route and time of travel. This will lead to better air quality and less noise pollution through modal shift to public transport and reduced congestion. This project will also provide the information base from which to develop and demonstrate specific tools that can be deployed in the traffic environment to allow closed loop control of the traffic against specific quality of environment parameters	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Sheffield_AQActionplan_14

LA (a)	Measure code (b)	Title	Description	Other information
Sheffield	Local_Sheffield_H5	Green Parking Scheme	A scheme which allows the owners of environmentally friendly cars (not powered solely by petrol or diesel) to park for free after the payment of a £10 registration fee. The scheme is due for a major re-working in 2008 to, perhaps, being based on DVLA CO_2 Emissions Banding	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2004 • Reduction timescale: Medium term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Sheffield_AQActionplan_15
Sheffield	Local_Sheffield_A2	Sheffield Community Transport	SCT have installed a bio-diesel tank to enable refuelling of their mini-bus fleet with a 10% ethically sourced blend of bio-diesel, helping reduce emissions and cutting greenhouse gases	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2006 • Reduction timescale: Medium term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Sheffield_AQActionplan_16
Sheffield	Local_Sheffield_B1	Actions to reduce emissions from Industry	SCC working within the LAPPC regime, and working closely with the Environment Agency to ensure industrial air pollution is minimised. Action being taken to increase inspection rates around 'part B' processes.	• Type: Technical • Sources affected: Industry including heating and power production • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: Yes • Smarter Choices (c) : No • Reference (d): Local_zone34_Sheffield_AQActionplan_17
Sheffield	Local_Sheffield_H6	Car Club	Car Club operated by WhizzGo has been operating successfully in Sheffield for the past year with a higher than anticipated uptake by 179 members b)17% of members have reduced their car ownership, with 40% of those cars being 8-9 years old. A further 24% of members have deferred buying a new car. This accounts for a reduction of 70 cars on the roads of Sheffield c)Customer's gave positive feedback, with 91% rating the Car Club as good or excellent, 97% gave positive feedback about the availability of cars and 96% about the ease of use. The positive results ensured WhizzGo maintained Carplus accreditation d)Developments for the second year will focus on	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2007 • Reduction timescale: Medium term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Sheffield_AQActionplan_18

LA (a)	Measure code (b)	Title	Description	Other information
			planned and specific marketing, with the increased visibility of the WhizzGo brand throughout Sheffield and a stronger presence in the heart of the City e)WhizzGo is committed to providing low emission vehicles, and their current fleet endeavours to utilise a 30% blend of recycled biodiesel f)Work with estate agents and letting agents to encourage new residents to consider joining the Car Club	
Sheffield	Local_Sheffield_H7	Green Roofs	Green roof forum was set up in Sheffield to promote their benefits with regards to climate change and air quality	• Type: Education/information • Sources affected: Commercial and residential sources • Spatial scale: local • Implementation date: 2006 • Reduction timescale: Medium term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Sheffield_AQActionplan_19
Sheffield	Local_Sheffield_E5	Land Use Planning	Section 106 agreements and Supplementary Planning Documents are being used to control or offset air pollution prior to developments taking place. Every planning application that reaches set trigger points is now required to undertake an air quality assessment and must produce a travel plan. A recent example being a new supermarket that is providing Electric Vehicle recharging points, subsidising bus passes, fitting particulate traps to delivery vehicles, introducing a car share scheme and producing an Employee Travel Plan.	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2007 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Sheffield_AQActionplan_20
Sheffield	Local_Sheffield_B	District Heating	The heat created by the combustion process in the Energy Recovery Facility is used to create steam which is used in power generation for sale to the National Grid, and is turned into hot water to provide heat and hot water for 130 buildings connected to the district heating network. Connection to the system reduces air pollution and CO_2 emissions by removing the need for individual boilers. The Housing Market Renewal Programme for Sheffield will promote energy efficiency and alternative energy use and smaller scale district heating schemes, including micro CHP.	• Type: Technical; Education/information • Sources affected: Commercial and residential sources • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Sheffield_AQActionplan_21

LA (a)	Measure code (b)	Title	Description	Other information
Wakefield	Local_Wakefield_B1	Implement energy efficiency plan	A continuing programme of energy advice and facilities is undertaken through the Wakefield Home Energy Team48. In addition, Council buildings are undergoing major energy efficiency scrutiny in an effort to minimise emissions as part of achieving the Wakefield Environment Policy Statement	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Wakefield_AQActionplan_1
Wakefield	Local_Wakefield_B2	Enforce clean air Act	Environmental Health Services to maintain their enforcement of clean air legislation as well as improving liaison with the Home Energy Team in data gathering.	• Type: Economic/fiscal; Technical; Education/information • Sources affected: Industry including heating and power production; Commercial and residential sources • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: Yes • Smarter Choices (c) : No • Reference (d): Local_zone34_Wakefield_AQActionplan_1
Wakefield	Local_Wakefield_C1	Increase use of CRT/ alternative fuels in Council fleet	Consider opportunities for introducing alternative fuelled vehicles to Council fleet.	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Wakefield_AQActionplan_1
Wakefield	Local_Wakefield_A1	Increase council driver training	Promoting driver training	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Wakefield_AQActionplan_1
Wakefield	Local_Wakefield_C2	Increase council use of sustainable fuels	Investigate opportunities to use alternative fuels including renewable energy	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term

LA (a)	Measure code (b)	Title	Description	Other information
				• Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Wakefield_AQActionplan_1
Wakefield	Local_Wakefield_A2	Assess emission standards for taxis and private hire vehicles.	A tightened fit for purpose mechanical check of taxis that includes emissions checks to ensure that they meet the current vehicle standards as well as reducing the taxi fleet age will be investigated. There are some 2000 licences for private hire and taxi vehicles in Wakefield which include a mix of vehicle types from small saloon to minibuses. Vehicles are required to undertake an annual fit for purpose check up to five years old and every six months for vehicles older than that.	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Wakefield_AQActionplan_1
Wakefield	Local_Wakefield_E1	Increase status of AQ issues in the LDF Increased training for Dev Control personnel in AQ issues	Both the proposed Local Development Framework and Development Control Policy described earlier (section 4.2.5) now contains specific air quality policies aimed at producing a sustainable, improved level of local air quality. In addition, a draft supplementary planning document (section 4.2.6) detailing the authority's policy on developer contributions to local development includes contributions relating to measures to improve local air quality has been produced.Specific air quality planning and development guidance (section 4.2.5) has been produced for planners and developers that describes an assessment process designed to minimise deterioration of local air quality through the planning and development process.	• Type: Technical; Education/information • Sources affected: Transport; Industry including heating and power production; Commercial and residential sources • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Wakefield_AQActionplan_1
Wakefield	Local_Wakefield_H1	Investigate Low Emission Zone	The proximity of strategic highway within the authority boundary and the dispersed nature of towns would make the introduction of LEZs difficult. However, as part of a wider package of measures it may prove more successful.	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Wakefield_AQActionplan_1
Wakefield	Local_Wakefield_D1	Develop a parking (and P&R) strategy	Ensure that the recommendations of the Wakefield Parking Strategy are fully implemented and integrated into the LDF process. A further assessment of the impact of the strategy is recommended in the future to	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008

LA (a)	Measure code (b)	Title	Description	Other information
			establish any further changes following the regeneration of town and city.	• Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Wakefield_AQActionplan_1
Doncaster	Local_Doncaster_E1	Ensure that new developments are located, designed and managed so that the number of additional vehicle journeys they are likely to generate are minimised.	Ensure that new developments are located, designed and managed so that the number of additional vehicle journeys they are likely to generate are minimised.	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Doncaster_AQActionplan_1
Doncaster	Local_Doncaster_E2	Ensure that new development provides a real choice of transport, including walking, cycling and public transport and that such development contributes to meeting the demand for the transport provision that it generates.	Ensure that new development provides a real choice of transport, including walking, cycling and public transport and that such development contributes to meeting the demand for the transport provision that it generates.	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Doncaster_AQActionplan_1
Doncaster	Local_Doncaster_H1	Active management of the pattern of urban growth to make the fullest use of public transport and focus major	Active management of the pattern of urban growth to make the fullest use of public transport and focus major transport generators of travel demand in town and district centres and near to major public transport interchanges.	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d):

LA (a)	Measure code (b)	Title	Description	Other information
		transport generators of travel demand in town and district centres and near to major public transport interchanges.		Local_zone34_Doncaster_AQActionplan_1
Doncaster	Local_Doncaster_A1	Smoky vehicle inspection with VI	Liase with the Vehicle Inspectorate to ensure all vehicles producing excessive and visible exhaust emissions “smoky vehicles” are inspected, tested and their emission reduced to acceptable levels.	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2004 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Doncaster_AQActionplan_1
Doncaster	Local_Doncaster_F1	The council will produce an air quality promotion and project pack for use in schools to encourage children to become aware of the importance of good air quality and the role that private car use and public transport can play in decreasing and improving air quality respectively	The council will produce an air quality promotion and project pack for use in schools to encourage children to become aware of the importance of good air quality and the role that private car use and public transport can play in decreasing and improving air quality respectively	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Doncaster_AQActionplan_1
Doncaster	Local_Doncaster_F2	Acquire, produce if	Acquire, produce if necessary and distribute relevant leaflets and	• Type: Technical • Sources affected: Transport

LA (a)	Measure code (b)	Title	Description	Other information
		necessary and distribute relevant leaflets and promotional material relating to improving air quality and reducing (in particular vehicle) emissions. This material to be distributed in all council offices where the public may visit, major retails outlets, libraries, GP's surgeries and hospitals and all public events.	promotional material relating to improving air quality and reducing (in particular vehicle) emissions. This material to be distributed in all council offices where the public may visit, major retails outlets, libraries, GP's surgeries and hospitals and all public events.	• Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Doncaster_AQActionplan_1
Doncaster	Local_Doncaster_B1	The council will continue to use all its powers to control industrial & commercial emissions to the atmosphere by liaison with the Environment Agency in respect of Part A processes and the institution of risk based process inspection in respect of Part B Processes.	The council will continue to use all its powers to control industrial & commercial emissions to the atmosphere by liaison with the Environment Agency in respect of Part A processes and the institution of risk based process inspection in respect of Part B Processes.	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Doncaster_AQActionplan_1

LA (a)	Measure code (b)	Title	Description	Other information
Doncaster	Local_Doncaster_F3	Carry out the Authority's duties under Road Traffic (Vehicle Emissions)(Fixed Penalty)(England) Regulations 2002 in respect of carrying out roadside vehicle emission testing and issuing fixed penalty notice in partnership with the other South Yorkshire Local Authorities and the Police.	Carry out the Authority's duties under Road Traffic (Vehicle Emissions)(Fixed Penalty)(England) Regulations 2002 in respect of carrying out roadside vehicle emission testing and issuing fixed penalty notice in partnership with the other South Yorkshire Local Authorities and the Police.	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Doncaster_AQActionplan_1
Doncaster	Local_Doncaster_F4	Carry out the Authorities duties under Road Traffic (Vehicle Emissions)(Fixed Penalty)(England) Regulations 2002 in respect of stopping engines when vehicles are stationary and together with the SYPTE encourage bus drivers to switch	Carry out the Authorities duties under Road Traffic (Vehicle Emissions)(Fixed Penalty)(England) Regulations 2002 in respect of stopping engines when vehicles are stationary and together with the SYPTE encourage bus drivers to switch off their engines when stationary.	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Doncaster_AQActionplan_1

LA (a)	Measure code (b)	Title	Description	Other information
		off their engines when stationary.		
Doncaster	Local_Doncaster_H2	Liase with the Vehicle Inspectorate to ensure all vehicles producing excessive and visible exhaust emissions “smoky vehicles” are inspected, tested and their emission reduced to acceptable levels.	Liase with the Vehicle Inspectorate to ensure all vehicles producing excessive and visible exhaust emissions “smoky vehicles” are inspected, tested and their emission reduced to acceptable levels.	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Doncaster_AQActionplan_1
Doncaster	Local_Doncaster_A2	The council will continue to ensure that its own vehicle fleet is progressively “greened” by carrying out the following initiatives: - - Ensuring all vehicles are properly maintained - Ensure 5% of all council fleet are dual fuel vehicles - Ensure all diesel engine vehicles are to Euro 2 standard	The council will continue to ensure that its own vehicle fleet is progressively “greened” by carrying out the following initiatives: - - Ensuring all vehicles are properly maintained - Ensure 5% of all council fleet are dual fuel vehicles - Ensure all diesel engine vehicles are to Euro 2 standard - Use of fuel management system to monitor efficient vehicle use - Provide an LPG gas station at North Bridge Depot - Investigate feasibility of electric and hybrid fuel vehicles - Continue to take advantage of all Government initiatives and grant aid from such bodies as the Energy Saving Trust (Powershift)	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Doncaster_AQActionplan_1

LA (a)	Measure code (b)	Title	Description	Other information
		- Use of fuel management system to monitor efficient vehicle use - Provide an LPG gas station at North Bridge Deport - Investigate feasibility of electric and hybrid fuel vehicles - Continue to take advantage of all Government initiatives and grant aid from such bodies as the Energy Saving Trust (Powershift)		
Doncaster	Local_Doncaster_A3	Investigate the use if the Split Cycle Offset Optimisation Technique (SCOOT) traffic signal control system to predict and link traffic emissions to traffic light sequencing in order to maximise traffic flow and minimise slow moving or	Investigate the use if the Split Cycle Offset Optimisation Technique (SCOOT) traffic signal control system to predict and link traffic emissions to traffic light sequencing in order to maximise traffic flow and minimise slow moving or stationary traffic during periods of elevated air pollution.	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Doncaster_AQActionplan_1

LA (a)	Measure code (b)	Title	Description	Other information
		stationary traffic during periods of elevated air pollution.		
Doncaster	Local_Doncaster_E3	Implement the specific policies contained in the Doncaster MBC Commuter Plan which are detailed in the plan under the following headings;- Reducing the need to travel Promoting alternative and more sustainable modes of transport to the car Reducing pollution through the use of environmentally acceptable vehicles and fuels Raising awareness e.g. promotion of travel plans.	Implement the specific policies contained in the Doncaster MBC Commuter Plan which are detailed in the plan under the following headings;- Reducing the need to travel Promoting alternative and more sustainable modes of transport to the car Reducing pollution through the use of environmentally acceptable vehicles and fuels Raising awareness e.g. promotion of travel plans.	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Doncaster_AQActionplan_1
Doncaster	Local_Doncaster_G1	Introduce a council car sharing scheme	Scheme introduced in 2002, all staff invited to register. Joint promotions with Bassetlaw and Doncaster NHS Trusts.	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2002 • Reduction timescale: Long term • Regulatory: No

LA (a)	Measure code (b)	Title	Description	Other information
				• Smarter Choices (c) : Yes • Reference (d): Local_zone34_Doncaster_AQActionplan_1
Doncaster	Local_Doncaster_E4	Ensure that all the strategies in the UDP and LTP complement each other and that development plan allocations and local transport and investment are closely linked.	Ensure that all the strategies in the UDP and LTP complement each other and that development plan allocations and local transport and investment are closely linked.	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Doncaster_AQActionplan_1
Doncaster	Local_Doncaster_D1	Promote the use of parking policies, alongside other planning and transport measures, to promote sustainable transport choices and reduce the reliance on the car.	Promote the use of parking policies, alongside other planning and transport measures, to promote sustainable transport choices and reduce the reliance on the car.	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Doncaster_AQActionplan_1
Doncaster	Local_Doncaster_H3	Expand "Quality Streets" initiative	The council will expand the Borough's successful "Quality Streets" initiative to extend the amount of pedestrianised streets, both within the town centre and the retail centres of the satellite towns.	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Doncaster_AQActionplan_1
Doncaster	Local_Doncaster_G2	Quality Bus corridors	Modification work undertaken on A638 and works started on Bawtry Road and York Road.	• Type: Technical • Sources affected: Transport • Spatial scale: local

LA (a)	Measure code (b)	Title	Description	Other information
				• Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Doncaster_AQActionplan_1
Doncaster	Local_Doncaster_E5	The council will support and promote the new transport interchange in order to ensure a fully integrated road/rail public transportation system is provided for the residents of and visitors to the Borough.	The council will support and promote the new transport interchange in order to ensure a fully integrated road/rail public transportation system is provided for the residents of and visitors to the Borough.	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Doncaster_AQActionplan_1
Doncaster	Local_Doncaster_A4	The council will investigate the feasibility of carrying out vehicle emission testing on the Boroughs fleet of private hire vehicles as part of the licensing procedure.	The council will investigate the feasibility of carrying out vehicle emission testing on the Boroughs fleet of private hire vehicles as part of the licensing procedure.	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2004 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Doncaster_AQActionplan_1
Doncaster	Local_Doncaster_A5	The council will, together with the operators of the new transport interchange, ensure that air quality information, in	The council will, together with the operators of the new transport interchange, ensure that air quality information, in particular the current level of air pollution within the Borough is made available to all of the users of the interchange and other stakeholders.	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Doncaster_AQActionplan_1

LA (a)	Measure code (b)	Title	Description	Other information
		particular the current level of air pollution within the Borough is made available to all of the users of the interchange and other stakeholders.		
Doncaster	Local_Doncaster_H4	Eco-Stars	New action. South Yorkshire wide scheme signing up fleet operators to obtain star rating and recognition of air quality benefits of improved perfomance of fleet. Provides action plan for improvememt of rating.	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2009 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Doncaster_AQActionplan_1
Barnsley	Local_Barnsley_B1	Continued provision of energy efficiency advice on insulation and provision of grants to disadvantaged	BMBC continues to work in partnership with the South Yorkshire Energy Advice Centre (SYEAC) and Npower to provide advice and some financial assistance to Private Barnsley residents. The Decent Homes programme is providing Social Housing with enhanced energy efficient heating and insulation measures. In addition, SYEAC works with the Warm Front Team as part of this Government initiative	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2004 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Barnsley_AQActionplan_1
Barnsley	Local_Barnsley_F1	Continue to operate the smoky diesel hotline	Barnsley MBC continues to provide the Smoky Diesel Hotline Service	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2004 • Reduction timescale: Short term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Barnsley_AQActionplan_1
Barnsley	Local_Barnsley_E1	Continue to work with planners, developers and employers to	Liaison with Development Control planners has enabled procedures to be developed for air quality to be considered, when appropriate. Local Authority developing procedures to role out travel plans in the Public and Private sectors.	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2004 • Reduction timescale: Long term

LA (a)	Measure code (b)	Title	Description	Other information
		guide sustainable development		• Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Barnsley_AQActionplan_1
Barnsley	Local_Barnsley_H1	Air Quality Website	The website has been operational since Summer 2005	• Type: Education/information • Sources affected: Transport; Industry including heating and power production; Commercial and residential sources; Other • Spatial scale: local • Implementation date: 2006 • Reduction timescale: Short term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Barnsley_AQActionplan_1
Barnsley	Local_Barnsley_E2	Proceed with Dodworth bypass scheme	By-pass completed September 2006	• Type: Technical • Sources affected: Transport • Spatial scale: local • Implementation date: 2006 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Barnsley_AQActionplan_1
Barnsley	Local_Barnsley_F2	Vehicle emission testing/ publicity campaign	Vehicle emission testing and associated awareness raising	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2007 • Reduction timescale: Short term • Regulatory: Yes • Smarter Choices (c) : No • Reference (d): Local_zone34_Barnsley_AQActionplan_1
Barnsley	Local_Barnsley_B2	Control of Part B and A2 processes, consultees for Part A1 processes	Barnsley MBC continues to undertake its LAPC and IPPC commitments	• Type: Economic/fiscal; Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2004 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Barnsley_AQActionplan_1
Barnsley	Local_Barnsley_H2	Assessment of air quality impact of major traffic schemes	Major schemes in the Borough have been assessed for their air quality impact.	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2004 • Reduction timescale: Long term

LA (a)	Measure code (b)	Title	Description	Other information
				• Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Barnsley_AQActionplan_1
Barnsley	Local_Barnsley_H3	Care4Air, including ECO driving campaign targeted at car drivers	Barnsley MBC is part of the award winning Care4Air campaign (www.care4air.org). There has been a major ECO driving campaign aimed at local car drivers. The success of this very difficult to quantify in terms of pollutant reduction.	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2004 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Barnsley_AQActionplan_2
Barnsley	Local_Barnsley_H4	ECO Stars Fleet Recognition Scheme	This scheme was launched in January 2009, and is amined to improve fuel management and as a consequence achieve lower emissions from vehicle fleets, including bus and HGV fleets operating or based in South Yorkshire. To date 3400 vehicles have signed up for the scheme including local bus operators, haulage contractors and council fleet operators	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2009 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Barnsley_AQActionplan_2
Barnsley	Local_Barnsley_G1	Travel Plans	Area wide and targeted	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2004 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Barnsley_AQActionplan_2
Barnsley	Local_Barnsley_A1	South Yorkshire Intelligent Transport Systems	Tied in with junction improvements	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2007 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Barnsley_AQActionplan_2
Calderdale	Local_Calderdale_F1	Provision of information	Increase in the provision of air quality information passed to the public domain at national, regional and local level.	• Type: Education/information • Sources affected: Transport; Commercial and residential sources • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Short term • Regulatory: No

LA (a)	Measure code (b)	Title	Description	Other information
				• Smarter Choices (c) : Yes • Reference (d): Local_zone34_Calderdale_AQActionplan_1
Calderdale	Local_Calderdale_G1	Calderdale Metropolitan Borough Council Travel Plan.	Continue to implement CMBC Travel Plan.	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Calderdale_AQActionplan_1
Calderdale	Local_Calderdale_G2	Encourage other employers in Halifax to develop travel plans.	Encourage other employers in Halifax to develop travel plans.	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Medium term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Calderdale_AQActionplan_1
Calderdale	Local_Calderdale_F2	Safer Routes to School	Continue to implement a Safer Routes to School programme of measures and initatives.	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Medium term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Calderdale_AQActionplan_1
Calderdale	Local_Calderdale_G3	School Travel Plans.	Encourage schools and education facilities to develop and encourage School Travel Plans.	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Medium term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Calderdale_AQActionplan_1
Calderdale	Local_Calderdale_F3	Travel awareness campaigns	Carry out travel awareness initatives and campaigns, including targeted individualised travel planning.	• Type: Education/information • Sources affected: Transport • Spatial scale: local

LA (a)	Measure code (b)	Title	Description	Other information
				• Implementation date: 2008 • Reduction timescale: Medium term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Calderdale_AQActionplan_1
Calderdale	Local_Calderdale_H1	Car share Programme	Continue to promote and publicise Calderdalecarshare.com.	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Calderdale_AQActionplan_1
Calderdale	Local_Calderdale_D1	Car parking initiatives for car sharers.	Introduce further car parking initiatives for car sharers.	• Type: Economic/fiscal; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Calderdale_AQActionplan_1
Calderdale	Local_Calderdale_F4	Promote and publicise benefits of public transport	Promote and publicise benefits of public transport and provide additional information and incetives for the A629 Huddersfield Road corridor bus services.	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Short term • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Calderdale_AQActionplan_1
Calderdale	Local_Calderdale_H2	Bus Quality Partnerships	Continue to develop Bus Quality Partnerships with Metro and operators and target the A629 Huddersfield Road corridor bus services.	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Calderdale_AQActionplan_1

LA (a)	Measure code (b)	Title	Description	Other information
Calderdale	Local_Calderdale_D2	Car parking strategy for Halifax	Continue to develop and implement car parking strategy for Halifax	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Calderdale_AQActionplan_1
Calderdale	Local_Calderdale_D3	Review and regulate long stay car parking charges.	Rreview and regulate long stay car parking charges.	• Type: Economic/fiscal; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Calderdale_AQActionplan_1
Calderdale	Local_Calderdale_E1	Inceased enforcement of waiting restrictions on A629 Hudderfield Road on AQMA.	Inceased enforcement of waiting restrictions on A629 Hudderfield Road on AQMA.	• Type: Economic/fiscal; Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Medium term • Regulatory: Yes • Smarter Choices (c) : No • Reference (d): Local_zone34_Calderdale_AQActionplan_1
Calderdale	Local_Calderdale_G4	Improve condition and singage of footway and footpath routes	Improve condition and singage of footway and footpath routes, in particular the the Calderdale Royal Hospital.	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Calderdale_AQActionplan_1
Calderdale	Local_Calderdale_G5	Improve walking routes and access to bus stops on the A629 Huddersfield	Improve walking routes and access to bus stops on the A629 Huddersfield Road corridor.	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: Long term • Regulatory: No

LA (a)	Measure code (b)	Title	Description	Other information
		Road corridor.		• Smarter Choices (c) : No • Reference (d): Local_zone34_Calderdale_AQActionplan_1
Calderdale	Local_Calderdale_G6	Cycle training programme	Continue to implement the cycle training programme to primary schools and devleop the advanced training to secondary schools.	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Calderdale_AQActionplan_1
Calderdale	Local_Calderdale_E2	Integrate and encourage air quality criteria into land use polic (UDP/ LDF) and planning process	Integrate and encourage air quality criteria into land use polic (UDP/ LDF) and planning process	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Calderdale_AQActionplan_1
Calderdale	Local_Calderdale_G7	Encourage take up of travel plan requirement for new developments.	Encourage take up of travel plan requirement for new developments.	• Type: Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: • Regulatory: No • Smarter Choices (c) : Yes • Reference (d): Local_zone34_Calderdale_AQActionplan_1
Calderdale	Local_Calderdale_H3	Continued monitoring of air quality traffic data	Continued monitoring of air quality traffic data	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local • Implementation date: 2008 • Reduction timescale: • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Calderdale_AQActionplan_1
Calderdale	Local_Calderdale_H4	Continue district wide monitoring	Continue district wide monitoring	• Type: Technical; Education/information • Sources affected: Transport • Spatial scale: local

LA (a)	Measure code (b)	Title	Description	Other information
				• Implementation date: 2008 • Reduction timescale: • Regulatory: Yes • Smarter Choices (c) : No • Reference (d): Local_zone34_Calderdale_AQActionplan_1
Calderdale	Local_Calderdale_H5	Continue cross boundary working with neighbouring authorities.	Continue cross boundary working with neighbouring authorities.	• Type: Education/information • Sources affected: Transport • Spatial scale: regional • Implementation date: 2008 • Reduction timescale: • Regulatory: No • Smarter Choices (c) : No • Reference (d): Local_zone34_Calderdale_AQActionplan_1

(a) Name of responsible Local Authority.
(b) The Letter in the measure code indicates the main source sector that will be affected by the measure. Letters are assigned as follows: A - measures to reduce emissions from mobile sources, B - measures to reduce emissions from stationary sources, C - fuels and petrol stations, D - Economic incentives to reduce emissions (e.g. congestion charging, controlled parking zones), E - measures related to traffic planning/redesigning infrastructure, F - information/educational measures, G - change of transport mode (e.g. scheme to encourage people out of cars and onto bikes), H - Other.
(c) Measures have been classified as 'smarter choices' or not based on expert judgement
(d) References available for download from: http://uk-air.defra.gov.uk/library/NO_2ten/