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## **Draft Air Quality Plan for the achievement of EU air quality limit value for nitrogen dioxide (NO<sub>2</sub>) in West Yorkshire Urban Area (UK0004)**

**September 2015**



Llywodraeth Cymru  
Welsh Government



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# 1 Introduction

## 1.1 This document

This document is the West Yorkshire Urban Area agglomeration zone (UK0004) updated air quality plan for the achievement of the EU air quality limit values for nitrogen dioxide (NO<sub>2</sub>). This is an update to the air quality plan published in September 2011 (<http://uk-air.defra.gov.uk/library/no2ten/>).

This plan presents the following information:

- General information regarding the West Yorkshire Urban Area agglomeration zone
- Details of the NO<sub>2</sub> exceedance situation within the West Yorkshire Urban Area agglomeration zone
- Details of local air quality measures that have been implemented, will be implemented or are being considered for implementation in this agglomeration zone.

This air quality plan for the West Yorkshire Urban Area agglomeration zone should be read in conjunction with the separate UK overview document. 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 document show how the UK will ensure that compliance with the NO<sub>2</sub> limit values is achieved in the shortest possible time.

## 1.2 Context

Two NO<sub>2</sub> limit values for the protection of human health have been set in the Air Quality Directive (2008/50/EC). These are:

- The annual mean limit value: an annual mean concentration of no more than 40  $\mu\text{g m}^{-3}$
- The hourly limit value: no more than 18 exceedances of 200  $\mu\text{g m}^{-3}$  in a calendar year.

The Air Quality Directive stipulates that compliance with the NO<sub>2</sub> limit values will be achieved by 01/01/2010.

## 1.3 Zone status

The assessment undertaken for the West Yorkshire Urban Area agglomeration zone indicates that the annual limit value was exceeded in 2013 but is likely to be achieved before 2025 through the introduction of measures included in the baseline. When combined with the measures outlined in the overview document for the UK we expect this zone to be compliant by 2020.

## 1.4 Plan Structure

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

Section 3 then presents the overall picture with respect to NO<sub>2</sub> levels in this agglomeration zone for the 2013 reference year of this air quality plan. This includes declaration of exceedance situations within the agglomeration zone and presentation of a detailed source apportionment for each exceedance situation.

An overview of the measures already taken and to be taken within the agglomeration zone both before and after 2013 is given in section 4.

Baseline modelled projections for 2020, 2025 and 2030 for each exceedance situation are presented in section 5. The baseline projections presented here include, where possible, the impact of measures that have already been taken and measures for which the relevant authority has made a firm commitment to take the measure(s). However, it has not been possible to quantify the impact of all the measures. This section therefore also explains which measures have been quantified, and hence included in the model projections, and which measures have not been quantified.

## 2 General information about the Zone

### 2.1 Administrative information

Zone name: West Yorkshire Urban Area

Zone code: UK0004

Type of zone: agglomeration zone

Reference year: 2013

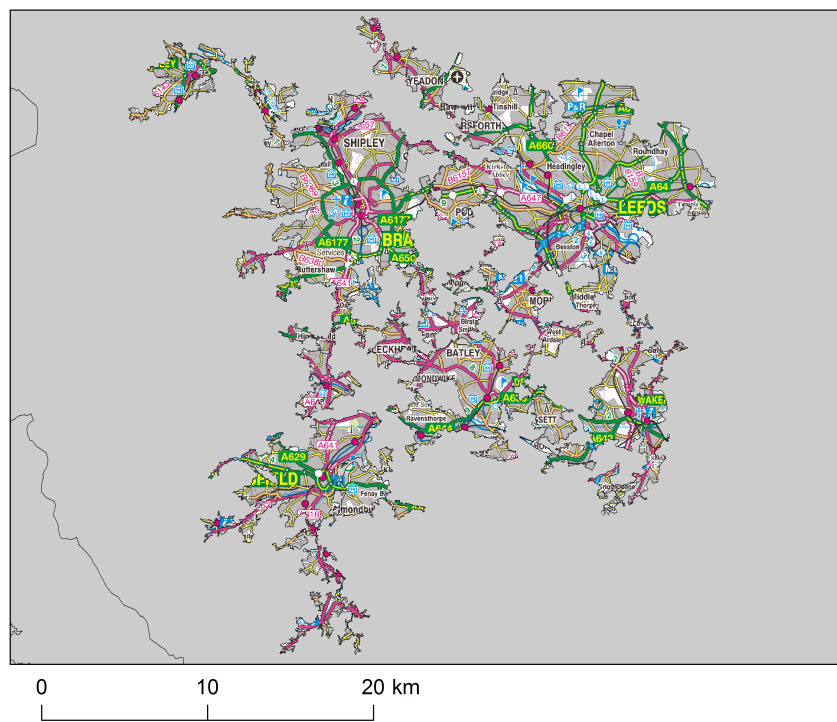
Extent of zone: Figure 1 shows the area covered by the West Yorkshire Urban Area agglomeration zone.

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

1. Calderdale Metropolitan Borough Council
2. City of Bradford
3. Kirklees Metropolitan Council
4. Leeds City Council
5. Wakefield Metropolitan District Council

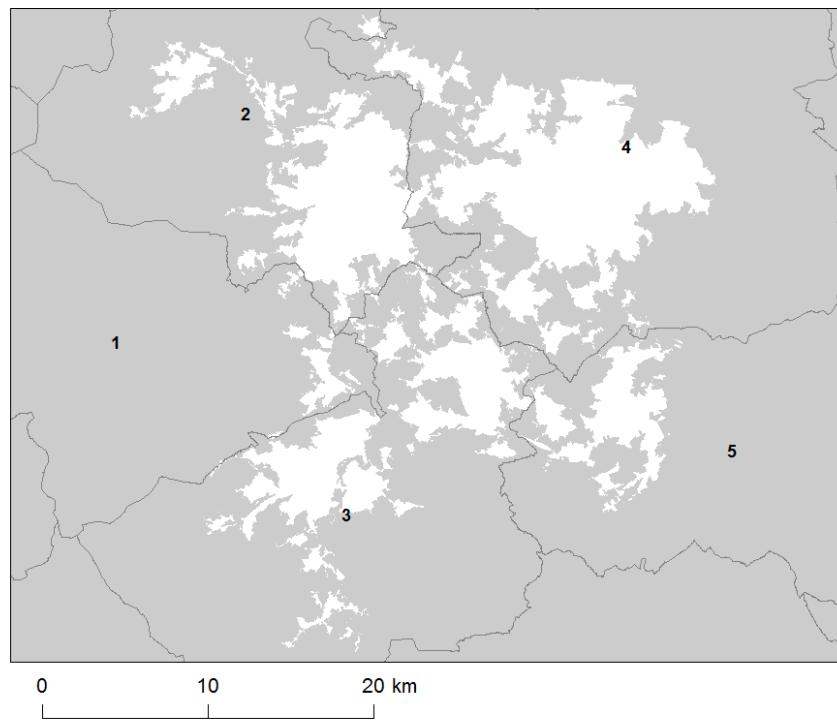
(Note: Local Authority boundaries do not necessarily coincide with zone boundaries. Hence Local Authorities may be listed within more than one zone plan.)

**Figure 1: Map showing the extent of the West Yorkshire Urban Area agglomeration zone (UK0004).**



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**Figure 2: Map showing Local Authorities within the West Yorkshire Urban Area agglomeration zone (UK0004).**



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## 2.2 Assessment details

### Measurements

NO<sub>2</sub> measurements in this zone were available in 2013 from the following national network monitoring stations (NO<sub>2</sub> data capture for each station in 2013 shown in brackets):

1. Leeds Centre GB0584A (97%)
2. Leeds Headingley Kerbside GB0926A (99%)

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

### Modelling

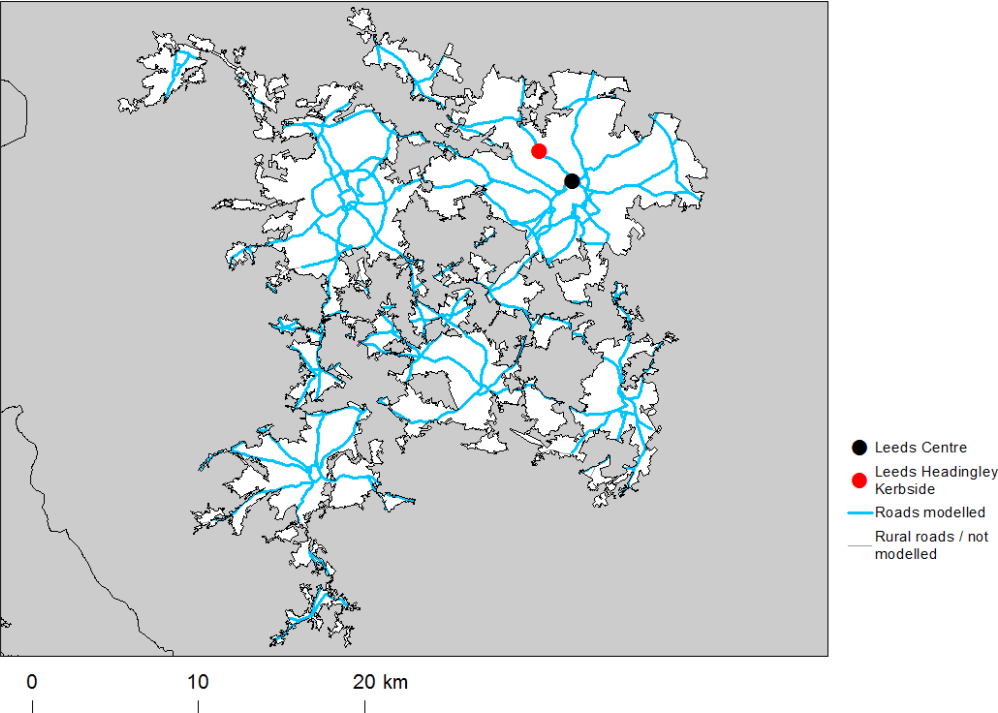
Modelling for the 2013 reference year has been carried out for the whole of the UK. This modelling covers the following extent within this zone:

- Total background area within zone (approx): 352 km<sup>2</sup>
- Total population within zone (approx): 1,308,189 people
- Total road length where an assessment of NO<sub>2</sub> concentrations have been made: 402 km in 2013 (and similar lengths in previous years)

### Zone maps

Figure 3 presents the location of the NO<sub>2</sub> monitoring stations within this zone for 2013 and the roads for which NO<sub>2</sub> concentrations have been modelled. NO<sub>2</sub> concentrations at background locations have been modelled across the entire zone at a 1 x 1 km<sup>2</sup> resolution.

**Figure 3: Map showing the location of the NO<sub>2</sub> monitoring stations with valid data in 2013 and roads where concentrations have been modelled within the West Yorkshire Urban Area (UK0004) agglomeration zone.**



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## 2.3 Reporting Under European Directives

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

In addition, the UK has reported on air quality plans and programmes (Decision 2004/224/EC) <http://cdr.eionet.europa.eu/gb/eu/aqpp>.

# 3 Overall Picture for 2013 Reference Year

## 3.1 Introduction

There are two limit values for the protection of health for NO<sub>2</sub>. These are:

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

Within the West Yorkshire Urban Area agglomeration zone the annual limit value was exceeded in 2013. Hence, one exceedance situation for this zone has been defined, NO<sub>2</sub>\_UK0004\_Annual\_1, which covers exceedances of the annual limit value. This exceedance situation is described below.

## 3.2 Reference year: NO<sub>2</sub>\_UK0004\_Annual\_1

The NO<sub>2</sub>\_UK0004\_Annual\_1 exceedance situation covers all exceedances of the annual mean limit value in the West Yorkshire Urban Area agglomeration zone in 2013.

Compliance with the annual limit value in this exceedance situation has been assessed using a combination of air quality measurements and modelling. Table 1 presents measured annual concentrations at national network stations in this exceedance situation since the 1st Daughter Directive (1999/30/EC) came into force in 2001. This shows that there were measured exceedances of the annual limit value at Leeds Headingley Kerbside (GB0926A) in 2013. Table 2 summarises modelled annual mean NO<sub>2</sub> concentrations in this exceedance situation for the same time period. This table shows that, in 2013, 82.7 km of road length was modelled to exceed the annual limit value. There were no modelled background exceedances of the annual limit value. Maps showing the modelled annual mean NO<sub>2</sub> concentrations for 2013 at background and at roadside locations are presented in Figures 4 and 5 respectively. All modelled exceedances of the annual limit value are coloured orange or red in the maps.

The maximum measured concentration in the zone varies due to changes in emissions and varying meteorology in different years. However, the models are also updated each year to take into account the most up-to-date science, so the modelled results for different years may not be directly comparable.

The modelling carried out for this exceedance situation has also been used to determine the annual mean NO<sub>x</sub> source apportionment for all modelled locations. Table 3 presents summary source apportionment information in this exceedance situation.

Table 3 summarises the modelled NO<sub>x</sub> source apportionment for the section of road with the highest modelled NO<sub>2</sub> concentration in this exceedance situation in 2013. This is important information because it shows which

sources need to be tackled at the location with the largest compliance gap in the exceedance situation. It is not possible to calculate an unambiguous source apportionment for annual mean NO<sub>2</sub> concentrations for the reasons discussed in the UK Technical Report<sup>1</sup>. Therefore no NO<sub>2</sub> source apportionment is provided.

Figure B.1 in Annex B presents the annual mean NO<sub>x</sub> source apportionment for each section of road within the NO<sub>2</sub>\_UK0004\_Annual\_1 exceedance situation (i.e. the source apportionment for all exceeding roads only) in 2013. Roads have been grouped into motorways, primary roads and trunk roads in this figure.

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<sup>1</sup>Technical report to be finalised for the final plan.

**Table 1: Measured annual mean NO<sub>2</sub> concentrations at national network stations in NO2\_UK0004\_Annual\_1 for 2001 onwards,  $\mu\text{gm}^{-3}$  (a). Data capture shown in brackets.**

Site name (EOI code)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Bradford Centre (GB0689A)	44 (90)	37 (97)	37 (94)	31 (96)	29 (88)	32 (94)	22 (59)						
Leeds Centre (GB0584A)	36 (91)	39 (87)	40 (86)	31 (92)	31 (92)	39 (92)	37 (99)	35 (100)	34 (95)	36 (89)	38 (95)	36 (99)	34 (97)
Leeds Headingley Kerbside (GB0926A)								49 (59)	48 (99)	51 (99)	44 (95)	44 (97)	43 (99)

(a) Annual Mean Limit Value = 40  $\mu\text{gm}^{-3}$

**Table 2: Annual mean NO<sub>2</sub> model results in NO<sub>2</sub>\_UK0004\_Annual\_1 for 2001 onwards.**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Road length exceeding (km)	287.5	171.8	305.7	175.3	187.5	164.6	162.3	109.9	121.4	162.2	106.7	107.2	82.7
Background exceeding (km <sup>2</sup> )	36	0	24	2	4	2	0	0	0	3	1	0	0
Maximum modelled concentration ( $\mu\text{gm}^{-3}$ ) (a)	75.5	70.1	92.1	77.4	84.5	80.0	79.4	85.1	88.0	96.2	75	75	74

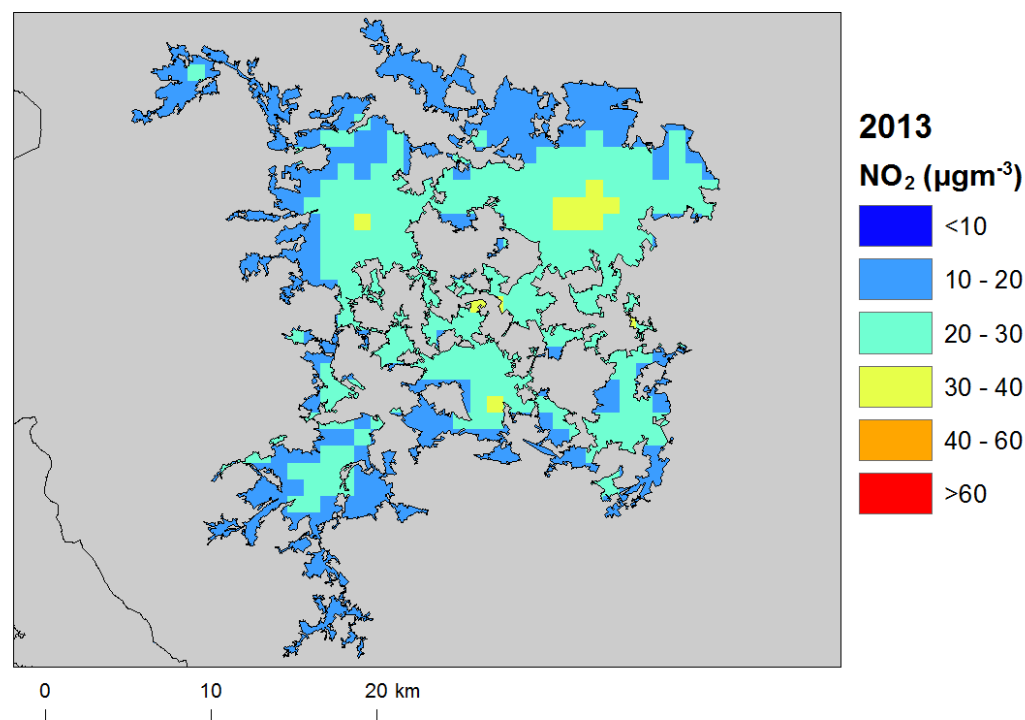
(a) Annual Mean Limit Value = 40  $\mu\text{gm}^{-3}$

**Table 3: Modelled annual mean NOx source apportionment at the traffic count point with the highest modelled concentration in 2013 in NO2\_UK0004\_Annual\_1 ( $\mu\text{gm}^{-3}$ ) (traffic count point 18451 on the A58; OS grid (m): 429200, 433650).**

Spatial scale	Component	Concentration at highest road link (a)
Regional background sources NOx (i.e. contributions from distant sources of > 30 km from the receptor).	Total	11.3
	From within the UK	6.4
	From transboundary sources (includes shipping and other EU member states)	4.9
Urban background sources NOx (i.e. sources located within 0.3 - 30 km from the receptor).	Total	51.6
	From road traffic sources	31.4
	From industry (including heat and power generation)	6.4
	From agriculture	NA
	From commercial/residential sources	6.4
	From shipping	0.0
	From off road mobile machinery	3.5
	From natural sources	NA
	From transboundary sources	NA
	From other urban background sources	3.9
Local sources NOx (i.e. contributions from sources < 0.3 km from the receptor).	Total	135.3
	From petrol cars	14.2
	From diesel cars	50.7
	From HGV rigid	24.7
	From HGV articulated	3.7
	From buses	16.6
	From petrol LGVs	0.4
	From diesel LGVs	24.9
	From motorcycles	0.1
	From London taxis	0.0
Total NOx (i.e. regional background + urban background + local components)		198.2
Total NO <sub>2</sub> (i.e. regional background + urban background + local components)		74

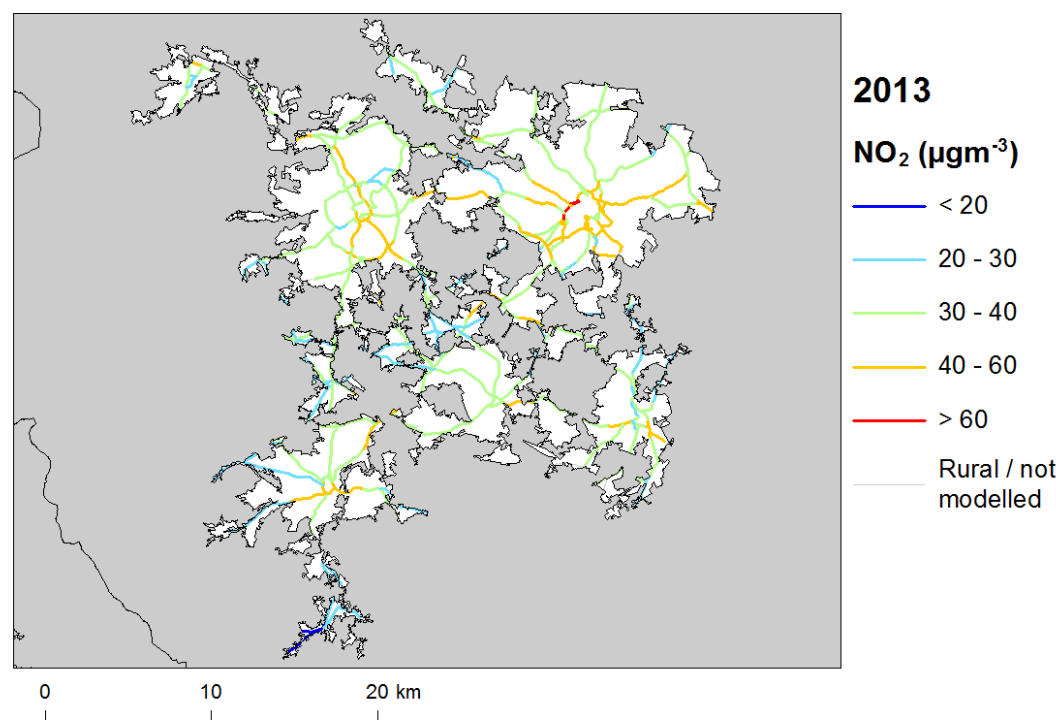
(a) Components are listed with NOx concentration of NA when there is no source from this sector.

**Figure 4: Map of modelled background annual mean NO<sub>2</sub> concentrations 2013. Modelled exceedances of the annual limit value are shown in orange and red.**



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**Figure 5: Map of modelled roadside annual mean NO<sub>2</sub> concentrations 2013. Modelled exceedances of the annual limit value are shown in orange and red.**



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## 4 Measures

### 4.1 Introduction

This section (section 4) gives details of measures that address exceedances of the NO<sub>2</sub> limit values within West Yorkshire Urban Area agglomeration zone. This includes both measures that have already been taken and measures for which there is a firm commitment that they will be taken.

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

### 4.2 Source apportionment

It is important to understand which sources are responsible for causing the exceedance in order to most effectively tailor measures to address the NO<sub>2</sub> exceedance situation described in section 3 above. This can be achieved by considering the source apportionment for the exceedance situation, also presented in section 3. A summary of what the source apportionment shows and the implications for which measures would therefore be appropriate is given here.

Local road traffic was the dominant source in this exceedance location in the reference year. The largest contribution was from cars at the location of maximum exceedance with a contribution of 64.9  $\mu\text{gm}^{-3}$  of NO<sub>x</sub> out of a total of 198.2  $\mu\text{gm}^{-3}$  of NO<sub>x</sub>. Articulated HGVs and cars 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. Cars, buses, rigid HGVs and LGVs were important sources on the primary roads with the highest concentrations. For all road links concentrations of NO<sub>x</sub> from diesel cars were approximately four times greater than NO<sub>x</sub> emissions from petrol cars. NO<sub>x</sub> concentrations from petrol LGVs are a small component of total NO<sub>x</sub> concentrations and less than 2% of total NO<sub>x</sub> from LGVs.

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<sub>2</sub> in this agglomeration zone have been taken and/or are planned at a range of administrative levels. These are:

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

Details of European Union measures (e.g. euro standards, fuel quality directives, integrated pollution prevention and control) can be found on the European Commission's website ([http://ec.europa.eu/environment/air/index\\_en.htm](http://ec.europa.eu/environment/air/index_en.htm)). Details of national measures are given in the UK overview document.

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

An overarching West Yorkshire Low Emission Strategy (WYLES) covering all West Yorkshire Districts and West Yorkshire Combined Authority is in place to promote low emission transport. The strategy is expected to be implemented in 2016.

There is a West Yorkshire Local Transport Plan that promotes cycling, improved parking and bus facilities provided by the Bus Hotspots Fund. The West Yorkshire Combined Authority is developing a Single Transport Plan for West Yorkshire for developing an effective, efficient and integrated transport network. Funding will be awarded to organisations that demonstrate the greatest potential to become outstanding examples for the adoption of ultra-low emission vehicles (ULEVs).

Several measures have been taken to reduce emissions from vehicles and this is supported by a low emission strategy promoting the use of cleaner fuels. School buses have been retrofitted to the extent that emissions have been reduced by 90%. Building on this initiative, there has been an installation of a rapid charge network across West Yorkshire to promote the use of electric vehicles. The intention behind this is to develop a public electric vehicle recharging network that is fast. The chargers are being installed on a strategic network, 8 of which will be in Leeds. If funding is available, all electric vehicle recharging points will be made available to the private users through advance booking via a public transport smart card that will be implemented in 2016-2021.

Policies have also been developed on the wider public transport system. A planned transport strategy for Leeds to reduce vehicle / pedestrian conflict within the rest of the city includes the increased use of park and rides and restricting capacity on key city centre routes.

Part of Leeds' Core Strategy is to extend the city centre area to the south of the River Aire and remove general through traffic away from the City Square area at the north side of the Rail Station.

Metro buses have been retrofitted in West Yorkshire and all Euro III and Euro IV buses will be retrofitted to meet Euro V+ emission standards. The intention behind this initiative is to improve vehicle efficiency. To build upon these policies the West Yorkshire Combined Authority and Leeds City Council are developing a strategy with bus operators on a fleet efficiency programme.

As part of an OLEV funding bid, a scrappage scheme is also being considered as one of a range of measures over 2016-2021 to incentivise ULEVs.

## 4.4 Measures timescales

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

Local Authorities report on progress with the implementation of their action plans annually and review action plan measures regularly. Information on local measures was collected in February/March 2015. Hence, any Local Authority action plans and measures adopted by Local Authorities after this time have not been included in this air quality plan.

The reference year for this air quality plan is 2013. Hence where measures started and finished before 2013, then the improvement in air quality resulting from these measures will have already taken place before the reference year and the impact of these measures will have been included in the assessment where the measure has had an impact on the statistics used to compile the emission inventory. Many measures started before the reference year and will continue to have a beneficial impact on air quality well beyond the reference year. Hence measures with a start date before 2013 and an end date after 2013 may have an impact on concentrations in the reference year and a further impact in subsequent years. Where the Status column in Annex C is 'Implementation', this shows that this measure is already underway or that there is a commitment for this measure to go ahead. Where the Status is 'Planning', 'Preparation' or 'Other' the level of commitment is less clear and it is possible some of these measures may not go ahead.

## 5 Baseline Model projections

### 5.1 Overview of model projections

Model projections for 2020, 2025 and 2030, starting from the 2013 reference year described in section 3, have been calculated in order to determine when compliance with the NO<sub>2</sub> limit values is likely to be achieved on the basis of EU, regional and local measures currently planned. Details of the methods used for the baseline emissions and projections modelling are provided in the UK technical report.

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

The impacts of the individual Local Authority measures have not been explicitly included in the baseline model projections. However, measures may have been included implicitly if they have influenced the traffic counts for 2012 (used as a basis for the compilation of the emission inventory) or in the traffic activity projections to 2020 and beyond (used to calculate the emissions projections). It should be recognised that these measures will have a beneficial impact on air quality, even if it has not been possible to quantify this impact here.

### 5.2 Baseline projections: NO<sub>2</sub>\_UK0004\_Annual\_1

Table 4 presents summary results for the baseline model projections for 2020, 2025 and 2030 for the NO<sub>2</sub>\_UK0004\_Annual\_1 exceedance situation. This shows that the maximum modelled annual mean NO<sub>2</sub> concentration predicted for 2020 in this exceedance situation is 47  $\mu\text{gm}^{-3}$ . By 2025, the maximum modelled annual mean NO<sub>2</sub> concentration is predicted to drop to 38  $\mu\text{gm}^{-3}$ . Hence, the model results suggest that compliance with the NO<sub>2</sub> annual limit value is likely to be achieved before 2025 under baseline conditions in this exceedance situation.

Figures 6 and 7 show maps of projected annual mean NO<sub>2</sub> concentrations in 2020, 2025 and 2030 for background and roadside locations respectively. Maps for 2013 are also presented here for reference.

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



**Table 4: Annual mean NO<sub>2</sub> model results in NO<sub>2</sub>\_UK0004\_Annual\_1.**

	2013	2020	2025	2030
Road length exceeding (km)	82.7	2.7	0.0	0.0
Background exceeding (km <sup>2</sup> )	0	0	0	0
Maximum modelled concentration NO <sub>2</sub> (μgm <sup>-3</sup> ) (a)	74	47	38	35
Corresponding modelled concentration NOx (μgm <sup>-3</sup> ) (b)	198	118	91	81

(a) Annual Mean Limit Value = 40 μgm<sup>-3</sup>

(b) NOx is recorded here for comparison with the NOx source apportionment graphs for 2013 presented in Annex B of this plan. Limit values for EU directive purposes are based on NO<sub>2</sub>.

Figure 6: Background baseline projections of annual mean NO<sub>2</sub> concentrations in 2020, 2025 and 2030. 2013 is also included here for reference. Modelled exceedances of the annual limit value are shown in orange and red.

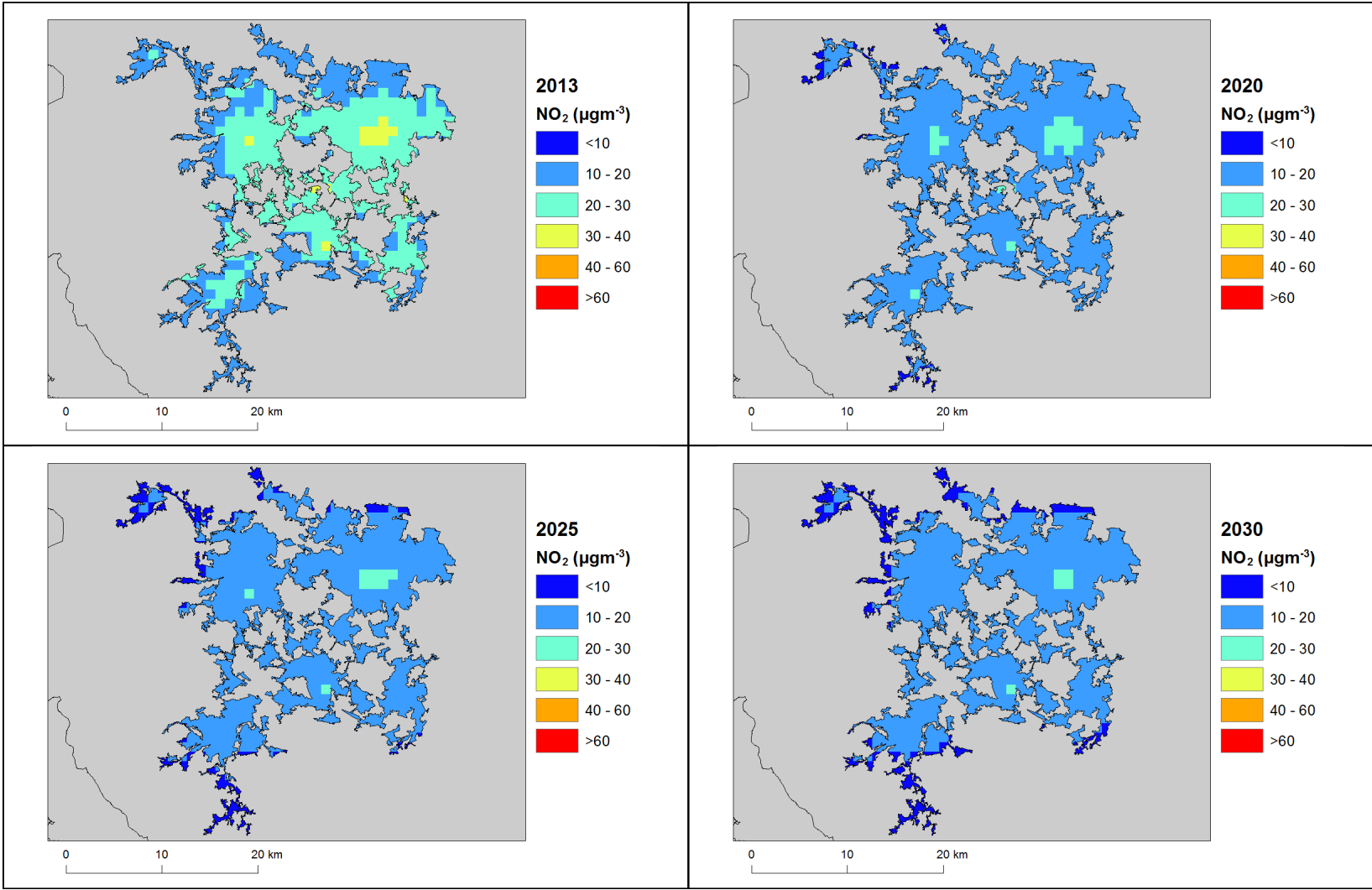
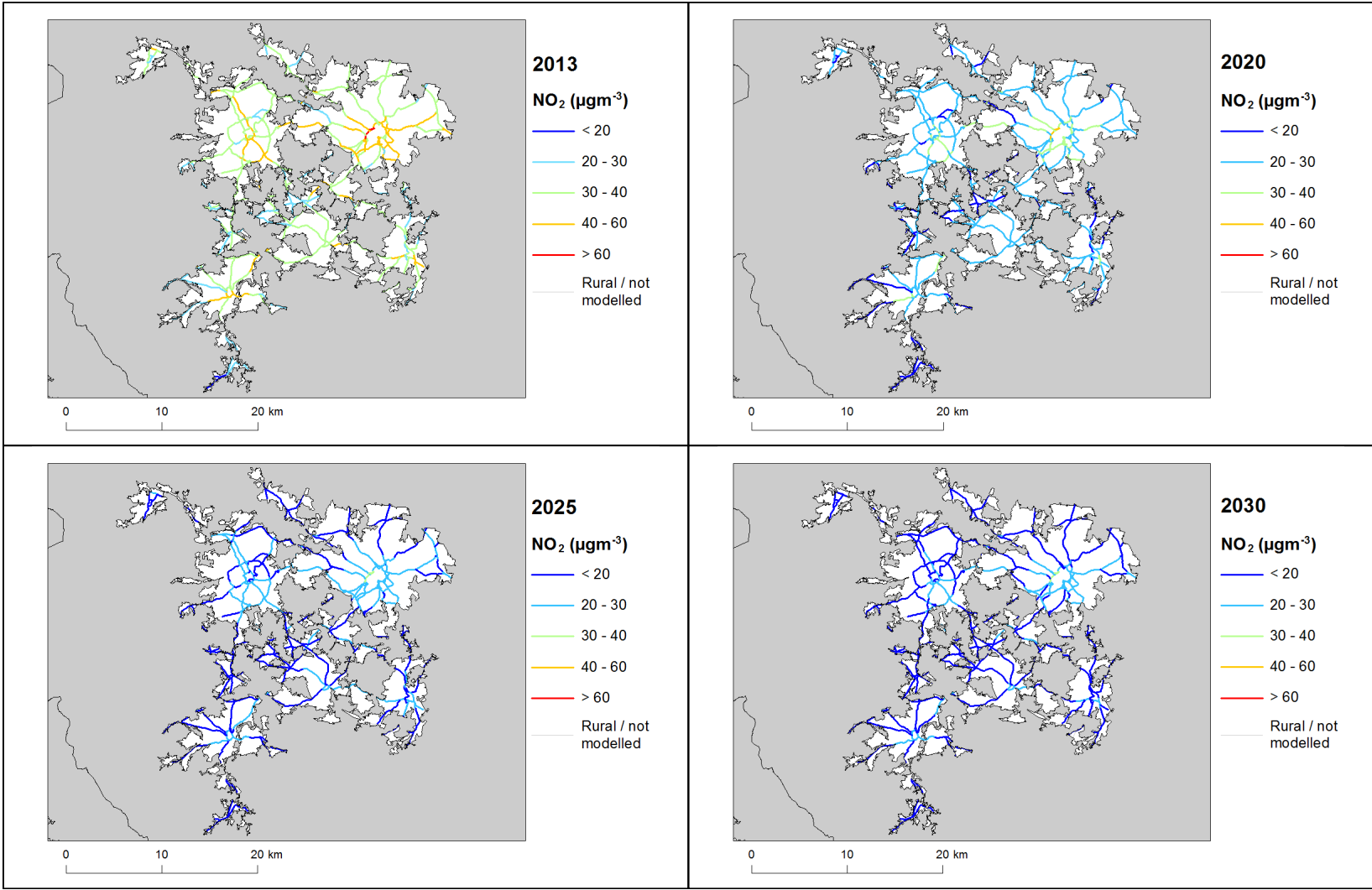


Figure 7: Roadside baseline projections of annual mean NO<sub>2</sub> concentrations in 2020, 2025 and 2030. 2013 is also included here for reference. Modelled exceedances of the annual limit value are shown in orange and red.



# Annexes

## A References

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

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

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

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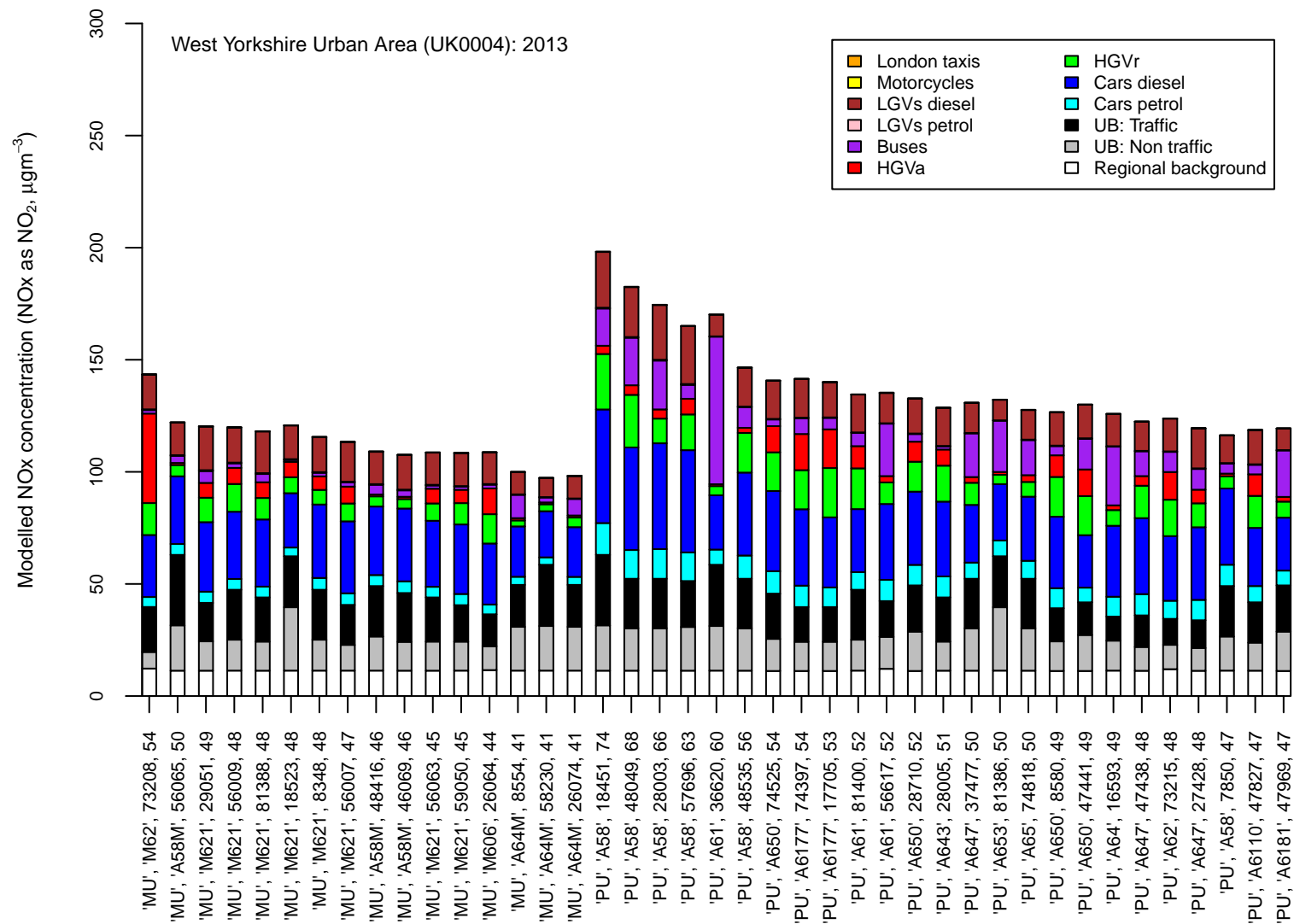
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1st Daughter Directive 1999/30/EC. Council Directive 1999/30/EC, of 22 April 1999 relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air (The First Daughter Directive). From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

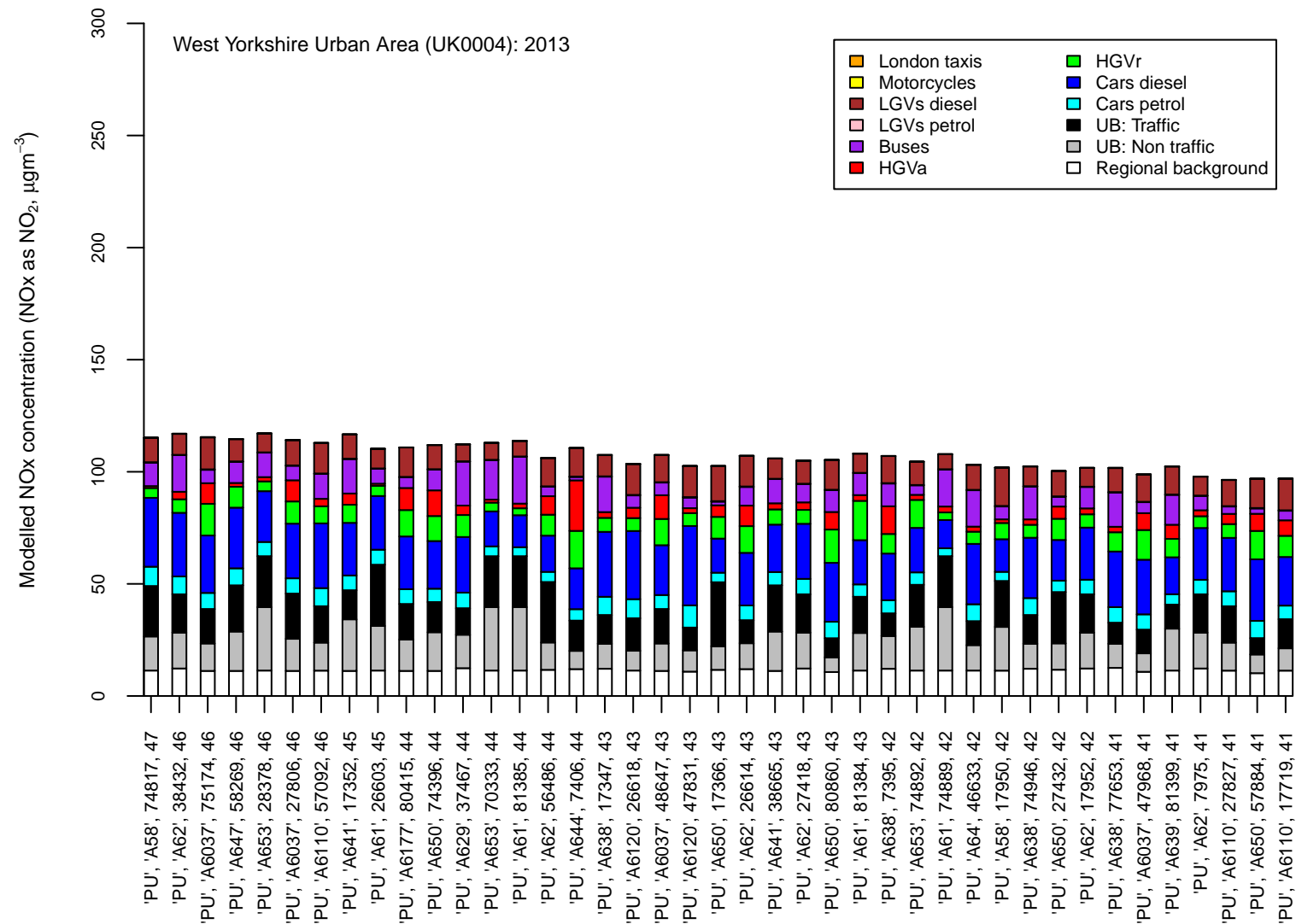
## **B Source apportionment graphs**

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Figure B.1: Annual mean roadside NO<sub>x</sub> source apportionment plots for all roads exceeding the annual mean NO<sub>2</sub> limit value in 2013.



Road class (MU = motorway, PU = primary road, TU = trunk road), road number, census id 12 and modelled NO<sub>2</sub> concentration (µgm<sup>-3</sup>)



Road class (MU = motorway, PU = primary road, TU = trunk road), road number, census id 12 and modelled NO<sub>2</sub> concentration (µgm<sup>-3</sup>)

**C   Tables of measures**

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**Table C.1 Relevant Local Authority measures within West Yorkshire Urban Area (UK0004)**

Measure code	Description	Focus	Classification	Status	Other information
Kirklees Metropolitan Council_1	Install Split Cycle Offset Optimisation technique (SCOOT) Traffic Managements System within AQMA 1	Vehicle queuing	Traffic planning and management: Other measure	Evaluation	Start date: 2014 Expected end date: 2014 Spatial scale: Local Source affected: Transport Indicator: Reduction in queuing time Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_2	Alter SCOOT to incorporate actual Air Quality pollution levels	Vehicle queuing	Traffic planning and management: Other measure	Planning	Start date: 2016 Expected end date: 2017 Spatial scale: Local Source affected: Transport Indicator: Reduction in NOx and PM10 Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_3	Bus priority at lights in AQMA 1	Reducing Public transport queuing times	Traffic planning and management: Other measure	Evaluation	Start date: 2014 Expected end date: 2014 Spatial scale: Local Source affected: Transport Indicator: Reduction in queuing time for public transport Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_4	Bradley Junction. Re-model one of the busiest Road Junction in Kirklees in AQMA 1	Vehicle queuing	Traffic planning and management: Encouragement of shift of transport modes	Planning	Start date: 2019 Expected end date: 2021 Spatial scale: Local Source affected: Transport Indicator: Reduce congestion levels at AM/PM peaks Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_5	Ravensthorpe Bypass. Complete by pass of AQMA 2.	Diverting traffic away from AQMA 2	Traffic planning and management: Encouragement of shift of transport modes	Planning	Start date: 2021 Expected end date: 2026 Spatial scale: Local Source affected: Transport Indicator: Divert traffic away from AQMA 2 Target emissions reduction: NO2 / PM10

Measure code	Description	Focus	Classification	Status	Other information
Kirklees Metropolitan Council_6	Cooper Bridge Gyratory proposed in AQMA 1	Traffic Management	Traffic planning and management: Encouragement of shift of transport modes	Planning	Start date: 2019 Expected end date: 2021 Spatial scale: Local Source affected: Transport Indicator: Reduction in queuing time Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_7	Proposed New Junction 24a on M62	Traffic Management	Traffic planning and management: Encouragement of shift of transport modes	Planning	Start date: 2021 Expected end date: 2023 Spatial scale: Local Source affected: Transport Indicator: Reduction in traffic volume through AQMA 1 Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_8	Bus Lanes approaching AQMA 1	Public transport improvements	Traffic planning and management: Improvement of public transport	Evaluation	Start date: 2011 Expected end date: 2011 Spatial scale: Local Source affected: Transport Indicator: Reduction in delays to buses Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_9	Resource Smart Resource Corridor	Transport link improvement	Traffic planning and management: Encouragement of shift of transport modes	Planning	Start date: 2014 Expected end date: 2014 Spatial scale: Local Source affected: Transport Indicator: Reduction of NO2 in AQMA Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_10	Internal Travel Plans	Promote modal shift	Traffic planning and management: Encouragement of shift of transport modes	Evaluation	Start date: 2008 Expected end date: 2009 Spatial scale: Local Source affected: Transport Indicator: Uptake of sustainable options Target emissions reduction: NO2 / PM10

Measure code	Description	Focus	Classification	Status	Other information
Kirklees Metropolitan Council_11	Transport Plans for Businesses required	Promote modal shift	Traffic planning and management: Encouragement of shift of transport modes	Evaluation	Start date: 2006 Expected end date: 2006 Spatial scale: Local Source affected: Transport Indicator: Uptake of sustainable options Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_12	School Travel Plan Framework	Promote modal shift	Traffic planning and management: Encouragement of shift of transport modes	Evaluation	Start date: 2005 Expected end date: 2006 Spatial scale: Local Source affected: Transport Indicator: Uptake of sustainable options Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_13	Bikeability in schools. Council staff visited schools giving cycling safety training.	Promote modal shift	Traffic planning and management: Encouragement of shift of transport modes	Evaluation	Start date: 2010 Expected end date: 2014 Spatial scale: Local Source affected: Transport Indicator: Increase in cycling Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_14	Spen Valley Greenway (Traffic Free Cycleway on former railway line)	Improvement to cycle route	Traffic planning and management: Expansion of bicycle and pedestrian infrastructure	Evaluation	Start date: 2001 Expected end date: 2001 Spatial scale: Local Source affected: Transport Indicator: Increase in cycling Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_15	Calder Valley Cycleway (Traffic Free Cycleway on former railway line)	Improvement to cycle route	Traffic planning and management: Expansion of bicycle and pedestrian infrastructure	Planning	Start date: 2008 Expected end date: 2008 Spatial scale: Local Source affected: Transport Indicator: Increase in cycling Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_16	City Cycle Ambition Grant 2	Improvement to cycle route to connect the Colne Valley to Cooper Bridge (through AQMA 1)	Traffic planning and management: Expansion of bicycle and pedestrian infrastructure	Planning	Start date: 2015 Expected end date: 2016 Spatial scale: Local Source affected: Transport Indicator: Increase in cycling Target emissions reduction: NO2 / PM10

Measure code	Description	Focus	Classification	Status	Other information
Kirklees Metropolitan Council_17	Free Parking for Electric Vehicles and 50% discount on parking for other ULEV	Promote uptake of LEVs	Traffic planning and management: Differentiation of parking fees	Implementation	Start date: 2008 Expected end date: 2008 Spatial scale: Local Source affected: Transport Indicator: Uptake of low emission and Ultra Low Emission Vehicles Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_18	City Car Club	Private Vehicle Usage reduction	Other measure: Other measure	Evaluation	Start date: 2009 Expected end date: 2009 Spatial scale: Local Source affected: Transport Indicator: Use of club cars Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_19	Car Sharing Scheme	Private Vehicle Usage reduction	Other measure: Other measure	Evaluation	Start date: 2007 Expected end date: 2007 Spatial scale: Local Source affected: Transport Indicator: Use of website Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_20	Local Free Bus around Huddersfield Town Centre and Dewsbury Town Centre	Private Vehicle Usage reduction	Other measure: Other measure	Evaluation	Start date: 2006 Expected end date: 2006 Spatial scale: Local Source affected: Transport Indicator: Bus Patronage Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_21	Conversion of Fleet to ULEV where appropriate	Promoting ULEV vehicles	Public procurement: Other measure	Implementation	Start date: 2008 Expected end date: 2020 Spatial scale: Local Source affected: Transport Indicator: Number of fleet changed to EV Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_22	Air Quality report to Newspaper	Promotes Air Quality Information to public	Public procurement: Other measure	Implementation	Start date: 2006 Expected end date: 2006 Spatial scale: Local Source affected: Transport Indicator: Awareness of Air Quality amongst the public Target emissions reduction: NO2 / PM10

Measure code	Description	Focus	Classification	Status	Other information
Kirklees Metropolitan Council_23	Bike to work scheme within Council, discount cycle purchase scheme	Promote modal shift	Traffic planning and management: Encouragement of shift of transport modes	Evaluation	Start date: 2009 Expected end date: 2009 Spatial scale: Local Source affected: Transport Indicator: Uptake of bikes Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_24	Local sustainable transport fund project to promote modal shift in schools. Dedicated officer visiting schools promoting model shift	Promote modal shift	Traffic planning and management: Encouragement of shift of transport modes	Planning	Start date: 2012 Expected end date: 2012 Spatial scale: Local Source affected: Transport Indicator: Monitor transport options at local schools Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_25	Air Quality Strategy	Policy driver	Other measure: Other measure	Evaluation	Start date: 2006 Expected end date: 2006 Spatial scale: Local Source affected: Transport Indicator: Local policy using Air Quality as a decision factor Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_26	Deep Clean in AQMA 2	Deep clean area to reduce particulate resuspension	Traffic planning and management: Other measure	Evaluation	Start date: 2013 Expected end date: 2014 Spatial scale: Local Source affected: Transport Indicator: Reduction in PM10 levels Target emissions reduction: PM10
Kirklees Metropolitan Council_27	Mote sensing real-time emissions	Research	Other measure: Other measure	Evaluation	Start date: 2010 Expected end date: 2011 Spatial scale: Local Source affected: Transport Indicator: Results from research Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_28	Electric Vehicle Charge point Installed in Council Depot	Improvement to infrastructure	Public procurement: Other measure	Evaluation	Start date: 2014 Expected end date: 2014 Spatial scale: Local Source affected: Transport Indicator: Number of fleet changed to EV Target emissions reduction: NO2 / PM10

Measure code	Description	Focus	Classification	Status	Other information
Kirklees Metropolitan Council_29	Trial of EV vehicles as pool car	Modal shift	Public procurement: Other measure	Evaluation	Start date: 2014 Expected end date: 2014 Spatial scale: Local Source affected: Transport Indicator: Uptake of LEVs Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_30	Smokey Vehicle hotline	Identify high emitters	Other measure: Other measure	Evaluation	Start date: 2001 Expected end date: 2001 Spatial scale: Local Source affected: Transport Indicator: Number of calls received Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_31	Planning conditions on all applications for sustainable transport	Promotes ULEV adoption	Other measure: Other measure	Evaluation	Start date: 2014 Expected end date: 2014 Spatial scale: Local Source affected: Transport Indicator: Number of conditions on approval Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_32	Green Procurement Toolkit	Promote green procurement	Other measure: Other measure	Evaluation	Start date: 2006 Expected end date: 2015 Spatial scale: Local Source affected: Transport Indicator: use of toolkit in procurement Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_33	West Yorkshire Low Emission Strategy	Air Quality Policy	Other measure: Other measure	Implementation	Start date: 2013 Expected end date: 2015 Spatial scale: Local Source affected: Transport Indicator: Policy adopted by Kirklees Council Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_34	Hotel EV Charge Point Project. Electric Vehicle Charge points installed in a number of accommodation providers	Improvement to infrastructure	Public procurement: Other measure	Implementation	Start date: 2015 Expected end date: 2015 Spatial scale: Local Source affected: Transport Indicator: use of the charge points Target emissions reduction: NO2 / PM10

Measure code	Description	Focus	Classification	Status	Other information
Kirklees Metropolitan Council_35	Install SCOOT within AQMA 2	Vehicle queuing	Traffic planning and management: Other measure	Implementation	Start date: 2013 Expected end date: 2013 Spatial scale: Local Source affected: Transport Indicator: Reduction in queuing time Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_36	New links to Greenway (Cycle Path) added through planning	Promote modal shift	Traffic planning and management: Expansion of bicycle and pedestrian infrastructure	Evaluation	Start date: 2001 Expected end date: 2001 Spatial scale: Local Source affected: Transport Indicator: Increase cycle routes Target emissions reduction: NO2/PM10
Kirklees Metropolitan Council_36	Subsidised Metro Cards for Staff	Promote modal shift	Other measure: Other measure	Evaluation	Start date: 2006 Expected end date: 2006 Spatial scale: Local Source affected: Transport Indicator: Promote use of public transport Target emissions reduction: NO2/PM10
Kirklees Metropolitan Council_37	Metro Cards Introduced for work journeys	Modal Shift	Other measure: Other measure	Evaluation	Start date: 2009 Expected end date: 2009 Spatial scale: Local Source affected: Transport Indicator: Reduce use of cars for shorter journeys Target emissions reduction: NO2/PM10
Kirklees Metropolitan Council_38	Installing EV Charge points into private car parks (three sites, 4 units installed)	Promotes ULEV adoption	Public procurement: Other measure	Implementation	Start date: 2015 Expected end date: 2015 Spatial scale: Local Source affected: Transport Indicator: Usage of charge points Target emissions reduction: NO2/PM10
Kirklees Metropolitan Council_39	Congestions performance funding	Promotes modal shift in schools	Traffic planning and management: Encouragement of shift of transport modes	Evaluation	Start date: 2012 Expected end date: 2014 Spatial scale: Local Source affected: Transport Indicator: Number of children going to schools using non private vehicles to access sites Target emissions reduction: NO2/PM10

Measure code	Description	Focus	Classification	Status	Other information
Kirklees Metropolitan Council_40	Bus priority at lights in AQMA 1. Gives late buses priority through Air Quality Management Area 1	Public transport journey times reduced, incentivising Public Transport	Traffic planning and management: Other measure	Evaluation	Start date: 2014 Expected end date: 2014 Spatial scale: Local Source affected: Transport Indicator: Reduction in queuing time for public transport Target emissions reduction: NO2 / PM10
Kirklees Metropolitan Council_41	Bluetooth journey monitoring	Inform traffic management systems	Traffic planning and management: Other measure	Implementation	Start date: 2014 Expected end date: 2016 Spatial scale: Local Source affected: Transport Indicator: Inform smart traffic management Target emissions reduction: NO2/PM10
Kirklees Metropolitan Council_42	Retrofitting of School Buses with Pollution abatement equipment	Vehicle Emissions Management	Retrofitting: Retrofitting emission control equipment to vehicles	Evaluation	Start date: 2013 Expected end date: 2014 Spatial scale: Whole agglomeration Source affected: Transport Indicator: All school buses now retrofitted and emissions reduced by 90% Target emissions reduction: NO2
Kirklees Metropolitan Council_44	Installation of Rapid Charge Network across West Yorkshire	Installation of infrastructure to promote EV use	Public procurement: Other measure	Evaluation	Start date: 2015 Expected end date: 2015 Spatial scale: Whole agglomeration Source affected: Transport Indicator: Rapid charge network across West Yorkshire being installed Target emissions reduction: NO2/PM10
Kirklees Metropolitan Council_45	Ainley Top	Highway Improvements and installation of Scoot	Traffic planning and management: Other measure	Evaluation	Start date: 2014 Expected end date: 2015 Spatial scale: Local Source affected: Transport Indicator: Reduction in traffic congestion Target emissions reduction: NO2/PM10



Measure code	Description	Focus	Classification	Status	Other information
Kirklees Metropolitan Council_46	A629 Corridor Improvement	Vehicle queuing	Traffic planning and management: Other measure	Planning	Start date: 2018 Expected end date: 2021 Spatial scale: Local Source affected: Transport Indicator: Reduction in traffic congestion Target emissions reduction: NO2/PM10
Kirklees Metropolitan Council_47	A653 Corridor Improvement	Vehicle queuing	Traffic planning and management: Other measure	Planning	Start date: 2018 Expected end date: 2020 Spatial scale: Local Source affected: Transport Indicator: Reduction in traffic congestion Target emissions reduction: NO2/PM10
Kirklees Metropolitan Council_48	Bus priority at lights in AQMA 2	Reducing Public transport queuing times	Other measure: Other measure	Evaluation	Start date: 2012 Expected end date: 2013 Spatial scale: Local Source affected: Transport Indicator: Reduction in queuing time for public transport Target emissions reduction: NO2 / PM10
Leeds City Council_1	TRAFFIC DEMAND MANAGEMENT - PUBLIC TRANSPORT MEASURES	Bus Lanes - linked to Quality Bus Initiatives/ Partnerships	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2012 Expected end date: 2014 Spatial scale: Whole town or city Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Leeds City Council_2	TRAFFIC DEMAND MANAGEMENT - PUBLIC TRANSPORT MEASURES	Guided busways	Traffic planning and management: Improvement of public transport	Implementation	Start date: 2001 Expected end date: 2010 Spatial scale: Whole town or city Source affected: Transport Indicator: A total of 3.5 kms of Guideways were built along appropriate sections of the A61, A64 & A63 corridors. The A61 route has benefitted from a fleet of hybrid buses since 2011. All Guideways benefit from other bus priority systems eg. AVL Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Leeds City Council_3	TRAFFIC DEMAND MANAGEMENT - PUBLIC TRANSPORT MEASURES	New Generation Transport Trolleybus	Traffic planning and management: Improvement of public transport	Preparation	Start date: 2020 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: If approved, this £250K project would involve a dedicated 14 km mass transit system, running from north to south Leeds. It will use state of the art electric trolley buses, part powered from renewable energy. Would include 2 large P&R sites, totalling 3,000 spaces Target emissions reduction: N/A
Leeds City Council_4	TRAFFIC DEMAND MANAGEMENT - PUBLIC TRANSPORT MEASURES	New Rail Stations	Traffic planning and management: Improvement of public transport	Planning	Start date: 2014 Expected end date: 2015 Spatial scale: Whole town or city Source affected: Transport Indicator: The construction of 2 new rail stations (Apperly Bridge & Kirkstall Forge) on the electrified Airedale /Wharfedale line. Will include 2 P&R sites with 400 spaces Target emissions reduction: N/A
Leeds City Council_5	TRAFFIC DEMAND MANAGEMENT - PUBLIC TRANSPORT MEASURES	Promotion of Electric trains	Traffic planning and management: Improvement of public transport	Implementation	Start date: 2014 Expected end date: 2015 Spatial scale: Whole agglomeration Source affected: Transport Indicator: Construction of a new Southern Entrance to Leeds rail station. Northern Rail constructed a cycle point at Leeds, capable of storing up to 300 cycles. Target emissions reduction: N/A
Leeds City Council_6	TRAFFIC DEMAND MANAGEMENT - PUBLIC TRANSPORT MEASURES	HS2/HS3	Traffic planning and management: Improvement of public transport	Preparation	Start date: 2012 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: Proposed high speed Leeds to London route, with likely journey time reduced to 1hr 22 mins & speeds designed for 225 mph Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Leeds City Council_7	TRAFFIC DEMAND MANAGEMENT - PRIORITY MEASURES	HOV lanes	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2001 Expected end date: 2011 Spatial scale: Local Source affected: Transport Indicator: Leeds set up the first HOV lane on the A647. This was followed by a second HOV lane on the A63, which links the IRR with the A1/M1 Link road Target emissions reduction: N/A
Leeds City Council_8	TRAFFIC DEMAND MANAGEMENT - PRIORITY MEASURES	HGV lanes	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2010 Expected end date: 2010 Spatial scale: Local Source affected: Transport Indicator: The A63 HOV lane is also an HGV lane having easy access to the to M1 for the existing Industrial area + the proposed Leeds Enterprise Zone Target emissions reduction: N/A
Leeds City Council_9	TRAFFIC DEMAND MANAGEMENT - PRIORITY MEASURES	Bus lanes/gates	Traffic planning and management: Improvement of public transport	Implementation	Start date: 2001 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: As for QBI's Target emissions reduction: N/A
Leeds City Council_10	TRAFFIC DEMAND MANAGEMENT - PRIORITY MEASURES	AVL - priority at traffic lights for buses	Traffic planning and management: Improvement of public transport	Implementation	Start date: 2001 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: Used on most transport corridors in Leeds eg. Guided bus. It extends Green phase of lights, known as SPRUCE Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Leeds City Council_11	TRAFFIC DEMAND MANAGEMENT - INTEGRATED TRANSPORT SYSTEMS	P+R sites	Traffic planning and management: Improvement of public transport	Implementation	Start date: 2014 Expected end date: 2016 Spatial scale: Whole town or city Source affected: Transport Indicator: Elland Rd P&R has capacity for 800 cars, it opened mid 2014, average occupancy is 350 cars & increasing + 8 EV recharging points. Temple Green is proposed 1,000 space P&R in Leeds Enterprise Zone, it will operate Hybrid buses Target emissions reduction: N/A
Leeds City Council_12	TRAFFIC DEMAND MANAGEMENT - INTEGRATED TRANSPORT SYSTEMS	Quality Contracts/ Partnerships	Public procurement: Cleaner vehicle transport services	Other	Start date: 2010 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: On Going discussions with WYCA & relevant Bus Operators Target emissions reduction: N/A
Leeds City Council_13	TRAFFIC DEMAND MANAGEMENT - FISCAL RESTRAINTS	Incentives to promote LEVs + ULEVs	Public procurement: Other measure	Evaluation	Start date: 2016 Expected end date: 2021 Spatial scale: Whole town or city Source affected: Transport Indicator: A range of incentives are being developed to promote EV's & hybrid cars/taxis. Will include reduced parking costs, free EV recharging, beneficial taxi ranks etc. Target emissions reduction: N/A
Leeds City Council_14	TRAFFIC DEMAND MANAGEMENT - FISCAL RESTRAINTS	Car Parking charges	Traffic planning and management: Differentiation of parking fees	Implementation	Start date: 2016 Expected end date: 2016 Spatial scale: Whole town or city Source affected: Transport Indicator: As for 13 Target emissions reduction: N/A
Leeds City Council_15	TRAFFIC DEMAND MANAGEMENT - CYCLING & WALKING	Leeds & Bradford City Connect Superhighway	Traffic planning and management: Expansion of bicycle and pedestrian infrastructure	Implementation	Start date: 2014 Expected end date: 2016 Spatial scale: Whole town or city Source affected: Transport Indicator: £20m Govt. funding for 23kms of segregated cycle & pedestrian tracks, between east Leeds & Bradford CC Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Leeds City Council_16	TRAFFIC DEMAND MANAGEMENT - CYCLING & WALKING	Cycling & pedestrian routes	Traffic planning and management: Expansion of bicycle and pedestrian infrastructure	Implementation	Start date: 2001 Expected end date: 2026 Spatial scale: Whole town or city Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Leeds City Council_17	ENCOURAGING SUSTAINABLE TRAVEL - TRAVELWISE	Travel awareness campaigns	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2001 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: A range of initiatives & campaigns take place on an annual basis, managed by a specialist LCC & W Yorks Team Target emissions reduction: N/A
Leeds City Council_18	ENCOURAGING SUSTAINABLE TRAVEL - TRAVELWISE	Bikeability	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2005 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: Specialist Team provides cycle training to all primary schools Target emissions reduction: N/A
Leeds City Council_19	ENCOURAGING SUSTAINABLE TRAVEL - TRAVELWISE	Leeds City Car Club - with increasing use of ULEVs	Other measure: Other measure	Planning	Start date: 2005 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: Numerous sites in Leeds. Approx. 50 cars are available to Leeds City Car Club members Target emissions reduction: N/A
Leeds City Council_20	ENCOURAGING SUSTAINABLE TRAVEL - TRAVELWISE	Car Sharing	Other measure: Other measure	Implementation	Start date: 2005 Expected end date: 2030 Spatial scale: Whole agglomeration Source affected: Transport Indicator: LCC corporate car sharing + the W Yorks Travel Plan Network have a large & growing database for car sharing Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Leeds City Council_21	ENCOURAGING SUSTAINABLE TRAVEL - TRAVEL PLANNING	School, workplace and residential travel plans	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2001 Expected end date: 2015 Spatial scale: Whole town or city Source affected: Transport Indicator: 278 schools (98%) of schools have tailored Travel Plans, 49 of which are monitored annually & 15 are 'accredited schools'. Links with Corporate & W Yorks Travel Plans Target emissions reduction: N/A
Leeds City Council_22	ENCOURAGING SUSTAINABLE TRAVEL - TRAVEL PLANNING	Personalised travel plans	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2005 Expected end date: 2015 Spatial scale: Whole town or city Source affected: Transport Indicator: Sustrans school officers have developed bespoke Travel plans across various organisations Target emissions reduction: N/A
Leeds City Council_23	ACTIONS TO REDUCE VEHICLE EMISSIONS - TRAFFIC MANAGEMENT	New UTMC system to promote smooth/free-flowing traffic	Traffic planning and management: Other measure	Implementation	Start date: 2012 Expected end date: 2016 Spatial scale: Whole town or city Source affected: Transport Indicator: A new TMS is now operational that has improved traffic flow & reduced disruption. This system continues to be extended and is backed up with CCTV cameras at over 200 sites Target emissions reduction: N/A
Leeds City Council_24	ACTIONS TO REDUCE VEHICLE EMISSIONS - TRAFFIC MANAGEMENT	Intelligent Transport systems (eg Variable message signs)	Traffic planning and management: Other measure	Implementation	Start date: 2014 Expected end date: 2015 Spatial scale: Whole town or city Source affected: Transport Indicator: Have installed 20 VMS's across Leeds at appropriate locations, to advise motorists of disruption Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Leeds City Council_25	ACTIONS TO REDUCE VEHICLE EMISSIONS - TRAFFIC MANAGEMENT	Speed Management (Active speed management signs)	Traffic planning and management: Other measure	Implementation	Start date: 2012 Expected end date: 2016 Spatial scale: Local Source affected: Transport Indicator: 50 Vehicle Activated Signs have been set up in appropriate sites across Leeds Target emissions reduction: N/A
Leeds City Council_26	ACTIONS TO REDUCE VEHICLE EMISSIONS - LOW EMISSION STRATEGIES AND CLEANER FUELS	Exemplar local authority - Liquid gas (CNG/LBM) vehicles; hybrid vans; electric 'panel' vans	Public procurement: Other measure	Implementation	Start date: 2009 Expected end date: 2025 Spatial scale: Whole town or city Source affected: Transport Indicator: Number of fleet vehicles switched to LEV / Alternative fuel and atechnology Target emissions reduction: N/A
Leeds City Council_27	ACTIONS TO REDUCE VEHICLE EMISSIONS - LOW EMISSION STRATEGIES AND CLEANER FUELS	Development of public EV recharging network (fast and rapid)	Public procurement: Other measure	Preparation	Start date: 2014 Expected end date: 2015 Spatial scale: Whole agglomeration Source affected: Transport Indicator: 16 Rapid EV Chargers Installed on strategic WY network, of which 8 will be in Leeds Target emissions reduction: N/A
Leeds City Council_28	ACTIONS TO REDUCE VEHICLE EMISSIONS - LOW EMISSION STRATEGIES AND CLEANER FUELS	EV recharging in residential and commercial premises conditioned through planning	Other measure: Other measure	Implementation	Start date: 2012 Expected end date: 2012 Spatial scale: Whole town or city Source affected: Transport Indicator: No. of EV charge points installed on new developments Target emissions reduction: N/A
Leeds City Council_29	ACTIONS TO REDUCE VEHICLE EMISSIONS - LOW EMISSION STRATEGIES AND CLEANER FUELS	Provision of hybrid buses (x35) in Leeds based fleet	Public procurement: Cleaner vehicle transport services	Implementation	Start date: 2012 Expected end date: 2014 Spatial scale: Whole town or city Source affected: Transport Indicator: A total of 35 Hybrid buses are operational in the north & east of Leeds Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Leeds City Council_30	ACTIONS TO REDUCE VEHICLE EMISSIONS - LOW EMISSION STRATEGIES AND CLEANER FUELS	Retrofit technologies - SCRT to 146 WYMetro buses	Retrofitting: Retrofitting emission control equipment to vehicles	Implementation	Start date: 2014 Expected end date: 2015 Spatial scale: Whole agglomeration Source affected: Transport Indicator: All Euro III and Euro IV buses retrofitted to meet Euro V+ emission standards Target emissions reduction: N/A
Leeds City Council_31	ACTIONS TO REDUCE VEHICLE EMISSIONS - LOW EMISSION STRATEGIES AND CLEANER FUELS	Shift of LA Refuse Collection fleet to CNG/LBM; gas refuelling infrastructure	Public procurement: Other measure	Planning	Start date: 2013 Expected end date: 2022 Spatial scale: Local Source affected: Transport Indicator: No of additional CNG Refuse Collection Vehicles (RCV) entering the fleet Target emissions reduction: N/A
Leeds City Council_32	ACTIONS TO REDUCE VEHICLE EMISSIONS - LOW EMISSION STRATEGIES AND CLEANER FUELS	Hybrid taxi/private hire project	Permit systems and economic instruments: Introduction/increase of environment taxes	Other	Start date: 2013 Expected end date: 2015 Spatial scale: Whole town or city Source affected: Transport Indicator: Penetration of hybrid vehicles into licensed fleet Target emissions reduction: N/A
Leeds City Council_33	ACTIONS TO REDUCE VEHICLE EMISSIONS - LOW EMISSION STRATEGIES AND CLEANER FUELS	Development of hydrogen bus feasibility project	Public procurement: New vehicles, including low emission vehicles	Evaluation	Start date: 2016 Expected end date: 2016 Spatial scale: Whole town or city Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Leeds City Council_34	ACTIONS TO REDUCE VEHICLE EMISSIONS - LOW EMISSION STRATEGIES AND CLEANER FUELS	Liquid Air' technology applications & trials on buses & refrigerated transport units in Leeds	Retrofitting: Retrofitting emission control equipment to vehicles	Planning	Start date: 2015 Expected end date: 2017 Spatial scale: Whole agglomeration Source affected: Transport Indicator: The Dearman Engine Company have received Govt. funding to develop & trial zero emission Heat Hybrid bus units & zero emission Transport Refrigeration Units (TRUs), working with local Bus & Supermarket operators in Leeds Target emissions reduction: N/A



Measure code	Description	Focus	Classification	Status	Other information
Leeds City Council_35	ACTIONS TO REDUCE VEHICLE EMISSIONS - LOW EMISSION STRATEGIES AND CLEANER FUELS	Eco driving techniques - SAFED courses	Other measure: Other measure	Implementation	Start date: 2006 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Leeds City Council_36	GUL CITY SCHEME BID	Access to and advanced booking of all EV recharging points using Public Transport Smart Card	Public procurement: Other measure	Planning	Start date: 2016 Expected end date: 2021 Spatial scale: Whole agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Leeds City Council_37	GUL CITY SCHEME BID	Smart EV energy use through dynamic charging system	Public procurement: Other measure	Planning	Start date: 2016 Expected end date: 2020 Spatial scale: Whole agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Leeds City Council_38	GUL CITY SCHEME BID	Scrappage scheme to incentivise ULEV uptake	Public procurement: Other measure	Evaluation	Start date: 2016 Expected end date: 2016 Spatial scale: Whole town or city Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Leeds City Council_39	GUL CITY SCHEME BID	ULEV purchase incentives for employees	Public procurement: Other measure	Evaluation	Start date: 2016 Expected end date: 2016 Spatial scale: Whole agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Leeds City Council_40	GUL CITY SCHEME BID	Free city centre parking	Traffic planning and management: Differentiation of parking fees	Planning	Start date: 2016 Expected end date: 2016 Spatial scale: Whole agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Leeds City Council_41	GUL CITY SCHEME BID	Try-before-you-buy' EV fleet to encourage uptake	Public procurement: Other measure	Evaluation	Start date: 2016 Expected end date: 2017 Spatial scale: Whole town or city Source affected: Transport Indicator: N/A Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Leeds City Council_42	GUL CITY SCHEME BID	Expansion of ULEV fleet in Car Club vehicles	Public procurement: Other measure	Planning	Start date: 2016 Expected end date: 2016 Spatial scale: Whole agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Leeds City Council_43	GUL CITY SCHEME BID	A ULEV apprenticeship programme to skill vehicle repairers and servicing staff	Public procurement: Other measure	Planning	Start date: 2016 Expected end date: 2019 Spatial scale: Whole agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Leeds City Council_44	OVERARCHING STRATEGIC DOCUMENTS	West Yorkshire Transport Emissions Group (WYTEG)	Public procurement: Other measure	Other	Start date: 2001 Expected end date: 2030 Spatial scale: Whole agglomeration Source affected: Transport Indicator: WYTEG has continued to provide advice to the W Yorks LTP on Air Quality, Climate Change mitigation & resilience, Noise & ULEVs /fuels etc. Target emissions reduction: N/A
Leeds City Council_45	OVERARCHING STRATEGIC DOCUMENTS	West Yorkshire Low Emission Strategy (WYLES)	Public procurement: Other measure	Preparation	Start date: 2015 Expected end date: 2015 Spatial scale: Whole agglomeration Source affected: Transport Indicator: To develop an overarching West Yorkshire Low Emission Strategy. Final draft completed March 2015. Target emissions reduction: N/A
Leeds City Council_46	OVERARCHING STRATEGIC DOCUMENTS	Leeds LEZ Feasibility Study	Public procurement: Other measure	Implementation	Start date: 2014 Expected end date: 2014 Spatial scale: Whole town or city Source affected: Transport Indicator: Joint working with Bradford provided excellent value for supporting HIA report & for the EcIA report Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Leeds City Council_47	OVERARCHING STRATEGIC DOCUMENTS	Leeds CC Low Emission Strategy - including freight and bus strategies	Other measure: Other measure	Planning	Start date: 2015 Expected end date: 2015 Spatial scale: Whole agglomeration Source affected: Transport Indicator: Delivery of LES for Leeds CC based on development of WYLES and with knowledge gained from LEZ feasibility study Target emissions reduction: N/A
Bradford City Council_1	Lobby for additional regional/national measures	Inform relevant agencies of scale of problem and need for lower traffic flow and LEVs	Other measure: Other measure	Implementation	Start date: 2009 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: No new AQMAs Target emissions reduction: 25-40% reduction in NO2 by 2015 in the AQMAs
Bradford City Council_2	Adoption of Corporate Air Quality Strategy (AQS)	Adoption of Bradford AQS to address current and future Air Quality Issues	Other measure: Other measure	Implementation	Start date: 2009 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: No new AQMAs Target emissions reduction: No new AQMAs. Improvements in air quality across the district
Bradford City Council_3	Additional use of the Planning system for LAQM	Development and implementation of LES planning guidance via LES	Other measure: Other measure	Implementation	Start date: 2009 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Commercial and residential sources Indicator: S106 agreements Target emissions reduction: S106 contributions in a budget for LAQM. Formulae for determining contributions
Bradford City Council_4	Low Emission strategy for procuring council fleet	Within AQS / LES	Other measure: Other measure	Implementation	Start date: 2009 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: Emission standards adopted, number of compliant vehicles and activity monitored Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Bradford City Council_5	Integrate the AQAP into the WYLTP3	Development of West Yorkshire Low Emission Strategy (WYLES)	Other measure: Other measure	Implementation	Start date: 2009 Expected end date: 2015 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: - Target emissions reduction: -
Bradford City Council_6	Freight Strategy	N/A	Traffic planning and management: Freight transport measure	Implementation	Start date: 2009 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: Compliance monitoring Target emissions reduction: Road schemes identified, emissions standards adopted and compliance monitored
Bradford City Council_7	Provide environmental and travel information	School travel Public transport	Public information and Education: Internet	Implementation	Start date: 2009 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: Quantitative surveys Target emissions reduction: N/A
Bradford City Council_8	Travel Planning	Reduction in car useage	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2009 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: Surveys to confirm overall car journeys reduced by 10% Target emissions reduction: Reduce car useage (personal, institutional and commercial sectors) by 10%
Bradford City Council_9	Living Street / Connect 2	To link Bradford City Centre, West Bowling and beyond with a high quality walking and cycling route.	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Bradford City Council_10	Great Northern Trail	To link villages in the West of the district with a high quality walking and cycling route	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Bradford City Council_11	Bikeability	To promote safe cycling amongst school children.	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Bradford City Council_12	bradfordcarshare.com	Website to encourage car sharing	Traffic planning and management: Other measure	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Bradford City Council_13	High occupancy vehicle lanes	To encourage car sharing	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Bradford City Council_14	Bradford District Bus Performance Improvement Partnership	To facilitate improvements to bus services in the District and develop bus action plans	Public procurement: Cleaner vehicle transport services	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Bradford City Council_15	YorCard SMART bus ticketing	To make public transport more attractive and efficient by allowing seamless single ticket travel within the West Yorkshire region via different service providers. Some destinations beyond West Yorkshire also to be included.	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Bradford City Council_16	Variable Message Signage (VMS)	To provide better real time travel information.	Public information and Education: Other mechanisms	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Bradford City Council_17	Planned new railway stations at Apperley Bridge and Low Moor. Rail station improvements at Forster Sq, Keighley, Ben Rhydding, Burley in Wharfedale and Frizinghall.	To improve public transport provision	Traffic planning and management: Improvement of public transport	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Bradford City Council_18	EV Charging Provision Jacob's Well, Bradford MDC, Council offices twin 7kW 32A	To promote and facilitate EV use	Public procurement: Other measure	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Bradford City Council_19	EV Charging Provision Ian Clough Hall, Baildon, Council owned community hall twin 7kW 32A	To promote and facilitate EV use	Public procurement: Other measure	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Bradford City Council_20	EV Charging Provision Scott St council car park , Keighley twin 7kW 32A	To promote and facilitate EV use	Public procurement: Other measure	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Bradford City Council_21	EV Charging Provision Airedale Hospital twin 7kW 32A	To promote and facilitate EV use	Public procurement: Other measure	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Bradford City Council_22	EV Charging Provision Saltaire BDCT twin 7kW 32A	To promote and facilitate EV use	Public procurement: Other measure	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Bradford City Council_23	EV Charging Provision Lynfield Mount BDCT twin 7kW 32A	To promote and facilitate EV use	Public procurement: Other measure	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Bradford City Council_24	EV Charging Provision Airedale Centre Mental Health BDCT twin 7kW 32A	To promote and facilitate EV use	Public procurement: Other measure	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Bradford City Council_25	EV Charging Provision Bradford University	To promote and facilitate EV use	Public procurement: Other measure	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: N/A Target emissions reduction: N/A
Bradford City Council_26	Successful Clean Vehicle Technology Fund bid	To reduce bus emissions	Retrofitting: Retrofitting emission control equipment to vehicles	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: NOx reduction 118 tonnes Target emissions reduction: Reductions in Manningham Lane AQMA <40ug/m3
Bradford City Council_27	Partnership with Bradford Institute of Health research (BIHR) with associated funding (50,000)	To research increases in active travel and improvements for air quality and health	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2014 Expected end date: 2017 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: Research project Target emissions reduction: increases in walking and cycling in school
Bradford City Council_28	Bradford LEZ feasibility Study	To understand LEZ interventions in Bradford	Other measure: Other measure	Implementation	Start date: 2012 Expected end date: 2012 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: Raising awareness Target emissions reduction: Revocation of most AQMAs
Bradford City Council_29	Gas trial and feasibility study	To trial gas technology with a view to fleet transformation	Other measure: Other measure	Implementation	Start date: 2013 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: Raising awareness of use of gas as a vehicle fuel Target emissions reduction: N/A
Bradford City Council_30	Lead Authority for the Academic Health Science Network	To promote NHS partnership and work with health colleagues to improve air quality	Other measure: Other measure	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole Agglomeration Source affected: Transport Indicator: Improvements in air quality quantified using NHS improvement targets Target emissions reduction: N/A

Measure code	Description	Focus	Classification	Status	Other information
Calderdale Metropolitan Borough Council_AQAP1	Achieve better understanding of local air quality	Improved measurement and monitoring of air quality and traffic flows.	Traffic planning and management: Other measure	Implementation	Start date: 2009 Expected end date: 2024 Spatial scale: Whole town or city Source affected: Transport Indicator: (1) Traffic flow and travel demand through and within the AQMAs. Traffic queue lengths in AQMAs. (2) Monitoring and modelling of traffic flows and air quality. Traffic queue lengths at junctions. Journey times through junctions. (3) Emissions characteristics of different vehicle types and under different driving conditions. Target emissions reduction: N/A
Calderdale Metropolitan Borough Council_AQAP2	Awareness campaign	Stakeholder engagement and active participation in a joint search for solutions.	Public information and Education: Internet	Implementation	Start date: 2009 Expected end date: 2024 Spatial scale: Whole town or city Source affected: Transport Indicator: (1) Investigate feasibility of Local Air Quality Partnership. (2) Disseminate air quality information via Council website. Reports published on website. (3) Investigate establishment of Freight Quality Partnership. Target emissions reduction: N/A
Calderdale Metropolitan Borough Council_AQAP3	Traffic and Highways management	Changes to the highway network. Travel demand management. Travel choice.	Traffic planning and management: Other measure	Implementation	Start date: 2009 Expected end date: 2024 Spatial scale: Whole town or city Source affected: Transport Indicator: (1) High occupancy routes. Promote high occupancy vehicles. Modal split surveys. Improve traffic flow on AQMA corridors. (2) Promote cycling and walking. (3) Public transport patronage. Promotion of company discounted MetroCards + First Bus and Northern Rail Season tickets. Increase provision of Metro poll cards for Council travel. (4) Car clubs. (5) Car parking strategy. (6) 20mph areas. Target emissions reduction: N/A



Measure code	Description	Focus	Classification	Status	Other information
Calderdale Metropolitan Borough Council_AQAP4	Promote LEV technologies	Vehicle technology - encourage uptake and provide infrastructure	Public procurement: Other measure	Implementation	Start date: 2009 Expected end date: 2024 Spatial scale: Whole town or city Source affected: Transport Indicator: (1) Where possible and practical procure ULEVs within fleet profile. Pilot use of EV to evaluate suitability as pool car. (2) Introduce Council staff salary sacrifice car scheme for LEVs. (3) Promote EV recharge point installation. Target emissions reduction: N/A
Calderdale Metropolitan Borough Council_AQAP5	Planning policy	Promote sustainable transport in new development, both to restrict / prevent growth in air pollution and to restrict relevant exposure to poor air quality	Other measure: Other measure	Implementation	Start date: 2009 Expected end date: 2024 Spatial scale: Whole town or city Source affected: Transport Indicator: (1) Require travel plans and transport assessments in association with major new developments. (2) School travel plan. (3) Ensure full account taken of air quality in connection with new developments. Target emissions reduction: N/A
Calderdale Metropolitan Borough Council_AQAP6	Compatibility with other programmes	Improve compatibility and cross-benefits with other strategic plans. Development of employee car salary sacrifice scheme. Promotion of community renewal energy schemes. Schemes to minimise food miles by supporting local food production. West Yorkshire + Transport Plan - Halifax Master Plan to remove through traffic, expand pedestrian realm and new bus facilities.	Traffic planning and management: Other measure	Implementation	Start date: 2014 Expected end date: 2024 Spatial scale: Whole town or city Source affected: Transport Indicator: (1) Compatibility with West Yorkshire Local Transport Plan and development of WYLES. (2) Increase in uptake of locally grown food. Target emissions reduction: N/A
Wakefield Metropolitan District Council_1	Establish the West Yorkshire Low Emissions Strategy	Overarching strategy to enable emissions reduction implementation	Other measure: Other measure	Evaluation	Start date: 2016 Expected end date: 2020 Spatial scale: Whole agglomeration Source affected: Transport Indicator: Adoption within the authority's principals Target emissions reduction: emission reductions not quantified but likely to be substantial when action plan implemented

Measure code	Description	Focus	Classification	Status	Other information
Wakefield Metropolitan District Council_2	Production of an air quality and emissions planning guidance document	To reduce emissions from new developments	Other measure: Other measure	Implementation	Start date: 2014 Expected end date: 2014 Spatial scale: Whole town or city Source affected: Transport Indicator: Implementation of the guidance Target emissions reduction: emission reductions not quantified but likely to be significant when implemented
Wakefield Metropolitan District Council_3	Establish EV charging in all new developments	To reduce emissions from new developments	Public procurement: Other measure	Implementation	Start date: 2014 Expected end date: 2030 Spatial scale: Whole town or city Source affected: Transport Indicator: No. of developments with charging infrastructure Target emissions reduction: emission reductions not quantified but likely to be significant when implemented
Wakefield Metropolitan District Council_4	Establish the West Yorkshire Low emissions Group	To oversee implementation of the West Yorkshire Low Emission strategy	Other measure: Other measure	Implementation	Start date: 2013 Expected end date: 2018 Spatial scale: Whole agglomeration Source affected: Transport Indicator: Adoption and implementation of the WYLES Target emissions reduction: emission reductions not quantified but likely to be substantial when action plan implemented
Wakefield Metropolitan District Council_5	Establish Rapid charging EV point network	To allow uptake of LEV	Public procurement: Other measure	Implementation	Start date: 2015 Expected end date: 2016 Spatial scale: Whole town or city Source affected: Transport Indicator: Number of points created to complement existing points Target emissions reduction: emission reductions not quantified but likely to be significant when implemented
Wakefield Metropolitan District Council_6	Establish gas refuelling infrastructure	To reduce HDV and bus emissions	Public procurement: Other measure	Implementation	Start date: 2015 Expected end date: 2017 Spatial scale: Whole town or city Source affected: Transport Indicator: number of stations established & uptake Target emissions reduction: up to 70% reductions dependent on uptake

Measure code	Description	Focus	Classification	Status	Other information
Wakefield Metropolitan District Council_7	Extension of the Leeds/Bradford Low Emission Zone Feasibility	Reduce emissions in exceedence areas	Traffic planning and management: Low emission zones	Evaluation	Start date: 2015 Expected end date: 2017 Spatial scale: Whole agglomeration Source affected: Transport Indicator: Viability of LEZ Target emissions reduction: up to 30% reductions dependent on the uptake
Wakefield Metropolitan District Council_8	Creation of the Wakefield Eastern Relief Road (WERR) & associated emissions reduction measures	To relieve congestion in Wakefield city	Traffic planning and management: Other measure	Implementation	Start date: 2016 Expected end date: 2017 Spatial scale: Whole town or city Source affected: Transport Indicator: Implementation of air quality mitigation measures Target emissions reduction: up to 30% reductions within the AQMA, dependent on the uptake of measures
Wakefield Metropolitan District Council_9	Retrofit (SCR) to fleet of MyBus school buses	Reduce emissions in exceedence areas	Retrofitting: Retrofitting emission control equipment to vehicles	Implementation	Start date: 2013 Expected end date: 2015 Spatial scale: Whole agglomeration Source affected: Transport Indicator: Elimination of Euro III & IV school buses Target emissions reduction: emission reductions not quantified but likely to be significant when implemented
Wakefield Metropolitan District Council_10	Wakefield Cycle Strategy	Increase safe cycle use and reduce car dependency	Traffic planning and management: Expansion of bicycle and pedestrian infrastructure	Implementation	Start date: 2013 Expected end date: 2020 Spatial scale: Whole town or city Source affected: Transport Indicator: increase in cycle use Target emissions reduction: emission reductions not quantified but significant within exceedence areas
Wakefield Metropolitan District Council_11	Wakefield Transport Strategy	improving transport use, availability and impact	Traffic planning and management: Other measure	Implementation	Start date: 2012 Expected end date: 2017 Spatial scale: Whole town or city Source affected: Transport Indicator: review 2015 Target emissions reduction: emissions reductions not quantified but are reflected in air quality improvements

Measure code	Description	Focus	Classification	Status	Other information
Wakefield Metropolitan District Council_12	WMDC Rights of Way Improvement Plan	Improve accessibility, use and connectivity	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2012 Expected end date: 2014 Spatial scale: Whole town or city Source affected: Transport Indicator: review 2015 Target emissions reduction: emissions reductions not quantified but are reflected in air quality improvements
Wakefield Metropolitan District Council_13	West Yorkshire Travel Planner	Reduce emissions in exceedence areas	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2010 Expected end date: 2017 Spatial scale: Whole agglomeration Source affected: Transport Indicator: Membership and activity Target emissions reduction: emissions reductions not quantified but are reflected in air quality improvements
Wakefield Metropolitan District Council_14	Sustainable Development Travel Plans	Reduce emissions in exceedence areas	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2014 Expected end date: 2020 Spatial scale: Whole town or city Source affected: Transport Indicator: Number of approved plans Target emissions reduction: emission reductions not quantified but likely to be significant when implemented
Wakefield Metropolitan District Council_15	Worksmart & Flexible working	Reduce emissions	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2012 Expected end date: 2020 Spatial scale: Whole town or city Source affected: Transport Indicator: workforce numbers utilising the scheme Target emissions reduction: emissions reductions not quantified but are reflected in air quality improvements
Wakefield Metropolitan District Council_16	Sustainable School Travel Strategy	Reduce car usage on school runs	Traffic planning and management: Encouragement of shift of transport modes	Implementation	Start date: 2012 Expected end date: 2020 Spatial scale: Whole town or city Source affected: Transport Indicator: 1% car reduction year on year Target emissions reduction: emissions reductions not quantified but are reflected in air quality improvements

Measure code	Description	Focus	Classification	Status	Other information
Wakefield Metropolitan District Council_17	Expansion & conversion of the Free City Bus to LEV	Reduce polluting emissions	Public procurement: Cleaner vehicle transport services	Planning	Start date: 2016 Expected end date: 2018 Spatial scale: Whole town or city Source affected: Transport Indicator: uptake of measure Target emissions reduction: emissions reductions not quantified but are reflected in air quality improvements
Wakefield Metropolitan District Council_18	Conversion and expansion of Council LEV fleet	Reduce polluting emissions	Other measure: Other measure	Planning	Start date: 2016 Expected end date: 2020 Spatial scale: Whole town or city Source affected: Transport Indicator: Number of vehicles procured or converted Target emissions reduction: emission reductions not quantified but likely to be substantial when action plan implemented
Wakefield Metropolitan District Council_19	Bus conversions & procurement to LEV	Reduce polluting emissions	Public procurement: Other measure	Planning	Start date: 2016 Expected end date: 2020 Spatial scale: Whole agglomeration Source affected: Transport Indicator: Number of LEV buses in operation Target emissions reduction: Up to a potential 80% reduction in targeted areas
Wakefield Metropolitan District Council_20	LE taxi/Private Hire	Reduce polluting emissions	Permit systems and economic instruments: Introduction/increase of environment taxes	Planning	Start date: 2016 Expected end date: 2018 Spatial scale: Whole town or city Source affected: Transport Indicator: Uptake of initiatives Target emissions reduction: emissions reductions not quantified but are reflected in air quality improvements
Wakefield Metropolitan District Council_21	Establish EV charging infrastructure	Reduce polluting emissions	Public procurement: Other measure	Planning	Start date: 2016 Expected end date: 2020 Spatial scale: Whole town or city Source affected: Transport Indicator: Size of network Target emissions reduction: emissions reductions not quantified but are reflected in air quality improvements

Measure code	Description	Focus	Classification	Status	Other information
Wakefield Metropolitan District Council_22	Financial incentives for ULEV procurement	Reducing polluting emissions	Public procurement: Other measure	Planning	Start date: 2016 Expected end date: 2020 Spatial scale: Whole town or city Source affected: Transport Indicator: uptake of incentives Target emissions reduction: emissions reductions not quantified but are reflected in air quality improvements
Wakefield Metropolitan District Council_23	Carbon Management Plan LES measures	to meet carbon reduction targets	Public procurement: New vehicles, including low emission vehicles	Planning	Start date: 2017 Expected end date: 2020 Spatial scale: Whole town or city Source affected: Transport Indicator: Measure implementation Target emissions reduction: emissions reductions not quantified but are reflected in air quality improvements