



Department  
for Environment  
Food & Rural Affairs

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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 Leicester Urban Area (UK0011)**

**September 2015**



Llywodraeth Cymru  
Welsh Government



The Scottish  
Government  
Riaghaltas na h-Alba



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# Contents

|                |  |           |
|----------------|--|-----------|
| <b>1</b>       | <b>Introduction</b>  | <b>3</b>  |
| 1.1            | This document . . . . .  | 3         |
| 1.2            | Context . . . . .  | 3         |
| 1.3            | Zone status . . . . .  | 3         |
| 1.4            | Plan Structure . . . . .   | 3         |
| <b>2</b>       | <b>General information about the Zone</b>                        | <b>4</b>  |
| 2.1            | Administrative information . . . . .                             | 4         |
| 2.2            | Assessment details . . . . .                                     | 6         |
| 2.3            | Reporting Under European Directives . . . . .                    | 8         |
| <b>3</b>       | <b>Overall Picture for 2013 Reference Year</b>                   | <b>8</b>  |
| 3.1            | Introduction . . . . .   | 8         |
| 3.2            | Reference year: NO <sub>2</sub> _UK0011_Annual_1 . . . . .       | 8         |
| <b>4</b>       | <b>Measures</b>  | <b>13</b> |
| 4.1            | Introduction . . . . .   | 13        |
| 4.2            | Source apportionment . . . . .                                   | 13        |
| 4.3            | Measures . . . . .   | 13        |
| 4.4            | Measures timescales . . . . .                                    | 14        |
| <b>5</b>       | <b>Baseline Model projections</b>                                | <b>14</b> |
| 5.1            | Overview of model projections . . . . .                          | 14        |
| 5.2            | Baseline projections: NO <sub>2</sub> _UK0011_Annual_1 . . . . . | 15        |
| <b>Annexes</b> |  | <b>19</b> |
| A              | References . . . . .   | 19        |
| B              | Source apportionment graphs . . . . .                            | 20        |
| C              | Tables of measures . . . . .                                     | 22        |

# 1 Introduction

## 1.1 This document

This document is the Leicester Urban Area agglomeration zone (UK0011) 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 Leicester Urban Area agglomeration zone
- Details of the NO<sub>2</sub> exceedance situation within the Leicester 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 Leicester 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  $\mu\text{g}\text{m}^{-3}$
- The hourly limit value: no more than 18 exceedances of 200  $\mu\text{g}\text{m}^{-3}$  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. However, where the limit values cannot be achieved by then, the Directive also allowed Member States to postpone this attainment date until 01/01/2015 at the latest provided air quality plans were established demonstrating how the limit values would be met by this extended deadline. Postponement of compliance until 01/01/2015 was granted by the European Commission for Leicester Urban Area agglomeration zone.

## 1.3 Zone status

The assessment undertaken for the Leicester Urban Area agglomeration zone indicates that the annual limit value was exceeded in 2013 but is likely to be achieved before 2020 through the introduction of measures included in the baseline.

## 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: Leicester Urban Area

Zone code: UK0011

Type of zone: agglomeration zone

Reference year: 2013

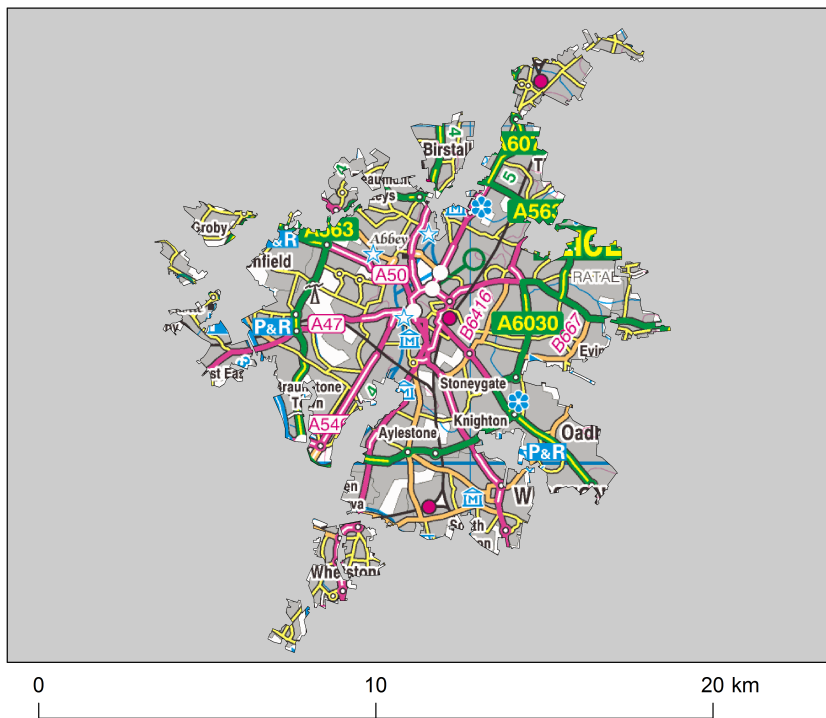
Extent of zone: Figure 1 shows the area covered by the Leicester Urban Area agglomeration zone.

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. Blaby District Council
2. Charnwood Borough Council
3. Harborough District Council
4. Hinckley and Bosworth Borough Council
5. Leicester City Council
6. Oadby & Wigston 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 Leicester Urban Area agglomeration zone (UK0011).**



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**Figure 2: Map showing Local Authorities within the Leicester Urban Area agglomeration zone (UK0011).**



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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. Leicester Centre GB0597A (67%)
2. Leicester University GB1026A (21%)

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

### Modelling

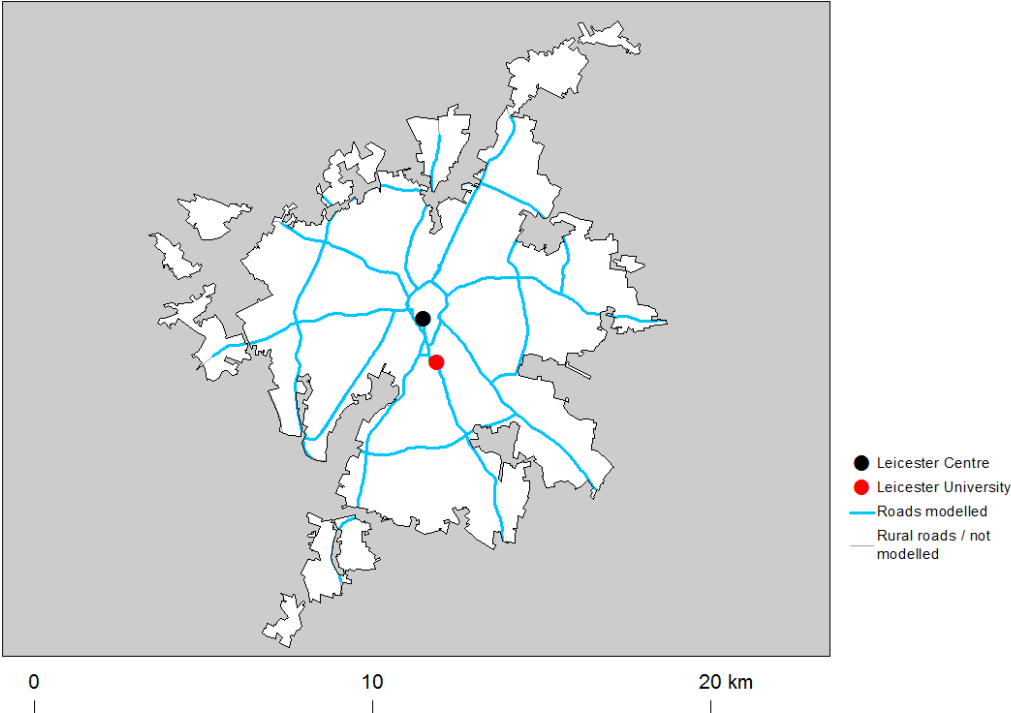
Modelling for the 2013 reference year has been carried out for the whole of the UK. This modelling covers the following extent within this zone:

- Total background area within zone (approx): 101 km<sup>2</sup>
- Total population within zone (approx): 432,018 people
- Total road length where an assessment of NO<sub>2</sub> concentrations have been made: 82 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 Leicester Urban Area (UK0011) 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 µgm<sup>-3</sup>)
- The hourly limit value (no more than 18 hourly exceedances of 200 µgm<sup>-3</sup> in a calendar year)

Within the Leicester 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>\_UK0011\_Annual\_1, which covers exceedances of the annual limit value. This exceedance situation is described below.

Where locations have a time extension in place, a margin of tolerance has been defined by the Air Quality Directive (2008/50/EC) which applies to both NO<sub>2</sub> limit values up until the time extension expires. Data comparing assessed concentrations at locations within this agglomeration zone with the margin of tolerance are presented in e-reporting for 2013 (<http://cdr.eionet.europa.eu/gb/eu/annualair>).

## 3.2 Reference year: NO<sub>2</sub>\_UK0011\_Annual\_1

The NO<sub>2</sub>\_UK0011\_Annual\_1 exceedance situation covers all exceedances of the annual mean limit value in the Leicester 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 no measured exceedances of the annual limit value in this zone 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, 19.4 km of road length and 1 km<sup>2</sup> background area were modelled to exceed 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>\_UK0011\_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 NO<sub>2</sub>\_UK0011\_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    |
|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Leicester Centre (GB0597A)     | 35 (98) | 35 (94) | 37 (93) | 36 (85) | 33 (97) | 30 (98) | 32 (99) | 30 (99) | 29 (93) | 42 (81) | 30 (70) | 30 (89) | 25 (67) |
| Leicester University (GB1026A) |         |         |         |         |         |         |         |         |         |         |         |         | 32 (21) |

(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>\_UK0011\_Annual\_1 for 2001 onwards.**

|  | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Road length exceeding (km)                                 | 77.2 | 36.4 | 71.4 | 46.3 | 47.8 | 46.5 | 51.6 | 24.1 | 25.3 | 43.4 | 18.6 | 18.5 | 19.4 |
| Background exceeding (km <sup>2</sup> )                    | 15   | 0    | 5    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 2    | 1    | 1    |
| Maximum modelled concentration ( $\mu\text{gm}^{-3}$ ) (a) | 64.0 | 54.0 | 61.4 | 58.1 | 59.2 | 56.2 | 58.2 | 58.2 | 66.5 | 73.5 | 66   | 62   | 53   |

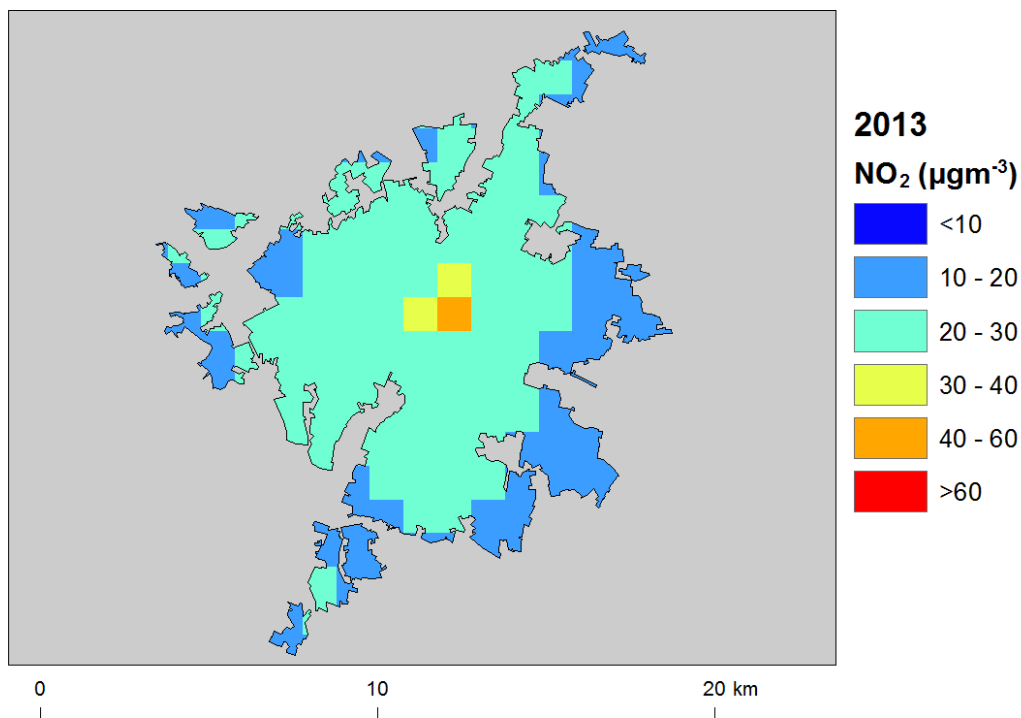
(a) Annual Mean Limit Value =  $40 \mu\text{gm}^{-3}$

**Table 3: Modelled annual mean NOx source apportionment at the traffic count point with the highest modelled concentration in 2013 in NO2\_UK0011\_Annual\_1 ( $\mu\text{gm}^{-3}$ ) (traffic count point 48489 on the A594; OS grid (m): 458290, 304630).**

| 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   | 12.5                                   |
|   | From within the UK  | 7.8                                    |
|   | From transboundary sources (includes shipping and other EU member states) | 4.7                                    |
| Urban background sources NOx (i.e. sources located within 0.3 - 30 km from the receptor).               | Total   | 42.3                                   |
|   | From road traffic sources   | 23.4                                   |
|   | From industry (including heat and power generation)                       | 5.2                                    |
|   | From agriculture  | NA                                     |
|   | From commercial/residential sources                                       | 6.3                                    |
|   | From shipping   | 0.0                                    |
|   | From off road mobile machinery  | 5.3                                    |
|   | From natural sources  | NA                                     |
|   | From transboundary sources  | NA                                     |
| From other urban background sources   | 2.1   |  |
| Local sources NOx (i.e. contributions from sources < 0.3 km from the receptor).                         | Total   | 83.0                                   |
|   | From petrol cars  | 9.5                                    |
|   | From diesel cars  | 32.8                                   |
|   | From HGV rigid  | 9.1                                    |
|   | From HGV articulated  | 2.3                                    |
|   | From buses  | 16.5                                   |
|   | From petrol LGVs  | 0.2                                    |
|   | From diesel LGVs  | 12.4                                   |
| From motorcycles  | 0.1   |  |
| From London taxis   | 0.0   |  |
| Total NOx (i.e. regional background + urban background + local components)                              |   | 137.8                                  |
| Total NO <sub>2</sub> (i.e. regional background + urban background + local components)                  |   | 53                                     |

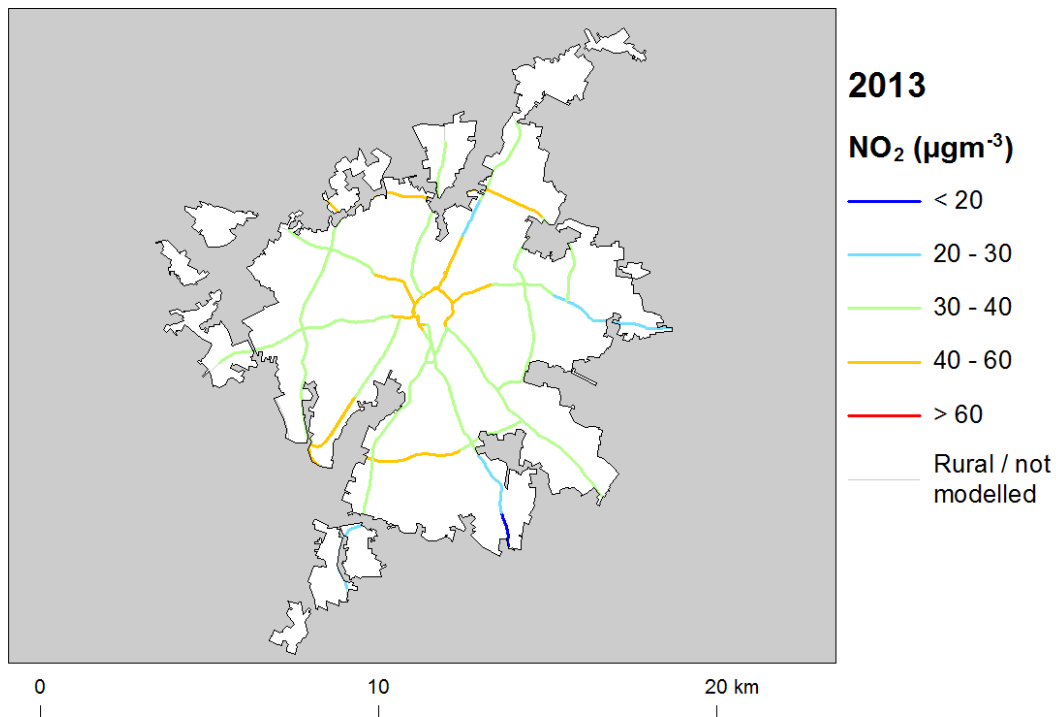
(a) Components are listed with NOx concentration of NA when there is no source from this sector.

**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 Leicester 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 42.3  $\mu\text{gm}^{-3}$  of NO<sub>x</sub> out of a total of 137.8  $\mu\text{gm}^{-3}$  of NO<sub>x</sub>. Cars, LGVs and on some roads buses, articulated HGVs and Rigid HGVs 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.

## Overview

Leicester's Local Transport Plan aims to reduce the negative impact of traffic on air quality and deliver improvements to access to key services by public transport, walking and cycling that will help improve air quality.

The Leicester North West Major Transport Scheme, with attributed funding of £19.2 million, is run jointly by Leicester City Council and Leicestershire County Council and is intended to produce significant network improvements. The scheme consists of a wedge broadly around the transport corridors of the A50 (Grobby Road) and the A6 (Loughborough Road). It will be constructed over three years beginning in 2015/16. There will be a phased approach to delivering the construction elements of the scheme mainly to minimise disruption to road users during the three years of construction. Typically the works are improved junctions and roads, improved signal control, cycle and pedestrian route improvements. Buses will also benefit from continued development of real-time information and smart ticketing.

The policies that have been adopted within the area will help improve air quality by reducing the level of emissions. As part of this, a number of buses have been retrofitted and taxi and freight operators have been encouraged to change vehicles to achieve emission reductions. For example, there is a 50% reduction on the licence fee for taxis to go to the Euro VI standard. To help encourage a shift away from using private cars for travelling, a number of cycling routes have also been implemented that will reduce congestion and an initiative to engage 100 small businesses to carry out staff cycle training.

## 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>\_UK0011\_Annual\_1**

Table 4 presents summary results for the baseline model projections for 2020, 2025 and 2030 for the NO<sub>2</sub>\_UK0011\_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 39  $\mu\text{gm}^{-3}$ . Hence, the model results suggest that compliance with the NO<sub>2</sub> annual limit value is likely to be achieved before 2020 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>\_UK0011\_Annual\_1.**

|  | 2013 | 2020 | 2025 | 2030 |
|--|------|------|------|------|
| Road length exceeding (km)   | 19.4 | 0.0  | 0.0  | 0.0  |
| Background exceeding (km <sup>2</sup> )                                    | 1    | 0    | 0    | 0    |
| Maximum modelled concentration NO <sub>2</sub><br>(μgm <sup>-3</sup> ) (a) | 53   | 39   | 35   | 33   |
| Corresponding modelled concentration NOx<br>(μgm <sup>-3</sup> ) (b)       | 138  | 98   | 85   | 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.

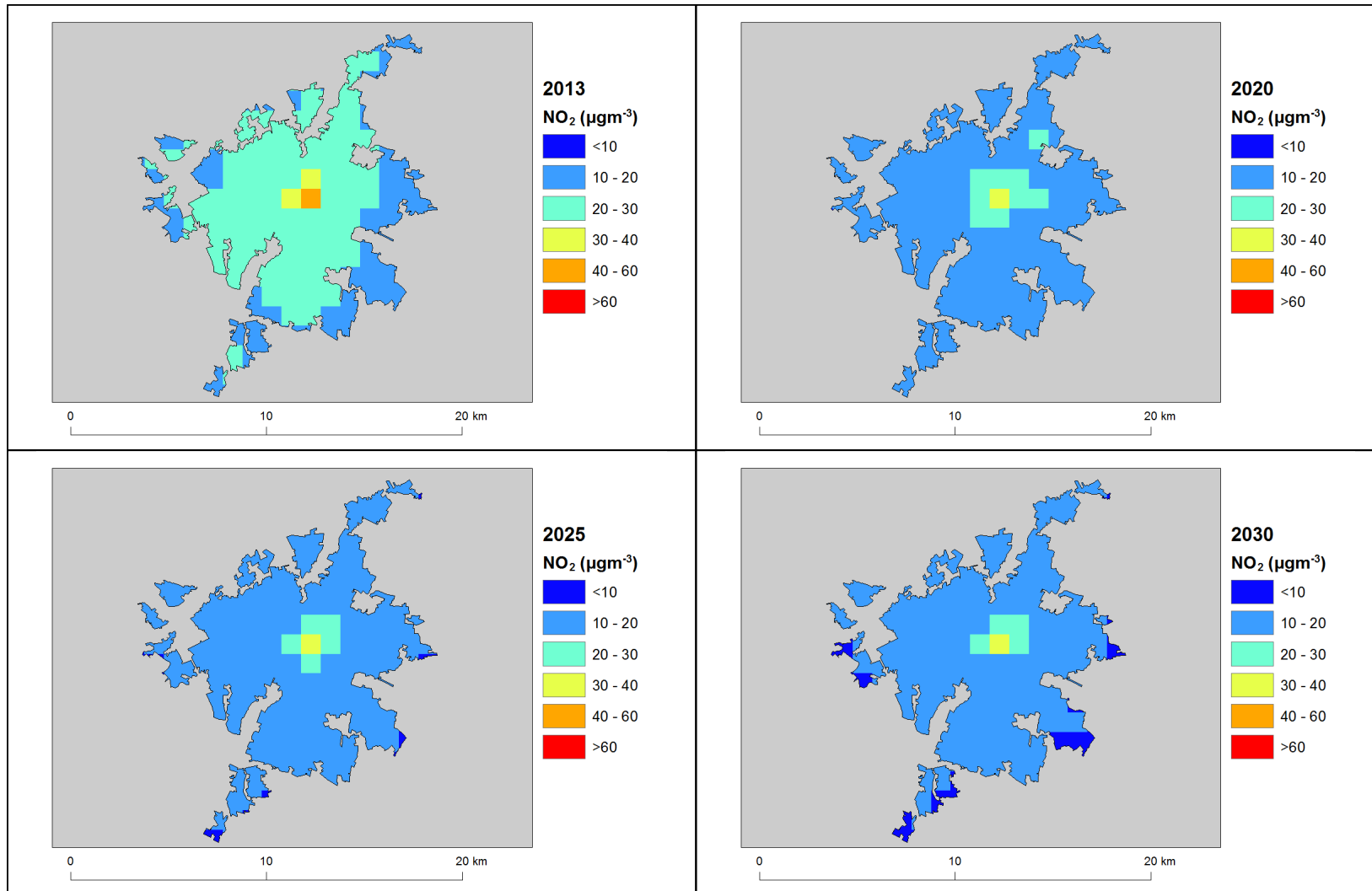
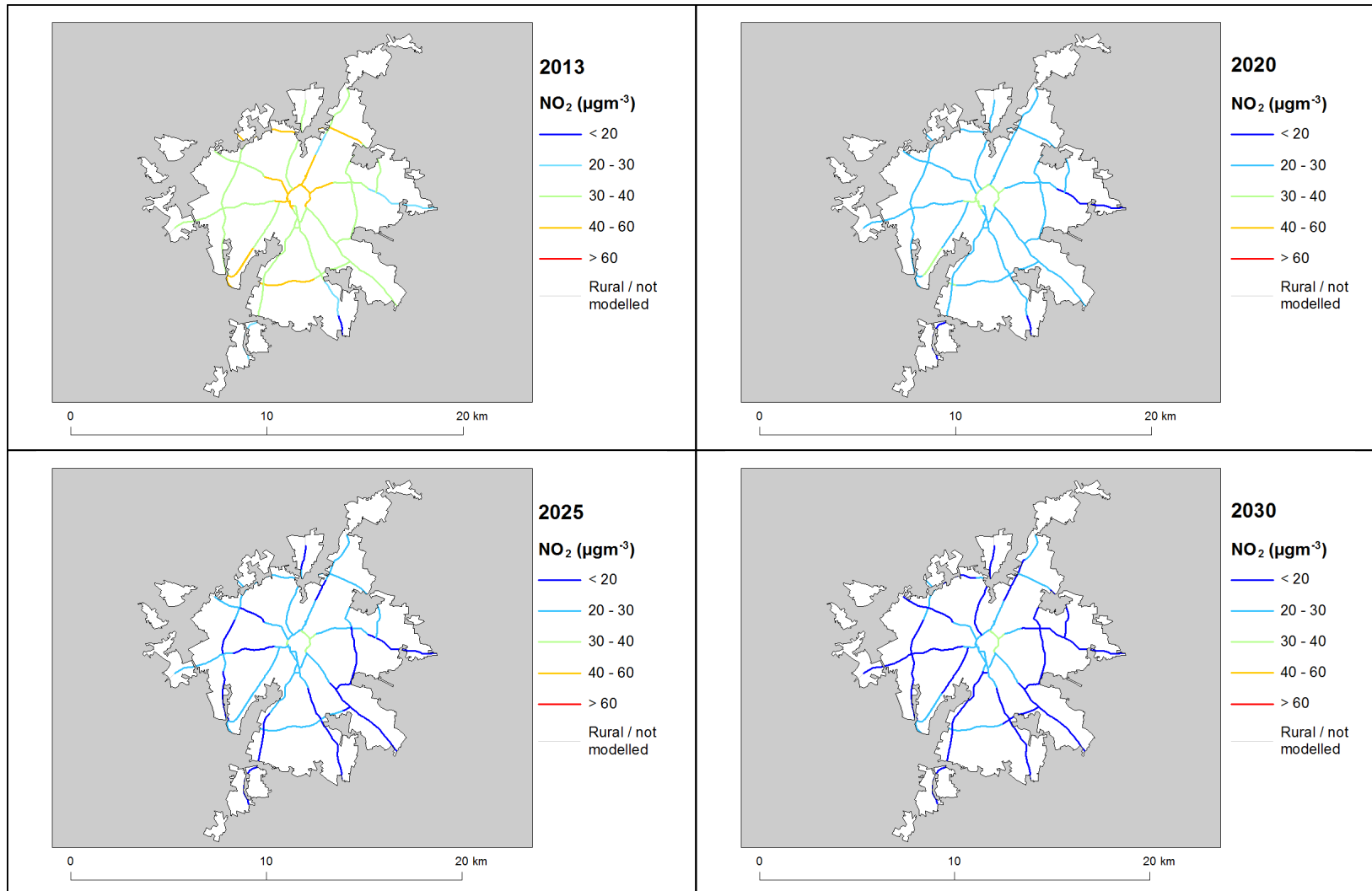


Figure 7: Roadside baseline projections of annual mean NO<sub>2</sub> concentrations in 2020, 2025 and 2030. 2013 is also included here for reference. Modelled exceedances of the annual limit value are shown in orange and red.



# Annexes

## A References

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

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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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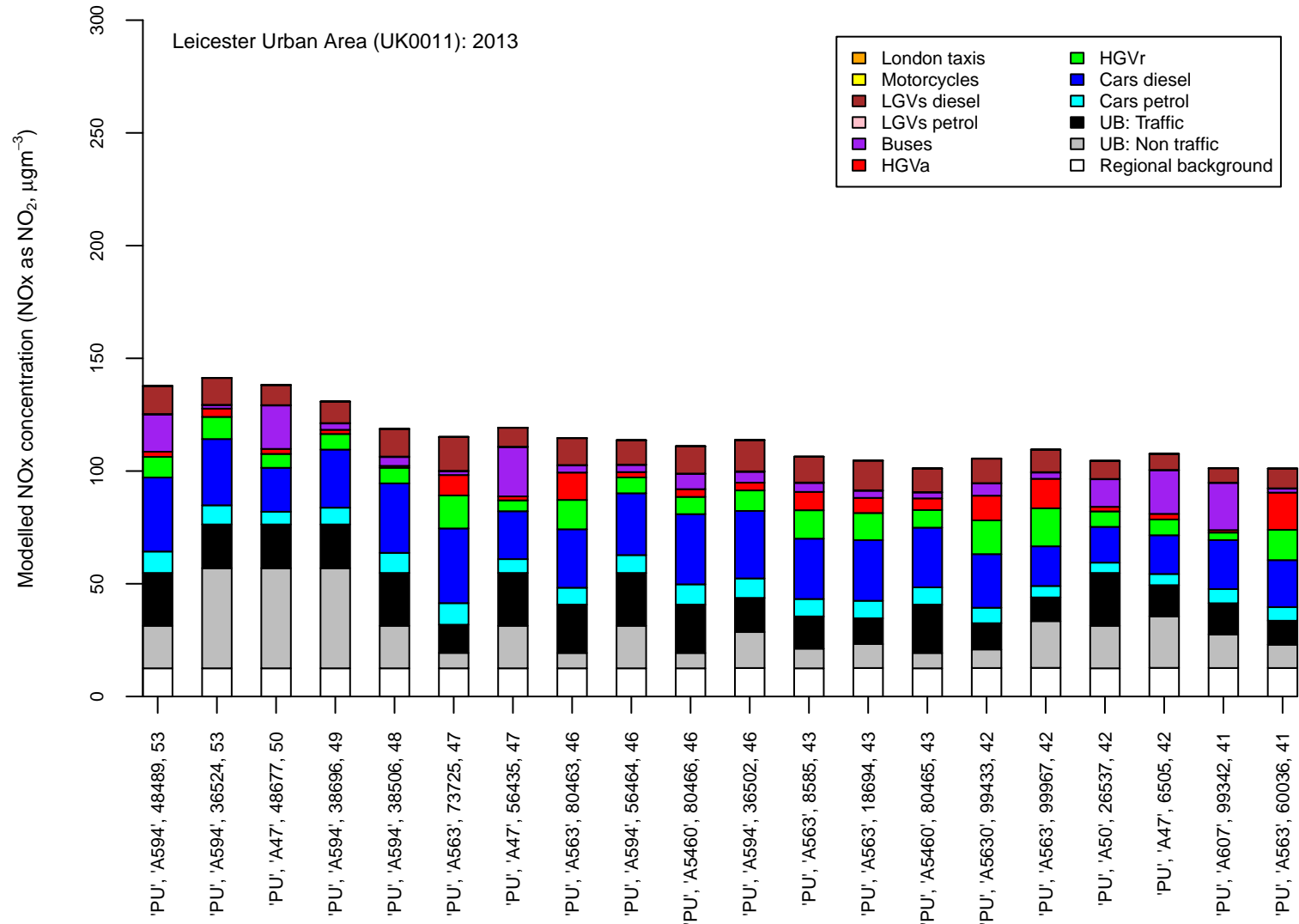
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1st Daughter Directive 1999/30/EC. Council Directive 1999/30/EC, of 22 April 1999 relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air (The First Daughter Directive). From 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, censusid 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 Leicester Urban Area (UK0011)**

| Measure code              | Description                | Focus   | Classification                                    | Status         | Other information   |
|---------------------------|----------------------------|---|---|----------------|---|
| Leicester City Council_51 | 18. Enforcing speed limits | Leicester and Leicestershire Road Safety Partnership  | Traffic planning and management:<br>Other measure | Implementation | Start date: 2001<br>Expected end date: 2030<br>Spatial scale: Whole agglomeration<br>Source affected: Transport<br>Indicator: No of schemes introduced<br>Target emissions reduction: <0.1% |
| Leicester City Council_52 | 18. Junction improvements  | Pork Pie scheme                                       | Traffic planning and management:<br>Other measure | Implementation | Start date: 2007<br>Expected end date: 2008<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: Scheme implemented<br>Target emissions reduction: <0.1%                     |
| Leicester City Council_53 | 18. Junction improvements  | The Ravensbridge Drive junction improvement           | Traffic planning and management:<br>Other measure | Implementation | Start date: 2007<br>Expected end date: 2008<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: Scheme implemented<br>Target emissions reduction: <0.1%                     |
| Leicester City Council_54 | 18. Junction improvements  | Melton Road/Troon way junction improvement            | Traffic planning and management:<br>Other measure | Evaluation     | Start date: 2007<br>Expected end date: 2008<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: Scheme implemented<br>Target emissions reduction: <0.1%                     |
| Leicester City Council_55 | 18. Junction improvements  | St Nicholas Place junction improvement                | Traffic planning and management:<br>Other measure | Implementation | Start date: 2007<br>Expected end date: 2008<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: Scheme implemented<br>Target emissions reduction: <0.1%                     |
| Leicester City Council_56 | 18. Junction improvements  | Ayelstone Road/ A426 improvements                     | Traffic planning and management:<br>Other measure | Implementation | Start date: 2014<br>Expected end date: 2015<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: Scheme implemented<br>Target emissions reduction: <0.1%                     |
| Leicester City Council_57 | 18. Junction improvements  | A47 Humberstone Road - 4 major junctions improvements | Traffic planning and management:<br>Other measure | Implementation | Start date: 2007<br>Expected end date: 2008<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: Scheme implemented<br>Target emissions reduction: <0.1%                     |



| Measure code              | Description                                     | Focus  | Classification  | Status         | Other information   |
|---------------------------|---|--|---|----------------|---|
| Leicester City Council_58 | 18. Junction improvements                       | Safron lane /Sturdee Road improvements   | Traffic planning and management:<br>Other measure                   | Implementation | Start date: 2007<br>Expected end date: 2008<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: Scheme implemented<br>Target emissions reduction: <0.1%         |
| Leicester City Council_59 | 18. Management of congestion from works /events | There are three groups that manage this measure (which also forms part of the TMA Action Plan). These are: Events Advisory Group - this meets monthly with organisers and stakeholders such as the emergency services to plan events in detail to minimise disruption. This is managed with the support Transport Systems which advise on traffic management and the Area Traffic Control room is used for large events e.g. Diwali, Caribbean Carnival etc. NRSWA Co-ordination Group - this meets quarterly and discusses the programme of works which includes Council, Utility, Developers and County Council works which may have an effect on the City. Work programmes are agreed to avoid clashes and reduce disruption. Monthly Traffic Management Meetings - these monthly meetings include the bus companies, emergency services and other agencies discuss traffic management in detail of projects that affect the highway network. The Council employs a Utilities NRSWA Co-ordinator who manages the Street Work Register [a statutory requirement]. This enables all proposed works to be effectively co-ordinated in the short and medium term. | Traffic planning and management:<br>Other measure                   | Implementation | Start date: 2007<br>Expected end date: 2030<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: No of roadworks and events<br>Target emissions reduction: <0.1% |
| Leicester City Council_60 | 18. Reallocation of road space                  | A426 Aylestone road - bus priority lane  | Traffic planning and management:<br>Improvement of public transport | Implementation | Start date: 2011<br>Expected end date: 2014<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: No of schemes completed<br>Target emissions reduction: <0.1%    |

| Measure code              | Description                    | Focus   | Classification   | Status         | Other information  |
|---------------------------|--------------------------------|---|--|----------------|--|
| Leicester City Council_61 | 18. Reallocation of road space | The Pedestrian Preference Zone order has been completed and is in operation. Gallowtree Gate, Market Street and Hotel Street have been completed. The next and final stages of the project include: Belvoir Street, Clock Tower / East Gates, High Street, Granby Street, Market Place. This will be completed by September 2008. This work is being carried out to support the huge investment in regeneration and construction, and in conjunction with the development of Highcross Leicester (the extended Shires Shopping Centre); creating a large traffic free area, which will be safe and pollution free - making visiting the city centre a pleasure and complementing the new shopping centre. | Traffic planning and management: Encouragement of shift of transport modes | Implementation | Start date: 2014<br>Expected end date: 2018<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: No of schemes completed<br>Target emissions reduction: <0.1% |

| Measure code              | Description   | Focus  | Classification   | Status         | Other information  |
|---------------------------|---|--|--|----------------|--|
| Leicester City Council_62 | 18. Reallocation of road space                                    | <p>Quality Bus Corridors: Saffron Lane - Phase 1; Pork Pie Island scheme completed in 2007/08.</p> <p>Abbey Lane -</p> <p>Ravensbridge Drive junction improvements complete in 2007/08.</p> <p>Melton Road - Melton Road/Troon Way junction improvement scheme complete.</p> <p>Improvements to the A47 Humberston Road QBC Phase 1 complete. City Centre bus, pedestrian and cycle improvements -</p> <p>From early 2006, Leicester City Council has been working on its 'Streets + Spaces' and Connecting Leicester programmes to develop the streets and spaces in the city centre. Streets + Spaces include creating a new bus corridor to the north of the city centre; pedestrianising High Street, Clock Tower, Market Place approach the Lanes area and Market Street. Many streets will also be rebuilt to a new high quality standard, using granite paving, new street furniture and designs which will create clean, uncluttered streets and spaces.</p> | Traffic planning and management: Improvement of public transport | Implementation | <p>Start date: 2007</p> <p>Expected end date: 2030</p> <p>Spatial scale: Local</p> <p>Source affected: Transport</p> <p>Indicator: No of schemes completed</p> <p>Target emissions reduction: &lt;0.1%</p>             |
| Leicester City Council_63 | 18. Replace further 11,000 sodium street lights with LEDs         | Road infrastructure  | Traffic planning and management: Other measure                   | Implementation | <p>Start date: 2014</p> <p>Expected end date: 2015</p> <p>Spatial scale: Whole town or city</p> <p>Source affected: Transport</p> <p>Indicator: No of lamps replaced</p> <p>Target emissions reduction: &lt;0.01%</p>  |
| Leicester City Council_64 | 18. Replace traffic signals at 129 sites with more efficient LEDs | Road infrastructure  | Traffic planning and management: Other measure                   | Implementation | <p>Start date: 2014</p> <p>Expected end date: 2015</p> <p>Spatial scale: Whole town or city</p> <p>Source affected: Transport</p> <p>Indicator: No of lights replaced</p> <p>Target emissions reduction: &lt;0.01%</p> |

| Measure code              | Description                                 | Focus   | Classification  | Status         | Other information   |
|---------------------------|---|---|---|----------------|---|
| Leicester City Council_65 | 18. Traffic calming/diverting rat runs      | Traffic calming schemes are implemented in 20 mph zones to ensure the enforcement | Traffic planning and management:<br>Reduction of speed limits and control | Implementation | Start date: 2001<br>Expected end date: 2023<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: Scheme implemented<br>Target emissions reduction: <0.1%         |
| Leicester City Council_66 | 19. Deliver programme of 20 MPH zones       | 80 zones to be implemented in areas around schools and residential areas          | Traffic planning and management:<br>Reduction of speed limits and control | Implementation | Start date: 2001<br>Expected end date: 2023<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: No of schemes implemented<br>Target emissions reduction: <0.1%  |
| Leicester City Council_67 | 20. Discounted parking charges for LEV's    | Reduced charges for LEV   | Traffic planning and management:<br>Differentiation of parking fees       | Implementation | Start date: 2015<br>Expected end date: 2030<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: Scheme in place<br>Target emissions reduction: <0.1%            |
| Leicester City Council_68 | 21. Preparation of new Leicester Local Plan | Leicester Local Plan  | Other measure: Other measure  | Preparation    | Start date: 2015<br>Expected end date: 2016<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: Plan in place<br>Target emissions reduction: <0.1% |

| Measure code                | Description                    | Focus   | Classification  | Status     | Other information  |
|-----------------------------|--------------------------------|---|---|------------|--|
| Charnwood Borough Council_1 | Eastern Gateway Project:       | Construction of a new link road [combined with the closure of Ratcliffe Road (currently in an AQMA) to through-traffic], from Nottingham Road to Meadow Lane on derelict land around Loughborough Rail Station. Enabling much improved access to the station, reducing delay and congestion in the area. Improvements to the station forecourt area, combined with the new link road has enabled greatly improved and consolidated public transport interchange facilities at the station i.e. integrated bus hub, taxi ranks, cycle racks. Associated traffic management improvements to surrounding narrow residential streets, including removing lorries from unsuitable routes and introducing a residents parking scheme. | Traffic planning and management:<br>Improvement of public transport | Evaluation | Start date: 2011<br>Expected end date: 2011<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A |
| Charnwood Borough Council_2 | Loughborough Inner Relief Road | Construction of an inner relief road to redirect all traffic away from the arterial A6 (High Street and Swan Street) allowing for pedestrianisation of the town centre. The scheme incorporates new bus stops and travel information 'waypoints' in the pedestrianised area, consolidated taxi ranks, improved traffic management (control and signage), parking restrictions   | Traffic planning and management:<br>Improvement of public transport | Evaluation | Start date: 2014<br>Expected end date: 2014<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A |
| Charnwood Borough Council_3 | Epinal Way Junction            | Alterations made to junction layout, providing extra lanes and improved traffic signals to aid traffic flow.  | Traffic planning and management:<br>Other measure                   | Evaluation | Start date: 2014<br>Expected end date: 2014<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A |

| Measure code                | Description  | Focus | Classification  | Status         | Other information  |
|-----------------------------|--|-------|---|----------------|--|
| Charnwood Borough Council_4 | Put in two electric charge points at Beehive Lane car park Loughborough for public use                                     | N/A   | Public procurement: Other measure   | Implementation | Start date: 2014<br>Expected end date: 2014<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: Equipment on site and contract in place with contractor to supply to public<br>Target emissions reduction: Not known   |
| Charnwood Borough Council_5 | Renew 3 no. street wardens fleet vehicles with 2 electric charge vehicles and one Diesel. Currently have 3 diesel vehicles | N/A   | Public procurement: New vehicles, including low emission vehicles                   | Implementation | Start date: 2015<br>Expected end date: 2015<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: New vehicles on site including 2 electric charge vehicles<br>Target emissions reduction: Not known                     |
| Charnwood Borough Council_6 | Driver assessments   | N/A   | Other measure: Other measure  | Planning       | Start date: 2015<br>Expected end date: 2030<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: Reduction in fuel consumption<br>Target emissions reduction: Not Known   |
| Charnwood Borough Council_7 | Investment in cycle route network to reach all parts of Loughborough   | N/A   | Traffic planning and management: Expansion of bicycle and pedestrian infrastructure | Other          | Start date: 2007<br>Expected end date: 2030<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: Monitoring of %age increase in cycling at counting points across Loughborough<br>Target emissions reduction: Not known |
| Charnwood Borough Council_8 | Evaluation of fewer parking spaces or higher charges to restrain car access to work or shops                               | N/A   | Traffic planning and management: Management of parking places                       | Other          | Start date: 2007<br>Expected end date: 2030<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: Incorporating the effectiveness of Civil Parking Enforcement (CPE)<br>Target emissions reduction: Not known            |

| Measure code                 | Description  | Focus | Classification   | Status | Other information   |
|------------------------------|--|-------|--|--------|---|
| Charnwood Borough Council_9  | Staff Car sharing scheme   | N/A   | Other measure: Other measure   | Other  | Start date: 2005<br>Expected end date: 2030<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A              |
| Charnwood Borough Council_10 | CO2 banding for staff car parking allowance / permits  | N/A   | Traffic planning and management: Differentiation of parking fees           | Other  | Start date: 2005<br>Expected end date: 2030<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A              |
| Charnwood Borough Council_11 | Increasing bus travel through work on Quality Bus Partnership (QBP)                              | N/A   | Traffic planning and management: Improvement of public transport           | Other  | Start date: 2007<br>Expected end date: 2030<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A              |
| Charnwood Borough Council_12 | Birstall 'Park & Ride'   | N/A   | Traffic planning and management: Improvement of public transport           | Other  | Start date: 2011<br>Expected end date: 2030<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A              |
| Charnwood Borough Council_13 | Voluntary public emission testing with VOSA  | N/A   | Public information and Education: Other mechanisms                         | Other  | Start date: 2006<br>Expected end date: 2030<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A              |
| Charnwood Borough Council_14 | Increasing travel by train with bus connections to town centre and key destinations              | N/A   | Traffic planning and management: Improvement of public transport           | Other  | Start date: 2006<br>Expected end date: 2030<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A |
| Charnwood Borough Council_15 | Personalised Travel Planning and Accessibility Team set up to promote sustainable travel choices | N/A   | Traffic planning and management: Encouragement of shift of transport modes | Other  | Start date: 2009<br>Expected end date: 2030<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A |

| Measure code                 | Description   | Focus                                     | Classification  | Status         | Other information   |
|------------------------------|---|---|---|----------------|---|
| Charnwood Borough Council_16 | Network management for roadworks, incidents, and planned events   | N/A                                       | Traffic planning and management:<br>Other measure                             | Other          | Start date: 2007<br>Expected end date: 2030<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A   |
| Charnwood Borough Council_17 | School Travel Planning  | N/A                                       | Traffic planning and management:<br>Encouragement of shift of transport modes | Other          | Start date: 2007<br>Expected end date: 2030<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: Schools with travel plans in place and monitoring the % of journeys to school as the only pupil<br>Target emissions reduction: N/A |
| Charnwood Borough Council_18 | Providing more consistent and reliable journey times  | N/A                                       | Traffic planning and management:<br>Other measure                             | Evaluation     | Start date: 2014<br>Expected end date: 2030<br>Spatial scale: Whole agglomeration<br>Source affected: Transport<br>Indicator: Average vehicle speeds (weekday morning peak)<br>Target emissions reduction: N/A  |
| Charnwood Borough Council_19 | Following completion of Town Centre Improvement Scheme, review TRO arrangements and signal operations at key junctions in / around town | N/A                                       | Traffic planning and management:<br>Other measure                             | Planning       | Start date: 2017<br>Expected end date: 2030<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A   |
| Charnwood Borough Council_20 | Programme of network signing improvements (including de-cluttering)   | N/A                                       | Traffic planning and management:<br>Other measure                             | Planning       | Start date: 2017<br>Expected end date: 2030<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A   |
| Leicester City Council_1     | 01.Air Quality Action Plan  | Upgraded Air Quality Plan for Leicester   | Other measure: Other measure  | Implementation | Start date: 2015<br>Expected end date: 2025<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: Review in 2018 and 2023<br>Target emissions reduction: < 1%  |
| Leicester City Council_2     | 1. AQGS LestAIR   | Low Emission Strategy study for Leicester | Other measure: Other measure  | Evaluation     | Start date: 2012<br>Expected end date: 2012<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: Final report delivered<br>Target emissions reduction: <0.1 %   |



| Measure code             | Description   | Focus   | Classification  | Status         | Other information   |
|--------------------------|---|---|---|----------------|---|
| Leicester City Council_3 | 1. To lobby and work with Central Government                    | Improving the air quality through dialogue with Central government                        | Other measure: Other measure                                      | Implementation | Start date: 2015<br>Expected end date: 2025<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: Response to the reports from Central government<br>Target emissions reduction: <0.1% |
| Leicester City Council_4 | 02a. Reduction of bus emissions _Breathe I                      | Retrofitting of 32 buses on Melton road corridor  | Public procurement: Other measure                                 | Implementation | Start date: 2013<br>Expected end date: 2017<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: No of buses retrofitted<br>Target emissions reduction: <0.5%                                      |
| Leicester City Council_5 | 02b. Reduction of bus emissions _Breathe II                     | Retrofitting 5 buses from Centerbus fleet on Melton road corridor                         | Other measure: Other measure                                      | Implementation | Start date: 2014<br>Expected end date: 2018<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: No of buses retrofitted<br>Target emissions reduction: <0.1%                                      |
| Leicester City Council_6 | 03a. Low emission zone for buses                                | Emission standards for buses using new Haymarket Bus Station                              | Traffic planning and management: Low emission zones               | Evaluation     | Start date: 2017<br>Expected end date: 2018<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: LEZ Buses in place<br>Target emissions reduction: <0.1%                              |
| Leicester City Council_7 | 03b. Ultra Low emission zone                                    | LestAir AQGS project  | Traffic planning and management: Low emission zones               | Evaluation     | Start date: 2022<br>Expected end date: 2025<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: ULEZ in place<br>Target emissions reduction: <0.1%                                   |
| Leicester City Council_8 | 4. Investigation to introduce gas powered buses                 | AQGS bid - business case to investigate an introduction of gas powered buses in Leicester | Public procurement: Other measure                                 | Preparation    | Start date: 2015<br>Expected end date: 2015<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: Delivery of final report<br>Target emissions reduction: <0.0%                        |
| Leicester City Council_9 | 5. Encourage bus, taxi and freight operators to introduce LEV's | OLEV bids to introduce LEVs to Leicester - taxis ,buses                                   | Public procurement: New vehicles, including low emission vehicles | Planning       | Start date: 2015<br>Expected end date: 2025<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: Obtaining grant for LEVs<br>Target emissions reduction: <0.1%                        |

| Measure code              | Description   | Focus   | Classification  | Status         | Other information  |
|---------------------------|---|---|---|----------------|--|
| Leicester City Council_10 | 06a. FQP - Improved freight operations                | Freight operators in Leicester and Leicestershire                                       | Other measure: Other measure                                      | Implementation | Start date: 2001<br>Expected end date: 2030<br>Spatial scale: Whole agglomeration<br>Source affected: Transport<br>Indicator: Dialog between LCC and freight operators<br>Target emissions reduction: <0.01% |
| Leicester City Council_11 | 06b. Investigate urban freight consolidation centre   | AQGS project : Revised air quality action plan interventions                            | Traffic planning and management:<br>Freight transport measure     | Evaluation     | Start date: 2017<br>Expected end date: 2017<br>Spatial scale: Whole agglomeration<br>Source affected: Transport<br>Indicator: Final report delivered<br>Target emissions reduction: <0.1%                    |
| Leicester City Council_12 | 06b. Partnership with bus operators                   | Quality Bus Partnership with bus operators in Leicester                                 | Public procurement: Other measure                                 | Implementation | Start date: 2001<br>Expected end date: 2023<br>Spatial scale: Whole agglomeration<br>Source affected: Transport<br>Indicator: Dialog between LCC and bus operators<br>Target emissions reduction: <0.1%      |
| Leicester City Council_13 | 7. Greener driving training for LCC and others        | Cleaner driving aimed at reducing pollution   | Other measure: Other measure                                      | Implementation | Start date: 2008<br>Expected end date: 2030<br>Spatial scale: Whole agglomeration<br>Source affected: Transport<br>Indicator: Ongoing project<br>Target emissions reduction: <0.1%                           |
| Leicester City Council_14 | 8. Promote ULEV infrastructure (OLEV)                 | Electric cars -Plugged In Places, installation of charging points for electric vehicles | Public procurement: New vehicles, including low emission vehicles | Planning       | Start date: 2012<br>Expected end date: 2030<br>Spatial scale: Whole agglomeration<br>Source affected: Transport<br>Indicator: No of electric sockets installed<br>Target emissions reduction: <0.1%          |
| Leicester City Council_15 | 9. Fuelling Infrastructure incl. shared arrangements  | AQGS study for gas powered buses  | Public procurement: Other measure                                 | Planning       | Start date: 2015<br>Expected end date: 2015<br>Spatial scale: Whole agglomeration<br>Source affected: Transport<br>Indicator: Final report delivered<br>Target emissions reduction: <0.1%                    |
| Leicester City Council_16 | 10. Progressive reduction in emissions from LCC fleet | LCC fleet reviews   | Public procurement: Other measure                                 | Implementation | Start date: 2001<br>Expected end date: 2030<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: annual reports<br>Target emissions reduction: <0.1%                             |

| Measure code              | Description  | Focus  | Classification  | Status         | Other information   |
|---------------------------|--|--|---|----------------|---|
| Leicester City Council_17 | 10. Electric vehicles trial                        | Trial of 2 electric vehicles in LCC fleet  | Other measure: Other measure  | Implementation | Start date: 2014<br>Expected end date: 2015<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: Uptake of 2 electric vehicles<br>Target emissions reduction: <0.1%                      |
| Leicester City Council_18 | 10. Essential user status review                   | Reduce the no of vehicles used by staff  | Other measure: Other measure  | Implementation | Start date: 2014<br>Expected end date: 2015<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: Assesment completed<br>Target emissions reduction: <0.1%                   |
| Leicester City Council_19 | 10. LCC Fleet Review                               | Review of council fleet  | Other measure: Other measure  | Implementation | Start date: 2014<br>Expected end date: 2015<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: Finished assesment of the whole fleet<br>Target emissions reduction: <0.1% |
| Leicester City Council_20 | 11. Reduce harmful emissions from taxis            | Licensing Policy - taxis to Euro IV standard receive 50% discount on licensing fee | Permit systems and economic instruments: Introduction/increase of environment taxes | Implementation | Start date: 2008<br>Expected end date: 2030<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: No of licences issued<br>Target emissions reduction: <0.2%                 |
| Leicester City Council_21 | 12. Support electrification of Midland Main Line   | Electrification of Midland Mainline through Leicester                              | Public procurement: Other measure   | Other          | Start date: 2012<br>Expected end date: 2020<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: Electrification complete<br>Target emissions reduction: <0.1%                           |
| Leicester City Council_22 | 13. Implement Sustainable Public Procurement Guide | LCC Procurement Guide  | Other measure: Other measure  | Preparation    | Start date: 2015<br>Expected end date: 2015<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: New guide delivered<br>Target emissions reduction: <0.1%                   |

| Measure code              | Description   | Focus   | Classification  | Status         | Other information  |
|---------------------------|---|---|---|----------------|--|
| Leicester City Council_23 | 14. Phase II Connecting Leicester - Walking & Cycling   | A scheme to create connections to provide a safe ,family and pedestrian orientated city centre. Connecting the different parts of the city centre and reducing the dominance of roads to create an attractive environment for local people to enjoy their historic city. It will also help businesses to flourish and attract new visitors. | Traffic planning and management:<br>Encouragement of shift of transport modes | Implementation | Start date: 2015<br>Expected end date: 2019<br>Spatial scale: Whole town or city<br>Source affected: Other, please specify<br>Indicator: Scheme implemented<br>Target emissions reduction: <0.1%   |
| Leicester City Council_24 | 14. Cycling routes  | Connecting Leicester  | Traffic planning and management:<br>Encouragement of shift of transport modes | Implementation | Start date: 2012<br>Expected end date: 2030<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: No of Cycling routes implemented<br>Target emissions reduction: <0.5% |
| Leicester City Council_25 | 15. Carbon action planning and the behavioural change   | Planning for addressing the behavioural change  | Other measure: Other measure  | Implementation | Start date: 2014<br>Expected end date: 2015<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: No of actions implemented<br>Target emissions reduction: <0.01%       |
| Leicester City Council_26 | 15. Continue to increase the number of children walking and cycling to school walking and cycling to school through the Walk to School and Bike It programmes, further to the 16.7% overall increase achieved last year | Promoting walking and cycling to schools  | Traffic planning and management:<br>Encouragement of shift of transport modes | Implementation | Start date: 2014<br>Expected end date: 2015<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: No of children engaged<br>Target emissions reduction: <0.01%          |
| Leicester City Council_27 | 15. Council home working and flexible hours   | N/A   | Other measure: Other measure  | Implementation | Start date: 2008<br>Expected end date: 2030<br>Spatial scale: Whole agglomeration<br>Source affected: Transport<br>Indicator: Scheme implemented<br>Target emissions reduction: <0.1%              |
| Leicester City Council_28 | 15. Leicester City Council website  | Air Quality information - updated website   | Public information and Education:<br>Internet                                 | Implementation | Start date: 2015<br>Expected end date: 2015<br>Spatial scale: Whole town or city<br>Source affected: Other, please specify<br>Indicator: Updated website<br>Target emissions reduction: <0.1%      |

| Measure code              | Description  | Focus   | Classification  | Status         | Other information   |
|---------------------------|--|---|---|----------------|---|
| Leicester City Council_29 | 15. Engage 100 small businesses to carry out staff cycle training charity B-Inspired, providing staff cycle training and advice on how to reduce business travel by car  | Promoting alternative modes of transport  | Traffic planning and management:<br>Encouragement of shift of transport modes | Implementation | Start date: 2014<br>Expected end date: 2015<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: No of businesses engaged<br>Target emissions reduction: <0.01%   |
| Leicester City Council_30 | 15. Host a number of green events at Curve theatre throughout the year including National Recycling Week by promoting recycling to both staff and visitors, and Earth Hour   | Public Information  | Traffic planning and management:<br>Encouragement of shift of transport modes | Implementation | Start date: 2014<br>Expected end date: 2015<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: No of events organised<br>Target emissions reduction: <0.01%   |
| Leicester City Council_31 | 15. Involve 40,000 employees through the Large Employers' engagement programme Employers Engagement Programme, running travel roadshows to encourage behavioural change  | Promoting alternative modes of transport  | Traffic planning and management:<br>Encouragement of shift of transport modes | Implementation | Start date: 2014<br>Expected end date: 2015<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: Engagement with employers<br>Target emissions reduction: <0.1%   |
| Leicester City Council_32 | 15. Involve over 25,000 people in organised bike rides cycling activity events through our Summer of Cycling programme. This will include the Ride Leicester Festival which will have the Castle Classic race and family-friendly Sky Ride | Annual bike rides organised - Skyride   | Traffic planning and management:<br>Encouragement of shift of transport modes | Implementation | Start date: 2014<br>Expected end date: 2015<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: Engagement of general public<br>Target emissions reduction: <0.1%  |
| Leicester City Council_33 | 15. JOAQUIN European Project   | EU funded project, information to general public about AQ - website. Also information to policy makers about improving AQ through various schemes and tools | Other measure: Other measure  | Evaluation     | Start date: 2011<br>Expected end date: 2015<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: Website for general public, Decision making tool for AQ specialists<br>Target emissions reduction: <0.1% |

| Measure code              | Description  | Focus  | Classification  | Status         | Other information  |
|---------------------------|--|--|---|----------------|--|
| Leicester City Council_34 | 15. LeicesterShire Sustainable Travel Challenge web site   | Promoting walking,cycling , public transport and care share  | Traffic planning and management:<br>Encouragement of shift of transport modes | Implementation | Start date: 2014<br>Expected end date: 2016<br>Spatial scale: Whole agglomeration<br>Source affected: Transport<br>Indicator: No of people who joined the website<br>Target emissions reduction: <0.1% |
| Leicester City Council_35 | 15. Personal route planner   | Individual travel plans  | Traffic planning and management:<br>Encouragement of shift of transport modes | Implementation | Start date: 2007<br>Expected end date: 2017<br>Spatial scale: Whole agglomeration<br>Source affected: Transport<br>Indicator: No of plans completed<br>Target emissions reduction: <0.1%               |
| Leicester City Council_36 | 15. Provide local businesses with grants of up to £5,000 to put towards sustainable transport methods for staff such as pool bike systems and shuttle buses                | Promoting alternative modes of transport   | Traffic planning and management:<br>Encouragement of shift of transport modes | Implementation | Start date: 2014<br>Expected end date: 2015<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: Grants provided<br>Target emissions reduction: <0.01%                     |
| Leicester City Council_37 | 15. Secure funding to complete an Area Wide Travel Plan Travel Plan for the creative industries in the Cultural Quarter to promote car sharing, cycling and cut congestion | Travel plan  | Traffic planning and management:<br>Encouragement of shift of transport modes | Implementation | Start date: 2015<br>Expected end date: 2015<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: Completion of the travel plan<br>Target emissions reduction: <0.01%       |
| Leicester City Council_38 | 15. Sign up a further 1,500 people to Leics. Car Share Scheme Leicestershare, a car sharing scheme aiming to reduce the number of single occupancy vehicles in the city    | Promoting car sharing  | Traffic planning and management:<br>Encouragement of shift of transport modes | Implementation | Start date: 2014<br>Expected end date: 2015<br>Spatial scale: Whole agglomeration<br>Source affected: Transport<br>Indicator: No of people signed for the scheme<br>Target emissions reduction: <0.1%  |
| Leicester City Council_39 | 15. Travel Planning  | Plans in place to reduce single vehicle occupancy, increase the number of sustainable modes of travel and rise awareness | Traffic planning and management:<br>Encouragement of shift of transport modes | Implementation | Start date: 2001<br>Expected end date: 2030<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: % of change in mode of travel<br>Target emissions reduction: <0.1%        |

| Measure code              | Description                                 | Focus   | Classification   | Status         | Other information  |
|---------------------------|---|---|--|----------------|--|
| Leicester City Council_40 | 15. Walking promotion                       | Promoting walking : Ramblers, Livingstreets, Sustrans     | Traffic planning and management: Encouragement of shift of transport modes | Implementation | Start date: 2011<br>Expected end date: 2030<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: No of people joining walks, walking to school, % shift in behavioural change<br>Target emissions reduction: <0.1% |
| Leicester City Council_41 | 16. Improved bus facilities and circulation | New Bus Station - Haymarket                               | Traffic planning and management: Improvement of public transport           | Implementation | Start date: 2015<br>Expected end date: 2015<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: Scheme implemented<br>Target emissions reduction: <0.1%  |
| Leicester City Council_42 | 16. Improved buses                          | Lower floor buses   | Traffic planning and management: Improvement of public transport           | Implementation | Start date: 2001<br>Expected end date: 2014<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: No of buses with low floors<br>Target emissions reduction: <0.1%  |
| Leicester City Council_43 | 16. Park and ride schemes                   | 2 new park and ride car parks opened since 2008           | Traffic planning and management: Encouragement of shift of transport modes | Implementation | Start date: 2001<br>Expected end date: 2011<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: 2 new park and ride car parks implemented<br>Target emissions reduction: <0.1%                                    |
| Leicester City Council_44 | 16. Subsidised bus fares                    | Subsidised bus fares for elderly, disabled and jobseekers | Traffic planning and management: Encouragement of shift of transport modes | Implementation | Start date: 2001<br>Expected end date: 2030<br>Spatial scale: Whole agglomeration<br>Source affected: Transport<br>Indicator: No of concessionary bus pass card holders<br>Target emissions reduction: 0.001                                   |
| Leicester City Council_45 | 16. Public Transport Information            | Real time information system                              | Traffic planning and management: Improvement of public transport           | Implementation | Start date: 2015<br>Expected end date: 2016<br>Spatial scale: Whole agglomeration<br>Source affected: Transport<br>Indicator: City wide system available<br>Target emissions reduction: <0.1%  |

| Measure code              | Description                    | Focus                              | Classification  | Status         | Other information  |
|---------------------------|--------------------------------|------------------------------------|---|----------------|--|
| Leicester City Council_46 | 16. Off bus ticketing          | smart ticketing project            | Traffic planning and management:<br>Improvement of public transport           | Implementation | Start date: 2008<br>Expected end date: 2030<br>Spatial scale: Whole agglomeration<br>Source affected: Transport<br>Indicator: City wide system in place<br>Target emissions reduction: <0.01%      |
| Leicester City Council_47 | 17. Bikeability                | Cycle training for children        | Traffic planning and management:<br>Encouragement of shift of transport modes | Implementation | Start date: 2008<br>Expected end date: 2030<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: 1800 children to participate<br>Target emissions reduction: <0.1%     |
| Leicester City Council_48 | 17. Bike parks at events       | To provide bike parts at festivals | Traffic planning and management:<br>Encouragement of shift of transport modes | Implementation | Start date: 2008<br>Expected end date: 2030<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: 50 bike parking spaces at events<br>Target emissions reduction: <0.1% |
| Leicester City Council_49 | 17. Ride Festival in leicester | Castle classic bike ride           | Traffic planning and management:<br>Encouragement of shift of transport modes | Implementation | Start date: 2008<br>Expected end date: 2030<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: 500 participants per ride<br>Target emissions reduction: <0.1%        |
| Leicester City Council_50 | 17. Led Rider Programme        | Organised bike rides               | Traffic planning and management:<br>Encouragement of shift of transport modes | Implementation | Start date: 2008<br>Expected end date: 2030<br>Spatial scale: Whole town or city<br>Source affected: Transport<br>Indicator: 35 public rides<br>Target emissions reduction: <0.1%                  |
| Blaby District Council_1  | Smart Motorways                | sections of M1                     | Traffic planning and management:<br>Other measure                             | Preparation    | Start date: 2016<br>Expected end date: 2025<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A   |
| Blaby District Council_2  | Painted chevrons               | as above                           | Traffic planning and management:<br>Other measure                             | Preparation    | Start date: 2016<br>Expected end date: 2017<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A   |



| Measure code             | Description  | Focus                      | Classification  | Status      | Other information  |
|--------------------------|--|----------------------------|---|-------------|--|
| Blaby District Council_3 | Noise barriers                                     | as above                   | Traffic planning and management:<br>Other measure     | Preparation | Start date: 2016<br>Expected end date: 2018<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A |
| Blaby District Council_4 | VMS  | as above                   | Public information and Education:<br>Other mechanisms | Preparation | Start date: 2016<br>Expected end date: 2016<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A |
| Blaby District Council_5 | Ecodriving   | as above                   | Other measure: Other measure                          | Preparation | Start date: 2016<br>Expected end date: 2016<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A |
| Blaby District Council_6 | Traffic management measures                        | certain junctions in AQMAs | Traffic planning and management:<br>Other measure     | Preparation | Start date: 2017<br>Expected end date: 2017<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A |
| Blaby District Council_7 | Ramp Metering                                      | Sections of M1             | Traffic planning and management:<br>Other measure     | Preparation | Start date: 2016<br>Expected end date: 2025<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A |
| Blaby District Council_8 | Integration of Air Quality into<br>planning policy | District                   | Other measure: Other measure                          | Planning    | Start date: 2015<br>Expected end date: 2016<br>Spatial scale: Local<br>Source affected: Transport<br>Indicator: N/A<br>Target emissions reduction: N/A |