

# Annual Air Quality Status Report 2017

Tony Cawthorne  
Environmental Health Officer

# Objectives

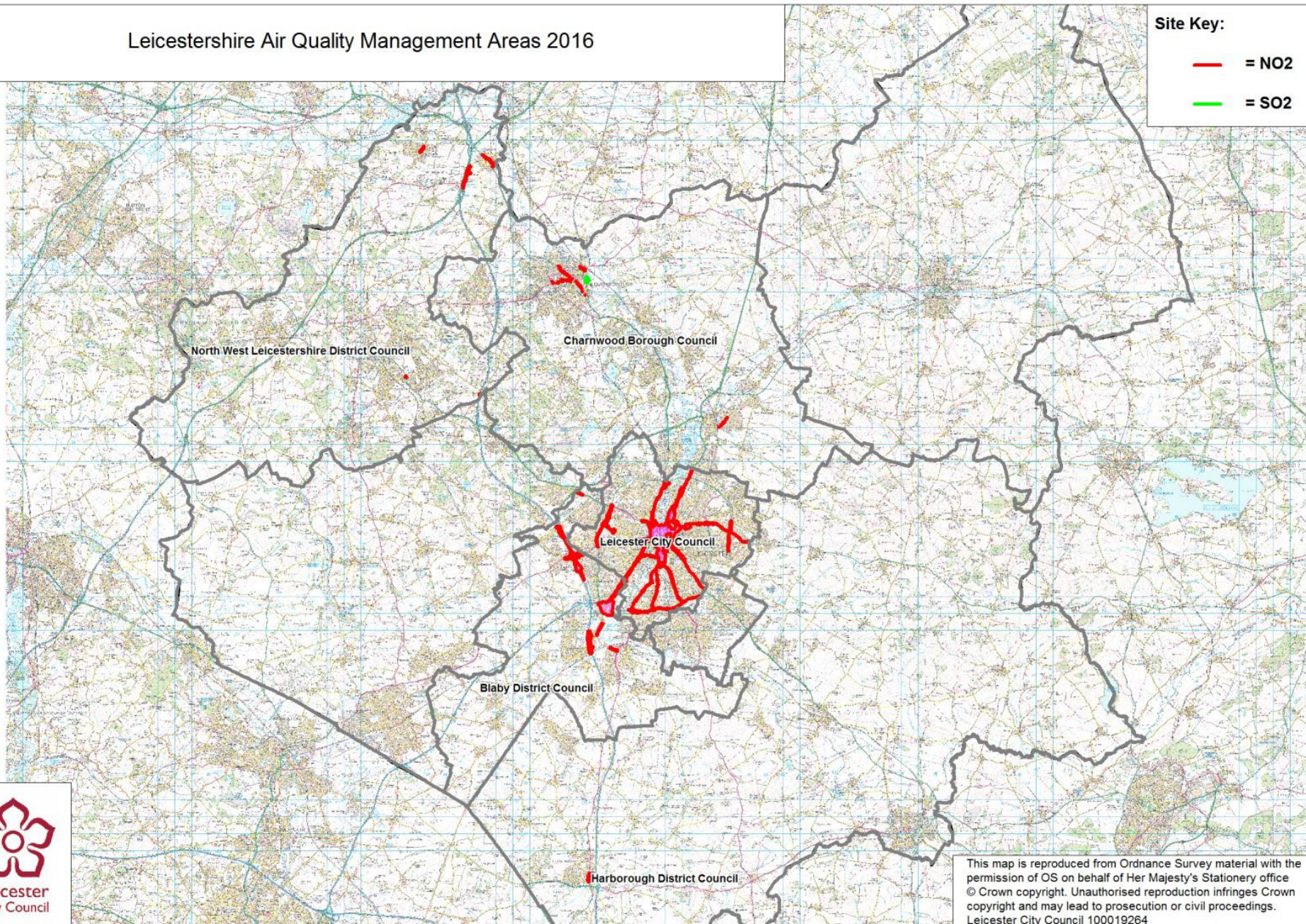
- To bring to your attention the Annual Status Report 2017
- Explain what is meant by Air Quality and an overview of Air Quality in Leicestershire
- Explain the causes and effects of Air Quality
- What Oadby and Wigston Borough Council is doing about Air Quality
- Receive your comments and observations

# Leicestershire Air Quality Management Areas 2016

Site Key:

— = NO2

— = SO2



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# Annual Status Report 2017

- The report is a statutory requirement
- The reports are always done for the previous year.
- The report follows a template provided by DEFRA using a guidance manual : Air Quality Management Technical Guidance LAQM.TG(09)
- The report used the data gathered throughout the year 2016.
- The data set has been completed and cannot be changed.

- DEFRA requires the Council to involve and advise the local community on the findings of the report.
- Issues raised will be looked at and may affect the actions taken by the Council in addressing Air Quality issues.

[www.defra.gov.uk](http://www.defra.gov.uk)

Part IV of the Environment Act 1995  
Environment (Northern Ireland) Order 2002 Part III

# Local Air Quality Management

Technical Guidance LAQM.TG(09)

February 2009



# What do we mean by Air Quality?

- The air that we breath may contain pollutants which can have a negative effect on our health
- Pollutants we are interested in are:
  - Particulate Matter- PM
  - Nitrous oxides –NO<sub>x</sub>
  - Sulphur -S
- Where the pollution is significant an Air Quality Management Area shall be declared
- NO<sub>x</sub> sampling is undertaken across the Borough using diffusion tubes

# NO<sub>x</sub> Passive Diffusion Tubes





# National Air Quality Objectives

| Pollutant                              | Air Quality Objective  |                |
|--|--|----------------|
|  | Concentration  | Measured as    |
| Nitrogen Dioxide (NO <sub>2</sub> )    | 200 µg/m <sup>3</sup> not to be exceeded more than 18 times a year   | 1-hour mean    |
|  | 40 µg/m <sup>3</sup>   | Annual mean    |
| Particulate Matter (PM <sub>10</sub> ) | 50 µg/m <sup>3</sup> , not to be exceeded more than 35 times a year  | 24-hour mean   |
|  | 40 µg/m <sup>3</sup>   | Annual mean    |
| Sulphur Dioxide (SO <sub>2</sub> )     | 350 µg/m <sup>3</sup> , not to be exceeded more than 24 times a year | 1-hour mean    |
|  | 125 µg/m <sup>3</sup> , not to be exceeded more than 3 times a year  | 24-hour mean   |
|  | 266 µg/m <sup>3</sup> , not to be exceeded more than 35 times a year | 15-minute mean |

▣ The units are in microgrammes of pollutant per cubic metre of air (µg/m<sup>3</sup>).

# Monitoring Locations

|             |  |
|-------------|--|
| <b>DT1</b>  | <b>Uplands Road / Junction A6</b>        |
| <b>DT3</b>  | <b>Shackerdale Road / Aylestone Lane</b> |
| <b>DT5</b>  | <b>Victoria Court, A6</b>                |
| <b>DT6</b>  | <b>Glen Rd, A6</b>                       |
| <b>DT7</b>  | <b>Leicester Rd, Wigston</b>             |
| <b>DT9</b>  | <b>Church Nook / Bullhead Street</b>     |
| <b>DT10</b> | <b>Magna Road /Blaby Road</b>            |
| <b>DT11</b> | <b>Canal Street / Station Road</b>       |

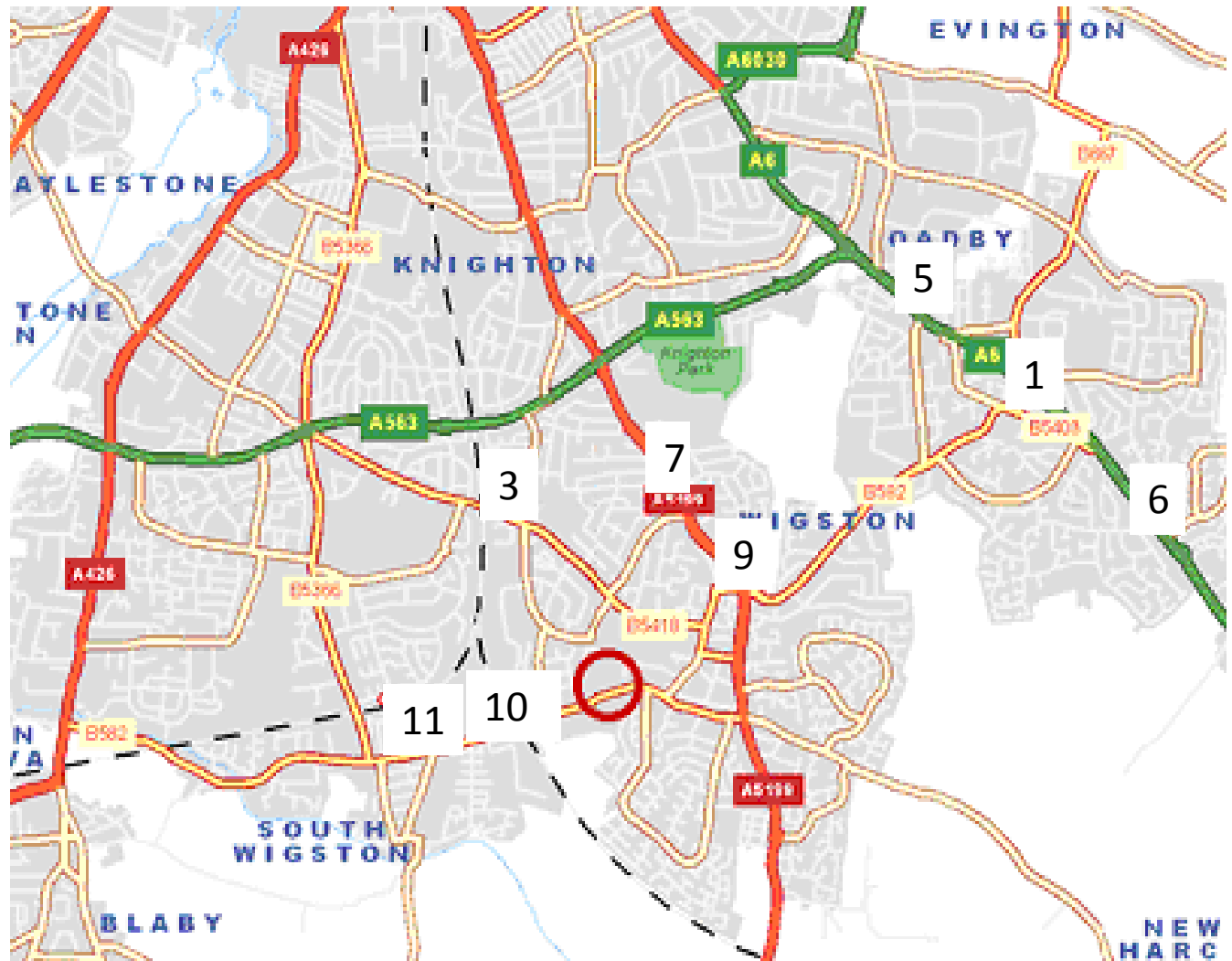
# Details of Non-Automatic Monitoring Sites

| Site ID | Site Name                             | Site Type | X OS Grid Ref | Y OS Grid Ref | Pollutants Monitored | In AQMA? | Distance to Relevant Exposure (m) <sup>(1)</sup> | Distance to kerb of nearest road (m) <sup>(2)</sup> | Tube collocated with a Continuous Analyser? | Height (m) |
|---------|---------------------------------------|-----------|---------------|---------------|----------------------|----------|--|---|---|------------|
| DT1     | Uplands Road/A6                       | Kerbside  | 463208        | 299913        | NO2                  | NO       | 12.7   | 3.8   | NO  | 2.2        |
| DT3     | Shackerdale Road                      | Kerbside  | 459448        | 299747        | NO2                  | NO       | 13.4   | 1.42  | NO  | 2.36       |
| DT5     | Victoria Court AQMS                   | Kerbside  | 461856        | 301027        | NO2                  | NO       | 14   | 0.8   | NO  | 2.2        |
| DT6     | Glen Road A6                          | Kerbside  | 463208        | 299913        | NO2                  | NO       | 12.5   | 5   | NO  | 2.2        |
| DT7     | Leicester Road, Wigston               | Kerbside  | 460541        | 299722        | NO2                  | NO       | 4  | 3.16  | NO  | 2.17       |
| DT9     | St. Wistans Church / Bull Head Street | Kerbside  | 460881        | 299075        | NO2                  | NO       | 25   | 1.55  | NO  | 2.34       |
| DT10    | Magna Road / Station Road             | Kerbside  | 459337        | 298464        | NO2                  | NO       | 7.4  | 1.63  | NO  | 2.4        |
| DT11    | Canal Street / Blaby Road             | Kerbside  | 459.12        | 298376        | NO2                  | NO       | 1.6  | 0.82  | NO  | 2.35       |

# The map indicates the approximate position of the NO<sub>2</sub> diffusion tube

- 1 - Uplands Road / A6
- 2 - Council Offices\*
- 3 - Shackerdale Road
- 4 - 141 Blaby Road\*
- 5 - Victoria Court
- 6 - Glen Road, A6
- 7 - Leicester Road, Wigston
- 8 - Oadby Road, Wigston\*
- 9 - Church Nook / Bullhead Street
- 10 - Magna Road / Station Road
- 11 - Canal Street / Blaby Road
- 12 - Tigers Road\*

\*Monitoring ceased in June 2013

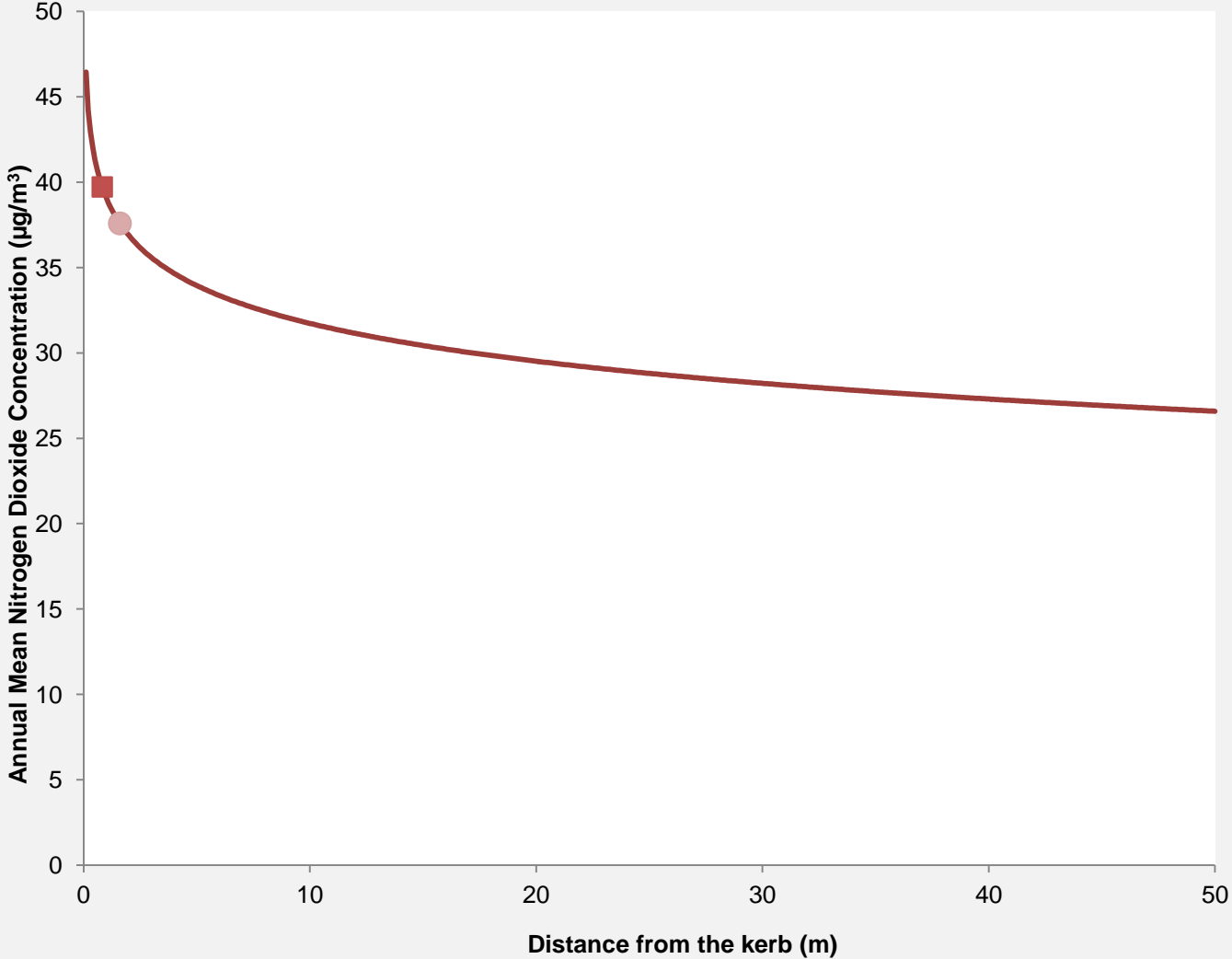


# Full Monthly Diffusion Tube Results for 2016

| Site ID     | NO <sub>2</sub> Mean Concentrations (µg/m <sup>3</sup> ) |      |             |      |      |      |      |      |      |      |      |             |             |  |   |
|-------------|--|------|-------------|------|------|------|------|------|------|------|------|-------------|-------------|--|---|
|             | Jan  | Feb  | Mar         | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec         | Annual Mean |  |   |
|             |  |      |             |      |      |      |      |      |      |      |      |             | Raw Data    | Bias Adjusted (0.77) and Annualised <sup>(1)</sup> | Distance Corrected to Nearest Exposure <sup>(2)</sup> |
| <b>DT1</b>  | 54.2   | 42.5 | 45.1        | 34.9 | 37.1 | 35.1 | 41.6 | 38.7 | 39.6 | 35.9 | 51.1 | 49.8        | 42.13       | 32.44  | 27.4  |
| <b>DT3</b>  | 52.9   | 53.1 | 52.5        |      | 40.5 | 36.3 | 39.8 | 36.7 | 42.6 | 40   | 54.8 | 57.9        | 46.10       | 35.50  | 30.3  |
| <b>DT5</b>  | <u>61.8</u>  | 49.2 | 49.4        | 47.6 | 36.2 | 36.5 | 31.7 | 33.6 | 41   | 34.8 | 58.2 | <u>63.2</u> | 45.27       | 34.86  | 27.0  |
| <b>DT6</b>  | 48.1   | 44.1 | 50.2        | 43.2 | 37.4 | 32.8 | 29.2 | 28.7 | 33.1 | 33.7 | 38.4 | 47.4        | 38.86       | 29.92  | 26.5  |
| <b>DT7</b>  | 42.5   | 45.5 | 41.1        | 35.4 | 32.6 | 32.3 | 27.5 | 30   | 34.9 | 39   | 47.1 | 44.3        | 37.68       | 29.02  | 28.6  |
| <b>DT9</b>  | 31   | 38.6 | 37          | 30.5 | 27.8 | 27.2 | 24.4 | 24.7 | 30.7 | 32.7 | 40.9 | 45.3        | 32.57       | 25.08  | 22.9  |
| <b>DT10</b> | 25.8   | 37.9 | 44.4        |      | 35.3 | 35.1 | 26.8 | 34.5 | 30.8 | 40.1 | 44.1 | 30.6        | 35.04       | 26.98  | 25.7  |
| <b>DT11</b> | 59.5   | 58.1 | <u>61.5</u> | 55.3 | 41.7 | 53.8 | 41.2 | 40   | 46.1 | 54.8 | 59.6 | 47.4        | 51.58       | 39.72  | 37.6  |

x National bias adjustment factor used

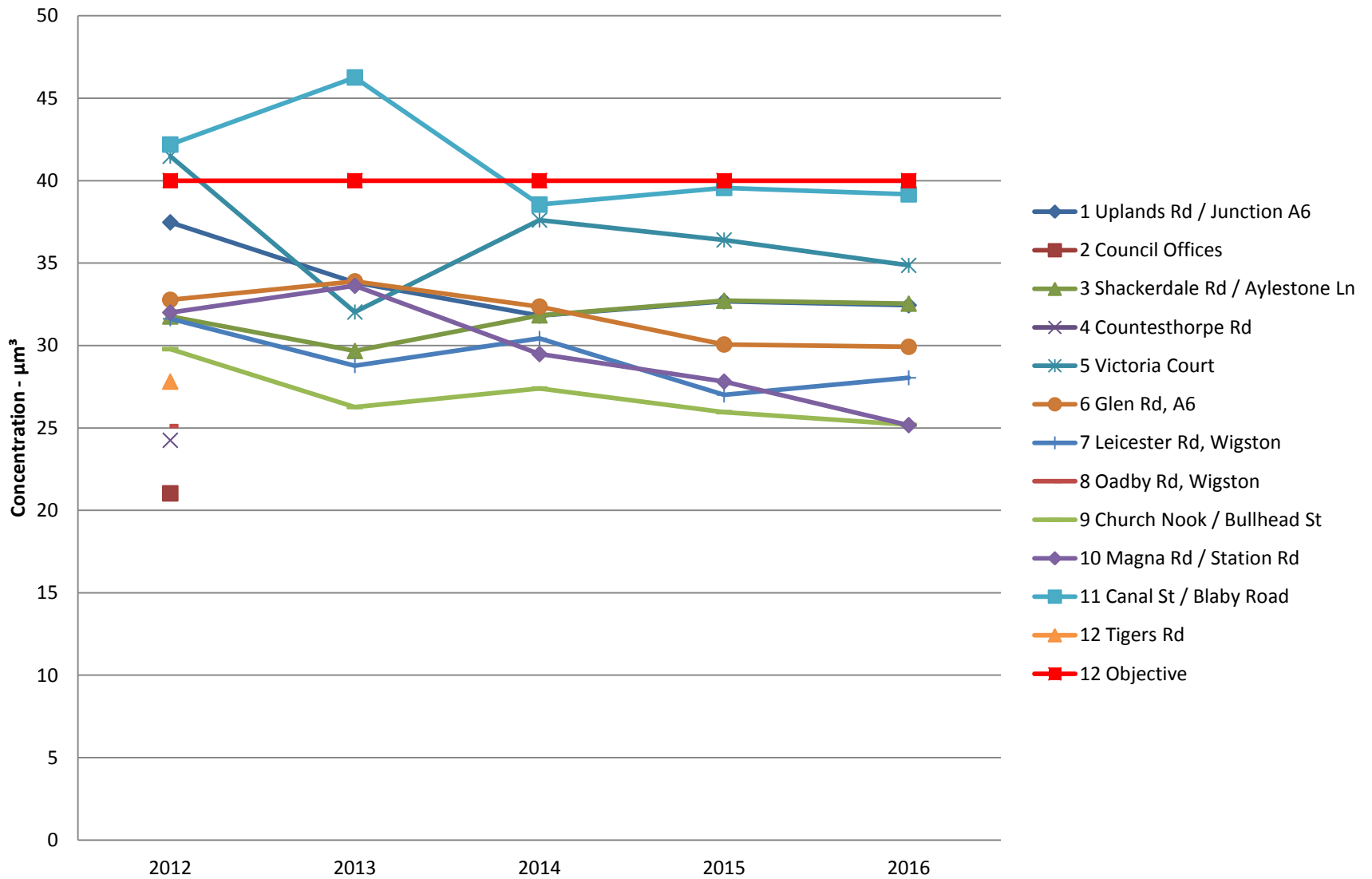
# Expected Reduction in Annual Mean Nitrogen Dioxide Concentration with Distance from the Kerb



- Your Measurement
- Your Prediction
- Typical Reduction with Distance



## Last 5 Years Annual Mean Nitrogen Dioxide Diffusion Tube data (Bias Adjusted)



# The Future

- Additional monitoring :
  - Aylestone Lane at Railway Bridge and West Avenue Junctions
  - Blaby Road detailed monitoring through 8 additional diffusion tubes between Magna Road and Saffron Road
  - Air Quality Monitoring Station to be put in place near Canal Street – Through Section 106 monies from the Former Premier Drum Development



# Blaby Road new diffusion tube monitoring locations

- 9. Vicarage, Blaby Road
- 10. 45 Blaby Road
- 11. 50a Blaby Road
- 12. 11 Canal Street
- 13. Canal Street / Station Road
- 14. 4 Station Road
- 15. Health Centre, Blaby Road
- 16. 141 Leicester Road
- 17. 2 Lansdown Grove
- 18. Magna Road / Station Road



# Aylestone Road/ Shakerdale Road Junctions additional Monitoring

- 6. Shakerdale Road /Aylestone Lane
- 7. 259 Aylestone Lane
- 8. 225 Aylestone Lane



Tony Cawthorne

any comments or feedback please

Email:

[Enviromental.Health@oadby-wigston.gov.uk](mailto:Enviromental.Health@oadby-wigston.gov.uk)