City of Nottingham

Local Air Quality Management

Stage Four Review and Assessment of Nottingham's Air Quality Management Areas July 2003

(Submitted to DEFRA: August 2003)

Development & Environmental Services
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Introduction

The Environment Act 1995 Part IV introduced the concept of Local Air Quality Management. Section 82 of this Act required Local Authorities to review the air quality in their area and assess whether the Air Quality Standards and Objectives will be achieved by the prescribed date for each pollutant of concern.

The Air Quality (England) Regulations 2000 (as amended) details the objectives for seven substances, to be achieved by the year 2005, see Table 1.

The Regulations provide that ‘achievement or likely achievement of the Air Quality Objectives is to be determined by reference to the quality of the air at locations which are situated outside of buildings… … and where members of the public are regularly present.’ It continues ‘… local authorities should have regard to those locations where members of the public are likely to be regularly present and are likely to be exposed over the averaging period of the objective.’ See Table 2 for examples of the areas.

The initial review and assessment process comprised three stages, each with increasing depth of investigation, designed to ensure only those pollutants which are predicted to exceed the Air Quality Objectives by the due date were assessed in the next stage. The reasons for proceeding to each subsequent stage of the review and assessment had to be clearly demonstrated, supported and in accordance with Government guidance.

Where it has been determined that an Air Quality Objective will not be achieved by the specified date, Section 83 of the Environment Act 1995 requires Local Authorities to designate Air Quality Management Areas (AQMAs) by Order and formulate and publish corresponding Air Quality Action Plans (AQAP’s). The AQAP must specify what actions a Local Authority intends to take 'in pursuit of the air quality objectives', including a timetable for implementing the plan. Local Authorities are also required to undertake a ‘Stage Four’ Review and Assessment of air quality in those areas designated AQMA’s to reflect changes in guidance, emissions or other local conditions in the AQMA.

Section 84(1) of the Environment Act 1995 requires authorities to carry out a further assessment of existing and likely future air quality in an AQMA. LAQM.G1(00) advises ‘Authorities should focus on areas where they have identified potential exceedances and for each pollutant, calculate:

i. how great an improvement is needed; and
ii. the extent to which different sources contribute to the problem.

This approach should identify sources which a local authority can control or influence and ensure consequent action plans strike a balance between the contribution from local authorities and the contribution that must come from other sectors of society. The approach should ensure that the relative contributions of industry, transport and other sectors are cost effective and proportionate and include an estimate of the costs and feasibility of different abatement options to allow for the development of proportionate and effective action plans.’

Table 1

The Air Quality (England) Regulations 2000 (as amended)

Substance	***Air quality objective levels***	***Air quality objective dates***
Benzene	16.25 micrograms per cubic metre or less, when expressed as a running annual mean 5 micrograms per cubic metre or less, when expressed as an annual mean	31st December 2003 31st December 2010
1,3 - Butadiene	2.25 micrograms per cubic metre or less, when expressed as a running annual mean	31st December 2003
Carbon monoxide	10 milligrams per cubic metre or less, when expressed as a maximum daily running 8 hour mean	31st December 2003
Lead	0.5 micrograms per cubic metre or less, when expressed as an annual mean 0.25 micrograms per cubic metre or less, when expressed as an annual mean	31st December 2004 31st December 2008
Nitrogen dioxide	200 micrograms per cubic metre, when expressed as an hourly mean, not to be exceeded more than 18 times a year 40 micrograms per cubic metre or less, when expressed as an annual mean	31st December 2005 31st December 2005
PM_{10}	50 micrograms per cubic metre or less, when expressed as a 24 hour mean, not to be exceeded more than 35 times a year 40 micrograms per cubic metre or less, when expressed as an annual mean	31st December 2004 31st December 2004
Sulphur dioxide	125 micrograms per cubic metre or less, when expressed as a 24 hour mean, not to be exceeded more than 3 times a year 350 micrograms per cubic metre or less, when expressed as an hourly mean, not to be exceeded more than 24 times a year 266 micrograms per cubic metre or less, when expressed as a 15 minute mean, not to be exceeded more than 35 times a year	31st December 2004 31st December 2004 31st December 2005

Table 2

Examples of where the air quality objectives should/should not apply

Averaging Period	***Objectives should apply at***	***Objectives should generally not apply at***
Annual mean	All background locations where members of the public might be regularly exposed. Building facades of residential properties, schools, hospitals, libraries etc.	Building facades of offices or other places of work where members of the public do not have regular access. Gardens of residential properties. Kerbside sites or any other location where public exposure is expected to be short term.
24 hour (daily) mean 8 hour mean	All locations where the annual mean objectives would apply. Gardens of residential properties.	Kerbside sites, or any other location where public exposure is expected to be short term
1 hour mean	All locations where the annual mean and 24 and 8-hour objectives apply. Kerbside sites (e.g. pavements of busy shopping streets) Those parts of car parks and railway stations etc. which are not fully enclosed. Any outdoor locations to which the public might reasonably be expected to have access.	Kerbside sites where public would not be expected to have regular access
15 min mean	All locations where members of the public might reasonably be exposed for a period of 15 minutes or longer.	

Table 3

Summary of automatic monitoring data 2000- 2002 (AURN)

Pollutant of Concern	2000	2001	2002
Nitrogen Dioxide (NO2)			
Annual mean concentration (ug/m3)	40	36	34
No. of exceeds of annual mean AQO	1	0	0
No of exceeds of hourly mean AQO	0	0	0
Particles (PM10)			
Annual mean concentration (ug/m3)	23	26	25
No. of exceeds of annual mean AQO	0	0	0
No of exceeds of daily mean AQO	0	0	0
Carbon Monoxide (CO)			
No. of exceeds of 8 hour mean AQO	0	0	0
Sulphur Dioxide (SO2)			
No of exceeds of 15-min mean AQO	0	0	0
No of exceeds of hourly mean AQO	0	0	0
No of exceeds of daily mean AQO	0	0	0

Note.
Monitoring results are preferably reported on a calendar year basis, for clarity of the measurement period and to allow monitoring over the full range of yearly weather conditions.

Operationally, it is not practicable to relocate monitoring equipment at the end of a year. Thus monitoring results for the AQMS are for the period from July 2002-May 2003 (a few weeks after its relocation), and a full 12 months of monitoring to encompass possible seasonal effects on air quality.

Table 4

Summary of automatic monitoring data June 2002 – May 2003 (AQMS)

Pollutant of Concern	2002-2003
Nitrogen Dioxide (NO2)	
Annual mean concentration (ug/m3)	42
No. of exceeds of annual mean AQO	1
No of exceeds of hourly mean AQO	0
Particles (PM10)	
Annual mean concentration (ug/m3)	28
No. of exceeds of annual mean AQO	0
No of exceeds of daily mean AQO	0
Carbon Monoxide (CO)	
No. of exceeds of 8 hour mean AQO	0
Sulphur Dioxide (SO2)	
No of exceeds of 15-min mean AQO	0
No of exceeds of hourly mean AQO	0
No of exceeds of daily mean AQO	0

Purpose and focus

The Second and Third Stage Review and Assessment was completed in September 2001 and published for consultation. No comments or observations requiring material change to the document were made by statutory consultees or stakeholders. The areas in which it was predicted certain Air Quality Objectives (AQOs) would not be met by the relevant dates were declared as Air Quality Management Areas (AQMAs) in February 2002.

The purpose of the Stage Four Review and Assessment is to confirm the original assessment of air quality against the prescribed objectives and designation of the Air Quality Management Areas and in doing so;-

i. review the information and data used to predict air quality in the Air Quality Management Area's in the Nottingham City area;
ii. to corroborate other assumptions on which the designation of the AQMA has been based, to check that the original designation is still valid and does not need amending in any way;
iii. to take account of national and local policy developments which occured after the AQMA declaration;
iv. to respond to any comments made by statutory consultees in respect of the Stage 1-3 reports, particularly where these have highlighted that insufficient attention has been paid to, e.g., the validation of modelled data
v. to carry out further monitoring in problem areas to check earlier findings,
vi. calculate how much of an improvement in air quality would be needed to deliver the Air Quality Objectives within the AQMA;
vii. to refine knowledge of the sources of pollution so that Air Quality Action Plans can be properly targeted;

The Government released revised statutory guidance LAQM.PG(03) and LAQM.TG(03) on the 6th February 2003, replacing all 8 general and technical guidance documents. However, this has not materially changed the Stage Four Review and Assessment revised guidance or process.

Existing and Predicted Air Quality in Air Quality Management Areas

Existing Air Quality

Nottingham City Council operates a mobile Air Quality Monitoring Station (AQMS) trailer and participates in the national NO_2 diffusion tube survey coordinated by NETCEN. It provides Local Site Operators for the DEFRA AURN (Automatic Urban Rural Network) station, located in Clinton Street East (classed as an 'urban centre').

The AQMS was relocated to the grounds of the Queens Medical Centre, Derby Road, Nottingham in March 2002 following the Second and Third Stage Review and Assessment.

Their locations are shown in Appendix 1, together with the Ordnance Survey co-ordinates. See the Technical Annex of the Second and Third Stage Review and Assessment for information concerning their operation, calibration and other details.

Air quality in the City Centre

Air quality has been monitored continuously at the AURN site since 1996. A summary of monitoring data for the period 2000-2002 is presented in Table 3. There have been no recorded exceedances of the Air Quality objectives for sulphur dioxide at this location.

Air quality in Air Quality Management Area 1 – sulphur dioxide

No monitoring data has been collected due to problems commissioning equipment. Monitoring equipment should be installed and commissioned by September 2003

Air quality in Air Quality Management Area 2 – nitrogen dioxide

No monitoring data has been collected due to problems commissioning equipment Monitoring equipment should be installed and commissioned by September 2003.

A summary of monitoring data for the period 2000-2002 is presented in Table 3. There have been no recorded exceedances of the Air Quality Objectives for nitrogen dioxide at this location.

Air quality in Air Quality Management Area 3 – nitrogen dioxide

The AQMS is currently located in Air Quality Management Area 3, adjacent to the A52, Clifton Boulevard, where the Second and Third Stage Review and Assessment process predicted that the nitrogen dioxide annual mean objective of 40*u*gms^{-3} will not be met in 2005.

A summary of monitoring data for the period 2002-2003 is presented in Table 4. It can be seen that the nitrogen dioxide annual mean Air Quality Objective of 40 *u*gm^{-3} has been exceeded.

Predicted Air Quality

The methodology follows that undertaken during the Second and Third Stage Review and Assessment, and is detailed in the following section.

A number of changes have occurred to traffic flows and routes within AQMA 1 City Centre. A large number of the ‘ variables’ used in the modeling process have thus changed preventing the ‘refinement ‘ of the prediction made by the Second and Third Stage Review and Assessment expected by the guidance for the Stage Four Review and Assessment.

Methodological approach to modelling

The further assessment of air quality in the designated AQMAs required the assumptions and data used in the Second and Third Stage Review and Assessment to be re-evaluated to ensure their validity and applicability.

Meteorology

The methodology used ADMS Urban and therefore required appropriate meteorological data. The latest meteorological data for the Nottingham City area available was Numerical Weather Prediction (NWP) for the year 2000. It should be noted that the Met Office has ceased the compilation of NWP data and future predictions are likely to be made using meteorological data for 2000.

Emission data

Point sources

Point sources, for example chimneys, usually serve boiler plant or large industrial processes. The information compiled for the inventory was calculated from data supplied by site operators using either: -

i. direct measurement of pollutant concentrations in the stack gases or
ii. estimates of pollutant emissions, based upon the type of fuel and consumption.

The data was assessed for its accuracy and appropriateness for use in the Stage Four Review and Assessment. All point sources used are detailed in Appendix 2.

Area Sources

For the Stage Four Review and Assessment detailed modelling purposes it is important to include sources that may contribute to a pollutant's concentration. Area source emission data for 'domestic' and 'other industrial sources' were obtained from the National Emissions Inventory at ‘http://www.naei.org.uk/index.php’ and used in the model.

Line Sources

Changes to traffic caused by implementation of the Local Transport Plan and Nottingham Express Transit (NET) project have been considered and modelled using traffic flow data from either the City’s Transport Model or actual traffic count data.

Changes proposed to the road layout and flows associated with the proposed redevelopments of the Broadmarsh Centre and Trinity Square have not been considered as these will not be completed until after 2005.

Background Pollutant Concentrations

A pollutant's concentration at a given location and time is a combination of local emissions from point, line and area sources and those transported from distant sources. The emissions from distant sources contribute to the background concentration, i.e. the concentration of a pollutant that would be measured in the absence of local sources.

Background pollutant concentrations can represent a significant or dominant proportion of the total pollutant concentration in an area. LAQM.TG(03) comments that background concentrations are expected to decline as a result of policies and legislation but the reduction in annual mean background NO_2 concentrations in future years is expected to be less than the corresponding reduction in NOx.

Background pollutant concentrations are also influenced by meteorology. Thus in using the most recent available NWP meteorological data it is appropriate to use the latest background concentrations (Rochester 2000).

For the Stage Four complex modelling, the monitoring data from the AURN monitoring site at Rochester upon Medway (the most appropriate rural site that measured all the pollutants of concern) was used.

Model verification and adjustment

A comparison between monitored and predicted levels for two sites (AURN and AQMS) was carried out. The concentrations predicted for each location by the model were very similar to the monitored concentrations and no adjustment to the predicted concentrations has been made.

AQMA specific information

AQMA 1 – sulphur dioxide area including City Hospital

The prediction that the AQO's will not be met by the due dates is based on modeling of emissions of sulphur dioxide from the City Hospital's boiler plant. There have been no physical changes to the boiler plant, change in mode of operation or fuel type. There has been a slight reduction in fuel usage due to energy efficiency measures at the site.

However, as part of the Stage Four Review and Assessment the sulphur content of the fuel (coal) used for the Stage Two and Three Review and Assessment was re-calculated and determined to be significantly less then that originally calculated from data supplied by the City Hospital in 2001. The newly calculated emission rates were verified against stack monitoring undertaken during June 2003 by CES Environmental Instruments Ltd on behalf of the Nottingham City Hospital NHS Trust.

Predicted ground level concentrations of sulphur dioxide for 2004/5 were made using Advanced Dispersion Modelling based on the new emission rate data and more detailed knowledge of boiler plant loading during the winter period.

Results

The computer model predicts exceedances of Air Quality Objectives by converting the AQO descriptor into an equivalent time period and then by expressing the time period as a percentage of a year.

Thus Air Quality Objectives for sulphur dioxide can be represented as the following percentile values:-

The 15-minute mean of no more than 35 exceedances of 266 $u$gm^{-3} equates to the 99.9th percentile.

The 1-hour mean of no more than 24 exceedances of 350 $u$gm^{-3} equates to the 99.7th percentile.

The 24-hour mean of no more than 3 exceedances of 125 $u$gm^{-3} equates to the 99th percentile.

The Air Quality Objectives are health based and are averaged over short time periods. Short lived meteorological conditions can trap pollutants and bring them down to ground level, for example a temperature inversion resulting from a combination of low wind speeds and a cloudless sky. The modelling results in Figures 1a, 1b, and 1c show the predicted concentrations and geographical extent when these infrequent weather conditions occur.

Conclusion

ADMS modelling predicts no exceedances of the objectives for the 15-minute, 1-hour or 24-hour means in the vicinity of the City Hospital.

Fig 1a

Sulphur Dioxide (SO2)
Predicted Maximum 24-hour Mean (99th %ile) Concentration 2004

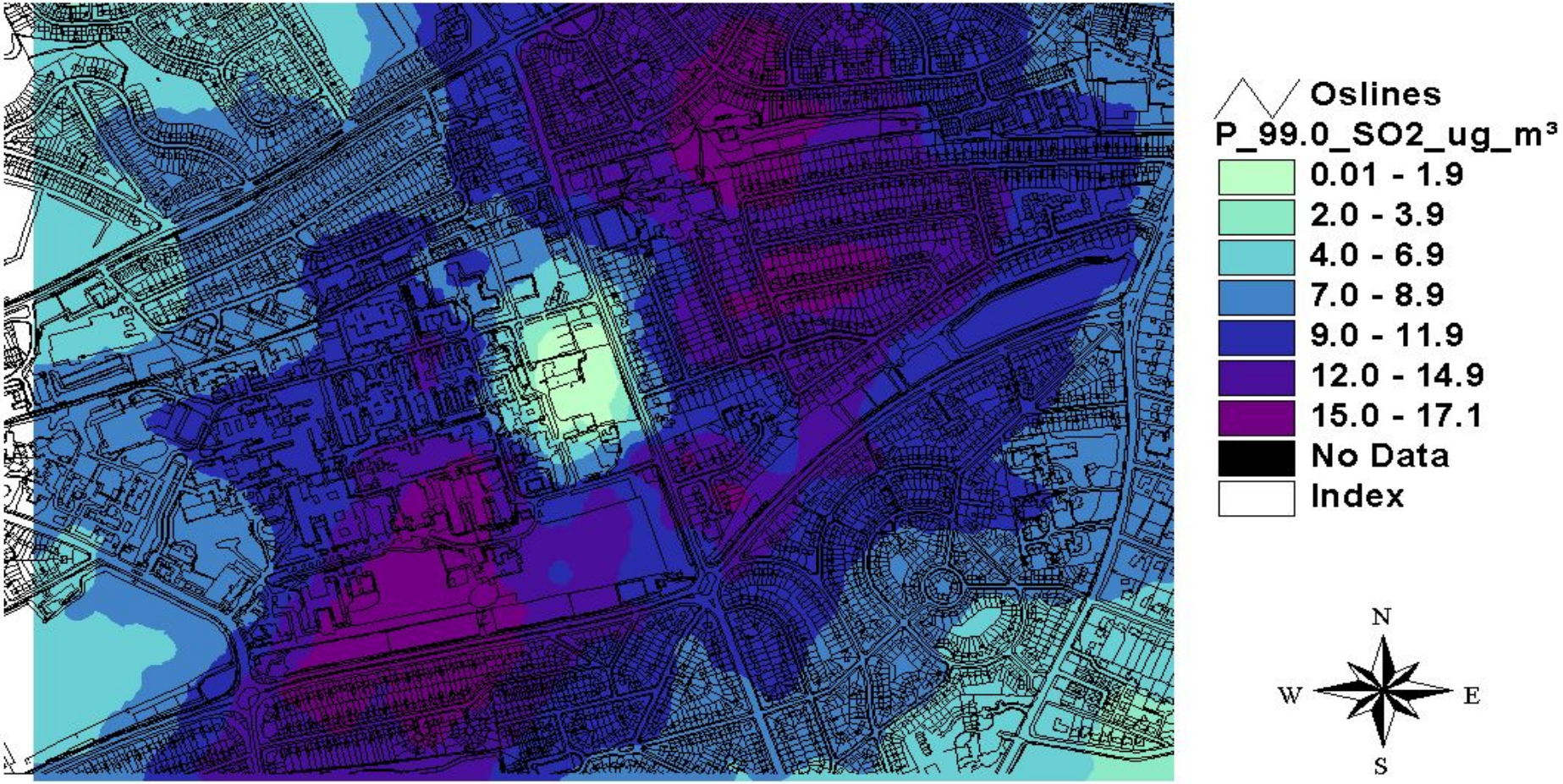


Fig 1b

Sulphur Dioxide (SO2)
Predicted Maximum 1-hour Mean (99.7th %ile) Concentrations 2004

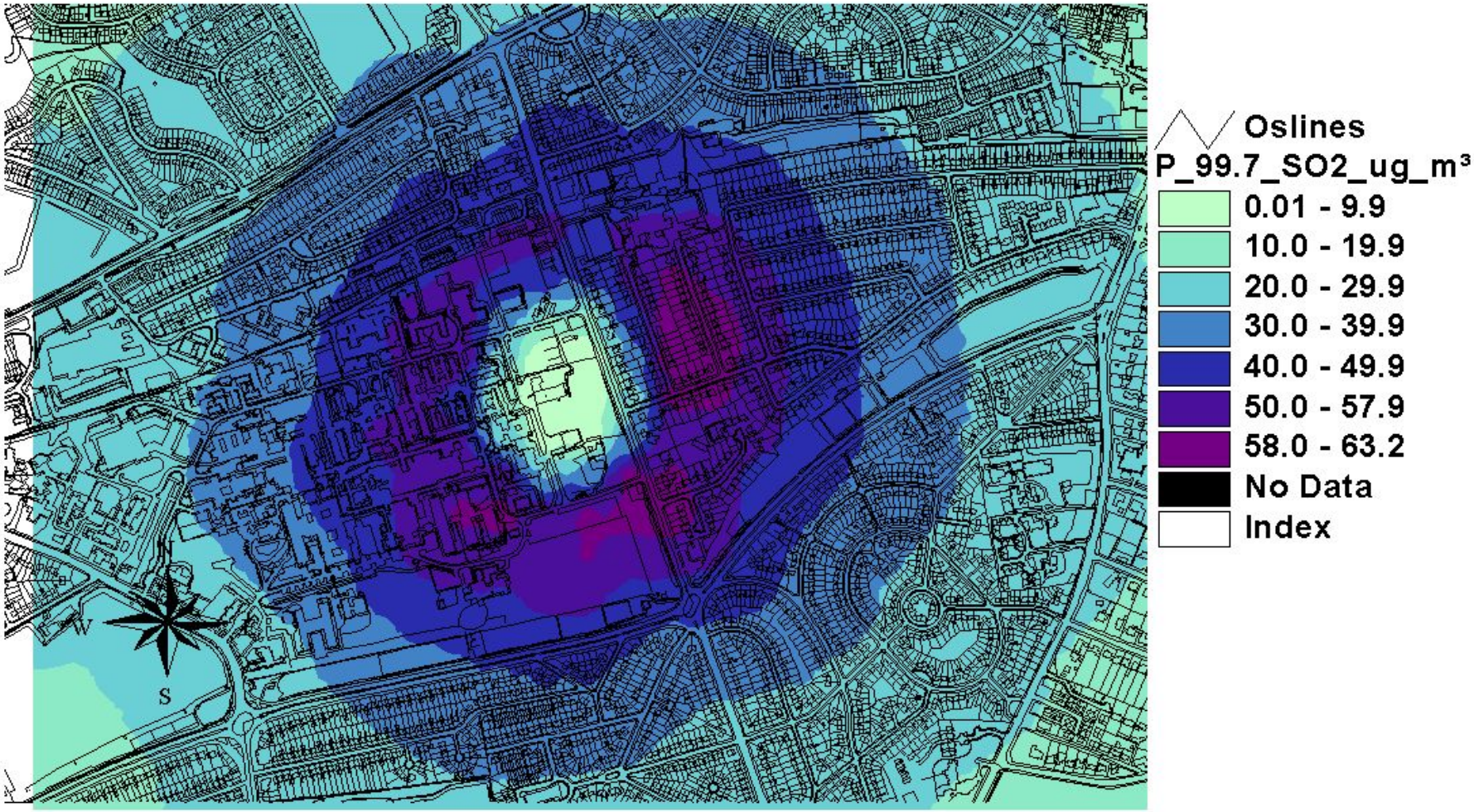
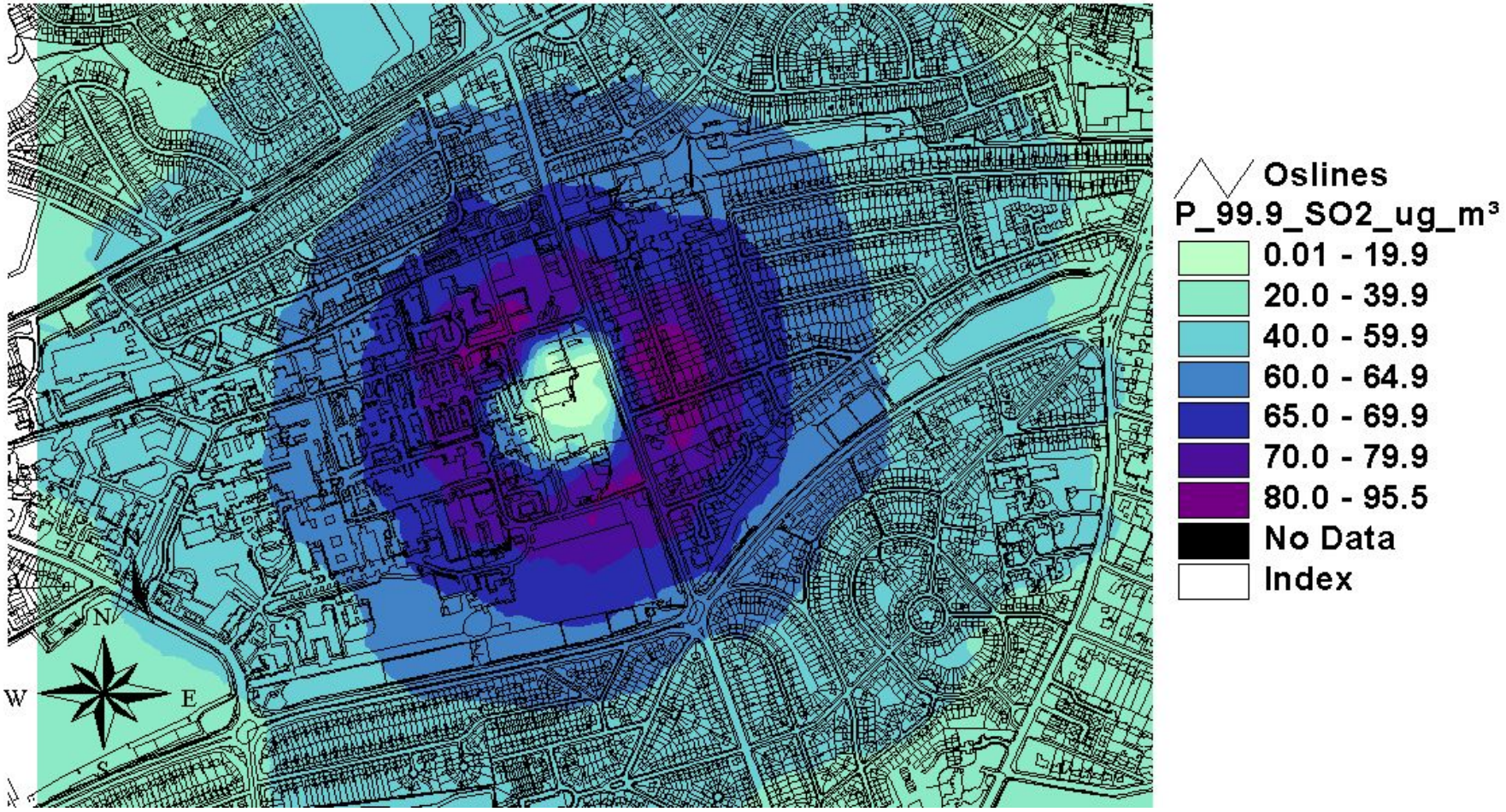


Fig 1c

Sulphur Dioxide (SO2)
Predicted Maximum 15-minute Mean (99.9th %) Concentrations 2005



AQMA 2 – nitrogen dioxide City Centre

Transport plan implementation

Modelling has determined the AQMA primarily results from road traffic. Implementation of Local Transport Plan schemes and route changes as part of the NET project has resulted in changes to the traffic flow and consequent reductions in traffic volumes within the AQMA.

Areas of route and traffic flow change in, and adjacent to, AQMA as part of Local Transport Plan since Stage Two and Three Review and Assessment;-

i. Lower Parliament Street/Carlton Road junction improvement, part closure of Barker Gate and flow changes due to National Ice Centre,
ii. Southern relief route – Queens Road junction improvement and flow changes
iii. Derby Road Island - Upper Parliament Street to South Sherwood Street: reduced to single lane,

The phased implementation of Local Transport Plan projects during the AQO target years with their associated changes to vehicular access and traffic flows (in their immediate vicinity and effects on the traffic flow around the City Centre in general) make the prediction of air quality during 2004/5 subject to additional uncertainty. Therefore only the situation based on the completion of programmed works has been modelled.

Nottingham Express Transit

Vehicle routes and flows through the City Centre have also been affected by changes required by the Nottingham Express Transit (NET) system. Route and flow changes associated with Route 1 of the NET will be completed by November 2003.

Areas of route and traffic flow change in, and adjacent to, AQMA 2 as part of the NET project since the Stage Two and Three Review & Assessment;-

i. Wollaton Street now closed to through traffic,

ii. North - South Sherwood Street, Talbot Street – Burton Street Junction improvement,

iii. Theatre Square Junction; (Wollaton Street closed to through traffic), Upper Parliament Street to South Sherwood Street: reduced from four to three lanes.

AQMA 3 – nitrogen dioxide A52 Dunkirk

The AQMA primarily results from road traffic. The Local Transport Plan refers to the Nottingham Ring Road Major Scheme which is still undergoing evaluation. A feasibility report was submitted to the Government in July 2002.

Stage Four Review and Assessment of Nitrogen Dioxide (NO_2)

The Stage Four Review and Assessment was undertaken according to the revised guidance contained in LAQM.TG4(00) and focused on the area of the two AQMA's.

Results of Modelling

Complex modelling using ADMS urban was carried out for the Stage Four Review and Assessment. Complex modelling predicts that the 99.8^{th} percentile, which corresponds to 18 exceedances of 1-hour mean objective of 200 $u gm^{-3}$, will not be exceeded in either AQMA 2 (Figure 2b) or AQMA 3 (Figure 3b).

With respect to AQMA 2 (City Centre) the modelling predicts the annual mean AQO will not be exceeded in 2005 (Figure 2a).

With respect to AQMA 3 (QMC/Dunkirk) the modelling predicts that the annual mean AQO will not be exceeded in 2005 (Figure 3a)

Figure 3a

Nitrogen Dioxide (NO2)
Predicted Annual Mean Nitrogen Dioxide Concentrations 2005

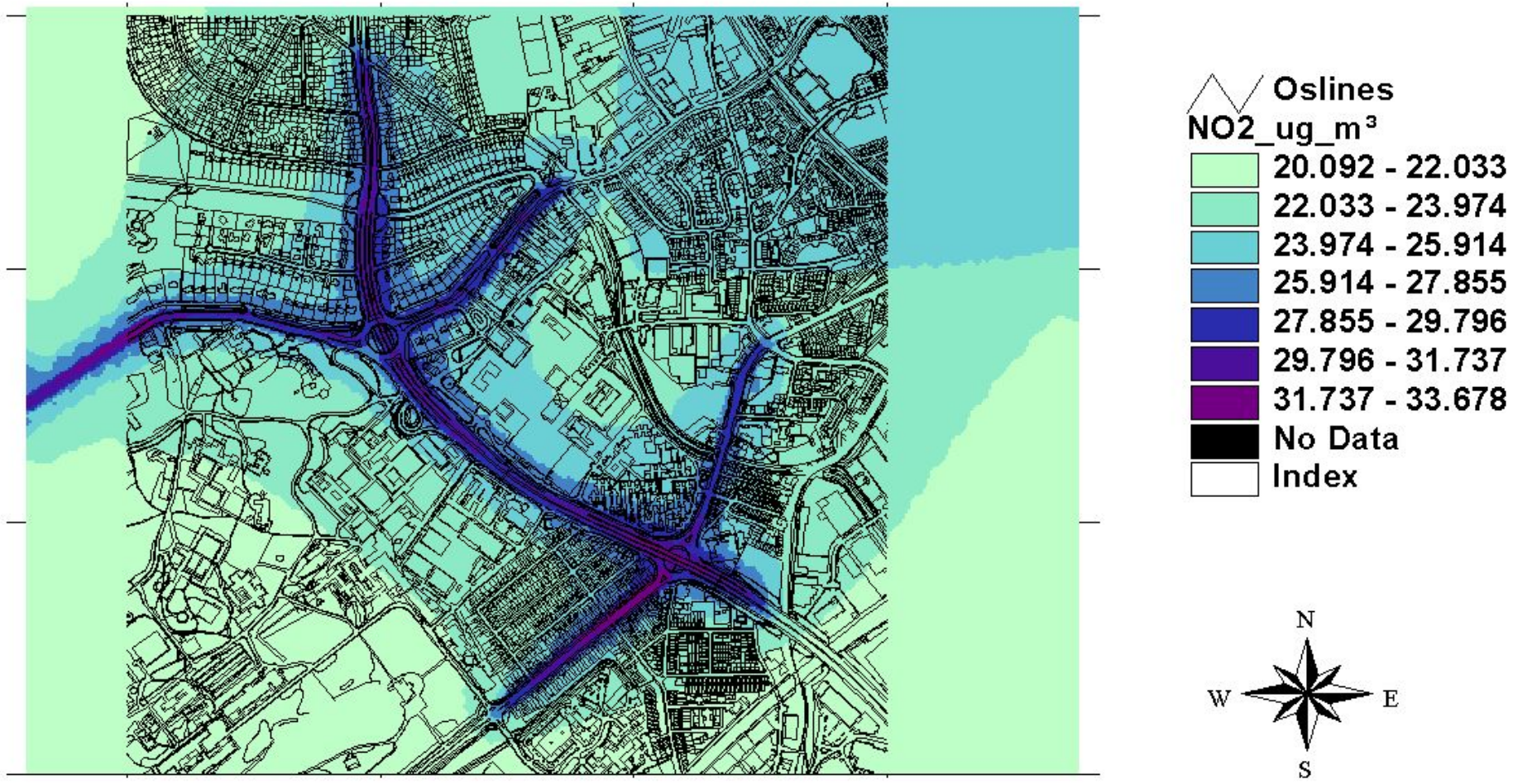


Figure 3b

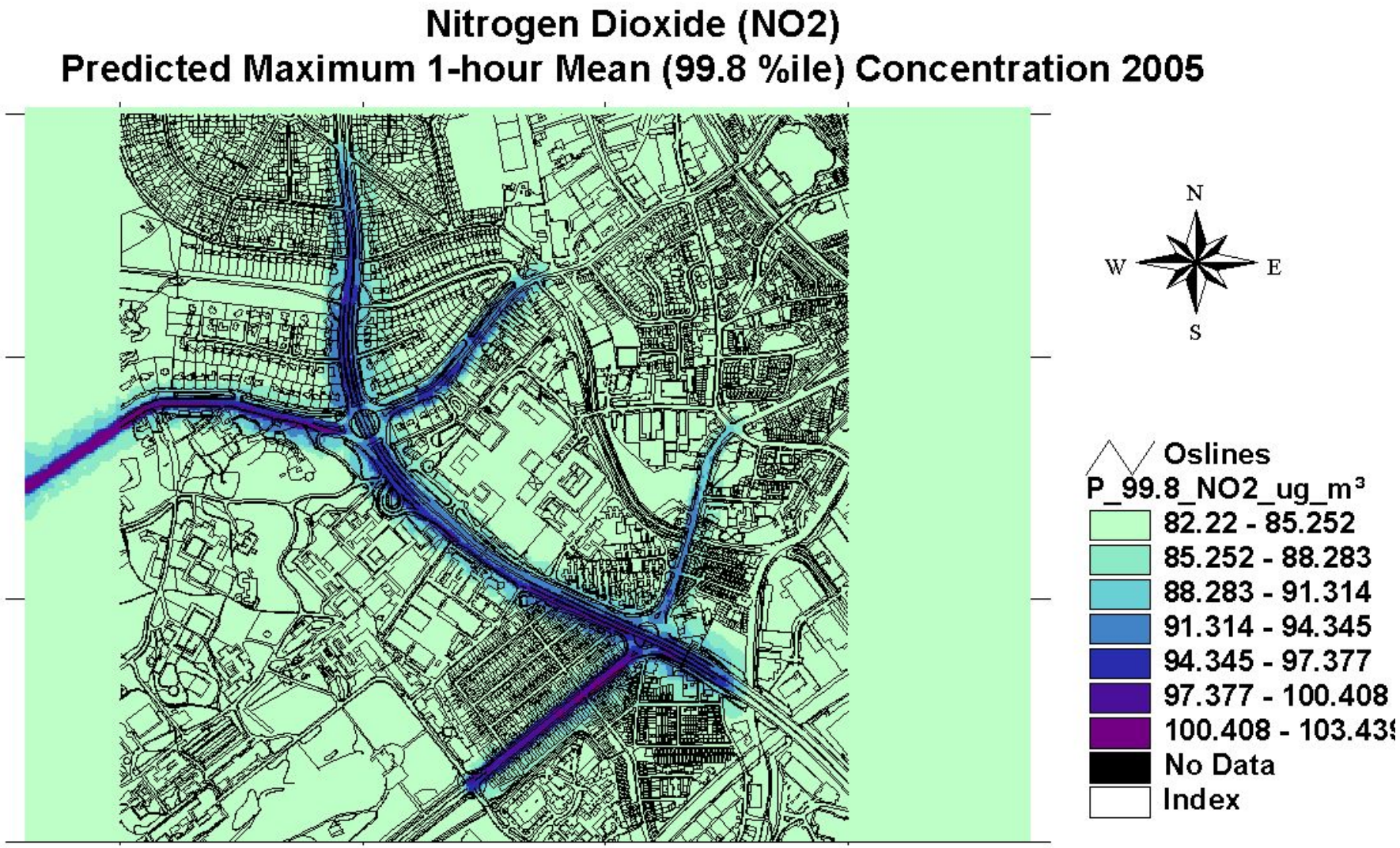

Nitrogen Dioxide (NO2)
Predicted Maximum 1-hour Mean (99.8 %ile) Concentration 2005
N
W
E
S
Oslines
P_99.8_NO2_ug_m³
82.22 - 85.252
85.252 - 88.283
88.283 - 91.314
91.314 - 94.345
94.345 - 97.377
97.377 - 100.408
100.408 - 103.43
No Data
Index

Figure 2a

Nitrogen Dioxide (NO2)
Predicted Annual Mean Nitrogen Dioxide Concentrations 2005

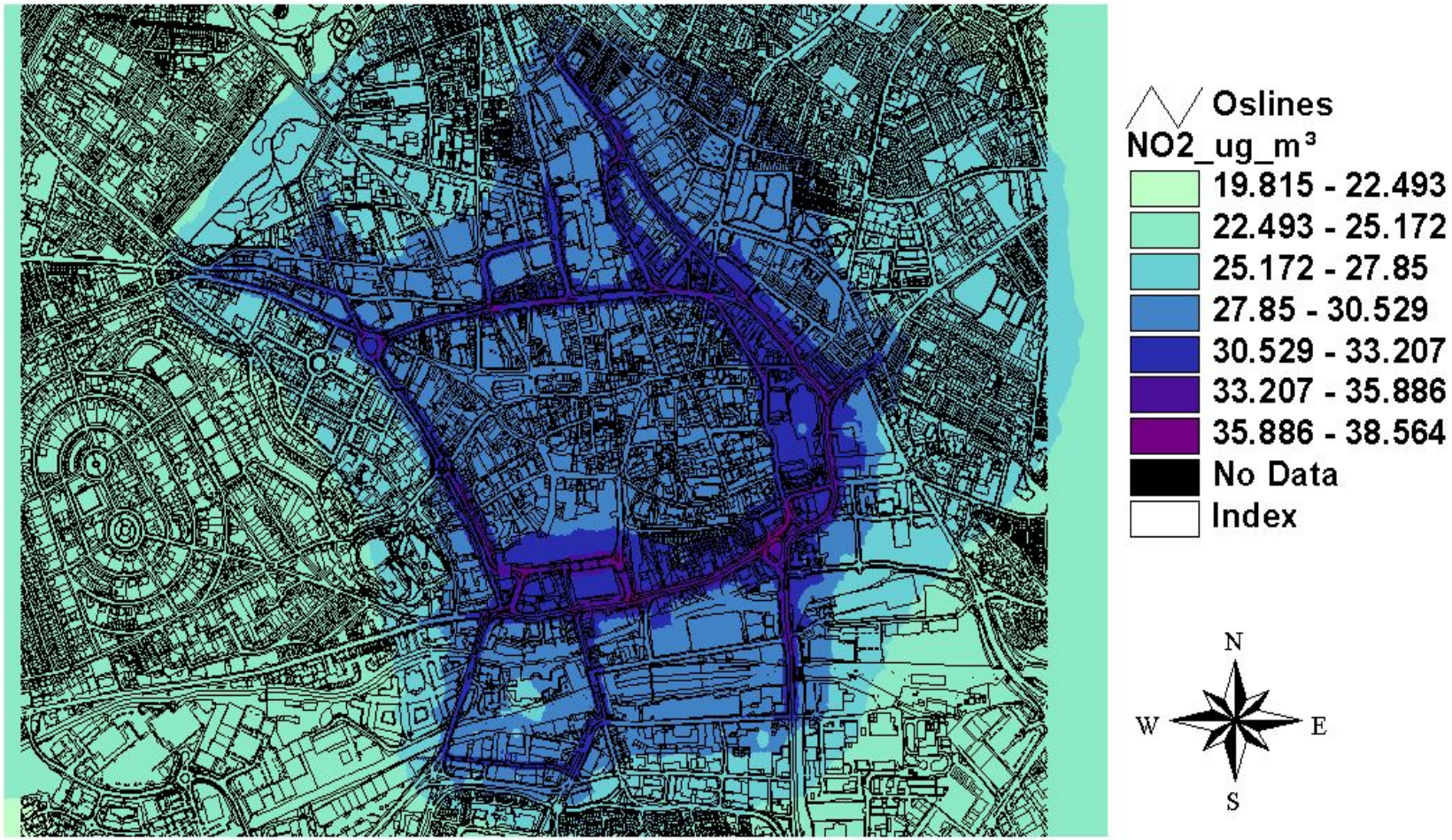
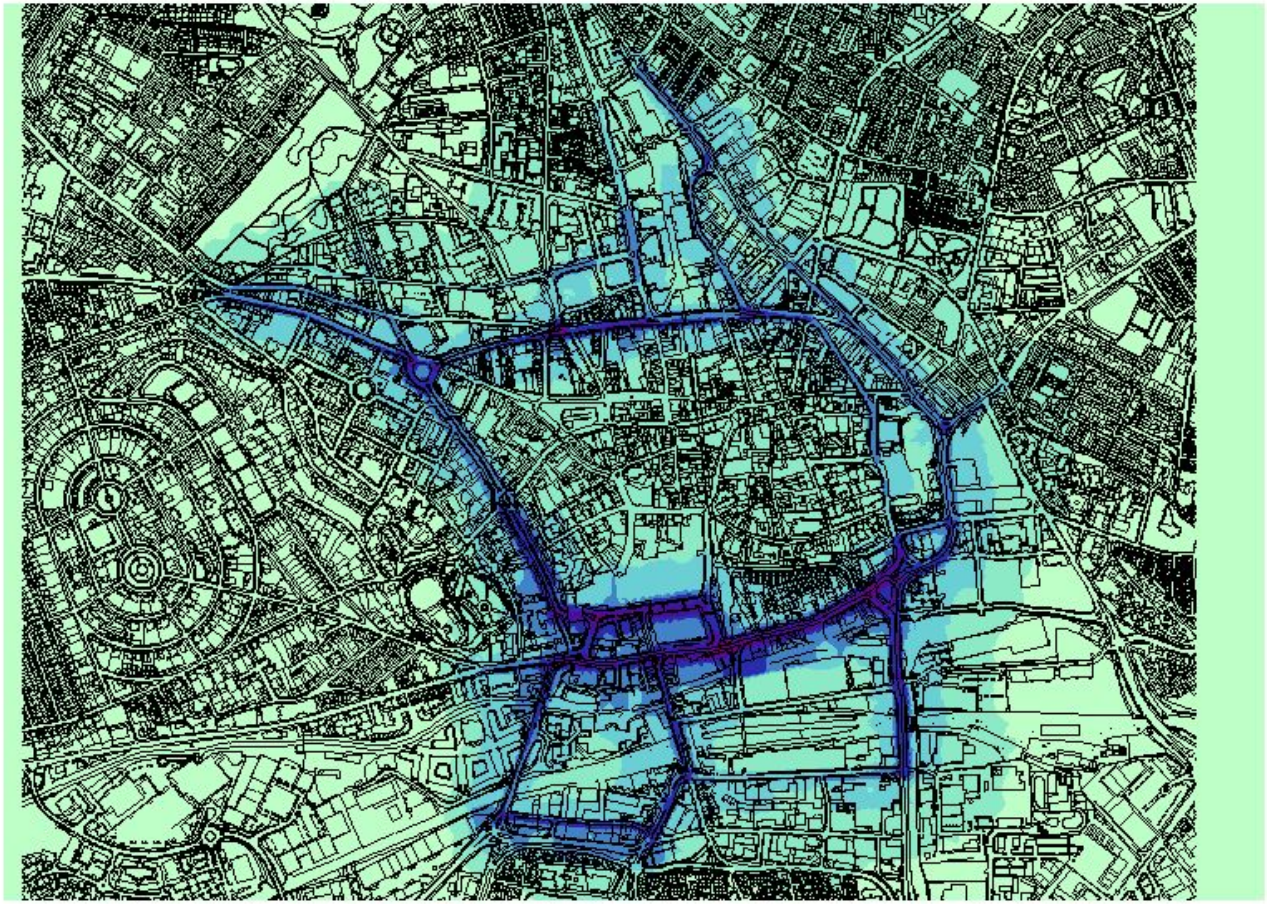


Figure 2b

Nitrogen Dioxide (NO2)
Predicted Maximum 1-hour Mean (99.8 %ile) Concentration 2005



Conclusion

In the City Centre, AURN data shows that, for the period 2000 to 2002, neither the annual mean nor the 1-hour mean NO_2 Air Quality Objective have been exceeded. Advanced Dispersion modelling predicts that the nitrogen dioxide annual mean AQO of 40 *u*gm^{-3} will be met by the target date. The modelling predicts that the 1-hour mean AQO will continue to be met.

With respect to AQMA 3 during the monitoring period June 2002-May 2003 the nitrogen dioxide annual mean was 41.9 *u*gm^{-3}.
Advanced Dispersion modelling predicts that the nitrogen dioxide annual mean AQO of 40 *u*gm^{-3} will be met by the target date. The modelling predicts that the 1-hour mean AQO will continue to be met.

Amendments to the Air Quality Management Areas

The Air Quality (England) Regulations 2000 require the achievement or likely achievement of Air Quality Objectives to be determined by reference to the quality of air at locations that are situated outside buildings **AND** where members of the public are regularly present and are likely to be exposed over the averaging period of the objective.' See Table 2.

Where, as the result of a Review and Assessment of air quality, it appears any Air Quality Standards or Objectives are not being, or are not likely to be achieved within the relevant period local authorities are required by The Environment Act 1995 to designate AQMAs. Thus Nottingham City designated AQMAs for sulphur dioxide and nitrogen dioxide following the Second and Third Stage Review and Assessment.

AQMA 1 - sulphur dioxide

The Stage Four Review and Assessment predicts that the Air Quality Objectives for 2004/5 are likely to be met in the vicinity of the City Hospital.

AQMA 2 – nitrogen dioxide

The Stage Four Review and Assessment predicts that the Air Quality Objectives for 2005 are likely to be met at locations of 'relevant exposure' in the City Centre.

AQMA 3 – nitrogen dioxide

The Stage Four Review and Assessment predicts that the Air Quality Objectives for 2005 are likely to be met at locations of 'relevant exposure' in the Dunkirk area.

The Environment Act 1995 Section 83 (2) states 'An order under this section may, as a result of a subsequent air quality review,-

(a) be varied by a subsequent Order; or

(b) be revoked by such an Order, if it appears on that subsequent Air Quality Review that the Air Quality Standards and Objectives **are being achieved**, and are likely throughout the relevant period to be achieved, **within the designated area**.

Monitoring, where available, has not been for a sufficiently long period or of sufficiently high capture rate to demonstrate that the Air Quality Standards and Objectives are being achieved**. It is not, therefore, appropriate at this time to revoke any of the Air Quality Management Areas.**
It is also necessary for monitoring to commence and continue within the AQMAs.

Air Quality Action Plans

Air Quality Management Area 1 – sulphur dioxide

The Stage Four Review and Assessment has determined that emissions of sulphur dioxide from the City Hospital boiler plant are significantly lower then those used in the Second and Third Stage Review and Assessment. Modelling predicts significantly lower maximum ground level concentrations and that the Air Quality Objectives will not be exceeded. An Air Quality Action Plan **designed to reduce emissions from the plant to meet the air quality objectives** is therefore unnecessary.

Air Quality Management Area 2 – nitrogen dioxide

The Stage Four Review and Assessment has determined that the major local contribution to ambient nitrogen dioxide concentrations is traffic. A number of measures introduced and being completed as part of the Local Transport Plan and NET project have reduced vehicle volumes in the City Centre. Modelling predicts that neither the annual mean AQO of 40 *u*gm^{-3} nor the 1-hour mean AQO will be exceeded. Any Air Quality Action Plan **designed to reduce emissions from road transport in the City Centre to meet the Air Quality Objectives** will therefore be likely to reflect aspects of the Local Transport Plan measures aimed at reducing traffic volumes and encouraging the use of alternatives to the car (modal shift). However as it is predicted the Air Quality Objectives will be met an AQAP is unnecessary.

Air Quality Management Area 3 – nitrogen dioxide

The Stage Four Review and Assessment has determined that the major local contribution to ambient nitrogen dioxide concentrations in the Dunkirk area is traffic. A number of measures are proposed in the Local Transport Plan to reduce vehicle volumes in the Dunkirk AQMA. However, even without these measures modelling predicts that neither the annual mean AQO of 40 *u*gm^{-3} nor the 1-hour mean AQO will be exceeded. Any Air Quality Action Plan **designed to reduce emissions from road transport in the Dunkirk AQMA to meet the air quality objectives** is likely to reflect aspects of the Local Transport Plan measures aimed at reducing traffic volumes and encouraging the use of alternatives to the car (modal shift).
However as it is predicted the Air Quality Objectives will be met an AQAP is unnecessary.

What happens next?
In September 2001 DEFRA commissioned a detailed evaluation of the first round of air quality reviews and assessments undertaken by local authorities under Part IV of the Environment Act 1995. The evaluation report was published in March 2002 and made a number of recommendations for future reviews and assessments of air quality. A key recommendation was that the next round should be carried out in two steps:
- An **Updating and Screening Assessment** (USA) for identifying those aspects that have changed since the first round of reviews and assessments; and
- A **Detailed Assessment** of those pollutants and specific locations that are identified in the USA as requiring further work.

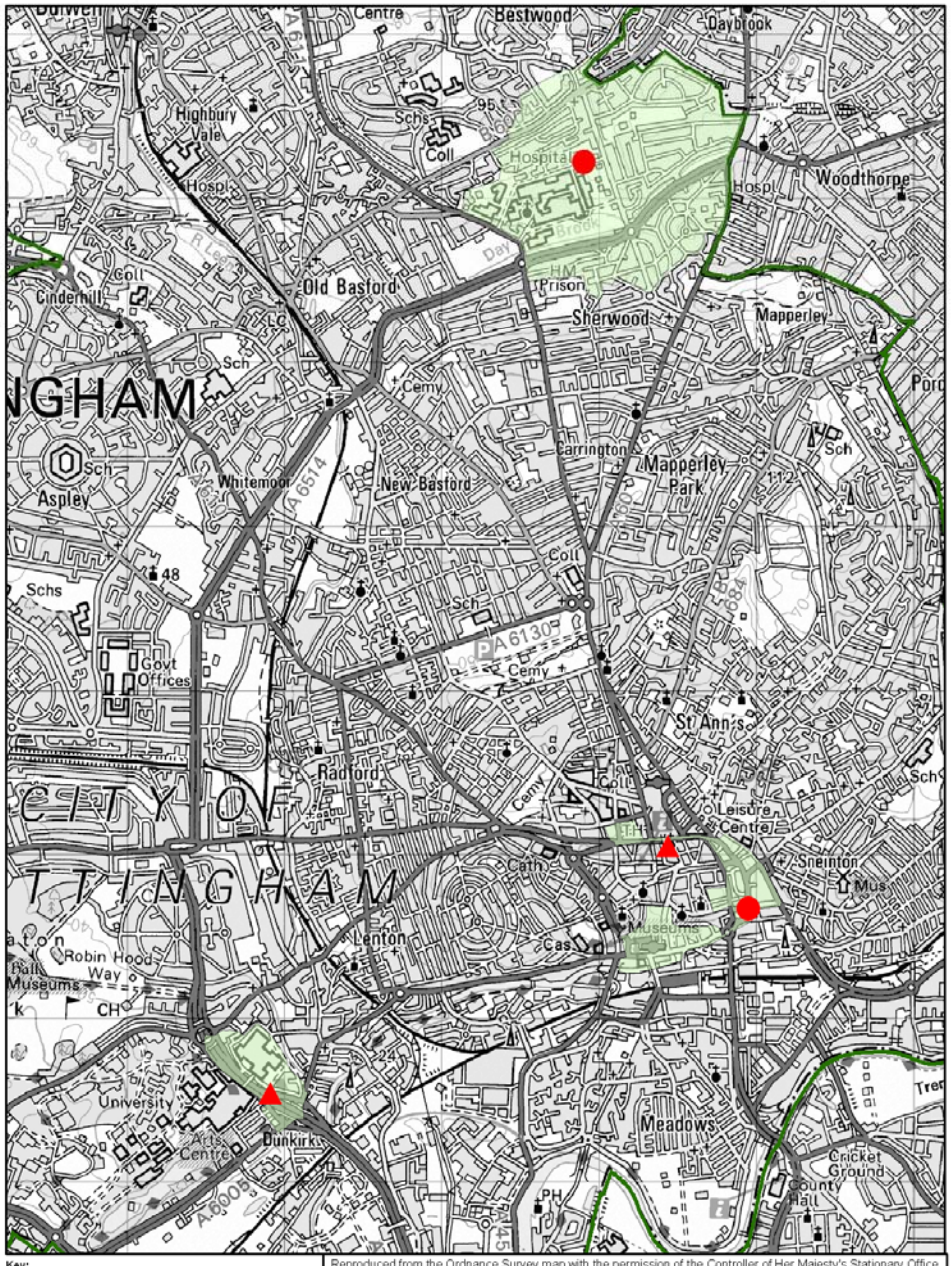
The administrative framework LAQM.PG (03) Policy Guidance and LAQM.TG (03) Technical Guidance were published in February 2003 which advised Local Authorities to follow the guidance on the recommended phased approach to the review and assessment process set out in LAQM.TG (03).
This new review and assessment process replaces the former 3-4 stage review and assessment process with the timetable overleaf.

DEFRA recommends that local authorities prepare annual air quality Progress Reports between subsequent rounds of reviews and assessments to ensure continuity in the LAQM process and that monitoring data is reported over the period of a calendar year.

	Completion Date	**Which Authorities?**
Updating and Screening Assessment (USA)	End of May 2003	All authorities
Detailed Assessment	End of April 2004	Those authorities which have identified the need for one in their April 2003 USA
Progress Report	End of April 2004	Those authorities which identified that there was no need for a Detailed Assessment in their April 2003 USA
Progress Report	End of April 2005	All Authorities
USA	End of April 2006	All Authorities
Detailed Assessment	End of April 2007	Those authorities which identified that there was no need for a Detailed Assessment in their April 2006 USA
Progress Report	End of April 2008	All authorities
USA	End of April 2009	All authorities
Detailed Assessment	End of April 2010	Those authorities which have identified the need for one in their April 2009 USA
Progress Report	End of April 2010	Those authorities which identified that there was no need for a Detailed Assessment in their April 2009 USA

Appendix 1

Automatic Monitoring Stations



Key:

Monitoring Station

▲ Existing

● Proposed

AQMAs

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City of NOTTINGHAM
Development & Environmental Services
Pollution Control Section

N

Scale : 1:35000
Drawn : JCW
Date : 16/07/2003

Scheme : Automatic Monitoring Stations

Title : City Location Plan

Appendix 2

Site name	Pollutant	AQMA
Nottingham City Hospital	SO2	1
London Road Heat Station	NOx	2
Eastcroft Incinerator	NOx	2
University of Nottingham	NOx	3
Queens Medical Centre	NOx	3

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