

A Summary of Consultation Responses – Variation to the Air Quality Management Area in Bath

In fulfillment of Part IV of the Environment Act 1995
Local Air Quality Management

Draft August, 2012

Report Author	Dr N Courthold
Checked by	Mr A Jones

Department	Environmental Monitoring and Licensing
Address	Lewis House Manvers Street Bath BA1 1JG
Telephone	01225 477557
e-mail	Environmental_monitoring@bathnes.gov.uk

Report Reference Number	R2CR2012
Date	August 2012

Executive Summary

This Detailed Assessment forms part of the on-going review and assessment of air quality within Bath and North East Somerset. Local Authorities are required under Part IV of the Environment Act 1995 to periodically review and assess the air quality in their area. Present and likely future quality of the air is compared to air quality objectives. The guidance issued by Department for Environment, Food and Rural Affairs (DEFRA) on how this should be approached has been followed in this assessment.

This report details the consultation which has taken place relating to the variation of the Bath AQMA to extend it to include the further areas highlighted as exceeding the objective and the proposed inclusion of the 1-hour objective.

The consultation shows that 65% of the responses agree with the proposed amendments to the AQMA boundary. They also agree that the 1-hour objective should be included in the AQMA. 54% of respondents agreed that the inclusion of the 1-hour objective should be over the whole area with, 8% selecting just the hotspots and 34% not specifying a preference.

It is therefore recommended based on monitoring data and the consultation that the Bath AQMA be varied to 1) include the proposed extensions as described in Figure A4 and 2) to include the 1-hour objective for the whole area.

Table of Contents

Executive Summary.....	3
1 Introduction.....	5
2 The Consultation	6
3 Responses.....	6
4 Conclusions and Recommendations	7
5 References	9
Appendix A: Maps of Air Quality Management Areas.....	10
Appendix B: Air Quality Objectives	14
Appendix C: Copy of the Leaflet.....	15
Appendix D: Glossary.....	17
Appendix E: Responses received.....	18

1 Introduction

This report forms part of the on-going review and assessment of air quality within Bath and North East Somerset. Local Authorities are required under Part IV of the Environment Act 1995⁽¹⁻²⁾ to periodically review and assess the air quality in their area. Present and likely future quality of the air is compared to air quality objectives (levels of pollutants which are to be met by a certain date), these are shown in Appendix 1. The Department for Environment, Food and Rural Affairs (DEFRA) has issued guidance on how this should be approached⁽³⁻⁴⁾.

Following Stage 3⁽¹²⁾ (Round 1) Review and Assessment, Bath & North East Somerset Council declared an Air Quality Management Area (AQMA) for nitrogen dioxide (NO₂) along the A4 London Road (Figure A1) in February 2002. From the results of the further assessment (Stage 4⁽¹¹⁾) the AQMA was widened in August 2005 from 7 m to 70 m from the centre of the road along the London Road from London Street to Hanover Place and 20 m from the centre of the road from Hanover Place to the Batheaston Roundabout. The area is also extended to include Bathwick Street (Figure A2).

Round 2 assessments⁽⁸⁻¹⁰⁾ identified a number of locations along main roads in Bath with the potential to exceed the annual mean objective for NO₂. This area was consulted on and the major road network (Figure A3) and the area was declared as an AQMA for NO₂ in July 2008. The further assessment⁽⁷⁾ indicated a minor extension to the boundary of the AQMA is required (Figure A4).

During Round 4^(5 & 6) it has been highlighted that results from several of the diffusion tube exceed 60 µg/m³. In this case it is recommended that the AQMA for Bath be varied to include the 1 hour NO₂ objective.

Setting the boundaries of an AQMA involves an element of judgement as to the extent of the exceedence based on monitoring data, sources, receptors and other local factors. An AQMA must encompass all known and predicted areas of exceedence where there is relevant exposure.

Objective	Concentration	Relevant Exposure
Annual Mean NO ₂	40 µg/m ³	All locations where members of the public might be regularly exposed. Building facades of residential properties, schools, hospitals, care homes etc. Not offices, gardens of residential properties or Kerbside sites
1-hour NO ₂	200 µg/m ³ with 18 exceedences per year. Guidance indicates that an annual mean NO ₂ concentration greater than 60 µg/m ³ may indicate an exceedence of the 1- hour objective.	As above plus hotels, gardens, any outside location where members of the public might reasonably be expected to spend 1 hour or longer.

This report details the consultation which has taken place relating to the variation of the Bath AQMA to extend it to include the further areas highlighted as exceeding the objective and the proposed inclusion of the 1-hour objective.

2 The Consultation

A leaflet and questionnaire was delivered to all houses along the roads in the proposed extension and several houses back on the side roads (approx. 1000 leaflets). Information was sent to all Councillors in Bath and relevant residents associations. Details were also posted on our website and sent electronically to all Statutory Consultees (list was taken from PG(09)):

- The Secretary of State
- Environment Agency
- The Highways Authority
- All neighbouring local authorities
- The County Council (if applicable)
- Any National Park Authority
- Other public authorities as appropriate
- Bodies representing local business interests and other organisations as appropriate

A copy of the leaflet and questionnaire are included in Appendix C.

3 Responses

We had 26 responses to the consultation (approx. 3% response rate). Details of the responses are given in Appendix E

Q1: Do you agree with the area shown for the amendments to the AQMA boundary? If not please specify what changes need to be made and give a reason.

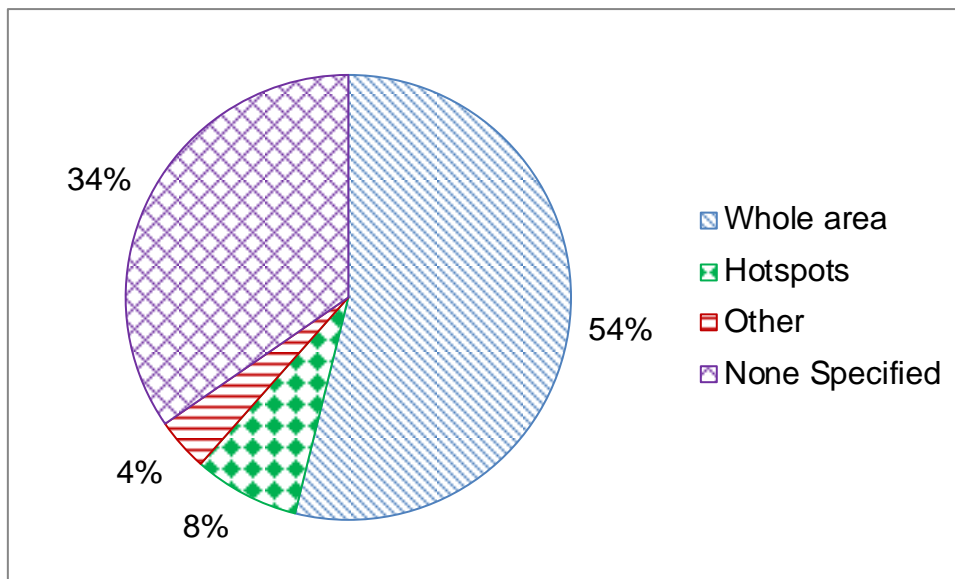
Option	Number of respondents selecting each option
Yes	17
No	0
None specified	9

Question 2: Do you agree that the AQMA should be extended to include the 1-hour objective?

Option	Number of respondents selecting each option
Yes	17
No	0
None specified	9

Question 3: Do you think the 1-hour objective should be declared for the whole area or for hotspots around the monitors which currently show potential breaches? Please describe any alternative areas.

Option	Number of respondents selecting each option
Whole area	14
Hotspots	2
Other	1 (either whole area or hotspots)
None Specified	9



4 Conclusions and Recommendations

The consultation shows that 65% of the responses agree with the proposed amendments to the AQMA boundary. They also agree that the 1-hour objective should be included in the AQMA. 54% of respondents agreed that the inclusion of the 1-hour objective should be over the whole area with, 8% selecting just the hotspots and 34% not specifying a preference.

It is therefore recommended based on monitoring data and the consultation that the Bath AQMA be varied to 1) include the proposed extensions as described in Figure A4 and 2) to include the 1-hour objective for the whole area.

5 References

1. HM Government (1995). Environment Act 1995 (Part IV). London HMSO.
2. Department for Environment, Food and Rural Affairs (2007) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland. DEFRA, London.
3. Department for Environment, Food and Rural Affairs (2009a) Part IV of the Environment Act 1995, Local Air Quality Management, Technical Guidance LAQM.TG(09). DEFRA, London.
4. Department for Environment, Food and Rural Affairs (2009b) Part IV of the Environment Act 1995, Local Air Quality Management, Policy Guidance LAQM.PG(09). DEFRA, London.
5. Bath & North East Somerset Council (2011a) 2011 Air Quality Progress Report for Bath and North East Somerset Council
6. Bath & North East Somerset Council (2010a) 2010 Air Quality Progress Report for Bath and North East Somerset Council
7. Bath & North East Somerset Council (2009c) Further Assessment of Air Quality , Bath and North East Somerset Council
8. Bath & North East Somerset Council (2005a) Review and Assessment of Air Quality – Round 2, Progress Report.
9. Bath & North East Somerset Council (2005b) Review and Assessment of Air Quality – Round 2, Detailed Assessment
10. Bath & North East Somerset Council (2003a) Review and Assessment of Air Quality – Round 2, Updating and Screening Assessment.
11. Bath & North East Somerset Council (2003b) Stage Four Review and Assessment of Air Quality.
12. Bath & North East Somerset Council (2001a) Stage Three Review and Assessment of Air Quality.
13. Bath & North East Somerset Council (2006b) Air Quality Action Plan.
14. Bath & North East Somerset Council (2011) Bath Air Quality Action Plan,
15. Department for Environment, Food and Rural Affairs:
<http://laqm1.defra.gov.uk/review/tools/no2/baf-national.php>
16. AEA Technology: <http://www.airquality.co.uk/>

Appendix A: Maps of Air Quality Management Areas

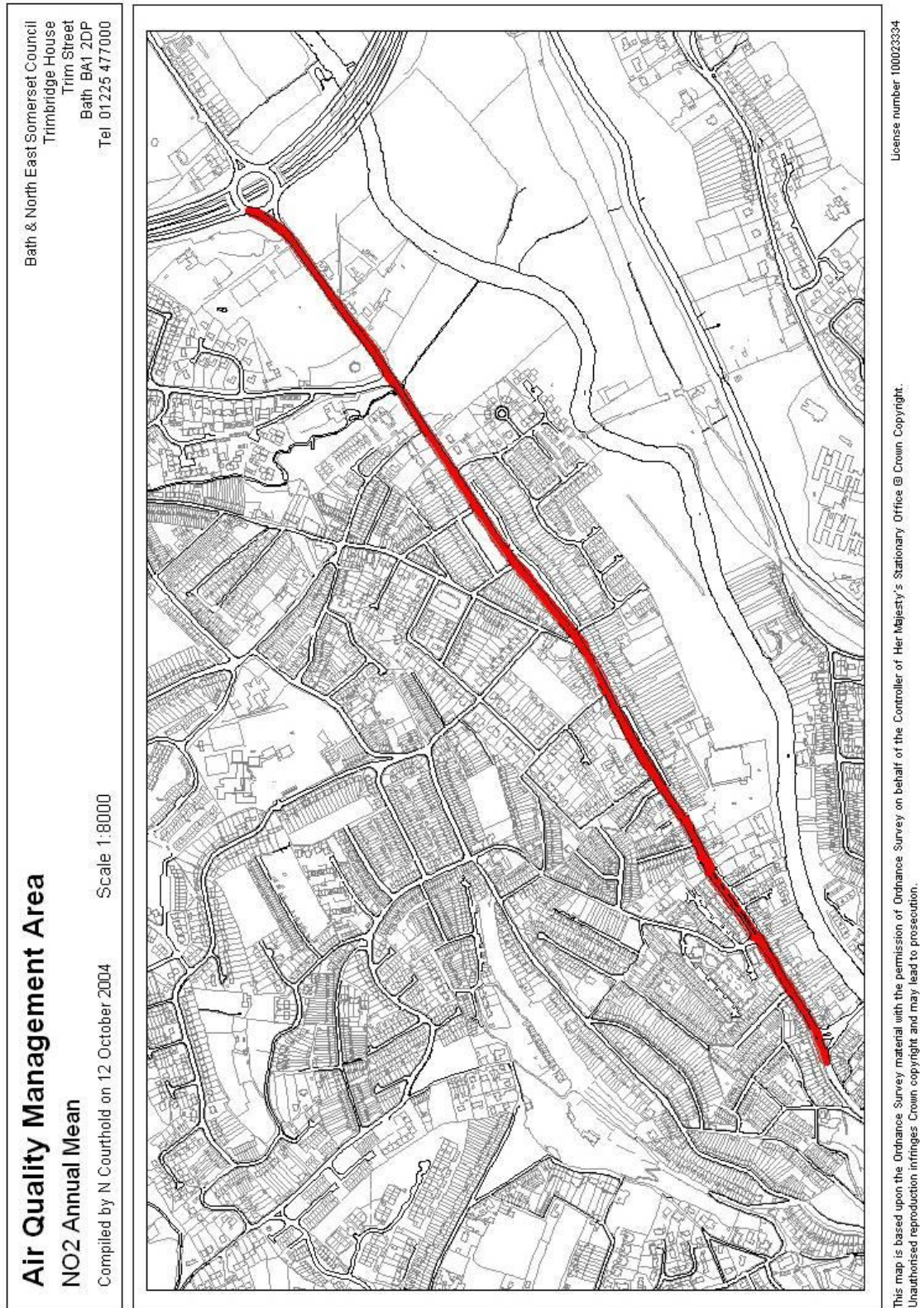


Figure A1: Map showing AQMA in Bath, valid 2002-2005

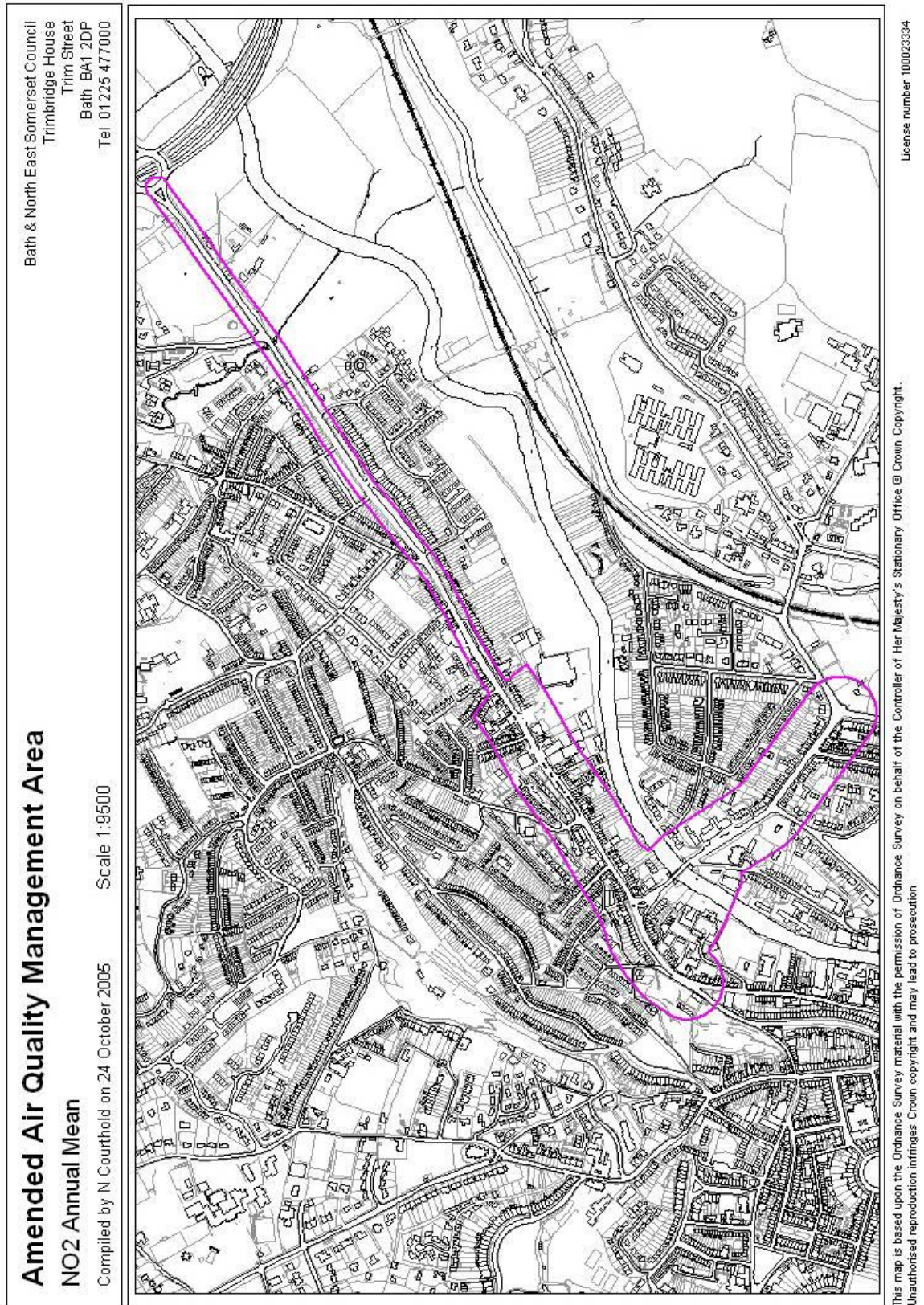


Figure A2: Map showing AQMA in Bath, valid 2005-2008

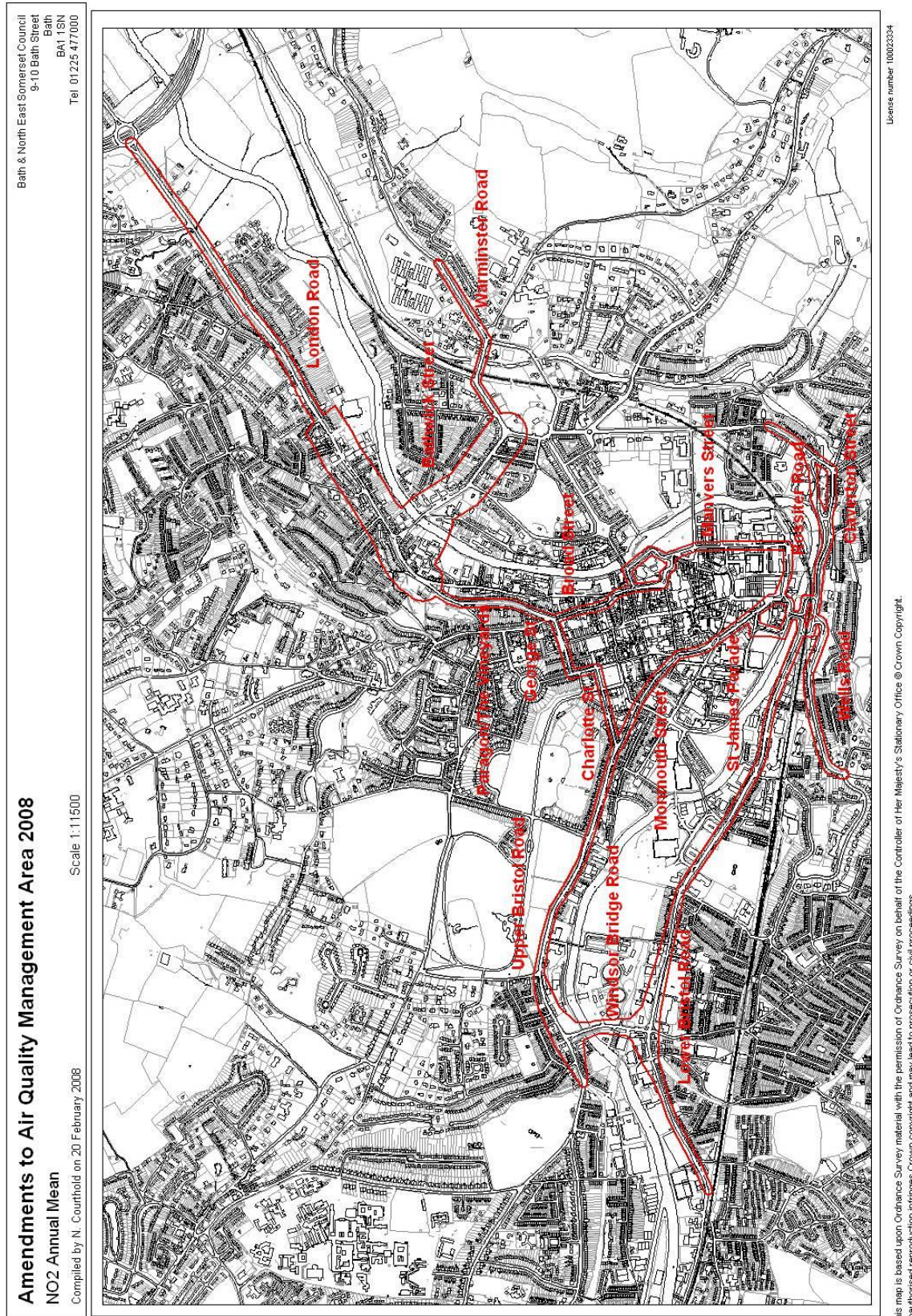


Figure A3: Map showing current AQMA in Bath, valid from 2008

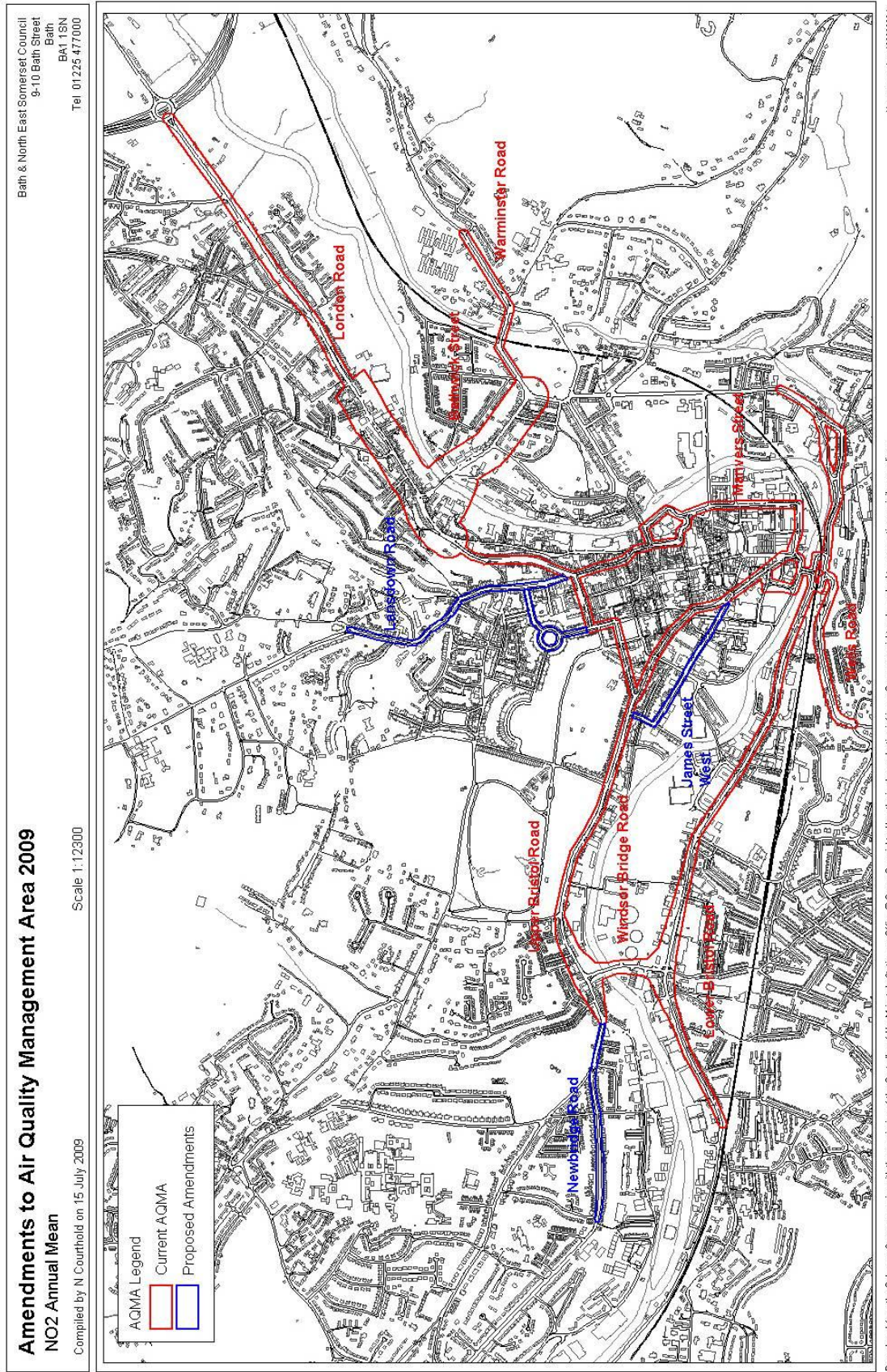


Figure A4: Map showing proposed changes to AQMA in Bath

Appendix B: Air Quality Objectives

Table B1: Current air quality objectives

Pollutant	Concentration	Measured as	Compliance
Benzene	16.25 µg/m ³ (5 ppb)	Running annual mean	31.12.2003
	5 µg/m ³ (1.5 ppb)	Annual mean	31 Dec 2010
1,3 Butadiene	2.25 µg/m ³ (1 ppb)	Running annual mean	31.12.2003
Carbon Monoxide	10 mg/m ³ (8.6 ppm)	Running 8-hour mean	31.12.2003
Lead	0.5 µg/m ³	Annual mean	31.12.2004
	0.25 µg/m ³	Annual mean	31.12.2008
Nitrogen Dioxide	200 µg/m³ (104.6 ppb)	1 hour mean	31.12.2005 (max 18 exceedences)
	40 µg/m³ (21 ppb)	Annual mean	31.12.2005
Fine Particles (PM ₁₀)	50 µg/m ³	24-hour mean	31.12.2004 (max 35 exceedences)
	40 µg/m ³	Annual mean	31.12.2004
Sulphur Dioxide	266 µg/m ³ (100 ppb)	15 minute mean	31.12.2005 (max 35 exceedences)
	350 µg/m ³ (131 ppb)	1 hour mean	31.12. 2004 (max 24 exceedences)
	125 µg/m ³ (46.8 ppb)	24 hour mean	31.12.2004 (max 3 exceedences)
Polycyclic aromatic hydrocarbons	0.25 ng/m ³ B[a]P	Annual mean	31.12.2010
Fine Particles (PM _{2.5}) Exposure Reduction	25 µg/m ³	Annual mean	2020
	Target of 15 % reduction in concentrations at urban background	Annual mean	Between 2010 and 2020
Ozone	100 µg/m ³	8 hour mean	31.12.2005 (max 10 exceedences)

Appendix C: Copy of the Leaflet

This was originally printed as a leaflet folded to A4.

**Bath & North East
Somerset Council**

A Consultation on Air Quality

Bath's Air Quality and your help improving it

The Council is seeking your views on the extension of the AQMA. Please complete the questionnaire and return it using the address below. Alternatively please telephone or email us to discuss your response.

1. Do you agree with the area shown for the amendments to the AQMA boundary? If not please specify what changes need to be made and give a reason. The area needs to be where the Air Quality Objectives are exceeded and with relevant public exposure e.g. residential properties. You may wish to highlight these areas on the map.
- YES NO (please specify changes)
-
-
-

2. Do you agree that the AQMA should be extended to include the 1-hour NO₂ objective?
- YES NO

3. Do you think the 1-hour objective should be declared for the whole area or for hotspots around the monitors which currently show potential for breaches? Please describe any alternative areas.

Whole area Hotspots Other (Please specify)

.....

.....

.....

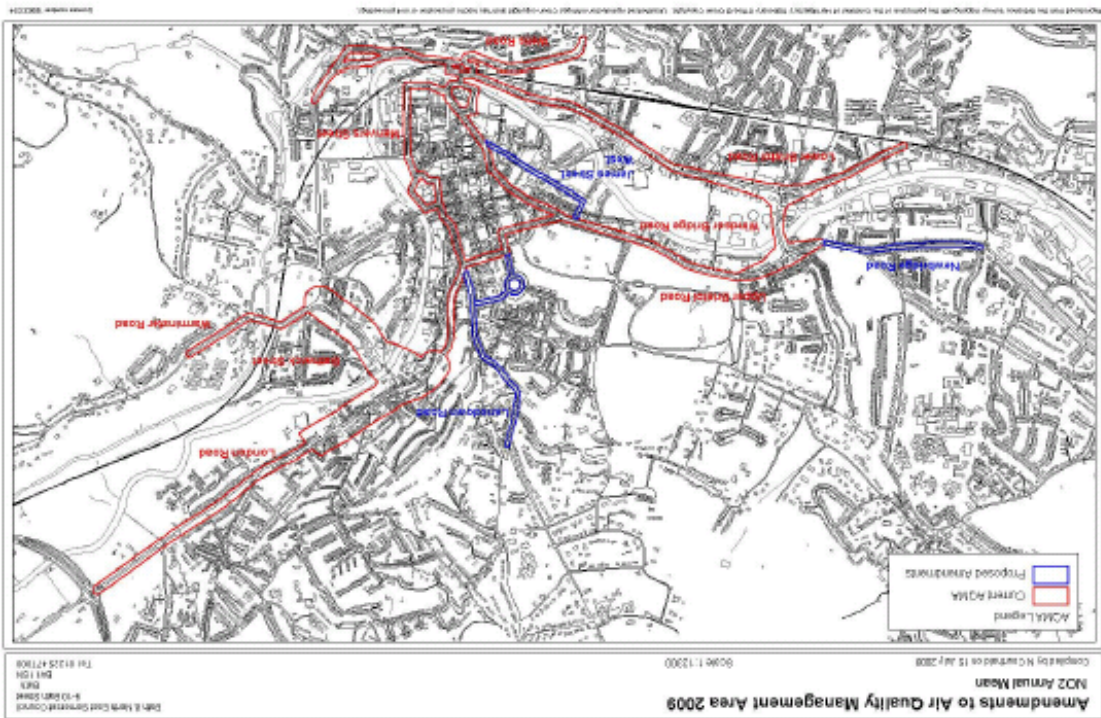
4. If you would like an Air Quality Officer to contact you to discuss your comments or provide further information please provide your contact details.
-
-

For further details or copies of the full technical documents please contact Environmental Monitoring. Telephone 01225 396622, email Environmental_Monitoring@bathnes.gov.uk.

Please return by 31 January 2012 to: Bath & North East Somerset Council
Environmental Monitoring
Environmental Services
FREEPOST (BA1458)
Bath
BA1 1ZZ

This document can be made available in a range of languages, large print, braille, on tape, electronic and accessible formats from 01225 477495.

Pollution Prevention through Control



DUTY

Local Authorities are required under Part IV of the Environment Act 1995 to periodically review and assess the air quality in their area in line with guidance issued by the Department for Environment, Food and Rural Affairs (DEFRA). Present and likely future quality of the air is compared to the National Air Quality Objectives. Where the objectives are found to be exceeded and are identified as areas of public exposure, an Air Quality Management Area (AQMA) must be declared.

AIR QUALITY OBJECTIVES

Objective	Concentration	Relevant Exposure
Annual Mean NO ₂	40 µg/m ³	All locations where members of the public might be regularly exposed. Building facades of residential properties, schools, hospitals, care homes etc. Not offices, gardens of residential properties or Kerbside sites
1-hour NO ₂	200 µg/m ³ with 18 exceedences per year. Guidance indicates that an annual mean NO ₂ concentration greater than 60 µg/m ³ may indicate an exceedence of the 1-hour objective.	As above plus hotels, gardens, any outside location where members of the public might reasonably be expected to spend 1 hour or longer.

CURRENT SITUATION

Following previous review and assessments, an AQMA was declared for the annual mean nitrogen dioxide (NO₂) objective. In 2002 an AQMA was declared covering the London Road. Following further assessments this area has been extended and now covers the major road network within the centre of Bath. The current area is shown in red on the attached map.

THIS CONSULTATION

Further monitoring has been in place since 2007 to ensure the boundary is correct. Following the extension of the AQMA in 2008, a further assessment has been carried out. This shows that there are a few areas where the boundary needs to be extended, these areas are shown in blue on the attached map. An Air Quality Action Plan to identify actions to reduce NO₂ levels is being finalised.

The latest assessment also shows that at 3 diffusion tube monitoring sites levels exceed 60 µg/m³, and there is the potential of the 1-hour objective also being exceeded. One of the sites is co-located with a continuous analyser which is not exceeding the 1-hour objective.

To ensure compliance with the Environment Act we need to extend the AQMA to cover the areas where an exceedence of the Air Quality Objectives has been found.

Appendix D: Glossary

Annual Mean:	The average of the concentrations measured for one year
AEAT:	AEA Technology Ltd
AQMA:	Air Quality Management Area
AQS:	Air Quality Strategy
AURN:	Automatic Urban and Rural Network
DEFRA:	Department for Environment, Food and Rural Affairs
DETR:	Department of the Environment, Transport and the Regions
DMRB:	Design Manual for Roads and Bridges
EU	European Union
GIS:	Geographical Information System
LAQM:	Local Air Quality Management
LSO:	Local Site Operator
mm	Millimetres
NETCEN:	National Environmental Technology Centre (part of AEA Technology Ltd.)
NO ₂ :	Nitrogen Dioxide
NO _x :	Oxides of Nitrogen
Objective:	Target values set by the Government for the key air pollutants that are required to be achieved by a set date.
OS:	Ordnance Survey
PM ₁₀ :	Particulate Matter with diameter less than 10 µm
QA/QC:	Quality Assurance/Quality Control
TG:	Technical Guidance Note
UKAS:	United Kingdom Accreditation Service
µg/m ³ :	Microgrammes per cubic metre
WASP:	Workplace Analysis Scheme for Proficiency
WHO:	World Health Organisation

Appendix E: Responses received

Respondant	Q1	Comments	Q2	Q3	Comments	Q4	Other comments	Response s
1						y		Letter sent
2	y		y	Hotspots		y		Letter sent
3	y	Extend to cover all four sides of Queen Sq not just North side and the roads leading south west and south	y	Whole area	A big option of course to reduce traffic in the affected roads	n		
4	y		y	Whole area		n		
5	y		y	Whole area		n		
6	y		y	Whole area		n		
7		Come on what is all this talk about an AQMA it doesn't mean a thing if you don't do anything about it, but, just put some more lines on the map			As for breaches what about them you can't do anything about them you can't stop all the cars		One day all the lines on the map will be in red and nothing will have been done about it. I will bet you.	
8	y		y	Whole area		n		
9	y	But as other thought Camden Road could be included as it is used as connection between Lansdown Rd and London Rd	y	Whole area			Already spoken to someone - thanks for clarifications	
10	y		y	Whole area		y		Letter sent
11	y		y	Whole area		y		Letter sent
12						y		Letter sent
13	y		y	Whole area		n		
14	y		y	Whole area		n		
15	y		y	Hotspots		n		

16	y		y	Whole area		y		email sent
17	y	But how is a layman supposed to answer this question knowledgably without access to existing data from the diffusion tubes or knowing where they are located	y	Whole area		n		(Data was available online or would have been sent on request).

18	y		y	Whole area		<p>Will the Action Plan as proposed earlier this year actually be able to deliver the necessary improvements? It proposed a number of actions, but events have moved on, and there may be a need to review what can do be done. For example, the revised BTP which has received DfT funding is different from what was included in the Action Plan. Furthermore, not all the CIVITAS measures will continue, and certainly some of the timescales assumed in the Action Plan have slipped. In my ward, I note that the AQMA covers Warminster Road, but not the section of Pulteney Road between the Bathwick Hill junction and the entry into Widcombe. With buses using North Parade and considerable traffic congestion at the traffic lights by the railway bridge, I would have thought it worthwhile to do some AQ monitoring in this area in order to establish whether there are exceedances. Also if the proposed changes to HDVs turning at the Bathwick Street/Beckford Road junction go ahead, we may see more HDVs along Pulteney Road. I know that transport CO2 emissions are not included in the AQMA requirements, but I am always keen to see what benefits there may be for CO2 reductions from AQ improvement actions. I would be interested in having a discussion with you and your colleagues about the on-going AQ Action Plan. Would it be possible to arrange a meeting sometime in the New Year?</p>	
----	---	--	---	------------	--	---	--

19	y	The Council has a legal obligation to extend their polluted area. The area to be monitored should embrace the whole of the city centre that is within the monitored roads surrounding the centre.	y	Whole area	This is not an 'Air Quality Management Plan'. At best it is an 'Air Quality Monitoring Plan'. A management plan envisages taking some action to address the issues. For many years the Council has merely monitored the pollution but done nothing to comply.	y		Letter sent
20							I appreciate that the monitoring stations in the city centre comply with National Standards, but am worried that there are large car parks where many vehicles start up and pump out fumes, and these locations are not having their air quality monitored. Furthermore, these car parks are close to homes or places of work, and conditions could well affect health. I call to mind such examples as Charlotte Street car park and those at the RUH, St Martin's Hospital, the University of Bath and the Park & Rides at Newbridge and Odd Down.	Letter sent

21	y	<p>However, we propose that the AQMA should be defined to include the whole of the city centre surrounded by the roads in the AQMA, ie from Bennett street down to Churchill Bridge. It seems to us that there must be areas not covered by the AQMA as presently defined which suffer excessive levels of NO2 (for example, the south side of Queen Square is presumably as polluted as the north side). We also consider that defining the AQMA in this way would underscore the serious nature of air pollution levels in the city and the urgent need for action to reduce them. We understand that the city of Cambridge, which has similar problems, has adopted the approach of defining the whole city centre as an AQMA.</p>	y	Other	<p>We have no preference as to whether this is declared for the whole area or for the hotspots.</p>	<p>Finally, while we support the measures included in the AQAP approved in February 2011, we believe that the only effective way to reduce air pollution in the city is to reduce the volume of traffic, which is the main source of air pollution. We believe that projections of reducing pollution levels based on the adoption of new technology are likely to prove over-optimistic. The projections in the AQAP are also based on the assumption that the Bath Transport Package would have been implemented, and as you will know several key elements including the very important eastern park-and-ride were removed from the package after the AQAP was approved. Thank you for this. I will be putting together a response for FOBRA. I think it is safe to say that we will support the expansion of the AQMA based on the annual mean NO2 concentrations. I should be grateful if you could advise on a few other points which occur to me: a.Where are the three locations with the one-hour exceedances? b. What practical effect would there be, in terms of the Council's obligation to take action, of adding the 3 hot spots to the AQMA? c. Ditto, declaring the one-hour objective for the whole area? d. Looking at the map at p69 of the AQAP, the 40 mcg/m3 NO2 level is exceeded on many roads which are not included in the AQMA or the proposed expansion of the AQMA - for example, St John's Road, Sydney Gardens, Guinea Lane and many side streets off the main roads. I appreciate that these are modelling projections of NO2 levels, but do the actual monitoring data not indicate that the expansion of the AQMA should also cover these areas?</p>	<p>Email sent after initial questions</p>
----	---	---	---	-------	---	---	---

Respondent 22

Comments

Thank you for the consultation.

The link to the map failed on my iPad, so I am wanting to confirm that the London road, Cleveland place and Bathwick street are all in the area.

Secondly I would like to know what actions are planned or in hand to address the problem in this area. Monitoring is all very well but not sufficient.

Response

I have attached a copy of the map showing the AQMA area. I can confirm that London Road, Cleveland Place and Bathwick Street are within the current AQMA and will still be included in the amended AQMA.

The Air Quality Action Plan adopted in early 2011 details actions which are planned to address the problem, can be viewed online at <http://www.bathnes.gov.uk/environmentandplanning/Pollution/airquality/airqualityactionplan/Pages/default.aspx>. A paper copy is available on request.

The AQMA has already informed and strengthened the case for a number of operational and planned transport initiatives including:

- Freight consolidation service (an electric lorry delivers goods to central retailers in Bath, reducing half-empty large HGVs and thus pollution)
- Electric vehicle infrastructure (the council are working on introducing charging point infrastructure to reduce traffic emissions, particularly in the AQMA)
- electric/ diesel hybrid bus (in operation on P&R routes including Newbridge)
- Low Emission Zone feasibility study (investigating a way of reducing vehicle emissions in particular from HGVs in the AQMA);
- LED sign at Windsor Bridge directing inbound HGVs away from Upper Bristol Road;
- Park and Ride expansion at Newbridge, Odd Down and Lansdown;
- Bus waiting infrastructure (real-time information)

Comments

Is there a timetable for the LEZ feasibility report? London have had something similar for several years, and I am concerned that we should implement something rather than just produce reports and studies. Hopefully the report is just the first step.

Response

We expect the consultant to commence work on the feasibility study early next week. It is due for completion by June and should the report suggest an LEZ would be effective, it be decided that a Low Emission Zone will be implemented, then we would aim to implement it by 2015, as the implementation period would provide time for companies/hauliers to adjust. The London LEZ zone had a 7 year implementation period with considerable research and preparation undertaken prior to that. We're involved with DEFRA's LEZ network working with other authorities to ensure that we adopt best practice and learn from London and other authorities experience.

Response (Cllr)

I will be talking to Matthew Smith about how we can act on Air Quality to make real improvements.

Respondent 23

Comments

You recently sent us a consultation form about extending the Air Quality Management Area to include the stretch of Newbridge Rd we live on.

However, the form doesn't include any information on the implications of doing so. Why would it be a good thing? What negative implications are there for us from extending it? Would being in the AQMA mean the Council will actually do something about the air quality in the road or is just a hoop jumping exercise required by the government that has no real world significance?

Or is it deliberate to not include any information as that allows the council to do what it wants by way of changes and claim all were consulted beforehand so cannot now complain?

That is I hope overly cynical, but I would have though basic consultation best practice would require you to actually explain what the point of a change is, in plain English, so people who are not policywonks know what on earth you are talking about.

Please explain, because without an explanation the consultation is nothing of the sort, and just a waste of public resources.

Response

Thanks for your email. I apologise if the consultation form is not clear.

We are required by law to declare (and extend) an Air Quality Management Area (AQMA) where the national objective levels for nitrogen dioxide are exceeded.

There are no negative implications of extending the AQMA other than it highlighting air pollution levels. It assists the commitment of resources for improving air quality. The AQMA is a material consideration in planning decisions and air quality impact assessments are required as part of a planning application for larger developments, to quantify their impact and identify mitigating measures.

The AQMA has already informed and strengthened the case for a number of operational and planned transport initiatives including:

- Freight consolidation service (an electric lorry delivers goods to central retailers in Bath, reducing half-empty large HGVs and thus pollution)
- Electric vehicle infrastructure (the council are working on introducing charging point infrastructure to reduce traffic emissions, particularly in the AQMA)
- electric/ diesel hybrid bus (in operation on P&R routes including Newbridge)
- Low Emission Zone feasibility study (investigating a way of reducing vehicle emissions in particular from HGVs in the AQMA);
- LED sign at Windsor Bridge directing inbound HGVs away from Upper Bristol Road;

- Park and Ride expansion at Newbridge, Odd Down and Lansdown;
- Bus waiting infrastructure (real-time information)

For more information, the Air Quality Action Plan adopted in early 2011 can be viewed online at <http://www.bathnes.gov.uk/airquality> . A paper copy is available on request.

I hope this is helpful.

Please don't hesitate to contact me if you have any further queries.

Comments

Thanks for this. It does seem however that calling it a consultation is misleading given extending the AQMA is required by law, so it doesn't matter whether we say we want it extending or not -and I think in future the wording should make clear what the actual options available are.

That said, I am very strongly in favour of measures to reduce air pollution, and not just because of where I live. As you will know people will be dying every year in our city as a result of poor air quality - the invisible victims of traffic.

Here is a question for both you - So if the council is serious about reducing air pollution, presumably you have specific targets for improving air quality incl. for particulates, NO2 etc, with milestones and an accompanying timescale, and the specific measures required to deliver those improvements? Where can I see this plan?

I would strongly support the introduction of a Low Emission zone, and ultimately a congestion charge if necessary, or at least a hike in town centre parking charges coupled with measures to reduce bus fares (do you know it costs us as a family of five around three times as much to get the bus into town as to park for a couple of hours? - we can't always walk)

Frankly putting hundreds of new parking places in under the Southgate was a terrible idea and tells me that improving air quality was simply not a priority. It will surely have generated hundreds of thousands of additional vehicle movements into the centre of Bath each year.

Ultimately those of us who actually live in Bath surely want a balanced economy that delivers a good quality of life for all, not simply for Bath to become some kind of giant Cribbs Causeway out of town shopping centre for anyone who lives in the South West - it isn't all about what the retail trade wants!

Even for shop owners there has to be a limit - someone I work with in London said they no longer come to Bath because of the huge queue along the London Road - and I'm sure they aren't the only ones put off.

Response

Thanks for your email. It is true that we are obliged to declare an air quality management area, however there is some flexibility over the exact boundary of the declaration. For example, a junction could be included in the AQMA because it causes problems in other areas through congestion, even if it does not exceed air quality objectives.

The target is to reduce pollution to meet the National Air Quality Objective limit of 40 micrograms per cubic metre (consistent with EU Directive 2008/50/EC). We have an unofficial target trajectory for bringing the average concentration of nitrogen dioxide across the Bath AQMA from 49 down to 40 by 2015. Nowhere in the district are we exceeding the target limit for fine particles (PM_{2.5} and PM₁₀), however we shall model any initiative to check that any reduction in NO₂ does not cause an increase in PM (as can be the case).

The plan for how the Council will reduce nitrogen dioxide pollution is included in the link as per my last email (www.bathnes.gov.uk/airquality)(hard copy available on request). The Joint Local Transport Plan 3 (<http://travelplus.org.uk/media/205985/jltp3%20march%202011.pdf>) also provides some idea of the other measures, as you will have seen in the press with the award of £34.3 million for transport measures.

When taking into account the closure of the Ham Gardens (660 space) car park, small Dorchester St car park and removal of 130 spaces at Bath Spa; although Southgate has 876 spaces, the net increase in spaces is only 34 spaces with an extra 20,000m² of retail space.

Deregulation of the bus industry in 1986 has no doubt had some effect on high public transport fares.

Cllr Response

Thanks for your email and for a number of years now I have been asking as to what real action can be taken to reduce the air pollution levels in certain streets in Kingsmead Ward, for example Charlotte Street, Queen Square and Little Stanhope Street all exceed EU specified safe levels at certain times of the year. Extending the air monitoring will allow the council to identify other such areas.

In response to the points you raise;

Low Emission Zone.

The idea of a low emission zone would be a good one but I would like to see what this actually means in terms of costs. There is a clear ambition for this administration to increase pedestrian areas and reduce traffic into the city centre.

City Centre Parking charges.

There is a fine balance here between council revenues, transport planning, park & ride usage and potential development sites. Avon street and Manvers street car parks are both earmarked for development – obviously the right sort of development that would enhance and complement city centre usage/needs. In addition Saw Close or the Cattle Market car park sites are outline/potential Casino sites. This demonstrates that at some future point parking in the city centre will be reduced.

Public transport charges.

This is an issue that is also raised by many residents. Since the deregulation of buses many years ago the private sector provides bus services. However there is very recent legislation that allows local councils to again become responsible for some/limited bus services. However, I personally would not wish to see council tax

revenues being spent on services, but would wish to see greater usage by younger people.

Southgate parking spaces.

Underground parking was always part of the Southgate development proposal and the concept was to replace the Ham Gardens car park spaces. The previous administration decided to increase the number of spaces increasing city congestion. I am aware that Cllr Symonds and our new administration wish to tackle the bottleneck that is now caused at Southgate here all traffic from Avon Street and Southgate are funnelled into.

Retail business.

I echo your views that we do not wish Bath to become a bland shopping destination. However it must be remembered that to ensure vibrancy of the city centre with a mix of pubs and restaurants Bath needs to be attractive to local and overseas visitors alike. In addition we also need to be aware that the retail sector in Bath is now a considerable local employer, and the transport needs for these staff needs also to be considered.

One concern that you have not raised is that high air pollution together with the particulates in the air does considerable damage to our historic buildings made of soft limestone.

Respondant 24

Comments

I would very much like to have the Consultation of Air Quality questionnaire that I have received through the letter-box explained to me.

I would also like it explained why the questionnaire is almost totally devoid of useful information. It seems rather a nonsense to ask people's opinion on something that is not at all explained, which has unknown and unstated ramifications and upon which, frankly, the public can have no educated opinion. How many of us have air quality meters we can wave out of our windows? Or are we to base our response upon whether we have noticed that we have coughed more frequently of late?

The whole thing reeks of box ticking. I assume that by law you have to do a consultation and so here it is, but it is no more than that: an exercise in being seen to do the right thing. The timing of it - in the build-up to Christmas when most folks are running around like headless, err, turkeys - is also deeply suspicious. It seems to me that you hope that nobody notices or bothers about this, or at least forgets about it until it is too late.

What does it mean to the residents of Bath if the AQMA has its boundary changed? What are the implications? Or are you just letting us know that what we're breathing isn't too good for us. What gets done about an AQMA? Just monitoring? Or do you actually try to improve the situation by messing with traffic flow with, presumably, other side-effects?

I have a Masters Degree in Engineering and have spent a good deal of my working life dissecting technical literature and yet the booklet and questionnaire tell me next

to nothing. I can't begin to imagine how little it means to many other people. I expect most will simply put it in the bin. Perhaps this is what you wanted? If, however, you would have liked a useful response to your questionnaire, then perhaps you should have put some useful information and education in it.

I particularly like the use of the word "exceeded" relating to Air Quality Objectives. Sounds nice. We have exceeded our objectives - bravo! This is confusing language. *Healthy limits have been exceeded. Objectives have not been met.*

Response

Thanks for your email. I apologise if the consultation form is not clear.

As required by legislation, the consultation attempts to enable a dialogue between ourselves and those living within the existing / proposed AQMA. There is a limited amount that can be said to affect an alteration to the proposed extension of the AQMA. However, there is some flexibility over the exact boundary of the declaration. For example, a junction could be included in the AQMA because it causes problems in other areas through congestion, even if it does not exceed air quality objective limit values of nitrogen dioxide.

There is no sinister intention about the timing of the consultation. In fact, the period commenced from when the leaflets were delivered in mid December to 31st of January – at least 6 weeks.

There are no negative implications of extending the AQMA other than it highlighting air pollution levels. It assists the commitment of resources for improving air quality. The AQMA is a material consideration in planning decisions and air quality impact assessments are required as part of a planning application for larger developments, to quantify their impact and identify mitigating measures.

The AQMA has already informed and strengthened the case for a number of operational and planned transport initiatives including:

- Freight consolidation service (an electric lorry delivers goods to central retailers in Bath, reducing half-empty large HGVs and thus pollution)
- Electric vehicle infrastructure (the council are working on introducing charging point infrastructure to reduce traffic emissions, particularly in the AQMA)
- electric/ diesel hybrid bus (in operation on P&R routes including Newbridge)
- Low Emission Zone feasibility study (investigating a way of reducing vehicle emissions in particular from HGVs in the AQMA);
- LED sign at Windsor Bridge directing inbound HGVs away from Upper Bristol Road;
- Park and Ride expansion at Newbridge, Odd Down and Lansdown;
- Bus waiting infrastructure (real-time information)

The Air Quality Action Plan adopted in early 2011 details how the Council intend to reduce air pollution. It is available online here: www.bathnes.gov.uk/airquality , (hard copy available on request). The Joint Local Transport Plan 3 (<http://travelplus.org.uk/media/205985/jltp3%20march%202011.pdf>) also provides some idea of the other measures, as you may have seen in the press with the award of £34.3 million for transport measures.

The target is to reduce pollution to meet the National Air Quality Objective limit of 40 micrograms per cubic metre (consistent with EU Directive 2008/50/EC). So, yes perhaps 'exceeded objective limit' would be correct.

Comment

Thank you. I am now duly edified.

Why wasn't this information in the consultation booklet? I think you'd have got a much more useful response from local residents if it had been.

Respondent 25

Comment

The vast amount of information you have provided in your Consultation Documents takes a considerable amount of time to read and comprehend and, so far I have been unable to complete the task.

However at this stage, may I make just one point which is that from the information at present available, further air monitoring action must be taken.

It would seem that large concentrations of vehicles with internal combustion engines add considerably to the general background level of air pollution and, that polluted air can and does affect the health of the young, the elderly and those already suffering from respiratory illnesses.

I appreciate that there are already many monitoring stations within the city of Bath and, that their locations comply with the required National Standards but, as outlying areas and areas containing large car parks do not at present have monitoring facilities available, I suggest that additional monitoring stations be set up at these additional sites.

It would seem that the present levels of air pollution at sites not at present monitored, are either not known at all or, values have been obtained from 'modelling', these being considered insignificant compared with present day knowledge of the levels of air pollution causing problems with the health of various sections of the population.

I am sure you would agree, that had we known more about air pollution at the time the Royal Victoria Park Children's Play Area was constructed immediately adjoining the A4 Upper Bristol Road here in Bath, it would not have been sited in this position. I appreciate the large cost that would be involved in moving the play equipment to a much more suitable site, possibly within the park but, surely human life cannot be measured in terms of money. I request that very serious thought be given to re-siting this play area, which is used by many thousands of young children every year, not only from Bath but from outlying areas, without delay.

May I suggest that monitoring stations be set up at all schools and their playing fields, hospitals, park and ride car parks and other commercial locations where large numbers of vehicles congregate within the B&NES area, so that definite information may be made available on air pollution levels.

It may well be possible to encourage those responsible for these sites to receive detailed information from the Council on the method of collecting this pollution information and, for them to forward the samples obtained to you.

As far as schools are concerned, this method of collecting the required information could well be included within the normal school curriculum, making children aware of the dangers of air pollution. This could be done in a similar way to that which many of them already provide weather information to the National Weather Bureau but, in this case the samples would be returned to you for analysis.

Such a system would then provide real data on many of these additional sites at no additional cost to the Council, other than the initial cost of providing the sampling equipment and instruction on the retrieval of the samples.

Response

I note your comments with reference to the need for further monitoring in particular at car parks and schools.

Whilst a car park is a source of pollution particularly at peak time, the fact that car parks are spread over a large area means that the nitrogen dioxide pollution disperses before reaching residential properties. Nitrogen dioxide is an indicator for traffic pollution and is the main pollutant that we are obliged to monitor and monitoring shows that this drops off significantly over a small distance from the road. Nitrogen dioxide reacts with air to create ozone in different distances and to varying degrees depending on the weather. As the pollution drops off significantly over a small distance, the pollution levels within the park are not as high as one might expect.

We will consider placing a diffusion tube close to a residential building façade at a car park when we next review the monitoring locations this year.

The highest pollution in Bath is found where busy roads are lined with tall buildings that trap the pollution - preventing its dispersion. For example, Broad Street and London Road at Cleveland Place have annual average nitrogen dioxide concentrations at approximately 60 micrograms per cubic metre. On Upper Bristol Road in the vicinity of the park, there is no canyon effect and traffic pollution is more quickly dispersed. This and the slightly lower traffic levels than at places such as London Road mean that annual average concentrations of nitrogen dioxide are significantly lower at just over 40 micrograms per cubic metre (the national objective limit level). As the pollution drops off significantly over a small distance, the pollution levels within the park are not as high as one might expect. However, monitoring will continue on this stretch of road and measures have been put in place to enforce the Traffic Regulation Order that restricts heavy goods vehicles using the Upper Bristol Road, such as the weight restriction sign on the approach to Windsor Bridge. This is because heavy goods vehicles contribute a disproportionate amount of nitrogen dioxide pollution.

We currently monitor nitrogen dioxide levels at a number of schools in the district. The council also has a "Safer Routes to School" programme which aims to reduce the need for car travel to school and to make it easier and safer for children to walk or cycle instead, which help reduce peak congestion and pollution in the vicinity of schools. We are just commencing work on a potential partnership with the various

school and environment initiatives and further monitoring is one of the likely components.

For more information on what the Council are doing to improve air quality, the Air Quality Action Plan adopted in early 2011 can be viewed online at <http://www.bathnes.gov.uk/airquality> . A paper copy is available on request.

Comments

I note your comments about the dispersal of nitrogen dioxide in areas that are not contained by buildings, giving rise to easier dispersal from open car parks and roads.

I appreciate that the level of pollution depends upon a great many variable factors and, that you are working with the information at present available, concerning the acceptable levels of pollution.

Maybe in years to come, what is considered to be acceptable levels of pollution now, will be found to be far too high a value for the enjoyment of long healthy life.

I also note your comments regarding the Children's Play Area in the Royal Victoria Park and, would hope that any further expansion would take place farther from the Upper Bristol Road, so as to increase the area of dispersion.

It is good to know that you are already monitoring pollution at a number of schools within the district, promoting "Safer Routes to School" to encourage walking and cycling and, starting work on a potential partnership with the various school and environment initiatives, which is likely to bring about further monitoring.

Hopefully your review of the monitoring locations to take place this year, will include the Newbridge Park and Ride Car Park.

I wonder how the present acceptable levels of nitrogen dioxide and other pollutants were obtained and, what experiments were carried out on animals and/or human beings to arrive at these levels?

No doubt information on this aspect of pollution is available in various scientific papers but, if you have time, maybe you could advise me of your understanding of the situation. By doing so, I would feel even more confident that you and your colleagues have the health of the population in this area, as one of prime concern.

I have checked the site <http://www.bathnes.gov.uk/airquality> which you gave me and, it certainly does cover a great deal of your work in some detail.

Response

Of course the aspiration is always to have no air pollution at all. I hope technology will advance to such a position as speedily as possible.

In terms of justification of the air quality standards by the government, the health effects have been assessed in four main ways: i) by experimental exposure of volunteers with and without asthma to the gas; ii) by assessment of the effects on groups of people of variations in ambient concentrations of nitrogen dioxide, using

daily symptoms or lung function measurement; iii) by assessing changes in hospital admissions or mortality in relation to changes in ambient concentrations and iv) by comparing the health of groups of people who have had different long-term exposures.

Surprisingly, research on the effects of nitrogen dioxide and the detail of the health effects of particular levels of concentration is unclear. The evidence is complicated by the fact that nitrogen dioxide itself is a precursor for a number of harmful secondary air pollutants, including nitric acid, the nitrate part of secondary inorganic aerosols and photo oxidants (including ozone) and the reactions can take some time. However, it is known that it is an oxidising agent which can damage cell membranes and proteins. At high concentrations it can cause inflammation of the airways. There is currently some research being undertaken that the government (EU and UK) will take into account by Dr Heather Walton of King's College London.

The Department for the Environment, Food and Rural Affairs will continue to provide guidance in this field.

Comments

My initial reaction on receiving your E mail was one of great satisfaction, in that you have taken the trouble to answer my questions in great detail and with the commitment that I hope I demonstrated when I was Deputy Engineer to a nearby local authority for many years.

I obtained great pleasure from members of the public when they asked me questions about work that was proposed or was being undertaken in my area, giving me a sense that they did not consider me as some faceless bureaucrat carrying out the Council's policy, even though I was doing so to the best of my ability. I would hope Rob that you enjoy the same situation that I experienced and, that you will continue to do so.

I appreciate your comments concerning research on the effects of nitrogen dioxide and the detail of the health effects of particular levels of concentration. I note that the government [Eu and UK] will take into consideration research being undertaken by Dr Heather Walton and, hopefully the picture will become clearer.

It is good to be living in a country where The Department for the Environment, Food and Rural Affairs [DEFRA] operates for the good of the population, passing guidance to local authorities for officers such as you and your colleagues to protect our health.

Respondent 26 Comments (via form)

Response

Thanks for your returned consultation form. I apologise if the information is not clear.

We are required by the Environment Act 1995 to declare (and extend) an Air Quality Management Area (AQMA) where the national objective levels for nitrogen dioxide are exceeded. There is some flexibility over the exact boundary of the declaration. For example, a junction could be included in the AQMA because it causes problems

in other areas through congestion, even if air pollution does not exceed air quality objective limits.

There are no negative implications of extending the AQMA other than it highlighting air pollution levels. It assists the commitment of resources for improving air quality. The AQMA is a material consideration in planning decisions and air quality impact assessments are required as part of a planning application for larger developments, to quantify their impact and identify mitigating measures.

The target is to reduce pollution to meet the National Air Quality Objective limit of 40 micrograms per cubic metre (consistent with EU Directive 2008/50/EC). We have an unofficial target trajectory for bringing the average concentration of nitrogen dioxide across the Bath AQMA from 49 down to 40 by 2015. Nowhere in the district are we exceeding the target limit for fine particles (PM_{2.5} and PM₁₀), however we shall model any initiative to check that any reduction in NO₂ does not cause an increase in PM (as can be the case).

The AQMA has already informed and strengthened the case for a number of operational and planned transport initiatives including:

- Freight consolidation service (an electric lorry delivers goods to central retailers in Bath, reducing half-empty large HGVs and thus pollution)
- Electric vehicle infrastructure (the council are working on introducing charging point infrastructure to reduce traffic emissions, particularly in the AQMA)
- electric/ diesel hybrid bus (in operation on P&R routes including Newbridge)
- Low Emission Zone feasibility study (investigating a way of reducing vehicle emissions in particular from HGVs in the AQMA);
- LED sign at Windsor Bridge directing inbound HGVs away from Upper Bristol Road;
- Park and Ride expansion at Newbridge, Odd Down and Lansdown;
- Bus waiting infrastructure (real-time information)

For more information on what the Council are doing to improve air quality, the Air Quality Action Plan adopted in early 2011 can be viewed online at

<http://www.bathnes.gov.uk/airquality> . A paper copy is available on request.

Comments

Thank you so much for taking the time to respond and I hope you did understand that I was making light of a serious situation—in part. The dirt I enclosed in my survey came from my window sill, which gives out onto Lansdowne Rd, on the raised pavement just across from Bennett Street. That grit comes from traffic—buses and lorries as well as private vehicles. I have noticed a great difference in my lung capacity when I am away, which tells me that I am inhaling a lot of this junk. I know that there are often calls for curtailing city centre traffic and I don't expect it to be on my behalf, but I do hope those who make traffic decisions will understand that many of us do not commute into the city for a few hours, we live here.