

CABINET – 3 AUGUST 2005 PORTFOLIO: Health and Social Inclusion

EXECUTIVE SUMMARY – AIR QUALITY UPDATE

Summary of Purpose and Recommendations:

The purpose of this report is to outline the findings of the Progress Report submitted to DEFRA in April 2005, to seek Cabinet approval for the declaration of an Air Quality Management Area in Fawley Village and to identify the likely need for additional funding associated with the continuation of the air quality monitoring programme.








The recommendations are that:

- (a) An Air Quality Management Area is declared in respect of sulphur dioxide in Fawley;
- (b) A funding bid for additional work to monitor and model air quality in the forthcoming financial year be supported, subject to further clarification of the financial contribution to be made by Hampshire County Council in respect of modelling; and
- (c) Monitoring programme to be continued in accordance with DEFRA's requirements to review and assess air quality in the district.

Cost to Council: TBA at the Cabinet meeting

Within existing budget? Largely but some additional funding could be required

Contribution to Corporate Plan (Minor/Moderate/Major/Neutral):

	+		-		+		-
 Minor				Priorities			
 Major				Clean Streets and Public Space		Neutral	
 Minor				Crime and Disorder		Neutral	
 Neutral		Neutral		Housing		Neutral	
 Major				Managing our Finances		Neutral	

Comments on Impacts on Corporate Objectives and Priorities:

Partnership working with local businesses, residents, Town and Parish Councils and colleagues in Planning and Transportation is key to the declaration of an Air Quality Management Area (AQMA) and the formulation and implementation of the AQ Action Plan

The continuous monitoring and assessment of Air Quality and the declaration of AQMA's in the district seeks to promote environmental well being by ensuring that the Air Quality objectives for defined pollutants are achieved.



AIR QUALITY PROGRESS REPORT

1.0 Introduction

- 1.1 From the previous report to Cabinet on the 1st September 2004 members will be aware that Local Authorities have a statutory duty under the Environment Act 1995, to review and assess the air quality in their district and to conclude their findings in reports produced on a yearly basis. These annual reports have to be submitted to DEFRA for approval, the purpose being to ensure that the air quality is continually assessed and if necessary further action taken to improve it.
- 1.2 The assessment of the air quality is made against objectives set by Government for 7 airborne pollutants. These pollutants and objectives are shown in Appendix 1. The assessment of air quality is undertaken by following Government guidance and by utilising monitoring and modelling techniques.
- 1.3 If through this continuous assessment it is found that an air quality objective is unlikely to be met, Local Authorities have a statutory duty to declare an Air Quality Management Area (AQMA). Following declaration an Action Plan is produced, the aim of which is to implement options designed to improve the air quality within the designated area.
- 1.4 In April of this year, the Authority produced a Progress Report which has now been accepted and approved by DEFRA. This updates the Local Authority's monitoring results, compares the results against the air quality objectives and lists developments and planning applications that may have an impact on air quality. The pollutants of concern to this Council's area are nitrogen dioxide, sulphur dioxide, PM10 and benzene. This Report, the main findings of which are outlined below, will assist with background information for the next round of the review and assessment, which is due to be completed in 2007.

2.0 NITROGEN DIOXIDE

- 2.1 During 2004 the real time analysers were moved from Ringwood and Holbury (as 3 years of results were below the objectives), to High Street, Lyndhurst and Junction Road, Totton, respectively. These analysers were installed at these locations to monitor the effects of traffic congestion on this pollutant and to add real time data to the diffusion tube results already being collated at these sites.
- 2.2 The monitoring during 2004 using the diffusion tube data has continued to show the likely exceedence of the annual mean objective for nitrogen dioxide in both Lyndhurst and Totton. There was insufficient data from the real time analysers from which to draw conclusions.
- 2.3 Accordingly, AQMA's have now been declared in respect of the annual mean objective for nitrogen dioxide for both Lyndhurst and Totton. This followed an extensive consultation exercise with local residents in both areas, Totton and Eling Town Council, Lyndhurst Parish Council, local members and District and County transport planners. In general the declaration of AQMA's has

been viewed positively as it is seen as a way of improving the air quality situation.

- 2.4 The information, which was given to local residents explaining the process and the purpose of an AQMA and subsequent AQ Action Plan is attached in Appendix 2, together with maps showing the agreed boundaries for both areas.

3.0 SULPHUR DIOXIDE

- 3.1 Monitoring during 2004 for sulphur dioxide using real time analysers in Holbury and Fawley did not show a likely exceedence of the set objectives.
- 3.2 However, the verified results already obtained for 2005 show that with 46 exceedences of the 15 min mean to the end May 2005, the objective will be exceeded in Fawley village. DEFRA has been consulted and has advised that an AQMA should now be declared with regards to the 15 min mean objective for sulphur dioxide in the vicinity of Fawley village. Subject to Cabinet approval it is likely that formal declaration of the AQMA will be made within 4 – 6 months following consultation with local members, Parish Council, Environment Agency and the public.
- 3.3 Discussions have already taken place with Exxon and officers have been advised of the measures the refinery intends to introduce to reduce the number of potential exceedences of this objective. As the exceedences occur in certain weather conditions (strong NW winds) the refinery is proposing to introduce a procedure, which alerts them to these adverse weather conditions thus enabling them to make immediate operational changes to some parts of the plant. In addition the refinery will be directly linked to the real time analyser in Fawley so that they can monitor when concentrations of sulphur dioxide rise over an agreed concentration.

4.0 PM10

- 4.1 Monitoring over 2004 for particulates using real time (TEOM) analysers at Ringwood and Holbury has not shown a likely exceedence of the set objectives.
- 4.2 During 2005 the analyser was moved from Ringwood (as 3 years of results were below the objectives), to Totton. The analyser was relocated to this location to assess the impact of local traffic in the vicinity of Junction Road. At present there is insufficient data from the real time analyser at Totton from which to draw conclusions.

5.0 BENZENE

- 5.1 The main source of benzene is from petroleum storage and processing and Members may recall that an earlier modelling exercise had predicted that the 2010 objective for this pollutant was likely to be exceeded in the vicinity of Fawley Village.

- 5.2 Additional monitoring has therefore been undertaken using diffusion tubes placed around the village. This monitoring is due to conclude in August 2005 by which time 12 months of data will have been obtained. The results of the monitoring to date do not support a problem with this pollutant and it is thought unlikely that the objective will be exceeded, contrary to the results of the initial modelling exercise.

6.0 LOCAL DEVELOPMENTS

- 6.1 The Progress Report also noted a number of local developments, which may have an impact on local air quality, namely;
- Onyx energy from waste plant, Marchwood Industrial site, Marchwood, is now operational. As well as process emissions the site may also increase localised traffic movements of waste vehicles.
 - Lymington Hospital (new site), Ampress Park, Lymington, may increase localised traffic flows and possible pollution from on site boilers etc .
 - Ampress Industrial Park improvement scheme may increase localised traffic flows.
 - Colbury Road junction off the A326, an operational new junction aimed at bringing localised traffic into the district via an alternative route.

7.0 ENVIRONMENTAL IMPLICATIONS

- 7.1 The declaration of AQMA's for Totton and Lyndhurst and the forthcoming declaration for Fawley Village will clearly have environmental implications for these areas. However, the aim of the respective AQ Action Plans will be to reduce pollutant concentrations thus leading to an improvement in air quality in such locations.
- 7.2 The review and assessment of air quality in the district is a continuous process and it is envisaged that the findings of such monitoring will only lead to positive environmental outcomes.
- 7.3 The importance of carrying out this review and assessment has been confirmed by the results of the March 2005 Citizens Panel Survey where 93% of the 750 responses received rated the monitoring and assessment of air quality in the district as either important or very important. This is an extremely positive indication of how our customers rate this aspect of the Environmental Health service.

8.0 FINANCIAL IMPLICATIONS

- 8.1 The maintenance of and quality assurance of the data produced from the four monitoring sites (Lyndhurst, Totton, Holbury and Fawley), including the existing diffusion tube studies, can all be undertaken within the current budget.

- 8.2 However, with the forthcoming declaration of an AQMA for Fawley alongside those already now declared in Lyndhurst and Totton, an increasing financial burden is likely to be placed on the service, for which additional funding is likely to be required.
- 8.3 For example, all our data will now need to be externally audited for which quotes are currently being obtained. The formulation of the AQ Action Plans, particularly in relation to the traffic congestion problems in Lyndhurst and Totton is likely to require modelling of the various options under consideration. A quote of £7,000 has currently been obtained for the modelling of the data relating to the traffic problems in Lyndhurst alone. In addition, for each AQMA declared there are costs associated with the consultation exercise such as placing the advertisement in the local paper, consultation with local residents, production of leaflets etc.
- 8.4 Discussions are currently taking place with Hampshire County Council and it is likely that they will provide funding for the modelling. However, even if this is forthcoming the other additional costs referred to above cannot be absorbed within the existing budget and a bid is likely to be made during the forthcoming expenditure plan process. It is anticipated that a better indication of these likely costs will be available by the time of the Cabinet meeting.

9.0 CRIME AND DISORDER IMPLICATIONS

- 9.1 None

10.0 CONCLUSIONS

- 10.1 Confirmation has now been received from DEFRA that they have accepted the findings of the Progress Report, namely:
- Based on the monitoring results for benzene and particulates there is no need at present to declare an AQMA in respect of either pollutant.
 - Monitoring results have continued to show likely exceedances of the nitrogen dioxide annual mean objective in Lyndhurst and Totton resulting in formal declaration of AQMA's in these areas on 6th June 2005.
 - Based on monitoring results in 2005 declaration of an AQMA in Fawley village with regards to the 15 min mean objective is now required.
- 10.2 Modelling work is required in Lyndhurst, and possibly Totton and Fawley, to assess the impact on air quality of any proposed schemes within the AQMA's.
- 10.3 Monitoring will continue during 2005. The next set of reports for submission to DEFRA will be in the form of the Updating and Screening Assessment in April 2006 together with further Assessments for the AQMA's in May 2006.
- 10.4 The Progress Report will be available in the coming weeks on the New Forest District Council web site and a hard copy will be sent out to relevant local industries, which will include members of the Waterside Liaison Panel.

11.0 PORTFOLIO HOLDER COMMENT

11.1 The Portfolio holder supports the Officers recommendations and agrees monitoring should continue. She supports the declaration of an AQMA in Fawley and welcomes the Officers discussions with Exxon and consultations with local members, Fawley Parish Council and the public before any formal declaration of an AQMA in Fawley is made.

12.0 COMMENTS BY THE ENVIRONMENT REVIEW PANEL

12.1 The Environment Review Panel support the recommendations to Cabinet.

13.0 RECOMMENDATIONS

13.1 It is therefore recommended that:

- The findings of the Progress Report are accepted
- An Air Quality Management Area is declared in respect of sulphur dioxide in Fawley
- Monitoring programme to be continued in accordance with DEFRA's requirements to review and assess air quality in the district

Further information can be obtained from:

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Background papers:

Environment Act 1995
DEFRA Policy Guidance on
Local Air Quality
Management LAQM.PG(03)

New Forest District Council
Progress Report, April 2005

Table showing the UK air quality objectives

Pollutant	Objective	Compliance Date
Benzene	16.25 $\mu\text{g}/\text{m}^3$ running annual mean	31-Dec-03
	5 $\mu\text{g}/\text{m}^3$ annual mean	31-Dec-10
1,3-Butadiene	2.25 $\mu\text{g}/\text{m}^3$ running annual mean	31-Dec-03
Carbon monoxide	10mg/m ³ max daily running 8 hr mean	31-Dec-03
Lead	0.5 $\mu\text{g}/\text{m}^3$ annual mean	31-Dec-04
	0.25 $\mu\text{g}/\text{m}^3$ annual mean	31-Dec-08
Nitrogen dioxide	200 $\mu\text{g}/\text{m}^3$ 1 hour mean, 18 <i>exceedences</i>	31-Dec-05
	40 $\mu\text{g}/\text{m}^3$ annual mean	31-Dec-05
Particles (PM₁₀)	50 $\mu\text{g}/\text{m}^3$ 24 hour mean, 35 <i>exceedences</i>	31-Dec-04
	40 $\mu\text{g}/\text{m}^3$ annual mean	31-Dec-04
Sulphur dioxide	350 $\mu\text{g}/\text{m}^3$ 1 hour mean, 24 <i>exceedences</i>	31-Dec-04
	125 $\mu\text{g}/\text{m}^3$ 24 hour mean, 3 <i>exceedences</i>	31-Dec-04
	266 $\mu\text{g}/\text{m}^3$ 15 min mean, 35 <i>exceedences</i>	31-Dec-05

PUBLIC CONSULTATION

NEW FOREST DISTRICT COUNCIL TO DECLARE AIR QUALITY MANAGEMENT AREAS IN LYNDHURST AND TOTTON

Following the monitoring and assessment of air quality in its district, New Forest District Council will be declaring an Air Quality Management Area (AQMA) in Lyndhurst and Totton.

Statutory Duty

The Environment Act 1995 places a statutory duty on Local Authorities to assess their area in terms of air quality objectives which have been prescribed in the National Air Quality Strategy for the following 7 pollutants;

Nitrogen Dioxide
Sulphur Dioxide
1,3 Butadiene
Benzene
Particulates
Lead
Carbon Monoxide

The pollutant of concern for Lyndhurst and Totton is nitrogen dioxide due to traffic congestion around the High Street, Lyndhurst and Junction Road, Totton when the railway crossing barriers are in operation.

Two objectives have been set for nitrogen dioxide, namely;

- An annual mean of $40 \mu\text{g}/\text{m}^3$
- An hourly mean of $200 \mu\text{g}/\text{m}^3$ (with 18 permitted exceedances).

and both are to be achieved by the end of 2005.

Following the monitoring and assessment of this pollutant during 2003 and 2004 it has been concluded that the annual mean objective is unlikely to be met by the target date, in the vicinity of the High Street, Lyndhurst and Junction Road, Totton.

Sources and Health Implications

Nitrogen dioxide is a gas produced during combustion processes. In the case of Lyndhurst the main source is associated with motor vehicle emissions, following the conversion of nitric oxide to nitrogen dioxide through chemical reactions.

Nitrogen dioxide may have an affect on people who already suffer from respiratory complaints. As concentrations of this pollutant increase, the sufferer may experience deterioration in their health.

Monitoring

New Forest District Council has monitored the concentrations of nitrogen dioxide from numerous sites in and around Lyndhurst and Totton using diffusion tubes, which are exposed for a month to give a monthly average from which an annual mean can then be obtained. This data is complimented by that obtained from monitoring stations recently installed in the High Street, Lyndhurst and Junction Road, Totton to provide real time data.

As mentioned, the monitoring has shown the likely exceedance of the annual mean objective in, and in the vicinity of, the High Street, Lyndhurst and Junction Road, Totton. The Environment Act 1995 states if this is the case the Local Authority has a duty to declare an Air Quality Management Area (AQMA).

Air Quality Management Area

The size of the AQMA is decided by the Local Authority based on the results of the monitoring to date. The boundaries of the proposed areas for Lyndhurst and Totton are shown on the maps and include both private and business premises and cover the following:

Lyndhurst - 25m either side of both kerbs in the High Street extending on the northern side from St Michael and All Angels Infant School to Forest Cottage, 97 High Street, including 1 – 5 and 2 Romsey Road and 28a Wellands Road; and 8 High Street to 76 High Street on the southern side.

Totton - 25m either side of both kerbs extending from the roundabout on the junction of Ringwood Road and Maynard Road to 13 and 16 Eling Lane (taking in parts of Junction Road from its junction with Maynard Road to Batts Corner and includes 1 Treeside Avenue and the BT Exchange Treeside Avenue and 2 and 4 High Street); and 25m either side of both kerbs in Rumbridge Street extending on the northern side from Rumbridge Gardens to Batts Corner and 57 Rumbridge Street to Batts Corner on its southern side.

Once the Air Quality Management Area has been declared, an Air Quality Action Plan will be formulated, ideally within 12 – 18 months. This is the challenging part of the process as the aim of the Action Plan is to consider options to improve local air quality in pursuit of the objective and will involve discussions with all interested parties. Each option will have to take into account the cost, effectiveness, feasibility and timescale of implementation.

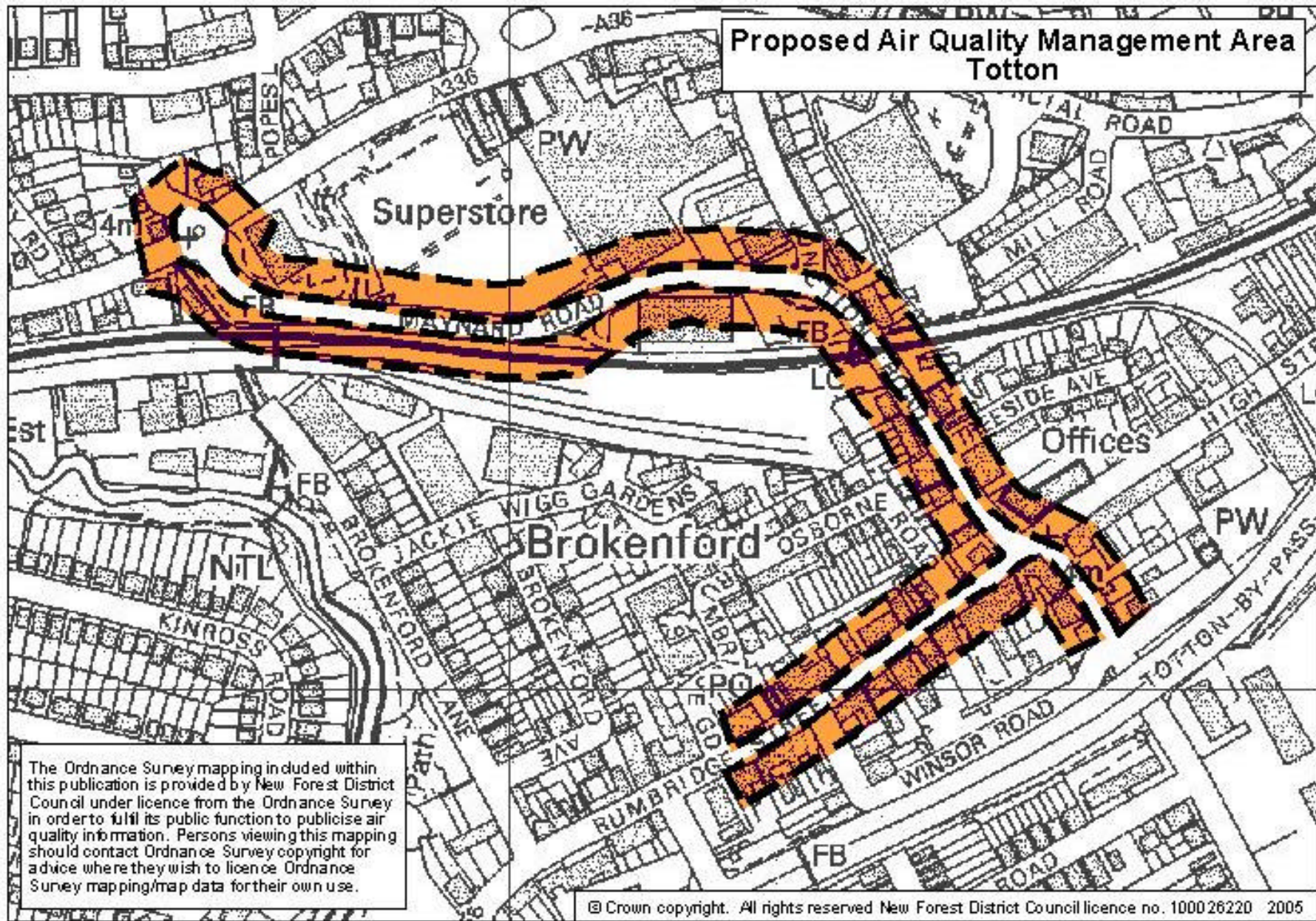
It is important to note that the Air Quality Management Area can be amended or revoked at anytime if it is found that the air quality improves or deteriorates.

Government guidelines state that currently it is not a requirement to disclose information on AQMA's in local land searches and as such it is not automatically given out when a property search is made. However, this may change in the future and such information is publicly available from the Local Authority should enquiries be made.

New Forest District Council has consulted with the respective Town Council, Local Members and District and County Transport planners with regards to the proposed AQMA. New Forest District Council therefore welcomes any comments or suggestions from the public with regards to the proposed boundaries.

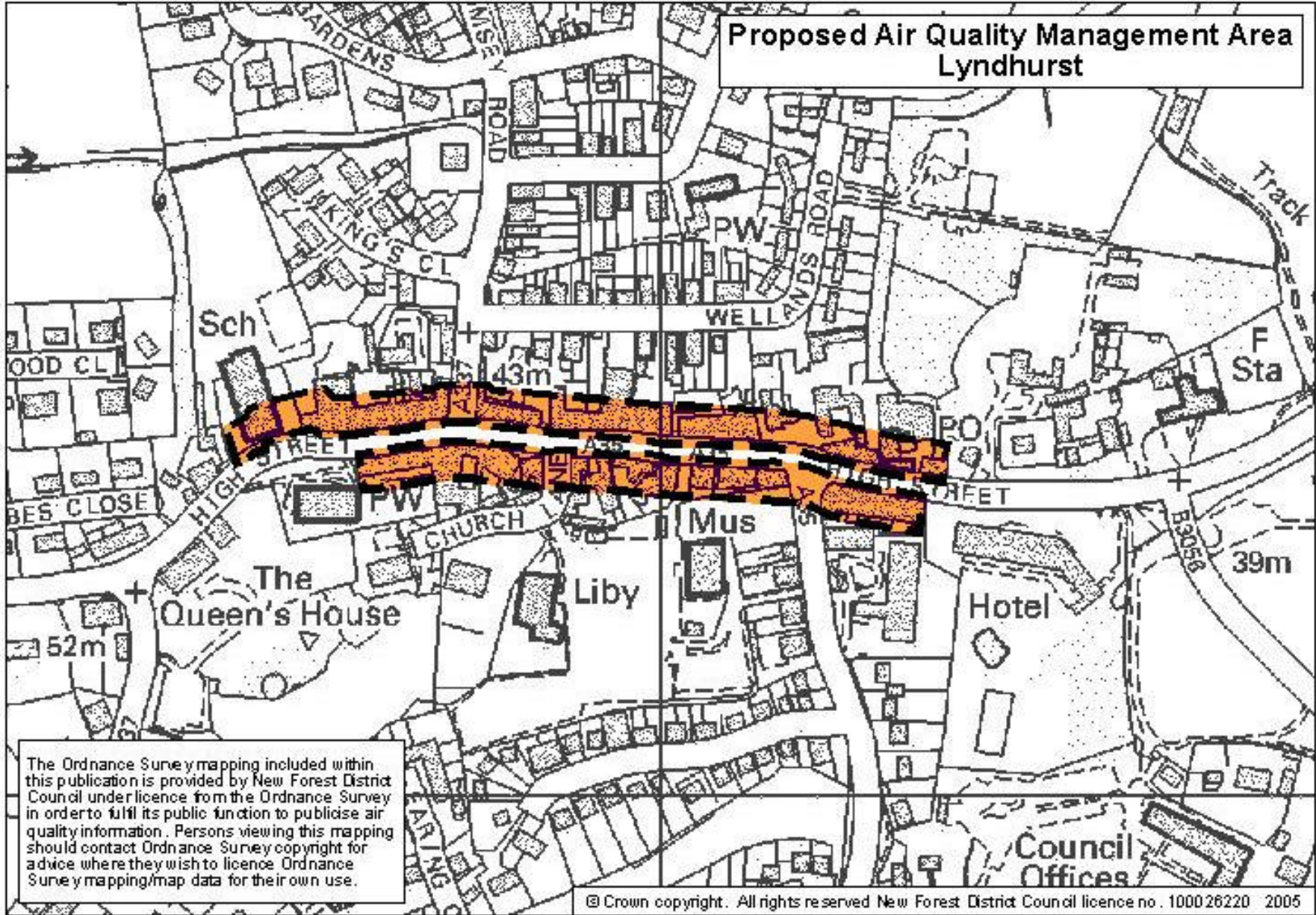
Should you have any comments or queries then please forward them either in writing to Mrs R. Higgins, Environmental Protection, New Forest District Council, Appletree Court, Lyndhurst, Hampshire, SO43 7PA or send an email to env.prot@nfdc.gov.uk or telephone 023 80 285161/023 80 285561. **Please can all comments be forwarded by Monday 16th May 2005.**

Proposed Air Quality Management Area Totton



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**Proposed Air Quality Management Area
Lyndhurst**



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