



AIR QUALITY

UPDATING AND SCREENING ASSESSMENT 2006

(PRODUCED APRIL 2006)

ABSTRACT SUMMARY

This is the Updating and Screening Assessment of air quality for New Forest District Council.

It is a desk top exercise designed to enable Local Authorities to identify, using data gathered and predictive models, the likelihood of exceedances of objectives set for seven pollutants; benzene, 1,3 – butadiene, carbon monoxide, lead, nitrogen dioxide, sulphur dioxide and particulates (PM₁₀).

A Detailed Assessment will be required if exceedances are predicted and this will involve using specified monitoring techniques and / or dispersion models.

It has been concluded that it will not be necessary for New Forest District Council to proceed to a Detailed Assessment for any of the pollutants.

New Forest District Council will continue to monitor and assess air quality within its district in accordance with guidelines set out by Defra.

The next annual air quality report is a Progress Report due to be completed in April 2007.

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1.0 INTRODUCTION

1.1 National Air Quality Strategy

The Environment Act 1995 Part IV imposed a duty on the Secretary of State to prepare and publish a National Air Quality Strategy, containing policies with respect to the assessment or management of the quality of air. Included in the Strategy are National Air Quality Standards and Objectives for a number of pollutants.

1.2 National Air Quality Standards and Objectives

The air quality *standards* in the National Air Quality Strategy are set purely with regard to scientific and medical evidence of the effects of the particular pollutant on health.

The air quality *objectives* in the Strategy represent the Government's present judgement of achievable air quality by the end of the stated years on the evidence of costs and benefits and technical feasibility. It is these pollutants and set objectives which Local Authorities review and assess across their district.

Air quality objectives have been set for seven pollutants. These objectives are shown in Table 1.

Table 1**Table showing the UK Air Quality Objectives**

Pollutant	Air Quality Objective
Benzene	16.25 $\mu\text{g}/\text{m}^3$ or less, when expressed as a running annual mean to be achieved by December 31 st 2003
	5.0 $\mu\text{g}/\text{m}^3$ or less, when expressed as a running annual mean to be achieved by December 31 st 2010
1,3 Butadiene	2.25 $\mu\text{g}/\text{m}^3$ or less, when expressed as a running annual mean to be achieved by December 31 st 2003
Carbon Monoxide	10.0 mg/m^3 or less, when expressed as a running 8 hour mean to be achieved by December 31 st 2003
Lead	0.5 $\mu\text{g}/\text{m}^3$ annual mean to be achieved by December 31 st 2004
	0.25 $\mu\text{g}/\text{m}^3$ annual mean to be achieved by December 31 st 2008
Nitrogen Dioxide	200 $\mu\text{g}/\text{m}^3$ when expressed as an hourly mean not to be exceeded more than 18 times a year to be achieved by 31st December 2005.
	40 $\mu\text{g}/\text{m}^3$ when expressed as an annual to be achieved by 31st December 2005.
PM₁₀	50 $\mu\text{g}/\text{m}^3$ or less when expressed as a 24hr mean not to be exceeded more than 35 times a year to be achieved by 31st December 2004.
	40 $\mu\text{g}/\text{m}^3$ or less when expressed as an annual mean to be achieved by 31st December 2004.
Sulphur Dioxide	125 $\mu\text{g}/\text{m}^3$ or less, when expressed as a 24 hour mean, not to be exceeded more than 3 times per year, to be achieved by 31 st December 2004.
	350 $\mu\text{g}/\text{m}^3$ or less when expressed as an hourly mean, not to be exceeded more than 24 times a year, to be achieved by 31 st December 2004.
	266 $\mu\text{g}/\text{m}^3$ or less when expressed as a 15 minute mean not to be exceeded more than 35 times a year, to be achieved by 31 st December 2005.

1.3 Air Quality Review and Assessment Process

The Environment Act 1995 Part IV section 80 places a statutory responsibility on Local Authority's to review and assess air quality in their district. New Forest District Council is continuing to fulfil its legal obligations through monitoring and assessing the seven pollutants against the set air quality objectives.

The review and assessment process is a three year continuous cycle of assessment and reports. This is achieved through a phased approach to the process which ensures that Local Authorities only undertake a level of assessment that is commensurate with the risk of an air quality objective being exceeded. It is not envisaged that every Local Authority will need to proceed beyond the first step.

Previous air quality reports can be viewed and downloaded from the New Forest District Council website; www.newforest.gov.uk/index.cfm?articleid=185

The Review and Assessment process can be summarized as follows ;

Step 1 – Updating and Screening Assessment

The Updating and Screening Assessment is the first step of the air quality review and assessment process. The aim is to identify those matters that may have changed since the last review and assessment, and which might lead to a likelihood of an air quality objective being exceeded.

Technical guidance has been published that provides checklists for Local Authorities to use to identify significant changes that may require further investigation. Where such changes are identified then by using simple screening tools, a Local Authority can decide whether or not there is sufficient risk of an exceedance of an objective to justify proceeding to a Detailed Assessment.

Step 2 – Detailed Assessment

A Detailed Assessment is only required if the Updating and Screening Assessment concludes there is a likelihood of an exceedance of an air quality objective.

The aim of a Detailed Assessment is to provide an accurate assessment of the likelihood of an air quality objective being exceeded at locations with relevant exposure. This should be sufficiently detailed to allow the designation or amendment of Air Quality Management Areas.

Technical guidance ensures that Local Authorities use quality assured monitoring and validated modelling methods to determine current and future pollutant concentrations in areas where there is a significant risk of exceeding an air quality objective.

If following the Detailed Assessment there is evidence of a likely exceedance of an air quality objective, the Local Authority has a duty to declare an Air Quality Management Area for the pollutant of concern, after which targeted reports relating to the Air Quality Management Area are required;

(i) Further Assessment

A Further Assessment of the Air Quality Management Area is made 12 months after the declaration of the area to validate the decision to declare the Air Quality Management Area and proportion the source(s) of the pollution.

(ii) Action Plan

The overall aim of declaring the Air Quality Management Area is to produce an Action Plan within 18 months of the declaration. The aim of the Action Plan is to outline the Authority's plans to attempt to reduce pollutant concentration to ensure the air quality objectives are met. The Action Plan will often involve other regulatory authorities for example the County Council with regards to transport related issues.

Step 3 – Progress Report

A Progress Report is required if there is no requirement to proceed to a Detailed Assessment following the Updating and Screening Assessment, and in the year following a Detailed Assessment.

The aim of a Progress Report is to update monitoring results from the previous year.

This report is the first report in the Review and Assessment process, the UPDATING and SCREENING ASSESSMENT.

2.0 BENZENE

2.1 National Perspective

The main sources of benzene emissions in the UK are petrol-engined vehicles, petrol refining and the distribution and uncontrolled emissions from petrol station forecourts without vapour recovery systems.

Since January 2000 EU legislation has reduced the maximum benzene content of petrol to 1%, from a previous upper limit of 5%. Vapour recovery systems will also reduce emissions from petrol storage and distribution centres.

The Government had adopted an objective of $16.25 \mu\text{g}/\text{m}^3$ (5 ppb) as a running annual mean concentration to be reached by the end of 2003. A tighter objective for benzene has also been set for an annual mean of $5 \mu\text{g}/\text{m}^3$ (1.5 ppb) to be achieved by the end of 2010 in England and Wales.

2.2 Local Perspective

The large refinery and associated chemical industries at Fawley within the New Forest district is a particular concern and careful consideration will be given to the updating and screening assessment checklist for benzene and industrial sources within the district.

Earlier rounds of the review and assessment process had indicated possible exceedances of the 2010 objective and a Detailed Assessment was undertaken in 2004 in the vicinity of the Hythe petrol storage terminal.

As part of the 2004 Detailed Assessment, modelling work was undertaken in conjunction with monitoring. Whilst the monitoring did not show a problem at relevant locations close to the petrol storage terminal, the model indicated possible exceedances of the 2003 and 2010 objective in the vicinity of Fawley Refinery in Fawley village. Therefore monitoring was undertaken during 2004 and 2005 at locations in and around Fawley village.

There have been no Air Quality Management Areas declared in the New Forest district with respect to benzene.

2.3 UPDATING AND SCREENING ASSESSMENT CHECKLIST

2.3.1 Monitoring Data

(A) Monitoring data outside an AQMA

Monitoring was undertaken using passive diffusion tubes in the vicinity of Fawley village from August 2004 to September 2005. The tubes were exposed for periods of approximately 4 weeks and located on building facades at a height of 3m in relevant exposures for benzene as stated in Box 1.4 of the Technical Guidance¹. Appendix 1 shows the locations of the diffusion tubes which were classed as industrial in accordance with the Technical Guidance¹ (Table A1.4).

New Forest District Council used diffusion tubes prepared and analysed by Gradko International Ltd. The tubes used were a BTEX diffusion tube using the absorbent 106 chromsorb. The laboratory analysis procedure is gas chromatography, with the analysis, quality assurance and accreditation shown in Appendix 2. Appendix 3 shows a typical results sheet detailing the uptake rate, limit of detection and uncertainty in the result.

Each batch of diffusion tubes contained a blank reference diffusion tube and one diffusion tube site was a duplicate site. The duplicate site allows the Authority to keep a check on the consistency of the laboratory results.

The full set of results are shown in Appendix 4. The annual mean results for each site are shown in Table 2.

Table 2

Table showing the diffusion tube results for 2004/2005 compared to the annual mean objective for 2005 and 2010.

	Sites		
	Church Lane	Ashdown Hill	Jubilee Hall *
Measured Annual Mean (2004 – 2005) / ppb	0.45	0.45	0.38
2005 Annual Mean Objective / ppb	5	5	5
Objective Achieved	Yes	Yes	Yes
2010 Annual Mean Objective /ppb	1.5	1.5	1.5
Objective Achieved	Yes	Yes	Yes

* Duplicate site, the published results are the site average.

It is noted that the monitored benzene concentrations cannot be projected forward to the 2010 objective year due to the main source of benzene in the area being from industry. Therefore the current monitored concentrations are compared with the 2010 objective concentration.

The monitored benzene concentrations do not exceed either the 2005 or 2010 annual mean objective.

Therefore there is no requirement to proceed to a detailed assessment in this location.

(B) Monitoring data within an AQMA

There is no Air Quality Management Area in the district with respect to benzene.

2.3.2 Road Traffic

(C) Very busy roads or junctions in built up areas

(i) Very Busy Roads and Junctions

Local Authorities need only undertake a screening assessment for 'very busy' roads and junctions where flows exceed the stated criteria (Box 3.2 LAQM.TG(03) Update – Jan 06).

Within the New Forest District Council there are NO

- Single carriageway roads where the AADT (Annual Average Daily Traffic (vehicles per day)) flows exceed 80,000.
- Dual carriageway roads where the AADT flows exceed 120,000.
- Motorways where the AADT flows exceed 140,000.

Therefore there is no requirement to proceed further with the screening assessment process.

(ii) Significant Increase in Traffic Flows

Local Authorities need only undertake a screening assessment for roads where there has been a significant increase in traffic flows as stated in the criteria (Box 3.2 LAQM.TG(03) Update – Jan 06).

Within the New Forest District Council there are no roads where there has been an increase of greater than 10% on the AADT.

Therefore there is no requirement to proceed further with the screening assessment process.

(iii) New Relevant Exposure

Local Authorities need only undertake a screening assessment where there is new relevant exposure. There are no new relevant exposures within 10m of a road.

Therefore there is no requirement to proceed further with the screening assessment process.

2.3.3 Industrial Sources

(D) New industrial sources

Within the New Forest district 5 new industrial IPC / PPC processes require assessment since the previous Updating and Screening Assessment. These processes are listed in Appendix 5.

In accordance with the Technical Guidance¹ Appendix E, three of these processes require further consideration with regards to benzene;

- BP Hythe *Gasification and associated process*
- Marchwood Power *Gasification and associated process*
- Cognis Hyde *Petrochemical processes*

BP Hythe

This process has not reported any benzene emissions on the processes' pollution inventory⁶.

The Environment Agency, who regulates the process, have confirmed that the process does not emit benzene, and therefore does not report benzene emissions, due to the plant being fired by natural gas.

Marchwood Power

This process is currently not built, however it has planning permission and a PPC Authorisation. However, the air quality assessment has not reported any potential benzene emissions.

The Environment Agency, who will be regulating the process, has confirmed that the process will not emit benzene, due to the plant being fired by natural gas.

Cognis Hyde

This process has not reported any benzene emissions on the processes' pollution inventory⁶. The process does however report a general VOC emission which could include benzene.

The Environment Agency, who regulates the process, has confirmed that the process does not emit benzene, and therefore does not report a separate benzene emission figure.

Following these discussions with the Environment Agency there is no requirement to proceed further with this screening assessment for the industries listed above.

(E) Industrial sources with substantially increased emissions or new relevant exposure

(i) Substantially increased emissions

Local Authorities need only undertake a screening assessment for industrial processes where industrial emissions have increased by greater than 30% as stated in the guidance (Box 3.2 LAQM.TG(03) Update – Jan 06).

After consultations with the Environment Agency, Environment Health Officers and neighbouring authorities it is concluded that there are no industrial sources with substantial increases in their emissions.

Therefore there is no requirement to proceed further with this screening assessment process.

(ii) New relevant exposure

There are no new relevant exposures with regards to existing industrial sources.

Therefore there is no requirement to proceed further with this screening assessment process.

(F) Petrol stations

All relevant petrol stations were covered in the Updating and Screening Assessment 2003.

Therefore there is no requirement to proceed further with this screening assessment process.

(G) Major fuel storage depots (petrol only)

The one relevant fuel storage depot at Hythe was covered in the Updating and Screening Assessment 2003 and subsequent Detailed Assessment 2004.

Therefore there is no requirement to proceed further with this screening assessment process.

In conclusion;

There is no need for New Forest District Council to proceed to a Detailed Assessment with regards to benzene.

3.0 1,3-BUTADIENE

3.1 National Perspective

The main source of 1,3-butadiene in the UK is emissions from motor vehicle exhausts. 1,3-butadiene is also an important industrial chemical and is handled in bulk at a small number of industrial premises.

The increasing numbers of vehicles equipped with three way catalyst will significantly reduce emissions of 1,3-butadiene in future years. Further reductions in vehicle emissions and improvements in fuel quality are expected to further lower 1,3-butadiene emissions.

These measures are expected to ensure that the 1,3-butadiene air quality objective for 2003 is achieved.

The objective for 1,3-butadiene is a maximum running annual mean concentration of 2.25 $\mu\text{g}/\text{m}^3$ to be achieved by the end of 2003.

3.2 Local Perspective

Only Local Authorities with relevant locations in the vicinity of major industrial processes which handle, store or emit 1,3-butadiene are expected to proceed beyond the updating and screening assessment.

As previously highlighted in the benzene updating screening and assessment, New Forest is home to a large refinery and associated chemical industries and again careful consideration will be given to the screening checklist with regard to the 1,3-butadiene objective.

There have been no Air Quality Management Areas declared in the New Forest district with respect to 1,3-butadiene.

3.3 UPDATING AND SCREENING ASSESSMENT CHECKLIST

3.3.1 Monitoring Data

(A) Monitoring data

New Forest District Council has not undertaken any monitoring for 1,3-butadiene either prior to or since the first round of the review and assessment process.

3.3.2 Industrial Sources

(B) New industrial sources

Within the New Forest district 5 new industrial IPC / PPC processes require assessment since the previous Updating and Screening Assessment. These processes are listed in Appendix 5.

In accordance with the Technical Guidance¹ Appendix E, one of these processes requires further consideration with regards to 1,3-butadiene;

- Cognis Hyde *Petrochemical processes*

Cognis Hyde

This process has not reported any emissions of 1,3 – butadiene on the processes' pollution inventory⁶. The process does however report a general VOC emission which could include 1,3 - butadiene.

The Environment Agency, who regulates the process, has confirmed that the process does not emit 1,3 - butadiene, and therefore does not report a separate 1,3 - butadiene emission figure.

Following these discussions with the Environment Agency there is no requirement to proceed further with this screening assessment for the industry listed above.

(C) Industrial sources with substantially increased emissions or new relevant exposure

(i) Substantially increased emissions

Local Authorities need only undertake a screening assessment for industrial processes where industrial emissions have increased by greater than 30% as stated in the guidance (Box 4.2 LAQM.TG(03) Update – Jan 06).

After consultations with the Environment Agency, Environment Health Officers and neighbouring authorities it is concluded that there are no industrial sources with substantial increases in their emissions.

Therefore there is no requirement to proceed further with this screening assessment process.

(ii) New relevant exposure

There are no new relevant exposures with regards to existing industrial sources.

Therefore there is no requirement to proceed further with this screening assessment process.

In conclusion;

There is no need for New Forest District Council to proceed to a Detailed Assessment with regards to 1,3-butadiene.

4.0 CARBON MONOXIDE

4.1 National Perspective

The main source of carbon monoxide in the UK is road transport, which accounted for 67% of total emissions in 2000. Annual emissions of carbon monoxide have been falling steadily since the 1970s and are expected to continue to do so. Current projections indicate that road transport emissions will decline by a further 42% between 2000 and 2005.

The UK objective for carbon monoxide is 10mg/m³ as a maximum daily 8 hour running mean concentration to be achieved by the end of 2003.

4.2 Local Perspective

It is considered unlikely that any authority will need to proceed beyond the Updating and Screening Assessment for carbon monoxide. Previous rounds of review and assessment concluded that there was little risk of the air quality objective being exceeded at any location within the New Forest.

Data collected from national networks or local monitoring is expected to give a more accurate indication of carbon monoxide than modelling studies. Local Authorities are recommended to prioritise the use of measured carbon monoxide concentrations wherever suitable data are available. For the review and assessment of carbon monoxide, only monitoring data collected at roadside sites need be considered.

There have been no Air Quality Management Areas declared in the New Forest district with respect to carbon monoxide.

4.3 UPDATING AND SCREENING ASSESSMENT CHECKLIST

4.3.1 Monitoring Data

(A) Monitoring data

New Forest District Council has not undertaken any monitoring for carbon monoxide either prior to or since the first round of the review and assessment process.

4.3.2 Road Traffic

(B) Very busy roads or junctions in built up areas

(i) Very Busy Roads and Junctions

Local Authorities need only undertake a screening assessment for 'very busy' roads and junctions where flows exceed the stated criteria (Box 2.2 LAQM.TG(03) Update – Jan 06).

Within the New Forest District Council there are NO

- Single carriageway roads where the AADT (Annual Average Daily Traffic (vehicles per day)) flows exceed 80,000.
- Dual carriageway roads where the AADT flows exceed 120,000.
- Motorways where the AADT flows exceed 140,000.

Therefore there is no requirement to proceed further with the screening assessment process.

(ii) Significant Increase in Traffic Flows

Local Authorities need only undertake a screening assessment for roads where there has been a significant increase in traffic flows as stated in the criteria (Box 2.2 LAQM.TG(03) Update – Jan 06).

Within the New Forest District Council there are no roads where there has been an increase of greater than 10% on the AADT.

Therefore there is no requirement to proceed further with the screening assessment process.

(iii) New Relevant Exposure

Local Authorities need only undertake a screening assessment where there is new relevant exposure.

Within the New Forest District Council one new relevant exposure has been identified;

- A new housing estate adjacent to the A326 (dual carriageway) at west Totton, approximate grid reference SU 33612 14386.

However, by utilising the year adjustment calculator spreadsheet² to correct 2001 mapped background concentrations to estimate 2005 background concentrations it is predicted that the background concentrations for carbon monoxide in the vicinity of the new housing estate are below 1 mg/m³ at 0.21 mg/m³.

Therefore there is no requirement to proceed further with the screening assessment process.

In conclusion;

There is no need for New Forest District Council to proceed to a Detailed Assessment with regards to carbon monoxide.

5.0 LEAD

5.1 National Perspective

The ban on sales of leaded petrol in the UK from 1st January 2001 has considerably reduced lead levels in the air. Emissions of lead are now restricted to a variety of industrial activities such as battery manufacture, pigments in paints, alloys, radiation shielding, tank lining and piping.

The objective for lead is an annual mean concentration of 0.5 µg/m³ to be achieved by the end of 2004.

In addition a lower air quality objective of 0.25µg/m³ to be achieved by the end of 2008 has also been set.

5.2 Local perspective

Only those authorities with relevant locations in the vicinity of major industrial processes that emit significant quantities of lead, will need to progress beyond the Updating and Screening Assessment.

There have been no Air Quality Management Areas declared in the New Forest district with respect to lead.

5.3 UPDATING AND SCREENING ASSESSMENT CHECKLIST

5.3.1 Monitoring Data

(A) Monitoring data

New Forest District Council has not undertaken any monitoring for lead either prior to or since the first round of the review and assessment process.

5.3.2 Industrial Sources

(B) New industrial sources

Within the New Forest district 5 new industrial processes require assessment since the previous Updating and Screening Assessment. These processes are listed in Appendix 5.

In accordance with the Technical Guidance¹ Appendix E, none of the listed industries are likely to emit lead in quantities worth considering further as part of this report.

Therefore there is no requirement to proceed further with this screening assessment process.

(C) Industrial sources with substantially increased emissions or new relevant exposure

(i) Substantially increased emissions

Local Authorities need only undertake a screening assessment for industrial processes where industrial emissions have increased by greater than 30% as stated in the guidance (Box 4.2 LAQM.TG(03) Update – Jan 06).

After consultations with the Environment Agency, Environment Health Officers and neighbouring authorities it is concluded that there are no industrial sources with substantial increases in their emissions.

Therefore there is no requirement to proceed further with this screening assessment process.

(ii) New relevant exposure

There are no new relevant exposures with regards to existing industrial sources.

Therefore there is no requirement to proceed further with this screening assessment process.

In conclusion;

There is no need for New Forest District Council to proceed to a Detailed Assessment with regards to lead.

6.0 NITROGEN DIOXIDE

6.1 National Perspective

Nitrogen dioxide (NO₂) and nitric oxide (NO) are both oxides of nitrogen, and are collectively referred to as nitrogen oxides (NO_x). All combustion processes produce emissions of nitrogen oxides largely in the form of nitric oxide, which is then converted to nitrogen dioxide, mainly as a result of reaction with ozone in the atmosphere. It is nitrogen dioxide that is associated with adverse effects on human health.

The principal source of emissions of nitrogen oxides is road transport, which accounted for about 49% of total UK emissions in 2000. Major roads carrying large volumes of high speed traffic are the predominant source, as are conurbations and city centres with congested traffic.

Other significant sources of nitrogen oxides emissions include the electricity supply industry and other industrial and commercial sectors. However emissions from these sources have declined dramatically due to the fitting of low nitrogen oxides burners and the increased use of natural gas plant.

There are two UK air quality objectives for nitrogen dioxide;

- annual mean concentration of 40 µg/m³ to be achieved by the end of 2005.
- 1 hour mean concentration of 200 µg/m³ not to be exceeded more than 18 times per year to be achieved by the end of 2005.

In recent years exceedances of the short term objective (1 hour mean concentration) have generally only been recorded at roadside or kerbside sites in close proximity to heavily-trafficked roads in major conurbations.

6.2 Local Perspective

New Forest District Council has an extensive network of diffusion tubes throughout its district as well as two real time analysers to monitor concentrations of nitrogen dioxide. The monitoring sites are situated at relevant locations in areas close to major traffic routes and in areas of traffic congestion.

The Authority's monitoring work, accompanied by modelling work undertaken in previous rounds of review and assessment, has resulted in extensive data being collated over a number of years with regards to nitrogen dioxide.

Whilst no exceedances have been monitored or modelled on the major traffic routes, for example the A31 and A337, exceedances of the annual mean objective have been monitored in two locations. Therefore, following the Detailed Assessment 2004 and Progress Report 2005, New Forest District Council declared two Air Quality Management Areas in June 2005.

One area is in Totton in the vicinity of Junction Road. The likely cause of the exceedances is due to traffic congestion during the operation of a railway barrier system. The other area is in Lyndhurst in the vicinity of the High Street with the likely cause of the exceedance due to general traffic congestion in a narrow street.

6.3 UPDATING AND SCREENING ASSESSMENT CHECKLIST

6.3.1 Monitoring Data

(A) Monitoring data outside an AQMA

New Forest District Council utilises diffusion tubes to monitor nitrogen dioxide concentrations at various locations throughout the district. Since December 2004 the Authority has 29 diffusion tube sites outside the two Air Quality Management Areas. This includes 3 duplicate sites which enables the Authority to keep a check on the consistency of the laboratory results.

The diffusion tubes allow the Authority to determine an annual mean concentration for each site which can be compared to the annual mean objective.

The diffusion tubes are supplied by Gradko International Ltd, a UKAS accredited laboratory for the procedure of analysing nitrogen dioxide diffusion tubes. The nitrogen dioxide is absorbed as nitrite by triethanolamine and is determined spectrophotometrically. The laboratory analysis procedure, quality control and accreditation are shown in Appendix 7. Gradko International also participates in an external Laboratory Measurement Proficiency Scheme.

The diffusion tubes were exposed for periods of 4 weeks and each batch of diffusion tubes contained a blank reference diffusion tube. The diffusion tubes were located at a height of approximately 3m above ground level in relevant exposures for nitrogen dioxide as stated in Box 1.4 of the Technical Guidance¹.

The diffusion tube locations for the sites are shown on maps in Appendix 8. The sites shown in red are likely to exceed the annual mean objective (of 40 µg/m³), yellow sites indicate those with an annual mean concentration of between 35 – 39.99 µg/m³ and sites shown in green are likely to meet the annual mean objective.

The annual mean concentrations, bias corrected concentrations and projected concentrations for all sites outside the Air Quality Management Areas are shown in Table 3 A full set of results are attached in Appendix 9.

Table 3**Table showing nitrogen dioxide results for 2005 at sites outside an AQMA**

LYNDHURST SITES

Site	Romsey Rd B&B	Romsey Rd	Goose Green	Foxlease Terrace	Hillmead Lodge
Annual Mean ($\mu\text{g}/\text{m}^3$)	26.08	26.84	23.96	38.10	32.89
Bias Corrected (x 0.99)	25.82	26.57	23.72	37.72	32.56
Projected to 2006 ($\mu\text{g}/\text{m}^3$)	25.09	25.81	23.05	36.65	31.63
Projected to 2010 ($\mu\text{g}/\text{m}^3$)	21.72	22.35	19.95	31.73	27.39
Annual Mean Objective ($\mu\text{g}/\text{m}^3$)	40	40	40	40	40
Objective Met?	YES	YES	YES	YES	YES

Site	Queens House	A35
Annual Mean ($\mu\text{g}/\text{m}^3$)	21.20	28.50
Bias Corrected (x 0.99)	20.98	28.22
Projected to 2006 ($\mu\text{g}/\text{m}^3$)	20.38	27.42
Projected to 2010 ($\mu\text{g}/\text{m}^3$)	17.65	23.74
Annual Mean Objective ($\mu\text{g}/\text{m}^3$)	40	40
Objective Met?	YES	YES

TOTTON SITES

Site	High Street	Rose Road	Winsor Road	Junction Road	Commercial Rd
Annual Mean ($\mu\text{g}/\text{m}^3$)	31.81	27.78	29.50	26.91	37.76
Bias Corrected (x 0.99)	31.49	27.50	29.21	26.64	37.38
Projected to 2006 ($\mu\text{g}/\text{m}^3$)	30.59	26.72	28.38	25.88	36.32
Projected to 2010 ($\mu\text{g}/\text{m}^3$)	26.49	23.13	24.57	22.41	31.44
Annual Mean Objective ($\mu\text{g}/\text{m}^3$)	40	40	40	40	40
Objective Met?	YES	YES	YES	YES	YES*

Site	Commercial Rd (Asda)	Library	Salisbury Rd	Water Lane	Ringwood Rd
Annual Mean ($\mu\text{g}/\text{m}^3$)	27.88	23.09	28.83	25.83	37.75
Bias Corrected (x 0.99)	27.60	22.86	28.54	25.57	37.37
Projected to 2006 ($\mu\text{g}/\text{m}^3$)	26.81	22.21	27.73	24.84	36.31
Projected to 2010 ($\mu\text{g}/\text{m}^3$)	23.22	19.23	24.01	21.51	31.43
Annual Mean Objective ($\mu\text{g}/\text{m}^3$)	40	40	40	40	40
Objective Met?	YES	YES	YES	YES	YES*

Site	Reynolds Dale	Main Rd
Annual Mean ($\mu\text{g}/\text{m}^3$)	20.30	28.92
Bias Corrected (x 0.99)	20.10	28.63
Projected to 2006 ($\mu\text{g}/\text{m}^3$)	19.53	27.82
Projected to 2010 ($\mu\text{g}/\text{m}^3$)	16.91	24.08
Annual Mean Objective ($\mu\text{g}/\text{m}^3$)	40	40
Objective Met?	YES	YES

OTHER SITES

Site	Marchwood Industrial Estate	Marchwood School	Holbury School **	Jubilee Hall Fawley	Beaulieu
Annual Mean ($\mu\text{g}/\text{m}^3$)	22.41	18.98	15.36	18.61	11.73
Bias Corrected (x 0.99)	22.19	18.79	15.21	18.42	11.61
Projected to 2006 ($\mu\text{g}/\text{m}^3$)	21.56	18.26	14.78	17.90	11.33
Projected to 2010 ($\mu\text{g}/\text{m}^3$)	18.67	15.81	12.79	15.49	10.15
Annual Mean Objective ($\mu\text{g}/\text{m}^3$)	40	40	40	40	40
Objective Met?	YES	YES	YES	YES	YES

Site	Chaffey Close Ringwood	The Furlong Ringwood	Ringwood School**	Stoney Cross** A31	Rockbourne
Annual Mean ($\mu\text{g}/\text{m}^3$)	24.24	21.97	21.84	34.45	9.47
Bias Corrected (x 0.99)	24.00	21.75	21.62	34.10	9.38
Projected to 2006 ($\mu\text{g}/\text{m}^3$)	23.32	21.13	21.01	33.13	9.16
Projected to 2010 ($\mu\text{g}/\text{m}^3$)	20.19	18.30	18.18	28.68	8.20
Annual Mean Objective ($\mu\text{g}/\text{m}^3$)	40	40	40	40	40
Objective Met?	YES	YES	YES	YES	YES

Note ; * indicates result close to the objective.

** indicates duplicate sites. Calculations shown in Appendix 10

The results shown have been corrected to allow for the laboratory bias. This correction is applied to the annual mean result for each site. A correction figure was obtained from Air Quality Consultants nitrogen dioxide diffusion tube comparison study³ depending on the laboratory and diffusion tube type used.

The correction figure of 0.99 was obtained from 2004 results. There was no data available at the time of the calculation for 2005, therefore the closest year correction factor was used.

Please note that although the Authority does have triplicate diffusion tube sites co-located with two real time NO_x analysers, the analysers produce differing correction figures, therefore, it is assumed that the local correction figures are very dependant on localised factors and environment. As a result the decision was made to utilise the national correction figure for the Authority's diffusion tubes as they are located throughout the whole Authority.

The bias corrected figure was then projected forward to obtain a likely concentration for 2006 and 2010, using a *year adjustment calculator* obtained from a website² listed in the Updated Technical Guidance⁴. These figures were then compared to the annual mean objective for nitrogen dioxide of 40 µg/m³.

The monitored nitrogen dioxide concentrations do not exceed the annual mean objective for either 2005 or projected forward for 2010. It is noted that 3 sites; Foxlease Terrace, Lyndhurst, Commercial Road and Ringwood Road, Totton are close to the objective. As a result monitoring will continue at these locations over 2006, and the sites reassessed next year.

Therefore there is no requirement to proceed to a detailed assessment at these locations.

With regards to the hourly mean objective, it is noted in the Updated Technical Guidance⁴ that the updating and screening assessment can only be completed for this objective if the Authority has continuous monitoring data. This Authority does not have such data outside Air Quality Management Areas.

It is noted however that research⁸ indicates it is unlikely that the hourly mean objective will be exceeded if the monitored annual mean concentration is below 60 µg/m³. All the sites listed above are below this concentration.

Therefore there is no requirement to proceed to a detailed assessment at these locations.

(B) Monitoring data within an AQMA

Two Air Quality Management Areas have been declared in the New Forest District Council. The locations are;

- Lyndhurst village centre. 25m either side of the kerb in the High Street
- Totton town centre. 25m either side of the kerb in parts of Junction Road, Rumbridge Street, Eling Lane and Maynard Road.

Both Air Quality Management Areas were declared in June 2005 and are in respect of the nitrogen dioxide annual mean objective. The maps showing the locations of the areas are shown in Appendix 6.

Monitoring within the Air Quality Management Areas has been undertaken by utilizing both continuous analysers and diffusion tubes.

Continuous Analysers

The Authority has 2 continuous nitrogen dioxide analysers. During 2004 these were located to;

- Junction Road, Totton in June 2004
- High Street, Lyndhurst in November 2004

The locations of these sites are shown on maps in Appendix 11.

Totton

This roadside site is located approximately 2m from the kerbside. The analyser was moved to this location due to the likely exceedences of the annual mean objective for nitrogen dioxide based on diffusion tube data. This location was chosen as it is close to a rail crossing where vehicles are regularly stationary with their engines idling. The nearest relevant exposure locations are residential properties set 10m from the kerb.

Lyndhurst

This roadside site is located approximately 1.5m from the kerbside in an office space on the 1st floor. The analyser was moved to this location due to the likely exceedences of the annual mean objective for nitrogen dioxide based on diffusion tube data. This location was chosen as it is close to a busy road junction, controlled by traffic lights, where vehicles are regularly stationary with their engines idling. The nearest relevant exposure locations are residential properties set 2m from the kerb and people who may be exposed on the kerbside for periods longer than 1 hour.

The analysers used are Monitor Laboratory 9841 Oxides of Nitrogen Chemiluminescent Analyser. Each analyser automatically undertakes a daily internal calibration using permeation tubes and a scrubber. The analysers are also manually calibrated using a reference span gas once a fortnight. This gas is obtained from BOC and each cylinder has a certificate detailing the gas concentration and life span of the gas.

The analysers are serviced and calibrated every 6 months by an engineer from Casella ETi who hold the service contract for the Authority's analysers. The engineer is also available for call outs if the analyser appears to be malfunctioning.

The Authority automatically downloads the data 3 times a day from each analyser. Therefore officers can check the data daily. The Authority also employs Kings College, London (erg) to validate and ratify the data which is downloaded daily. During this process they will flag any potential problems with the analysers and potential exceedances, and report back if necessary to the Authority.

The data from the analysers is ratified every 1 – 3 months when the fortnightly calibrations and servicing are taken into account. Full ratification occurs at the end of each year when all servicing reports, calibrations and breakdown information can be applied to the data.

The Authority has also appointed the National Physical Laboratory (NPL) to undertake site audits either annually or bi-annually. The first of these audits was undertaken in March 2006, therefore the results will not be applied to the real time data used in this report.

All the data given in the Updating and Screening Assessment has been partially, but not fully ratified. The results for both sites are shown in Table 4

Table 4
Table showing Nitrogen Dioxide continuous analyser results for 2005 compared against the objectives for Totton and Lyndhurst sites

Totton			
Objective	Data capture / %	Result	Objective achieved
Hourly mean. No more than 18 exceedances more than 200 µg/m ³	94	1	YES
Annual mean. 40 µg/m ³	94	32	YES
Lyndhurst			
Objective	Data capture / %	Result	Objective achieved
Hourly mean. No more than 18 exceedances more than 200 µg/m ³	99	1	YES
Annual mean. 40 µg/m ³	99	39	YES

Diffusion Tubes

Since December 2004 16 diffusion tube sites have been located in the District inside the two Air Quality Management Areas. This includes 2 duplicate sites which enables the Authority to keep a check on the consistency of the laboratory results and 2 triplicate sites co-located with the continuous analysers.

The diffusion tubes allow the Authority to determine an annual mean concentration for each site which can be compared to the annual mean objective.

The diffusion tubes are supplied by Gradko International Ltd, a UKAS accredited laboratory for the procedure of analysing nitrogen dioxide diffusion tubes. The nitrogen dioxide is absorbed as nitrite by triethanolamine and is determined spectrophotometrically. The laboratory analysis procedure, quality control and accreditation are shown in Appendix 7. Gradko International also participates in an external Laboratory Measurement Proficiency Scheme.

The diffusion tubes were exposed for periods of 4 weeks and each batch of diffusion tubes contained a blank reference diffusion tube. The diffusion tubes were located at a height of approximately 3m above ground level in relevant exposures for nitrogen dioxide as stated in Box 1.4 of the Technical Guidance¹.

The diffusion tube locations for the sites inside an Air Quality Management Areas are shown on maps in Appendix 12. The sites shown in red are likely to exceed the annual mean objective (of 40 $\mu\text{g}/\text{m}^3$), yellow sites indicate sites with an annual mean concentration of between 35 – 39.99 $\mu\text{g}/\text{m}^3$ and sites shown in green are likely to meet the annual mean objective.

The annual mean concentrations, bias corrected concentrations and projected concentrations for all sites inside the Air Quality Management Areas are shown in Table 5. A full set of results are attached in Appendix 9.

Table 5**Table showing nitrogen dioxide results for 2005 at sites inside an AQMA**

LYNDHURST SITES

Site	School	Jewellery Shop	Analyser ***	Bakery	Romsey Rd lights
Annual Mean ($\mu\text{g}/\text{m}^3$)	26.70	52.18	46.54	46.99	39.67
Bias Corrected (x 0.99)	26.43	51.66	46.08	46.52	39.28
Projected to 2006 ($\mu\text{g}/\text{m}^3$)	25.68	50.19	44.77	45.20	38.16
Projected to 2010 ($\mu\text{g}/\text{m}^3$)	22.23	43.45	38.76	39.13	33.04
Annual Mean Objective ($\mu\text{g}/\text{m}^3$)	40	40	40	40	40
Objective Met in 2005?	YES	NO	NO	NO	YES*

Site	Tea Shop**	Card Shop	Park Hotel	Gosport St.
Annual Mean ($\mu\text{g}/\text{m}^3$)	33.63	37.82	32.32	51.65
Bias Corrected (x 0.99)	33.29	37.44	32.00	51.13
Projected to 2006 ($\mu\text{g}/\text{m}^3$)	32.34	36.38	31.09	49.68
Projected to 2010 ($\mu\text{g}/\text{m}^3$)	28.00	31.49	26.92	43.01
Annual Mean Objective ($\mu\text{g}/\text{m}^3$)	40	40	40	40
Objective Met in 2005?	YES	YES*	YES	NO

TOTTON SITES

Site	Rumbridge St.	BATS corner	Junction Rd B **	Junction Rd C	Junction Rd D ***
Annual Mean ($\mu\text{g}/\text{m}^3$)	37.53	40.06	42.13	36.12	32.67
Bias Corrected (x 0.99)	37.15	39.66	41.71	35.76	32.35
Projected to 2006 ($\mu\text{g}/\text{m}^3$)	36.09	38.53	40.52	34.74	31.43
Projected to 2010 ($\mu\text{g}/\text{m}^3$)	31.25	33.36	35.08	30.08	27.21
Annual Mean Objective ($\mu\text{g}/\text{m}^3$)	40	40	40	40	40
Objective Met in 2005?	YES*	YES*	NO	YES*	YES

Site	Esso roundabout	Asda roundabout
Annual Mean ($\mu\text{g}/\text{m}^3$)	35.45	35.91
Bias Corrected (x 0.99)	35.09	35.55
Projected to 2006 ($\mu\text{g}/\text{m}^3$)	34.09	34.54
Projected to 2010 ($\mu\text{g}/\text{m}^3$)	29.52	29.90
Annual Mean Objective ($\mu\text{g}/\text{m}^3$)	40	40
Objective Met in 2005?	YES*	YES*

Note ; * indicates result close to the objective.

** indicates duplicate sites. Calculations shown in Appendix 10

*** indicates triplicate sites. Calculations shown in Appendix 10

The results shown have been corrected to allow for the laboratory bias. This correction is applied to the annual mean result for each site. A correction figure was obtained from Air Quality Consultants nitrogen dioxide diffusion tube comparison study³ depending on the laboratory and diffusion tube type used.

The correction figure of 0.99 was obtained from 2004 results. There was no data available at the time of the calculation for 2005, therefore the closest year correction factor was used.

Please note that although the Authority does have triplicate diffusion tube sites co-located with two real time NO_x analysers, the analysers produce differing correction figures, therefore, it is assumed that the local correction figures are very dependant on localised factors and environment. As a result the decision was made to utilise the

national correction figure for the Authority's diffusion tubes as they are located throughout the whole Authority.

The bias corrected figure was then projected forward to obtain a likely concentration for 2006 and 2010, using a *year adjustment calculator* obtained from a website² listed in the Updated Technical Guidance⁴. These figures were then compared to the annual mean objective for nitrogen dioxide of 40 µg/m³.

Lyndhurst

The Air Quality Management Area in Lyndhurst has not been declared with regards to the hourly mean objective as supported by the monitored nitrogen dioxide concentrations using the continuous analyser.

However as in 2004, the monitored nitrogen dioxide concentrations in 2005 exceed the annual mean objective at two locations namely the bakery and jewellery shop sites. Further exceedances have also been monitored at the diffusion tube site at Gosport Street, with the Romsey Road lights site very close to the objective at 39.28 µg/m³. The Authority would recognise this concentration as a site which 'exceeds' the objective.

It is acknowledged that the continuous analyser recorded an annual mean concentration 1 µg/m³ below the objective and that there was some difference of 7 µg/m³ between the analyser and the co-located diffusion tubes. It is unclear as to the reason why there is a difference between the two monitoring methods, it could possibly be due to very localised conditions such as wind turbulence. However the analyser is so close to the objective the Authority is confident in its declaration of the Air Quality Management Area in this location.

Due to these monitored exceedances within the designated Air Quality Management Area there is no requirement to proceed to a Detailed Assessment in Lyndhurst.

Totton

The Air Quality Management Area in Totton has not been declared with regards to the hourly mean objective as supported by the monitored nitrogen dioxide concentrations using the continuous analyser.

Once again the monitored nitrogen dioxide concentrations exceed the annual mean objective at the one diffusion tube location which had also exceeded the objective in 2004, the Junction Road B site located to the south of the railway crossing. This site, whilst still exceeding the objective, has monitored a decrease in the annual mean concentration from 44 µg/m³ in 2004 to 41 µg/m³ in 2005.

The BATS corner diffusion tube site also monitored an annual mean concentration very close to the objective at 39.66 µg/m³. The Authority would recognise this concentration as a site which 'exceeds' the objective.

The Authority is encouraged by the close correlation between the continuous analyser and the co-located diffusion tubes, with a monitored difference of less than $1 \mu\text{g}/\text{m}^3$ between the two different monitoring techniques.

Due to these monitored exceedences within the designated Air Quality Management Area there is no requirement to proceed to a Detailed Assessment in Totton.

6.3.2 Road Traffic

(C) Narrow congested streets with residential properties close to the kerb

Local Authorities need only undertake a screening assessment for narrow and congested roads where there are residential properties within 5m of the kerb as stated in the criteria (Box 6.2 LAQM.TG(03) Update – Jan 06).

During the previous rounds of review and assessment a number of roads were assessed. However a further location has been identified as a narrow, with a carriageway > 10m wide, with slow moving traffic (average traffic speed is > 50 kph) and residential properties within 5m of the kerb;

- Fordingbridge High Street. Grid Reference SU 14770 14203

The DMRB modelling tool⁵ was utilised to estimate the nitrogen dioxide concentrations at this relevant location. The results sheet is shown in Appendix 13.

The results show a predicted annual mean for nitrogen dioxide of **$19.1 \mu\text{g}/\text{m}^3$** for 2005 and **$17.9 \mu\text{g}/\text{m}^3$** for 2010 at this location. Please note that whilst the Authority obtained traffic figures from Hampshire County Council (as shown in Appendix 14) of 10100 AADT for this site, an estimated traffic figure of 15000 AADT was used for 2010.

The predicted annual mean concentrations for nitrogen dioxide is less than $40 \mu\text{g}/\text{m}^3$ for both 2005 and 2010.

Therefore there is no requirement to proceed to a Detailed Assessment at this location.

(D) Junctions

Local Authorities need only undertake a screening assessment for 'busy' junctions where flows exceed 10,000 vehicles per day as stated in the criteria (Box 6.2 LAQM.TG(03) Update – Jan 06).

In the previous review and assessment numerous junctions were assessed at the Updating and Screening Assessment stage, however a new junction has been identified with the nearest residential property 11m from the kerb;

- Colbury turn, Colbury. Grid Ref SU 35233 11756

The junction is currently not considered by Hampshire County Council as 'busy' with traffic figures of less than 10,000 AADT. This is due to this new junction not being adequately signed and only being used by local residents.

However after discussions with the County Transport Planners it is hoped that this junction will be used as a main route into the New Forest for visitors. Therefore the route (and junction) will in the future be signed from the motorway link.

As a result this junction is likely to be assessed in future review and assessments, however at this stage there is no requirement to proceed to a Detailed Assessment.

(E) Busy streets where people may spend 1 hour or more close to traffic

Local Authorities need only undertake a screening assessment for busy streets where people may spend 1 hour or more as stated in the guidance (Box 6.2 LAQM.TG(03) Update – Jan 06).

All relevant locations were assessed in the Updating and Screening Assessment 2003. No further locations have been identified.

Therefore there is no requirement to proceed further with this screening assessment process.

(F) Roads with high flow of buses and / or HGVs

Local Authorities need only consider roads where there is a proportion of HGV's and buses greater than 25% of the annual average daily traffic flow as stated in the guidance (Box 6.2 LAQM.TG(03) Update – Jan 06).

There are no roads in this Authority with a flow greater than 25% of HGV's and / or buses.

Therefore there is no requirement to proceed further with this screening assessment process.

(G) New roads constructed or proposed since the previous round of review and assessment

Local Authorities need only consider new roads or proposed roads in their district. Since the last round of review and assessment there have been no new roads built or proposed.

Therefore there is no requirement to proceed further with this screening assessment process.

(H) Roads with significantly increased traffic flows, or new relevant exposure.

(i) Roads with significantly increased traffic flows

Local Authorities need only undertake a screening assessment for roads where there has been a significant increase in traffic flows as stated in the criteria (Box 6.2 LAQM.TG(03) Update – Jan 06).

Within the New Forest District Council there are no roads where there has been an increase of greater than 25% on the AADT.

Therefore there is no requirement to proceed further with the screening assessment process.

(ii) New Relevant Exposure

Local Authorities need only undertake a screening assessment where there is new relevant exposure.

Within the New Forest District Council one new relevant exposure has been identified;

- A new housing estate adjacent to the A326 (dual carriageway) at west Totton, approximate grid reference SU 33612 14386.

The DMRB modelling tool was utilised to estimate the nitrogen dioxide concentrations at this relevant location. The results sheet is shown in Appendix 13, however the results show a predicted annual mean for nitrogen dioxide of **18.9 µg/m³** at this location.

The predicted annual mean concentration for nitrogen dioxide is less than 40 µg/m³.

Therefore there is no requirement to proceed to a Detailed Assessment at this location.

(I) Bus stations

All relevant bus stations were assessed in the Updating and Screening Assessment 2003. No further bus stations are now in operation since 2003.

Therefore there is no requirement to proceed further with this screening assessment process.

6.3.3 Industrial Sources

(J) New industrial sources

Within the New Forest district 5 new industrial IPC / PPC processes require assessment since the previous Updating and Screening Assessment. These processes are listed in Appendix 5.

In accordance with the Technical Guidance¹ Appendix E, four of these processes require further consideration with regards to nitrogen dioxide;

- BP Hythe *Gasification and associated process*
- Marchwood Power *Gasification and associated process*
- Veolia ES Onyx *Incineration*
- Onyx Hampshire *Incineration*

BP Hythe

From the pollution inventory, obtained from the Environment Agency website⁶, this process has reported annual figures for NOx as;

N₂O of 11.84 tonnes / yr

NO₂ of < 100,000 kg / yr (= 90 tonnes / yr)

Assuming a worst case scenario, the total NOx emissions from this process are;

101.84 tonnes / yr

This information is used in the calculation of scaled hourly and annual mean emission rates Appendix 15, which is compared to the emission rates obtained from the published nomograms in Tables 6.1 and 6.2 in the Technical Guidance¹.

From these calculations it was concluded that;

(i) Hourly Mean

Scaled emission rate = **25.46 tonnes / yr**

Nomogram emission rate = **275.00 tonnes / yr**

Scaled emission rate < Nomogram emission rate

Therefore no requirement to proceed to a Detailed Assessment.

(ii) Annual Mean

There are no sensitive receptors within 10 stack heights (450m) of this stack, however the calculation was performed as a check;

Scaled emission rate = **21.55 tonnes / yr**
Nomogram emission rate = **310.00 tonnes / yr**

Scaled emission rate < Nomogram emission rate

Therefore no requirement to proceed to a Detailed Assessment.

Marchwood Power

This process is currently not built, however it has planning permission and a PPC Authorisation.

The air quality assessment submitted as part of the planning application was assessed as sufficient for the purpose of the review and assessment process with regards to nitrogen dioxide. The assessment included detailed monitoring and modelling of the likely impact on the local environment in terms of the air quality objectives.

Therefore no requirement to proceed to a Detailed Assessment.

Veolia ES Onyx

From the pollution inventory, obtained from the Environment Agency website⁶, this process has reported annual figures for NO_x as;

NO_x of < 110,000 kg / yr (= 99 tonnes / yr)

For the purpose of this calculation this figure will be used as a worst case scenario.

This information is used in the calculation of scaled hourly and annual mean emission rates Appendix 15, which is compared to the emission rates obtained from the published nomograms in Tables 6.1 and 6.2 on the Technical Guidance¹.

From these calculations it was concluded that;

(i) Hourly Mean

Scaled emission rate = **24.75 tonnes / yr**
Nomogram emission rate = **90.00 tonnes / yr**

Scaled emission rate < Nomogram emission rate

Therefore no requirement to proceed to a Detailed Assessment.

(ii) Annual Mean

There are no sensitive receptors within 10 stack heights (375m) of this stack, however the calculation was performed as a check;

Scaled emission rate = **20.95 tonnes / yr**
Nomogram emission rate = **100.00 tonnes / yr**

Scaled emission rate < Nomogram emission rate

Therefore no requirement to proceed to a Detailed Assessment.

Onyx Hampshire

From the pollution inventory, obtained from the Environment Agency website⁶, this process has reported annual figures for NO_x as;

NO_x of 180 tonnes / yr from 1 stack

however as there are two stacks for the process, it is assumed the process could emit;

NO_x of 360 tonnes / yr from 2 stacks

For the purpose of this calculation this figure will be used as a worst case scenario.

This information is used in the calculation of scaled hourly and annual mean emission rates Appendix 15, which is compared to the emission rates obtained from the published nomograms in Tables 6.1 and 6.2 on the Technical Guidance¹.

From these calculations it was concluded that;

(i) Hourly Mean

Scaled emission rate = **90.00 tonnes / yr**
Nomogram emission rate = **160.00 tonnes / yr**

Scaled emission rate < Nomogram emission rate

Therefore no requirement to proceed to a Detailed Assessment.

(ii) Annual Mean

There are sensitive receptors within 10 stack heights (650m) of this stack in Marchwood, therefore the annual mean calculation was undertaken;

Scaled emission rate = **58.00 tonnes / yr**
Nomogram emission rate = **135.00 tonnes / yr**

Scaled emission rate < Nomogram emission rate

Therefore no requirement to proceed to a Detailed Assessment.

(K) Industrial sources with substantially increased emissions, or new relevant exposure

(i) Substantially increased emissions

Local Authorities need only undertake a screening assessment for industrial processes where industrial emissions have increased by greater than 30% as stated in the guidance (Box 6.2 LAQM.TG(03) Update – Jan 06).

After consultations with the Environment Agency, Environment Health Officers and neighbouring authorities it is concluded that there are no industrial sources with substantial increases in their emissions.

Therefore there is no requirement to proceed further with this screening assessment process.

(ii) New relevant exposure

There are no new relevant exposures with regards to existing industrial sources.

Therefore there is no requirement to proceed further with this screening assessment process.

(L) Aircraft

Local Authorities need only consider airports where there is relevant exposure within 1000m of an airport boundary as stated in the criteria (Box 6.2 LAQM.TG(03) Update – Jan 06).

Although there are no airports within the New Forest there are two in neighbouring authorities;

- Bournemouth International Airport at Christchurch
- Southampton Airport at Eastleigh.

However, there is no relevant exposure within the New Forest with properties in the district being further than 1000m away from airport boundary.

Therefore there is no requirement to proceed further with this screening assessment process.

In conclusion;

There is no need for New Forest District Council to proceed to a Detailed Assessment with regards to nitrogen dioxide.

7.0 PARTICULATES (PM₁₀)

7.1 National Perspective

There is a wide range of emission sources that contribute to PM₁₀ concentrations in the UK. These sources can be divided into 3 main categories ;

Primary particles - directly from combustion sources, including road traffic, power generation, industrial processes etc.

Secondary particles - formed by chemical reactions in the atmosphere, and comprise principally sulphates and nitrates.

Coarse particles – from a wide range of sources including resuspended dusts from road traffic, construction works, quarries, wind blown dusts and soils, sea salt and biological particles.

The Government has adopted two Air Quality Objectives for PM₁₀, which are equivalent to the EU Stage 1 limit values in the first Air quality Daughter Directive;

- Annual mean objective of 40 µg/m³ to be achieved by the end of 2004.
- 24 hour mean of 50 µg/m³ to be exceeded on no more than 35 days per year to be achieved by the end of 2004.

7.2 Local Perspective

More than 70 Air Quality Management Areas have been declared in the UK with regards to PM₁₀. The majority of these have been in combination with nitrogen dioxide and are associated with road traffic sources. Other examples of Air Quality Management Areas declared in respect to PM₁₀ include steel plant, unregulated coal fired burners, fugitive sources including quarries and port handling of aggregates.

The local sources of PM₁₀ in the New Forest are from roads and industry.

The Authority monitors PM₁₀ at Holbury Manor Infant School, Holbury and in Junction Road, Totton using real time analysers. These sites have been operational since 2000 and 2005 respectively.

Local Authorities have been advised to focus on areas where they expect pollution concentrations to be the highest and by so doing if there are no exceedances at the most polluted locations then it can be assumed that there should be no exceedances elsewhere.

New Forest District Council has not declared any Air Quality Management Areas with respect to PM₁₀.

7.3 UPDATING AND SCREENING ASSESSMENT CHECKLIST

7.3.1 Monitoring Data

(A) Monitoring data outside an AQMA

Real time analysers are located at Holbury Manor Infant School, Holbury and Junction Road, Totton.

The location at Holbury is an urban industrial site and is shown on a map in Appendix 16. This location is in a residential area identified as appropriate to monitor industrial sources, primarily a refinery, in the vicinity, approximately 1km away.

The location at Totton is a roadside location and is shown on a map in Appendix 17. This location is in a residential area, with properties located approximately 2m from the kerb.

The analysers used are Rupprecht and Patashnick TEOM's 1400a with a CEN approved PM₁₀ head.

The analysers are manually calibrated approximately every 6 weeks when the TEOM filter requires changing. The filter is changed once the loading on the filter is > 80%.

The analysers are serviced and calibrated every 6 months by an engineer from Casella ETi who hold the service contract for the Authority. The engineer is also available for call outs if the analyser appears to be malfunctioning.

The Authority automatically downloads the data 3 times a day from each analyser, therefore officers can check the data daily. The Authority also employs Kings College, London (erg) to validate and ratify the data which is downloaded daily.

Kings College validate the data daily. During this process they will flag any potential problems with the analysers and potential exceedences, and report back if necessary to the Authority.

The data from the analysers is ratified every 1 – 3 months when the fortnightly calibrations and servicing are taken into account. Full ratification occurs at the end of each year when all servicing reports, calibrations and breakdown information can be applied to the data.

The Authority has also appointed the National Physical Laboratory (NPL) to undertake site audits either annually or bi-annually. The first of these audits were undertaken in March 2006, therefore the results will not be applied to the real time data used in this report.

All the data given in the Updating and Screening Assessment has been partially, but not fully ratified. The results for the Holbury site are shown in Table 6.

The Totton site has only been operational since 19th April 2005, therefore the data used was for the monitoring period 19th April 2005 – 18th March 2006. The results for Totton are shown in Table 7.

Table 6

Table showing PM₁₀ results compared against the objectives from the Holbury site for 2005.

Objective	Data Capture / %	Result	Objective achieved
Annual mean of 40 µg/m ³	98	20	Yes
24 hour mean. No more than 35 days more than 50 µg/m ³	98	3	Yes

Table 7

Table showing PM₁₀ results compared against the objectives from the Totton site for the period 19.04.05 – 18.03.06.

Objective	Data Capture / %	Result	Objective achieved
Annual mean of 40 µg/m ³	90	28	Yes
24 hour mean. No more than 35 days more than 50 µg/m ³	90	9	Yes

The monitored particulate concentrations do not exceed any of the objectives set.

Therefore there is no requirement to proceed to a detailed assessment in this location.

(B) Monitoring data within an AQMA

There is no Air Quality Management Area with respect to PM₁₀.

7.3.2 Road Traffic

(C) Busy roads and junctions in Scotland

Not applicable

(D) Junctions

Whilst the guidance (Box 8.4 LAQM.TG(03) Update – Jan 06) states that junctions were not often adequately considered during previous review and assessments and therefore need to be considered further, New Forest District Council did adequately consider 'busy' junctions during the Updating and Screening Assessment 2003.

During the Updating and Screening Assessment 2003, 7 busy junctions were considered with 3 being screened further using the DMRB. However results predicted PM₁₀ concentrations and exceedances below the objective levels.

It is concluded that no further busy junctions need to be considered in this report, therefore there is no requirement to proceed further with this screening assessment.

(E) Roads with high flow of buses and / or HGV's.

Local Authorities need only consider roads where there is a proportion of HGV's and buses greater than 20% of the annual average daily traffic flow as stated in the guidance (Box 8.4 LAQM.TG(03) Update – Jan 06).

There are no roads in this Authority with a flow greater than 20% of HGV's and / or buses.

Therefore there is no requirement to proceed further with this screening assessment process.

(F) New roads constructed or proposed since the last round of review and assessment.

Local Authorities need only consider new roads or proposed roads in their district. Since the last round of review and assessment there have been no new roads built or proposed.

Therefore there is no requirement to proceed further with this screening assessment process.

(G) Roads with significantly increased traffic flows, or new relevant exposure.

(i) Roads with significantly increased traffic flows

Local Authorities need only undertake a screening assessment for roads where there has been a significant increase in traffic flows as stated in the criteria (Box 8.4 LAQM.TG(03) Update – Jan 06).

Within the New Forest District Council there are no roads where there has been an increase of greater than 25% on the AADT.

Therefore there is no requirement to proceed further with the screening assessment process.

(ii) New Relevant Exposure

Local Authorities need only undertake a screening assessment where there is new relevant exposure.

Within the New Forest District Council one new relevant exposure has been identified;

- A new housing estate adjacent to the A326 (dual carriageway) at west Totton, approximate grid reference SU 33612 14386.

The DMRB modelling tool⁵ was utilised to estimate the PM₁₀ concentrations at this relevant location. The results sheet is shown in Appendix 13, however the results show a predicted annual mean for PM₁₀ of **20.9 µg/m³** and 5 predicted days greater than 50.0 µg/m³ at this location for 2005 and an annual mean of **19.0 µg/m³** and 2 predicted days greater than 50.0 µg/m³ for 2010.

The predicted annual mean concentrations for particulates is less than 40 µg/m³ and the number of predicted days over 50.0 µg/m³ is less than 35.

Therefore there is no requirement to proceed to a Detailed Assessment at this location.

(H) Roads close to the objective during the second round of the review and assessment process.

Local Authorities need only consider roads which were close to the objective during the previous review and assessment due to changes in the background PM₁₀ maps as stated in the criteria (Box 8.4 LAQM.TG(03) Update – Jan 06).

Within New Forest there were no such roads identified, therefore there is no requirement to proceed further with the screening assessment process.

7.3.3 Industrial Sources

(I) New Industrial Sources

Within the New Forest district 5 new industrial processes require assessment since the previous Updating and Screening Assessment. These processes are listed in Appendix 5.

In accordance with the Technical Guidance¹ Appendix E, none of the listed industries are likely to emit particulates in quantities worth considering further as part of this report.

Therefore there is no requirement to proceed further with this screening assessment process.

(J) Industrial sources with substantially increased emissions or new relevant exposure

(i) Substantially increased emissions

Local Authorities need only undertake a screening assessment for industrial processes where industrial emissions have increased by greater than 30% as stated in the guidance (Box 8.4 LAQM.TG(03) Update – Jan 06).

After consultations with the Environment Agency, Environment Health Officers and neighbouring authorities it is concluded that there are no industrial sources with substantial increases in their emissions.

Therefore there is no requirement to proceed further with this screening assessment process.

(ii) New relevant exposure

There are no new relevant exposures with regards to existing industrial sources.

Therefore there is no requirement to proceed further with this screening assessment process.

7.3.4 Domestic Sources

(K) Areas of domestic solid fuel burning

Local Authorities need only consider areas where significant solid fuel burning takes place. Significant solid fuel burning is stated as more than 50 houses burning solid fuel as their primary heating source in an area approximately 500m² (Box 8.4 LAQM.TG(03) Update – Jan 06).

This source was previously considered in the last Updating and Screening Assessment 2003 in which no areas were identified. Since this report there have been no further areas identified within the Authority.

Therefore there is no requirement to proceed further with this screening assessment process.

7.3.5 Other Sources

(L) Quarries / landfill sites / opencast coal / handling of dusty cargoes at ports etc . .

Local Authorities need only consider premises and operations which were not considered during the last round of review and assessment.

All relevant premises and operations were considered in the Updating and Screening Assessment 2003. No further sources have become operational since 2003 and there have been no significant changes to existing premises since 2003.

Therefore there is no requirement to proceed further with this screening assessment process.

(M) Aircraft

Local Authorities need only consider airports where there is relevant exposure within 500m of an airport boundary as stated in the criteria (Box 8.4 LAQM.TG(03) Update – Jan 06).

Although there are no airports within the New Forest there are two in neighbouring authorities;

- Bournemouth International Airport at Christchurch
- Southampton Airport at Eastleigh.

However, there is no relevant exposure within the New Forest, with properties in the district further than 500m away from airport boundary.

Therefore there is no requirement to proceed further with this screening assessment process.

In conclusion;

There is no need for New Forest District Council to proceed to a Detailed Assessment with regards to PM₁₀.

8.0 SULPHUR DIOXIDE

8.1 National Perspective

The main source of sulphur dioxide in the UK is power stations, which accounted for more than 71% of emissions in 2000. There are also significant emissions from other industrial combustion services.

Local exceedances of the objectives (principally the 15 min mean objective) may occur in the vicinity of small combustion plant (less than 20MW) which burn coal or oil, in areas where solid fuels are the predominant form of domestic heating and in the vicinity of major ports.

The UK has adopted three objectives with regard to sulphur dioxide;

- 15 -minute mean objective of 266 $\mu\text{g}/\text{m}^3$ as an air quality standard for sulphur dioxide with an objective for the standard not to be exceeded more than 35 times in a year by the end of 2005.
- 1-hour mean objective of 350 $\mu\text{g}/\text{m}^3$ not to be exceeded more than 24 times a year, to be achieved by 2004.
- 24 hour objective of 125 $\mu\text{g}/\text{m}^3$ not to be exceeded more than 3 times a year to be achieved by the end of 2004.

8.2 Local Perspective

There have been a small number of Air Quality Management Areas declared with regards to sulphur dioxide throughout the UK.

The local sources of sulphur dioxide in the New Forest are mainly industrial, including a refinery and power station. However, the large number of shipping movements in Southampton Water which is on the eastern boundary of the New Forest is also a potential source of sulphur dioxide which may require further consideration.

The Authority monitors sulphur dioxide at Holbury Manor Infant School, Holbury and Jubilee Hall, Fawley using real time analysers. These sites have been operational since 2000 / 2001.

In the New Forest, an Air Quality Management Area was declared for the 15 minute mean objective around the village of Fawley due to emissions from the Esso Refinery. The Air Quality Management Area was formally declared in December 2005 after a recommendation from Defra following the Authority's Progress Report 2005.

8.3 UPDATING AND SCREENING ASSESSMENT CHECKLIST

8.3.1 Monitoring Data

(A) Monitoring data outside an AQMA

A real time analyser is located at Holbury Manor Infant School, Holbury. This location is an urban industrial sites and is shown on a map in Appendix 18. This location is in a residential area identified as appropriate to monitor industrial sources, primarily a refinery, in the vicinity, approximately 1km away.

The analyser used is a Monitor Laboratory 9850 UV Fluorescence sulphur dioxide analyser.

The analyser automatically undertakes a daily internal calibration using a zero and span gas at the Holbury site. The analyser is also manually calibrated using a reference span gas once a fortnight. This gas is obtained from BOC and each cylinder has a certificate detailing the gas concentration and life span of the gas.

The analysers are serviced and calibrated every 6 months by an engineer from Casella ETi who hold the service contract for the Authority. The engineer is also available for call outs if the analyser appears to be malfunctioning.

The Authority automatically downloads the data 3 times a day from each analyser, therefore officers can check the data daily. The Authority also employs Kings College, London (erg) to validate and ratify the data which is downloaded daily.

Kings College validate the data daily. During this process they will flag any potential problems with the analysers and potential exceedences, and report back if necessary to the Authority.

The data from the analysers is ratified every 1 – 3 months when the fortnightly calibrations and servicing are taken into account. Full ratification occurs at the end of each year when all servicing reports, calibrations and breakdown information can be applied to the data.

The Authority has also appointed the National Physical Laboratory (NPL) to undertake site audits either annually or bi-annually. The first of these audits were undertaken in March 2006, therefore the results will not be applied to the real time data used in this report.

All the data given in the Updating and Screening Assessment has been partially, but not fully ratified. The results for the site are shown in Table 8

Table 8
Table showing Sulphur Dioxide results compared against the objectives from the Holbury site for 2005.

Objective	Data Capture / %	Result	Objective achieved
Hourly mean. No more than 24 exceedences more than 350 µg/m ³	98	0	Yes
Daily mean. No more than 3 days more than 125 µg/m ³	98	0	Yes
15 min mean. No more than 35 exceedences 266 µg/m ³	98	19	Yes

The monitored sulphur dioxide concentrations do not exceed any of the objectives set.

Therefore there is no requirement to proceed to a detailed assessment in this location.

(B) Monitoring data within an AQMA

An Air Quality Management Area was declared in Fawley village with respect to the 15 min mean objective. The area was formally declared in December 2005 following consultation with Defra and due to the number of exceedances which were noted early in 2005. These exceedances were also noted in the Progress Report 2005. A map showing the extent of the Air Quality Management Area is shown in Appendix 19.

A real time analyser is located at Jubilee Hall, The Square, Fawley. This location is an urban industrial site and is shown on a map in Appendix 18. This location is in residential areas identified as appropriate to monitor industrial sources, primarily a refinery, in the vicinity, approximately 1km away.

The analyser used is a Monitor Laboratory 9850 UV Fluorescence Sulphur dioxide analyser.

The analyser automatically undertakes a daily internal calibration using internal permeation tubes and scrubbers at the Fawley site. The analyser is also manually calibrated using a reference span gas once a fortnight. This gas is obtained from BOC and each cylinder has a certificate detailing the gas concentration and life span of the gas.

The analysers are serviced and calibrated every 6 months by an engineer from Casella ETi who hold the service contract for the Authority. The engineer is also available for call outs if the analyser appears to be malfunctioning.

The Authority automatically downloads the data 3 times a day from each analyser, therefore officers can check the data daily. The Authority also employs Kings College, London (erg) to validate and ratify the data which is downloaded daily.

Kings College validate the data daily. During this process they will flag any potential problems with the analysers and potential exceedences, and report back if necessary to the Authority.

The data from the analysers is ratified every 1 – 3 months when the fortnightly calibrations and servicing are taken into account. Full ratification occurs at the end of each year when all servicing reports, calibrations and breakdown information can be applied to the data.

The Authority has also appointed the National Physical Laboratory (NPL) to undertake site audits either annually or bi-annually. The first of these audits were undertaken in March 2006, therefore the results will not be applied to the real time data used in this report.

All the data given in the Updating and Screening Assessment has been partially, but not fully ratified. The results for the site are shown in Table 9.

Table 9
Table showing Sulphur Dioxide results compared against the objectives from the Fawley site for 2005.

Objective	Data Capture / %	Result	Objective achieved
Hourly mean. No more than 24 exceedences more than 350 µg/m ³	97	4	Yes
Daily mean. No more than 3 days more than 125 µg/m ³	97	0	Yes
15 min mean. No more than 35 exceedences 266 µg/m ³	97	63	No

The monitored sulphur dioxide concentrations do not exceed the objectives set for the hourly and daily mean. The Air Quality Management Area in Fawley has not been declared with regards to these objectives and therefore *there is no requirement to proceed to a detailed assessment in this location for these objectives.*

The objective for the 15 minute mean has been exceeded in this location. Considering the Air Quality Management Area in Fawley has been declared with regards to this objective and an Action Plan is currently being progressed, *there is no requirement to proceed to a detailed assessment in this location for this objective.*

8.3.2 Industrial Sources

(C) New industrial sources

Within the New Forest district 5 new industrial processes require assessment since the previous Updating and Screening Assessment. These processes are listed in Appendix 5.

In accordance with the Technical Guidance¹ Appendix E, none of the listed industries are likely to emit sulphur dioxide in quantities worth considering further as part of this report.

Therefore there is no requirement to proceed further with this screening assessment process.

(D) Industrial sources with substantially increased emissions or new relevant exposure

(i) Substantially increased emissions

Local Authorities need only undertake a screening assessment for industrial processes where industrial emissions have increased by greater than 30% as stated in the guidance (Box 7.2 LAQM.TG(03) Update – Jan 06).

After consultations with the Environment Agency, Environment Health Officers and neighbouring authorities it is concluded that there are no industrial sources with substantial increases in their emissions.

Therefore there is no requirement to proceed further with this screening assessment process.

(ii) New relevant exposure

There are no new relevant exposures with regards to existing industrial sources.

Therefore there is no requirement to proceed further with this screening assessment process.

8.3.3 Domestic Sources

(E) Areas of domestic coal burning

Local Authorities need only consider areas where significant coal burning takes place. Significant coal burning is stated as more than 100 houses burning solid fuel as their primary heating source (Box 7.2 LAQM.TG(03) Update – Jan 06).

This source was previously considered in the last Updating and Screening Assessment 2003 in which no areas were identified. Since this report there have been no further areas identified within the Authority.

Therefore there is no requirement to proceed further with this screening assessment process.

8.3.4 Boilers

(F) Small boilers >5 MW_(thermal)

Local Authorities need only consider boiler plants >5MW_(thermal) where there is relevant exposure near to the source (Box 7.2 LAQM.TG(03) Update – Jan 06).

This source was previously considered in the last Updating and Screening Assessment 2003 in which no such plant was identified. Since this report there have been no further plant identified within the Authority.

Therefore there is no requirement to proceed further with this screening assessment process.

8.3.5 Other Sources

(G) Shipping

Local Authorities need only consider shipping if the Authority has relevant locations close to shipping ports that have not been considered in previous reviews and assessments. Further guidance has been issued with regards to sulphur dioxide concentrations and shipping as detailed in the updated Technical Guidance notes⁴.

The eastern boundary of the New Forest district includes part of Southampton Water which leads to the busy shipping port of Southampton. Whilst there are areas of possible relevant exposure within 1km of the port at Hythe Marina, Marchwood and Eling, the contributions to sulphur dioxide concentrations from shipping movements in Southampton Water were considered in the Authority's Detailed Assessment 2004.

The Detailed Assessment involved modelling work undertaken by Faber Maunsell consultants⁷. The conclusions from the modelling work were that the contributions to sulphur dioxide concentrations from shipping increased at locations further up Southampton Water, however the modelled sulphur dioxide concentrations were below the objectives set for sulphur dioxide.

The Authority will continue to work with our neighbouring Authority, Southampton City Council, with regards to this issue and undertake further monitoring or modelling should the situation change in the future, for example if shipping movement increase significantly.

Therefore there is no requirement to proceed further with this screening assessment process.

(H) Railway Locomotives

Local Authorities need only consider locomotives which are stationary for a minimum of 15 minutes with relevant public exposure. It is considered that during such circumstances there may be an impact on the 15 minute mean objective.

A rail route runs from London to the South West through the New Forest. However the one area where locomotives would be stationary for more than 15 minutes, at Rushington, was considered in the previous Updating and Screening Assessment 2003. There are no new areas or relevant exposures that require consideration at this time.

Therefore there is no requirement to proceed further with this screening assessment process.

In conclusion;

There is no need for New Forest District Council to proceed to a Detailed Assessment with regards to sulphur dioxide.

9.0 CONCLUSIONS

This Updating and Screening Assessment has not resulted in any requirement to proceed to a Detailed Assessment for any of the seven pollutants.

However, the review and assessment of air quality is a continuous process, therefore the Authority needs to be aware of a number of issues which may evolve over the forthcoming years.

The monitoring programme run by the Authority is always subject to change if the need arises and funding is available. It may be considered an appropriate time to move any diffusion tubes which have recorded nitrogen dioxide concentrations well below the objective concentration for a number of years, to other locations.

Whilst the Updating and Screening Assessment and DMRB model have screened out many potential exceedance locations, it has become apparent that some locations, particularly locally known hot spot areas, can be overlooked in the Updating and Screening Assessment process. Therefore by using local knowledge some diffusion tubes may be relocated in the future.

The new Colbury turn junction will be a new main route into the New Forest. Currently it is under used, due to a lack of signage and therefore not subject to an assessment. However, through Hampshire County Council's Local Transport Plan, this junction should be properly signed in the future. Therefore further assessment of this area may be required with regards to nitrogen dioxide once the junction becomes in full use.

A further area to consider is sulphur dioxide and shipping. As explained in the Updating and Screening Assessment the sulphur dioxide concentrations from shipping have been to a Detailed Assessment stage in 2004.

However with more properties being built on the coast line and the number of ships likely to increase in Southampton Water, it is an area which will continue to be under review. This Authority will also continue to work with our neighbouring Authorities to exchange monitoring data with regards to the shipping.

The Authority is also continuing with the process involved with the designation of Air Quality Management Areas.

Currently Further Assessments are due to be forwarded to Defra in June 2006 for the Air Quality Management Areas in Lyndhurst and Totton with regards to the exceedences of the nitrogen dioxide annual mean objective.

Draft Action Plans on these two areas are scheduled to be completed by December 2006.

With regards to the Air Quality Management Area in Fawley concerning the exceedences of the 15 min mean objective, the Further Assessment is due to be forwarded to Defra in December 2006, with the draft Action Plan scheduled to be completed by June 2007.

Therefore in conclusion, New Forest District Council will not be proceeding to a Detailed Assessment, however the Authority is continuing to work with regards to guidance set out by Defra in the statutory requirement to review and assess air quality in its district.

REFERENCES

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2. www.airquality.co.uk/archive/laqm/tool.php
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5. www.highways.gov.uk/business/238.aspx
6. <http://maps.environment-agency.gov.uk/wiyby/dataSearchController?topic=pollution&lang=e>
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APPENDICES