

**THE REVIEW AND ASSESSMENT OF AIR QUALITY
WITHIN WAVENEY DISTRICT**

**Updating and Screening Assessment Report
May 2006**

Summary:

Local Authorities have a duty under Part IV of the Environment Act 1995 to review and assess air quality within their area against objectives prescribed in the Air Quality (England) Regulations 2000 and the Air Quality (England) (Amendment) Regulations 2002. This report provides an update of air quality in the Waveney District since the second round of assessments carried out in 2003, with regard to seven pollutants.

Having considered each pollutant in accordance with the published guidance, it is concluded that the air quality objectives will be met and no detailed assessment of air quality is required. However, a significant road-building programme is under way. Modelling of the effects of these changes to the roads has been taken into account where available. However, further work will be required post completion of these changes to reassess their effects on air quality. This is reflected in the recommendations and actions concerning implementation of traffic control and monitoring measures described in the body of the report.

1. Introduction

1.1 Statutory Background to Local Air Quality Management

Local authorities have been charged with delivering the Government's National Air Quality Strategy, through the Local Air Quality Management System.

Each local authority has a duty to periodically review air quality within its area. This requirement is contained within the provisions of Part IV of the Environment Act 1995.

The Air Quality Regulations 2000 and the Air Quality (England)(Amendment) Regulations 2002 prescribe pollutant-specific air quality objectives to be achieved by a certain date specific to each pollutant. These are benzene, 1,3-butadiene, carbon monoxide, lead, nitrogen dioxide, particles (PM-10) and sulphur dioxide. These pollutants are subjects of the United Kingdom Air Quality Strategy. Local authorities have to consider the present, and likely future quality of the air up to these dates, and to assess whether these objectives will be met by those dates.

Where as a result of the Review process it appears that the air quality objectives are not, or are unlikely to be achieved in any area within its boundary, the local authority shall by order designate it as an 'Air Quality Management Area'. Once such an area has been designated, the authority shall prepare a written plan for the exercise by the authority of any of its powers available to it to achieve the air quality standards and objectives.

1.2 Explanation of the stages of the Review and Assessment

This Updating and Screening Assessment has three objectives:

1. to identify new or substantially changed emission sources since the last round of review and assessment which may lead to an air quality objective being exceeded.
2. to assess new monitoring data against relevant exposure and compare with objectives.
3. identify the need (if any) for a detailed assessment to quantify with reasonable certainty whether or not, and where any exceedences are likely to occur.

In this context, 'review' of air quality means the consideration of the concentrations in the air of each of the above pollutants and the estimation of future levels. 'Assessment' of air quality is the consideration of whether these levels estimated for the date specific to each pollutant will exceed those set down in the prescribed objectives.

Any detailed assessment found necessary will be sufficiently detailed to allow this Authority to determine whether it is necessary to designate an 'Air Quality Management Area'.

The results for each pollutant considered for this USA are contained in a separate section as per the guidance (LAQM TG(03))

2. Description of District

2.1 Geography

Population 114,300 (2005)

Situated in the northeast corner of Suffolk, Waveney District is bordered by the River Waveney in the north and the River Blyth in the south. It is situated on the North Sea coast and includes Lowestoft, which is the most easterly town and port in Great Britain.

Lowestoft is the second largest town in Suffolk, and sustains a variety of industries including food processing and engineering. The port handles general cargo and is a base for servicing off shore oil and gas installations. Alongside commercial activity the holiday trade of the whole district has steadily developed.

Apart from Lowestoft the main urban centres are Beccles and Bungay situated on the River Waveney adjacent to the Norfolk border and Southwold and Halesworth, both on the River Blyth. The centre of the district is agricultural and is sparsely populated.

2.2 Transport and transport development

2.2.1 Road Transport

The A 12 trunk road runs broadly north-south from a point north of Blythburgh, over the river Blyth and continues towards Lowestoft via Wrentham and the Kessingland bypass. It then runs from the Bloodmoor roundabout at Pakefield, through the Pakefield and Kirkley

wards (as London Road South) to the harbour crossing over the bascule bridge. The northward route then runs through the heart of central Lowestoft and joins the southbound route in the vicinity of St Peters Street. It then continues north out of the town through the suburbs to Corton, where it becomes a dual carriageway road and leaves the District just south of Hopton. The southbound carriageway runs from St Peters Street, south via Artillery Way, Whapload Road and then over the bascule bridge. The road then divides again; the southbound carriageway running parallel to the seafront until it joins the northbound route at Kensington Road. Suffolk County Council is the relevant highway authority for the A12 in Waveney.

Running east west the A 146 commences at the harbour bascule bridge in Lowestoft passes south of Lake Lothing to Oulton Broad. It then runs towards Beccles and leaves the District via the Beccles bypass.

The A1117 runs north-south from the Bloodmoor roundabout from Pakefield, through Oulton Broad, over Oulton Broad/Lake Lothing Water by Mutford Bridge. It then runs northeastwards for about 1½ kilometres until it joins the A 1144 at Normanston Park. It then runs northward for 3 kilometres until it joins the A12 south of Corton.

North of Lake Lothing in Lowestoft the A1144, which runs west from the A 12 at St Peters Street until it joins the A1117.

The Carlton Colville bypass commences at the Elm Tree Road/Bloodmoor roundabout (to link with the South Lowestoft Relief Road) and runs westwards, joining the existing A146 at the roundabout junction with Chapel Road, Carlton Colville.

2.2.2 Future road developments

South Lowestoft Relief Road - when completed this road will commence at the Elm Tree Road/Bloodmoor Road roundabout and will broadly follow the line of the Kirkley Stream, running in a northeasterly direction towards the harbour bascule bridge. It is anticipated that this scheme will be finished in November 2006, rerouting traffic currently on the A12.

Traffic heading north along the A12 over the bascule bridge in Lowestoft will continue westwards along Denmark Road and join the A1144 at Normanston Park. Traffic heading north along the A12 will then proceed along the existing A1144 towards Corton, but should join the existing A12 about 1 km further north at the existing junction with Corton Long Lane.

The Lowestoft ‘Sunrise’ scheme will see further pedestrianisation of streets in Lowestoft town centre and will form a new one-way system. This may divert extra traffic onto the A12 northbound along Katwijk Way, St Peters Street and southbound along Artillery Way.

2.2.3 Railway Traffic

Anglia Railways run an hourly service between Lowestoft and Norwich via Oulton Broad North and Somerleyton and an approximately one and a half hourly service to Ipswich, via Beccles; one of these being a through train to London Liverpool Street ³.

Lowestoft is a 'terminus' station, i.e. the trains arrive, lay over and return in the opposite direction. Layover times vary between five and forty minutes. The trains used are one, two or three car diesel multiple units. These units' engines are designed to switch off after 15 minutes.

2.2.4 Shipping

The port of Lowestoft occupies the harbour area east of the bascule bridge (the outer harbour) and Lake Lothing (the inner harbour). There is a small amount of bulk cargo handling and ship repairing activities along its shores.

During 1998, Lowestoft's inner harbour handled approximately 540 cargo vessel movements per year. The very significant decline noted in the last screening assessment in 2003 has continued, with the port handling 90 cargo vessel movements during 2005. Inshore fishing vessels (7000 movements in 1998) have rallied slightly from the 2002 figure (1000 movements) to 1300 movements in 2005. The net change in port activity represents a reduction in the threat posed to air quality parameters from this source.

3. Significant Industrial Processes [i.e. Prescribed processes authorised under Part 1, Environmental Protection Act 1990]

A list of these is given in appendix 2

4. Updating and Screening Assessment of the Pollutants of Concern

4.1 Carbon monoxide (CO)

No air quality management area (AQMA) has previously been declared for this pollutant within Waveney District.

New Monitoring Data

No monitoring of carbon monoxide is carried out in the Waveney District at present.

Background concentrations of CO monitored at roadside sites across the UK demonstrated that there were no locations at risk of exceeding the relevant objectives. Data provided for the Waveney District extrapolated from the national monitoring data show the estimated background levels on 1-kilometre grid squares. These data indicate that there are no 1-kilometre grid squares that have an estimated mean annual background concentration greater than 0.3 mg/m³ CO for the year 2001 within Waveney.

“Very Busy” roads or junctions

There are no ‘very busy’ roads or junctions within Waveney. These are defined as single carriageways with greater than 80,000 vehicles per day, dual carriageways with greater than 120,000 vehicles per day and motorways with greater than 140,000 vehicles per day

Conclusion for CO

The risk of the air quality objective for carbon monoxide being exceeded is negligible. Accordingly, Waveney District Council need not consider proceeding to a detailed assessment for this pollutant.

5. Benzene (C₆H₆)

Monitoring Data Outside an AQMA

No monitoring of Benzene is undertaken in the Waveney District at present.

Measured benzene concentrations at urban background and roadside sites between 1999 and 2001 were all well below the above 16.25 µg/m³ objective. In 2001 the concentrations at urban background sites were also below the 2010 objective of 5.0 µg/m³.

Measurements at roadside sites across the UK (on behalf of DEFRA) during 2005 met the relevant objective for 2003. Only one site exceeded the relevant objective for 2010. Estimates based on forward projections predict that levels at site will decrease and meet the 2010 objective.

Monitoring data within an AQMA

No AQMAs were declared from the first round of Review and Assessments for benzene in respect of the previous air quality objective.

Very busy roads or junctions in built-up areas

UK monitoring data indicate that the relevant objectives are only likely to be exceeded near to “very busy” roads and junctions where the background concentration exceeds 2µg/m³. There are no “very busy” roads or junctions in the Waveney District.

New industrial sources

There are no new industrial sources of Benzene

Industrial sources with substantially increased emissions, or new relevant exposure

There are no existing industrial sources of Benzene with substantially increased emissions or new relevant exposure. There are no major fuel storage depots.

Petrol Stations

Petrol stations with a large throughput of petrol (greater than 2 million litres per annum), are near to a busy road (>30,000 AADT) and have relevant exposure within 10 m of the petrol pumps. Petrol stations are likely to lead to benzene concentrations exceeding the 2010 AQS objective.

There is one petrol station in the Waveney District that has an annual throughput of > 2000m³ of petrol per annum, however there is no 'relevant exposure' (i.e. <10m) in the vicinity of any of these stations.

Major fuel storage depots (petrol only)

There are no major fuel storage depots in the Waveney district.

Conclusion for C₆H₆

The risk of the air quality objective for Benzene being exceeded is negligible. Accordingly, Waveney District Council need not consider proceeding to a detailed assessment for this pollutant

6. 1,3 butadiene

Monitoring data

Waveney District Council undertakes no monitoring of 1,3-butadiene at present.

1,3- butadiene concentrations measured during 2005 at all sites within the UK automatic monitoring network (on behalf of Defra) including busy roadside sites in London, met the relevant objective.

New industrial sources

There are no new processes in or near Waveney that emit 1,3-butadiene

Existing industrial sources with significantly increased emissions, or new relevant exposure

There are no existing industrial processes that emit significant quantities of 1,3-butadiene in or near the Waveney District

Conclusion for 1,3 butadiene

The risk of the air quality objective for 1,3 -butadiene being exceeded is negligible. Accordingly, Waveney District Council need not consider proceeding to a detailed assessment for this pollutant.

7. Lead (Pb)

Monitoring Data

Waveney District Council does not undertake any monitoring of lead at present. Lead monitoring undertaken on behalf of DEFRA in 2005 across the UK (including busy roadside sites) sites all met the objectives for 2004 and 2008.

New industrial sources

There are no new industrial sources of lead in or near the Waveney District.

Industrial sources with substantially increased emissions, or new relevant exposure

There are no existing industrial sources in or near the Waveney District that emit significant quantities of lead.

Conclusion for Pb

The risk of the air quality objectives for lead being exceeded is negligible. Accordingly, Waveney District Council need not consider proceeding to a detailed assessment for this pollutant.

8. Nitrogen Dioxide (NO₂)

Monitoring data outside an AQMA – Estimated background data was obtained from national maps⁴. These show that there is nowhere in Waveney District with an estimated annual mean background concentration expected to exceed 20 µg/m³ by 2010.

Since the previous round of review and assessments, a survey on nitrogen dioxide has been continued using passive diffusion tubes supplied and analysed by Harwell Scientifics, a UKAS accredited laboratory. The 2005 Progress Report identified three Locations of Concern in Waveney approaching the National Objective Limits where Levels of NO₂ of >36 µg/m³ but <40 µg/m³ have been measured. (Flying Dutchman, Pier Terrace & Golden Court). Monitoring of these sites has continued. None of the bias corrected results obtained from the flying Dutchman since September 2004 have exceeded 35µg/m³, with an average of 31.12µg/m³

Four of the bias corrected results obtained from Pier Terrace since September 2004 have exceeded 36µg/m³, and one of these exceeded 40µg/m³ (43.3µg/m³) with an average of 33.6µg/m³. This tube was located at the kerbside in a bus-stop lay-by outside a taxi office. (It has now been relocated at a location more representative of receptor exposure.)

Two of the bias corrected results obtained from Golden Court since September 2004 have exceeded 36µg/m³, and one of these exceeded 40µg/m³ (58µg/m³). Discounting this spurious result, the average is 27.2µg/m³. The average value for all these results is 30.02µg/m³.

One other site (Saltwater Way) returned a single bias corrected result exceeding 36µg/m³ (37.5µg/m³).

All other bias corrected diffusion tube results were below 36µg/m³. Full results are tabulated in appendix 3.

Monitoring within AQMAs

No air quality management area (AQMA) was declared for this pollutant within Waveney District.

Narrow Congested Streets

There are no 'street canyons' (as defined in LAQM TG [03]) in Waveney District. This was examined in the 2003 USA and the subsequent "Detailed Review and Assessment" reported in December 2004. This concluded that exceedences of the relevant objectives for 2010 were, at most, "possible". There has been no change to this position.

Junctions

There are no "very busy" junctions in the authority area. Two junctions were identified in the 2003 USA as being at risk of exceeding air quality objectives for NO₂. This concluded that exceedences of the relevant annual average objectives for NO₂ for 2005 and for 2010 were "possible". These results were examined in the "Detailed Review and Assessment" reported in December 2004. This confirmed that exceedences of the relevant objectives for 2010 were "possible". There has been no change to this position.

Busy streets where people may spend more than 1 hr close to traffic

This was examined in the 2003 USA and the subsequent “Detailed Review and Assessment” in December 2004. No such locations that fit the criteria in LAQM.TG (03) were identified in Waveney District. There has been no change to this position.

Roads with high flows of buses and/or HGVs

One road was identified during the 2003 USA that had a flow of > 2000 HDVs/day. This is the B1375, known as Bridge Road, Oulton Broad. It carries traffic over the river and runs north-south, carrying 2932 HDVs/day. The latest available data (appendix 4) gives an AADT and %HDV figures equivalent to 840 HDVs/day. The “Detailed Review and Assessment” reported in December 2004 concluded that exceedences of the relevant objectives for 2010 were “possible” and recommended further work to reassess traffic flows post-completion of the South Lowestoft Relief Road (November 2006). There has been no change to this position.

New roads constructed or proposed since the previous Review and Assessment

The Carlton Colville by-pass has been completed since the 2003 USA. An impact assessment in respect of air quality was undertaken for the Carlton Colville bypass in August 2002 by Messrs. Faber Maunsell. This report concluded that no exceedences of the Air Quality Standards were predicted for 2005 or for 2016 for any pollutant. This scheme was duly completed during late 2003/early 2004, prior to the commencement of the “Detailed Review and Assessment” reported in December 2004, which concluded that it was not appropriate for the authority to declare any Air Quality Management Areas. Locations have, however, been identified where NO₂ levels are approaching the National Objective and these may be influenced by the major road building programme currently taking place in Lowestoft. This includes the construction of the South Lowestoft Relief Road and Associated Measures and traffic flows are predicted to increase at two of the air pollution sensitive locations where NO₂ levels are approaching National Objectives. These are at the A12 Pier Terrace south of river crossing and A146 Mutford Bridge. The 2004 “Detailed Review and Assessment” did however, recommend a further study of traffic flows post-completion of the South Lowestoft Relief Road (completion due in November 2006).

Roads with significantly changed traffic flows

No roads were identified that have a 7 day annual average daily traffic flow of > 10000 vehicles/day, that had also experienced an increase in traffic flow of 25% or over. The 2004 “Detailed Review and Assessment” recommended a further study of traffic flows post-completion of the South Lowestoft Relief Road (scheduled for completion in November 2006).

Bus Stations

Lowestoft's main bus station is situated on Gordon Road There are approximately 150 bus movements per day counting in and out as separate movements. Accordingly, it is unlikely that emissions from buses would lead to NO₂ concentrations exceeding the relevant objectives.

New Industrial Sources

There have been no new industrial processes installed in Waveney District or any neighbouring authorities that would have a significant effect on the level of NO₂ since the date of the last Review and Assessment.

Industrial Sources with increased emissions or new relevant exposure

There are no industrial sources with significantly increased emissions of NO₂ or increased relevant exposure.

Aircraft

Waveney District Council does not have any major airport within its boundary.

Conclusion for NO₂

The possibility of exceedances of the 2010 annual mean objectives for NO₂ at certain locations identified in the 2003 assessment was confirmed by the detailed review and assessment in 2004. It also concluded that exceedances of the relevant UK objective for hourly exposure was “unlikely” for 2005 and 2010 and at present there has been no change to this position.

The 2004 detailed review and assessment recommend a further study of traffic flows post-completion of the South Lowestoft Relief Road (completion due in November 2006).

A new Urban Traffic Management Control (UTMC) system is being proposed as a part of the South Lowestoft Relief Road measures. This can include air pollution trigger monitors to allow action to be taken, for example to divert traffic away from the area in high pollution episodes, for example when the A12 river crossing bridge lifts for significant periods to allow large boats through, causing significant delay and congestion to traffic. Signs asking for engines to be switched off may be a further potential mitigation measure should trigger levels be reached.

The proposed installation of the UTMC in partnership with the Suffolk County Council will follow up the recommendation for further studies of traffic flows in Lowestoft, by providing the opportunity for the collection of good quality air pollution monitoring data at sensitive locations. Two mains powered roadside chemiluminescent monitors are proposed to form part of the UTMC system, one in each of two locations in Lowestoft where NO₂ levels are approaching the National Objective, namely A12 Pier Terrace south of river crossing (approximately 25,000 AADT) and A146 Mutford Bridge, (approximately 30,000 AADT). The roadside monitors will provide real-time monitoring information on NO_x (NO₂) levels, which can be used to provide routing advice to motorists and support future on-going review and assessment work.

These measures will work towards ensuring that local air quality levels do not deteriorate to such a level that AQMA declaration becomes necessary.

At present, there is no necessity for Waveney to proceed to a detailed assessment for this pollutant.

9. Sulphur Dioxide (SO₂)

Monitoring data outside an AQMA

Waveney District Council undertakes no monitoring of sulphur dioxide within its district at present.

Monitoring data within an Air Quality Management Area

Waveney has declared no AQMAs for its district.

New Industrial Sources

There are no new industrial sources of relevance for SO₂ in the authority or any neighbouring authorities since the last review and assessment.

Industrial sources with substantially increased emissions or new relevant exposures

There are no new or substantially increased industrial sources of relevance for SO₂ in the authority or any neighbouring authorities. There are no significant relevant new exposures.

Areas of domestic coal burning

No areas of domestic coal burning were identified in the 2003 assessment. Since then the Approved Coal merchants scheme have indicated that coal sales for domestic purposes have declined (February 2006).

Small boilers (>5MW (thermal)) burning coal or oil

There have been no new small boilers this authority since the last USA.

Shipping

This was examined in the 2003 USA. Port traffic has declined since the 2003 USA to just over 2000 shipping movements per year. (appendix 5). The 2003 USA concluded that the contribution of shipping was not significant for this pollutant. There has been no change to this position.

Railway Locomotives

Trains (diesel) were covered in the last USA and in the subsequent Detailed Review and Assessment” reported in December 2004. It was found that they were unlikely to be an issue. There has been no significant change in train services or exposure since the 2003 USA.

Conclusion for SO₂

The risk of the air quality objectives for sulphur dioxide being exceeded by the end of 2004 and 2005 is negligible. Accordingly, Waveney District Council need not consider proceeding to a detailed assessment for this pollutant.

10. Particulate Matter (PM₁₀)

Monitoring data outside AQMAs

No monitoring for PM₁₀ has been carried out in Waveney since the last round of review and assessments.

Monitoring data within AQMAs

No AQMAs have been declared for this pollutant within Waveney District.

Junctions

There are no “very busy” junctions in the authority. Two junctions were identified in the 2003 USA as being at risk of exceeding air quality objectives for PM₁₀ and were taken forward to a Detailed Assessment. This concluded that exceedences of the relevant daily objectives for PM₁₀ for 2004 were “unlikely”. It also predicted “likely” exceedences of the 2010 annual mean and daily mean objectives for 2010, both of which exceedences are beyond the scope of the Air Quality Regulations at present. There has been no change to this position.

Roads with high flows of buses and/or HGVs

No roads were identified during the last round of review and assessment that presented any significant risk from this specific source. There has been no significant change to this position.

New Roads

The Progress Report of 2004 highlighted a relief road (the South Lowestoft Relief Road) due to be constructed by November 2006. The Environmental Impact Assessment for this scheme, undertaken by Faber Maunsell in 2001 concluded that once the scheme was completed, exceedences of the UK objectives for PM₁₀ in 2005 would be unlikely. The 2004 “Detailed Review and Assessment” recommended further work to reassess traffic flows post-completion of the South Lowestoft Relief Road (November 2006). There has been no change to this position.

Roads with significantly changed traffic flows, or new relevant exposure

No roads were identified that have a 7 day annual average daily traffic flow of > 10000 vehicles/day, that had also experienced an increase in traffic flow of 25% or over.

New industrial sources

There have been no new industrial processes installed in Waveney District that would have a significant effect on the level of PM-10 since the date of the last Review and Assessment.

Industrial sources with substantially increased emissions, or new relevant exposure

There are no existing industrial sources likely to emit significantly increased quantities of PM₁₀ or with new relevant exposure.

Areas with domestic solid fuel burning

No areas of domestic coal burning were identified in the 2003 assessment. Since then the Approved Coal merchants scheme have indicated that coal sales for domestic purposes

have declined (February 2006). The main conurbations in the district are supplied with mains gas.

Quarries, landfill sites, opencast coal, handling of dusty cargoes at ports

The screening assessment in 2003 and the detailed assessment in 2004 considered these and concluded they were unlikely to cause an impact at relevant receptors that could exceed the relevant objectives. There has been no change to this position.

Aircraft

Waveney District Council does not have any major airports within its boundary.

Conclusion for PM₁₀

There are no significant changes to the results of the 2003 USA and the 2004 Detailed Assessment in respect of PM₁₀ however, further work will be required on traffic flows, post completion of the SLRR. (November 2006).

The Objective for PM-10 is likely to be achieved everywhere else within Waveney.

Accordingly it will not necessary for this Council to undertake a Detailed Assessment at these three locations for this pollutant for the time being.

11. Overall Conclusion

The relevant Air Quality Standards were achieved for all the pollutants of concern throughout Waveney District.

There are two pollutants, (NO₂ and PM₁₀), that may require further work in the form of modelling based on reassessment of traffic flows, post-completion of the current major road building scheme in Lowestoft in order to validate the conclusions of the predictive assessment work already completed in respect of the Carlton Colville bypass, the South Lowestoft Relief Road and the detailed review and assessment in 2004. Work is in hand to achieve this.

There are no pollutants that require detailed review and assessment at this time.

2006 USA Checklist

Updating and Screening Assessment Summary Checklist for **Carbon Monoxide**

Item	Response
Monitoring data	This authority is currently not monitoring CO.
Very busy roads or junctions in built-up areas	There are no very busy roads in built up areas.

Updating and Screening Assessment Summary Checklist for **Benzene**

Item	Response
Monitoring data outside an AQMA	National monitoring data is well below the objective. This authority is currently not monitoring Benzene
Monitoring data within an AQMA	Not applicable as no AQMA for Benzene
Very busy roads or junctions in built up areas	There are no very busy roads in built up areas in this District.
New industrial sources.	There are no new industrial sources of Benzene
Industrial sources with substantially increased emissions, or new relevant exposure	There are no industrial sources of Benzene with substantially increased emissions or new relevant exposure
Petrol stations	This was examined in the 2003 USA. One petrol station meets the criteria but there are no relevant exposures. No Exceedences or likely exceedences were identified for the relevant year and there has been no change to this position.
Major fuel storage depots (petrol only)	There are no major fuel storage depots.

Updating and Screening Assessment Summary Checklist for **1,3-butadiene**

Item	Response
Monitoring data	This authority is currently not monitoring 1,3 butadiene
New industrial sources.	There are no new industrial sources of 1,3 butadiene
Industrial sources with substantially increased emissions, or new relevant exposure	There are no industrial sources of 1,3 butadiene with substantially increased emissions or new relevant exposure

Updating and Screening Assessment Summary Checklist for **Lead**

Item	Response
Monitoring data	This authority is currently not monitoring Lead
New industrial sources.	There are no new industrial sources of Lead
Industrial sources with substantially increased emissions, or new relevant exposure	There are no industrial sources of Lead with substantially increased emissions or new relevant exposure

Updating and Screening Assessment Summary Checklist for **Nitrogen Dioxide**

Item	Response
Monitoring data outside an AQMA	Monitoring data indicates at most “possible” exceedences. Significant road building schemes will have a direct influence on NO _x at the locations of concern. Further monitoring of traffic flows is indicated, post completion of the South Lowestoft Relief Road scheme.
Monitoring data within an AQMA	Not applicable as no AQMA for NO ₂
Narrow congested streets with residential properties close to the kerb	This was examined in the 2003 USA and the subsequent “Detailed Review and Assessment” reported in December 2004. This concluded that exceedences of the relevant objectives for 2010 were, at most, “possible”. There has been no change to this position.
Junctions.	These were examined in the 2003 USA. There has been no change to this position.
Busy streets where people may spend 1-hour or more close to traffic	This was examined in the 2003 USA. There has been no change to this position.
Roads with high flow of buses and/or HGVs.	This was examined in the 2003 USA. There has been no change to this position.
New roads constructed or proposed since the previous round of R&A	The Carlton Colville by-pass has been completed since the 2003 USA. An impact assessment in respect of air quality was undertaken for the Carlton Colville bypass in August 2002 by Faber Maunsell. This report concluded that no exceedences of the Air Quality Standards were predicted for 2005 nor for 2016 for any pollutant. This scheme was duly completed during late 2003/early 2004, prior to the commencement of the “Detailed Review and Assessment” reported in December 2004, which concluded that it was not appropriate for the authority to declare any Air Quality Management Areas. The 2004 “Detailed Review and Assessment” did, recommend a further study of traffic flows post-completion of the South Lowestoft Relief Road (completion due in November 2006). There has been no change to this position.
Roads with significantly changed traffic flows, or new relevant exposure	Changes in traffic flows to existing roads consequent to the completion of the Carlton Colville by-pass were included in the scope of the “Detailed Review and Assessment” reported in December 2004. This concluded that exceedences of the relevant objectives for 2010 were, at most, “possible”. There has been no change to this position.
Bus Stations	This was examined in the 2003 USA. There have been no change to this position.
New industrial sources.	

Industrial sources with substantially increased emissions, or new relevant exposure	There are no new industrial sources of relevance for NO ₂ in the authority or any neighbouring authorities. There are no significant relevant new exposures. There has been no change to this position.
Aircraft	This was examined in the 2003 USA. Waveney District Council does not have any major airports within its boundary. There has been no change to this position.

Updating and Screening Assessment Summary Checklist for **Sulphur Dioxide**

Item	Response
Monitoring data outside an AQMA	This authority is currently not monitoring SO ₂
Monitoring data within an AQMA	Not applicable as no AQMA for SO ₂
New industrial sources.	There are no new or substantially increased industrial sources of relevance for SO ₂ in the authority or any neighbouring authorities. There are no significant relevant new exposures. There has been no change to this position.
Industrial sources with substantially increased emissions, or new relevant exposure	
Areas of domestic coal burning	This was examined in the 2003 USA. No areas of domestic coal burning were identified and there has been no change to this position.
Small Boilers > 5 MW (thermal).	There have been no new small boilers this authority since the last USA.
Shipping	This was examined in the 2003 USA. Port traffic has declined since the 2003 USA. There has been no change to this position.
Railway Locomotives	Trains (diesel) were covered in the last USA and in the subsequent Detailed Review and Assessment” reported in December 2004. There has been no significant change in train services or exposure since the 2003 USA.

Updating and Screening Assessment Summary Checklist for **PM₁₀**

Item	Response
Monitoring data outside an AQMA	This authority is currently not monitoring PM ₁₀
Monitoring data within an AQMA	Not applicable as no AQMA for PM ₁₀
Busy roads and junctions in Scotland	Not Applicable
Junctions.	There are no “very busy” junctions in the authority. Two junctions were identified in the 2003 USA as being at risk of exceeding air quality objectives for PM ₁₀ and were taken forward to a Detailed Assessment. There has been no change to this position.

Roads with high flow of buses and/or HGVs.	Changes in traffic flows to existing roads consequent to the completion of the Carlton Colville by-pass were included in the scope of the “Detailed Review and Assessment” reported in December 2004. This concluded that exceedences of the relevant objectives for 2010 were, at most, “possible”. There has been no change to this position.
New roads constructed or proposed since last round of R&A	The Progress Report of 2004 highlighted a relief road (the South Lowestoft Relief Road) due to be constructed by November 2006. The Environmental Impact Assessment for this scheme, undertaken by Faber Maunsell in 2001 concluded that once the scheme is completed, it is not predicted that exceedences of the UK objectives for PM ₁₀ in 2005 will occur at this location. The 2004 “Detailed Review and Assessment” recommended further work to reassess traffic flows post-completion of the South Lowestoft Relief Road (November 2006). There has been no change to this position.
Roads with significantly changed traffic flows, or new relevant exposure.	Changes in traffic flows following completion of the Carlton Colville by-pass were included in the scope of the impact assessment in respect of air quality for this scheme in August 2002 by Messrs. Faber Maunsell. This concluded that no exceedences of the Air Quality Standards were predicted for 2005 nor for 2016 for any pollutant. The “Detailed Review and Assessment” in December 2004 identified possible exceedences of the objectives for 2010. The construction of the South Lowestoft Relief Road (SLRR) will have significant impact on traffic flows at the locations of concern. The 2004 “Detailed Review and Assessment” recommended further work to reassess traffic flows post-completion of the SLRR (November 2006). There have been no other significant changes to traffic flows.
Roads close to the objective during the second round of Review and Assessment	Not applicable.
New industrial sources.	There have been no new industrial sources since the last USA.
Industrial sources with substantially increased emissions, or new relevant exposure	There are no new or substantially increased industrial sources of relevance for NO ₂ in the authority or any neighbouring authorities. There are no significant relevant new exposures. There has been no change to this position.
Areas of domestic solid fuel burning	There are no new areas of domestic solid fuel burning in the authority.
Quarries / landfill sites / opencast coal / handling of dusty cargoes at ports etc.	This was examined in the 2003 USA. There has been no change to this position.
Aircraft	This was examined in the 2003 USA. Waveney District Council does not have any major airport within its boundary. There has been no change to this position.

Appendix 1

Air Quality Objectives in Regulations for England

Pollutant	Concentration	Measured as	Date to be achieved by
Benzene	16.25 µg/m ³	Running annual mean	31.12.2003
	5 µg/m ³	Annual mean	31.12.2010
1,3 Butadiene	2.25 µg/m ³	Running annual mean	31.12.2003
Carbon monoxide	10 mg/m ³	Maximum daily 8 hour mean	31.12.2003
Nitrogen dioxide	200 µg/m ³ not to be exceeded more than 18 times a year	1 hour mean	31.12.2005
	40 µg/m ³	annual mean	31.12.2005
Particles (PM10)	50 µg/m ³ not to be exceeded more than 35 times a year	24 hour mean	31.12.2004
	40 µg/m ³	annual mean	31.12.2004
Sulphur dioxide	350 µg/m ³ not to be exceeded more than 24 times a year	1 hour mean	31.12.2004
	125 µg/m ³ not to be exceeded more than 3 times a year	24 hour mean	31.12.2004
	266 µg/m ³ not to be exceeded more than 35 times a year	15 minute mean	31.12.2005
Lead	0.5 µg/m ³	Annual mean	31.12.2004
	0.25 µg/m ³	Annual mean	31.12.2008

Appendix 2 – Significant Industrial Processes [i.e. Prescribed processes authorised under Part 1, Environmental Protection Act 1990]

Part B processes

Redland Ltd	Flixton Gravel Pit	Flixton	296	864	Mineral drying and roadstone coating process	PG3/15
Redland Ltd	Riverside Road	Lowestoft	543	925	Blending, packing, loading & use of bulk cement	PG3/1
Tarmac Topmix, C & H Quickmix	Ellough		443	900	Blending, packing, loading & use of bulk cement	PG3/1
Readicrete Ltd	Horn Hill	Lowestoft	542	922	Blending, packing, loading & use of bulk cement	PG3/1
Readicrete Ltd	Flixton Gravel Pit		298	864	Blending, packing, loading & use of bulk cement	PG3/1
Plasmor	Commercial Road	Lowestoft	542	928	Blending, packing, loading & use of bulk cement	PG3/1
P W Walters	Harbour Road	Lowestoft	527	930	Blending, packing, loading & use of bulk cement	PG3/1
V C Cooke	Ellough Road	Beccles	444	889	Concrete crushing mobile	PG3/10
John Grose	2 Barley Way	Lowestoft	551	930	Respraying of road vehicles	PG6/34
A W & D Hammonds	Blyth Road	Halesworth	383	765	Respraying of road vehicles	PG6/34
B R Shreeve & Son	Pinbush Road	Lowestoft	531	895	Respraying of road vehicles	PG6/34
Gooch Motors Accident Repair Centre	Belvedere Road	Lowestoft	544	925	Respraying of road vehicles	PG6/34
Simpsons Garage	Cooke Road	Lowestoft	531	895	Respraying of road vehicles	PG6/34
William Clowes	Caxton Road	Beccles	423	905	Printworks	PG 6/16
Gardwell Coatings	Unit 1, 2 and 3 Ellough Road	Beccles	442	887	Coating of metal and plastic	PG6/23
Sanyo Industries	School Road	Lowestoft	528	927	Coating of metal and plastic	PG6/23
Super Sign (Duramark)	Freemantle Road	Lowestoft	544	922	Coating of metal and plastic	PG6/23
Broadland Service Station	122 Beccles Road	Oulton Broad	514	918	Unloading of petrol - service station	PG1/14
BP Express Shopping	Jubilee Way	Lowestoft	551	940	Unloading of petrol - service station	PG1/14
Kirkley Run Service Station	99 Kirkley Run	Lowestoft	532	920	Unloading of petrol - service station	PG1/14
Mill Road Service Station	Mill Road	Lowestoft	544	928	Unloading of petrol - service station	PG1/14
Shell Oulton (262)	199 Normanston Drive	Lowestoft	524	932	Unloading of petrol - service station	PG1/14
Gunton Garage	269 Yarmouth Road	Lowestoft	530	963	Unloading of petrol - service station	PG1/14
College Farm	College Farm	Oulton			Unloading of petrol -	PG1/14

Service Station Kessingland	82 High Street	Broad Kessingland	530	840	service station Unloading of petrol - service station	PG1/14
Service Station Safeways Petrol Station	George Westwood Way	Beccles	426	909	Unloading of petrol - service station	PG1/14
Safeways Petrol Station	Tower Road	Lowestoft	531	895	Unloading of petrol - service station	PG1/14
Tesco Petrol Station	Yarmouth Road	Lowestoft	539	952	Unloading of petrol - service station	PG1/14
Pageant Garage	Gosford Road	Beccles	426	902	Unloading of petrol - service station	PG1/14
Rainbow Petrol Station	Saxon Way	Halesworth	387	772	Unloading of petrol - service station	PG1/14
Hammond Service Station	Norwich Road	Halesworth	387	779	Unloading of petrol - service station	PG1/14
Carlton Colville Service Station	The Street	Carlton Colville	512	897	Unloading of petrol - service station	PG1/14
Willow Works	Bardolph Road	Bungay			Unloading of petrol - service station	PG1/14

Part A Processes

Jeld-Wen UK Ltd	Waveney Drive	Lowestoft			Wood Coating	
Varco Ltd	Commercial Road	Lowestoft	545	760	Recovery of oil from drilling mud	
Alpheus WWT Plant	Grange Road	Flixton	310	862	Sewage Treatment works	
Bearnard Matthews Ltd Holton	Scalesbrooke Lane	Holton			Poultry Processing	
MP Eastern Ltd Wangford Landfill	Trinity Road Hill Road	Lowestoft Wangford	55 420	93sw 777	Plating Metals Landfill Site	
Two Sisters Anglo Beef Processors	Grange Road Hadenham Road	Flixton Pakefield	529	894	Poultry Processing Meat processing	
Unilever Ice Cream and Frozen Foods	Whapload Road	Lowstoft	553	938	Food processing	

Appendix 3 – Diffusion tube results

Sample Number	Site	Date and Time ON	Date and Time OFF	Exposure Time (Hours)	Total µg	PM ₁₀					average values
WAVEHA/04B/NB6S1	Flying Dutchman	27/09/2004 10:25	05/11/2004 13:11	938.77	2.71	40.7	21	0.75	30.53		
WAVEHA/04B/NB6S2	Flying Dutchman	01/12/2004 11:40	18/01/2005 14:50	1155.17	3.76	45.8	24	0.75	34.35		
WAVEHA/04B/NB5S1	Flying Dutchman	18/01/2005 14:50	21/02/2005 11:15	812.42	2.73	47.3	25	0.74	35.00		
WAVEHA/04B/NB6S3	Flying Dutchman	29/03/2005 15:10	29/04/2005 11:55	740.75	2.08	39.6	21	0.71	28.12		
WAVEHA/04B/NB5S2	Flying Dutchman	30/08/2005 13:15	03/10/2005 14:05	816.83	2.36	40.6	21	0.72	29.23		
WAVEHA/04B/NB6S5	Flying Dutchman	03/10/2005 14:05	31/10/2005 15:05	673	2.09	43.7	23	0.72	31.46		
WAVEHA/04B/NB5S3	Flying Dutchman	31/10/2005 15:05	01/12/2005 13:30	742.42	2.43	46.1	24	0.69	31.81		
WAVEHA/04B/NB7S2	Flying Dutchman	01/12/2005 13:30	04/01/2006 15:30	818	2.54	43.7	23	0.69	30.15		
WAVEHA/04B/NB7S3	Flying Dutchman	04/01/2006 15:30	03/02/2006 11:40	716.17	2.14	42.1	22	0.7	29.47	31.12	
WAVEHA/04B/NB7S4	Fir Lane Roundabout	29/03/2005 14:50	29/04/2005 11:40	740.83	1.86	35.4	18	0.71	25.13		
WAVEHA/04B/NB8S5	Fir Lane Roundabout	26/05/2005 11:10	27/06/2005 12:40	769.5	1.58	28.9	15	0.7	20.23		
WAVEHA/04B/NB7S5	Fir Lane Roundabout	21/07/2005 13:40	30/08/2005 12:45	959.08	1.33	19.5	10	0.71	13.85		
WAVEHA/04B/NB8S2	Fir Lane Roundabout	30/08/2005 12:45	03/10/2005 13:45	817	1.77	30.5	16	0.72	21.96		
WAVEHA/04B/NB8S4	Fir Lane Roundabout	03/10/2005 13:45	31/10/2005 14:50	673.08	2.17	45.5	24	0.72	32.76		
WAVEHA/04B/NB8S1	Fir Lane Roundabout	31/10/2005 14:50	01/12/2005 13:20	742.5	2.22	42.1	22	0.69	29.05		
WAVEHA/04B/NB8S3	Fir Lane Roundabout	01/12/2005 13:20	04/01/2006 15:05	817.75	2.17	37.3	19	0.69	25.74		
WAVEHA/04B/NB7S1	Fir Lane Roundabout	04/01/2006 15:05	03/02/2006 11:30	716.42	2.39	47	25	0.7	32.90	25.20	
WAVEHA/05A/NA1S2	Golden Court	10/10/2004 11:20	05/11/2004 13:07	625.78	2.08	46.8	24	0.75	35.10		

WAVEHA/05A/NA1S3	Golden Court	05/11/2004 13:10	01/12/2004 11:30	622.33	1.23	27.8	14	0.75	20.85	27.22
WAVEHA/05A/NA1S7	Golden Court	01/12/2004 11:30	18/01/2005 14:45	1155.25	2.89	35.3	18	0.75	26.48	
WAVEHA/05A/NA1S4	Golden Court	18/01/2005 14:45	21/02/2005 11:25	812.67	2.34	40.6	21	0.74	30.04	
WAVEHA/05A/NA1S1	Golden Court	29/03/2005 15:00	29/04/2005 11:50	740.83	2.34	44.4	23	0.71	31.52	
WAVEHA/05A/NA1S5	Golden Court	26/05/2005 11:25	27/06/2005 13:00	769.58	1.56	28.6	15	0.7	20.02	
WAVEHA/05A/NA3S5	Golden Court	21/07/2005 13:55	30/08/2005 13:00	959.08	1.53	22.5	12	0.71	15.98	
WAVEHA/05A/NA3S2	Golden Court	30/08/2005 13:00	03/10/2005 13:55	816.92	2.18	37.7	20	0.72	27.14	
WAVEHA/05A/NA3S6	Golden Court	03/10/2005 13:55	31/10/2005 15:00	673.08	3.85	80.6	42	0.72	58.03	
WAVEHA/05A/NA3S7	Golden Court	31/10/2005 15:00	01/12/2005 13:25	742.42	2.69	51	27	0.69	35.19	
WAVEHA/05A/NA3S1	Golden Court	01/12/2005 13:25	04/01/2006 15:20	817.92	2.51	43.3	23	0.69	29.88	
WAVEHA/05A/NA3S4	Golden Court	04/01/2006 15:20	03/02/2006 11:35	716.25	2.65	52.2	27	0.7	36.54	
WAVEHA/05A/NA6S1	Ilk St Margaret	10/10/2004 10:44	05/11/2004 12:30	625.77	0.68	15.3	8	0.75	11.48	10.64
WAVEHA/05A/NA5S4	Ilk St Margaret	05/11/2004 12:30	01/12/2004 10:50	622.33	0.86	19.4	10	0.75	14.55	
WAVEHA/05A/NA5S1	Ilk St Margaret	01/12/2004 10:50	18/01/2005 13:50	1155	1.24	15.1	7.9	0.75	11.33	
WAVEHA/05A/NA5S5	Ilk St Margaret	18/01/2005 13:50	21/02/2005 10:45	812.92	0.92	15.9	8.3	0.74	11.77	
WAVEHA/05A/NA5S2	Ilk St Margaret	29/03/2005 14:10	29/04/2005 11:05	740.92	0.85	16.2	8.4	0.71	11.50	
WAVEHA/05A/NA5S3	Ilk St Margaret	26/05/2005 10:20	27/06/2005 11:50	769.5	0.41	7.5	3.9	0.7	5.25	
WAVEHA/05A/NA6S4	Ilk St Margaret	21/07/2005 11:30	30/08/2005 10:55	959.42	0.56	8.3	4.3	0.71	5.89	
WAVEHA/05A/NA6S2	Ilk St Margaret	30/08/2005 10:55	03/10/2005 12:00	817.08	0.75	12.9	6.7	0.72	9.29	
WAVEHA/05A/NA6S7	Ilk St Margaret	03/10/2005 12:00	31/10/2005 13:50	673.83	0.63	13.2	6.9	0.72	9.50	
WAVEHA/05A/NA6S6	Ilk St Margaret	31/10/2005 13:50	01/12/2005 10:45	740.92	0.86	16.4	8.5	0.69	11.32	
WAVEHA/05A/NA5S6	Ilk St Margaret	01/12/2005 10:45	04/01/2006 13:55	819.17	1.03	17.7	9.2	0.69	12.21	
WAVEHA/05A/NA5S7	Ilk St Margaret	04/01/2006 13:55	03/02/2006 10:35	716.67	0.99	19.5	10	0.7	13.65	
WAVEHA/05A/NA7S2	Pier Terrace	10/10/2004 11:30	05/11/2004 13:21	625.85	1.65	37.1	19	0.75	27.83	10.64
WAVEHA/05A/NA7S6	Pier Terrace	05/11/2004 13:20	01/12/2004 11:40	622.33	2.55	57.7	30	0.75	43.28	

WAVEHA/05A/NA7S7	Pier Terrace	01/12/2004 11:40	18/01/2005 14:50	1155.17	3.2	39	20	0.75	29.25	33.57
WAVEHA/05A/NA7S4	Pier Terrace	18/01/2005 15:00	21/02/2005 11:35	812.58	3.09	53.6	28	0.74	39.66	
WAVEHA/05A/NA7S1	Pier Terrace	29/03/2005 15:25	29/04/2005 13:00	741.58	2.71	51.4	27	0.71	36.49	
WAVEHA/05A/NA7S3	Pier Terrace	26/05/2005 11:35	27/06/2005 13:05	769.5	2	36.5	19	0.7	25.55	
WAVEHA/05A/NA8S2	Pier Terrace	03/10/2005 14:15	31/10/2005 15:15	673	2.07	43.4	23	0.72	31.25	
WAVEHA/05A/NA8S3	Pier Terrace	31/10/2005 15:15	01/12/2005 13:40	742.42	2.48	47.1	25	0.69	32.50	
WAVEHA/05A/NA8S6	Pier Terrace	01/12/2005 13:40	04/01/2006 15:40	818	3.06	52.7	27	0.69	36.36	
WAVEHA/05A/NA8S7	Pier Terrace	04/01/2006 15:40	03/02/2006 11:50	716.17	2.44	47.9	25	0.7	33.53	
WAVEHA/05A/NA8S1	Saltwater Way	10/10/2004 11:15	05/11/2004 13:00	625.75	2	44.9	23	0.75	33.68	27.63
WAVEHA/05A/NA8S4	Saltwater Way	05/11/2004 13:00	01/12/2004 11:20	622.33	1.56	35.4	18	0.75	26.55	
WAVEHA/05A/NA8S5	Saltwater Way	01/12/2004 11:20	18/01/2005 14:50	1155.5	3.14	38.3	20	0.75	28.73	
WAVEHA/05A/NA9S2	Saltwater Way	18/01/2005 14:50	21/02/2005 11:20	812.5	2.14	37.2	19	0.74	27.53	
WAVEHA/05A/NA9S3	Saltwater Way	29/03/2005 14:45	29/04/2005 11:35	740.83	1.88	35.7	19	0.71	25.35	
WAVEHA/05A/NA9S6	Saltwater Way	21/07/2005 13:15	30/08/2005 13:10	959.92	1.91	28.1	15	0.71	19.95	
WAVEHA/05A/NA9S7	Saltwater Way	03/10/2005 14:10	31/10/2005 14:30	672.33	2.49	52.1	27	0.72	37.51	
WAVEHA/05A/NA9S4	Saltwater Way	31/10/2005 14:30	01/12/2005 13:00	742.5	2.02	38.4	20	0.69	26.50	
WAVEHA/05A/NA9S1	Saltwater Way	01/12/2005 13:00	04/01/2006 14:45	817.75	1.92	33	17	0.69	22.77	
WAVEHA/05A/NA9S5	Saltwater Way	04/01/2006 14:45	03/02/2006 11:10	716.42	2.02	39.7	21	0.7	27.79	
WAVEHA/05A/NA10S6	Tesco Yarmouth Rd	26/05/2005 11:05	27/06/2005 12:30	769.42	1.38	25.4	13	0.7	17.78	23.07
WAVEHA/05A/NA10S5	Tesco Yarmouth Rd	21/07/2005 13:35	30/08/2005 12:50	959.25	1.77	26.1	14	0.71	18.53	
WAVEHA/05A/NA10S7	Tesco Yarmouth Rd	30/08/2005 12:50	03/10/2005 13:40	816.83	1.84	31.8	17	0.72	22.90	
WAVEHA/05A/NA10S4	Tesco Yarmouth Rd	03/10/2005 13:40	31/10/2005 14:45	673.08	1.79	37.4	20	0.72	26.93	
WAVEHA/05A/NA10S1	Tesco Yarmouth Rd	31/10/2005 14:45	01/12/2005 13:15	742.5	1.97	37.3	19	0.69	25.74	
WAVEHA/05A/NA10S2	Tesco Yarmouth Rd	01/12/2005 13:15	04/01/2006 14:55	817.67	2.15	37.1	19	0.69	25.60	
WAVEHA/05A/NA10S3	Tesco Yarmouth Rd	04/01/2006 14:55	03/02/2006 11:20	716.42	1.74	34.3	18	0.7	24.01	

Appendix 4 – Road Traffic data

Trunk Roads

----- None -----

Detrunked Roads

Road	Site Title	1998	1999	2000	2001	2002	2003	2004	HDV	Av Speed- mph	85%ile- mph
A0012	WANGFORD BYPASS	8496	8107	-	-	9492	9171	9313	7.1%	50.4	58.4
A0012	KESSEINGLAND BYPASS	-	-	-	-	-	12476	13567	8.2%	61.4	72.8
A0012	LOWESTOFT BASCULE BRIDGE	-	30627	-	-	-	-	-	-	-	-
A0012	ARTILLERY WAY - LOWESTOFT	13526	12310	12901	13534	13700	12789	11337	7.8%	27.1	32.2
A0012	PAKEFIELD - NORTH OF A1117	11911	13421	13499	13420	14184	14193	14184	7.2%	35.5	35.5

Principal A Roads

Road	Site Title	1998	1999	2000	2001	2002	2003	2004	HDV	Av Speed- mph	85%ile- mph
A0144	ILKETSHALL	3991	4144	-	4158	-	4667	4719	16.4%	49.8	59.9
A0144	HALESWORTH RELIEF ROAD	10937	9901	11060	-	11857	11369	11746	6.9%	27.7	33.2
A0145	SOTHERTON NORTH OF U1519	1865	1461	2005	-	2310	2394	-	8.2%	-	-
A0145	BECCLES	7923	8695	-	8518	7821	8618	9158	-	-	-
A0145	SOUTH OF SHADINGFIELD	4147	-	3514	-	4232	5210	4200	2.6%	43.0	48.8
A0145	BECCLES SOUTH OF BYPASS	10028	-	10608	10687	-	11582	-	6.5%	-	-
A0146	CARLTON COLVILLE	-	15200	-	15176	14351	16425	16911	10.5%	51.5	58.5
A0146	VICTORIA ROAD - LOWESTOFT	-	12856	12427	12685	12550	12074	12330	5.0%	33.3	37.3
A0146	BECCLES BYPASS EAST OF RIVER	13802	-	14953	-	-	-	16535.0	11.0%	51.4	59.4
A0146	BECCLES BYPASS EAST OF RAILWAY	10652	-	11365	11958	-	14359	-	11.5%	-	-
A1095	WEST OF SOUTHWOLD	3846	2819	4406	-	4905	-	5658.0	7.8%	49.3	57.6
A1117	SALTWATER WAY - LOWESTOFT	25785	26038	25725	24844	26069	26099	27173	5.7%	24.5	30.5
A1117	NORMANSTON DRIVE - LOWESTOFT	-	18606	18422	17957	18074	18023	18141	4.8%	31.0	35.7

A1117	NORTHERN SPINE ROAD - LOWESTOFT	-	5402	6126	6377	7222	8053	8921	5.0%	38.6	44.8
A1144	ST PETERS STREET - LOWESTOFT	-	-	-	6807	7399	7008	7439	5.0%	28.6	34.0
A1145	COTMER ROAD - OULTON BROAD	-	-	-	13032	13660	13758	13680	5.3%	27.4	33.3

B Roads

Road	Site Title	1998	1999	2000	2001	2002	2003	2004	HDV	Av Speed- mph	85%ile- mph
B1062	BUNGAY - FLIXTON ROAD - WEST OF C947	3400	-	3272	-	-	3612	-	-	-	-
B1074	OULTON ROAD - LOWESTOFT	6404	6635	7035	6829	-	6859	6932	4.7%	27.1	34.4
B1074	BLUNDESTON WEST OF C904	1680	-	2367	-	-	2818	-	-	-	-
B1375	GORLESTON ROAD - LOWESTOFT	13929	11814	11490	12609	12831	13039	13194	6.4%	30.8	36.0
B1375	OULTON STREET - LOWESTOFT	10375	8761	7835	8590	8982	8917	-	5.2%	-	-
B1384	LOWESTOFT RD - CARLTON COLVILLE	-	-	-	8083	8261	6383	5519	5.2%	31.2	36.0
B1387	BLYTHBURGH EAST OF A12	1034	-	947	-	1275	1271	1059	1.0%	41.4	46.7
B1437	KESSINGLAND (OLD A12)	4105	-	5219	-	-	6117	-	0.0%	-	-

C Roads

Road	Site Title	1998	1999	2000	2001	2002	2003	2004	HDV	Av Speed- mph	85%ile- mph
C0913	LONG ROAD - LOWESTOFT	-	8020	8350	8776	8928	8069	9677	5.7%	35.7	40.6
C0969	WORLINGHAM ELLOUGH ROAD	4924	-	4006	-	2538	6072	-	-	-	-
C0970	PETO WAY - LOWESTOFT	-	7793	8042	8455	9077	9434	9212	4.6%	33.9	39.2

Appendix 5 – Vessel Movements – Port of Lowestoft

ASSOCIATED BRITISH PORTS LOWESTOFT – ARRIVALS 2005													
VESSEL TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Container	0	0	0	0	0	0	0	0	0	0	0	0	0
Cargo	10	7	9	3	8	4	6	7	12	10	10	4	90
Standby	14	14	17	9	13	9	15	16	14	14	14	15	164
Deep Sea Fishing Vessel	3	3	1	3	3	9	4	1	5	2	2	10	46
Inshore Fishing Vessel	73	56	133	114	134	61	145	59	113	128	141	157	1314
Research Vessels/Barges Dredgers	11	12	19	17	12	12	20	9	21	18	22	14	187
			11	57	53				7				128
Tankers	0	0	0	0	0	0	0	0	0	0	0	0	0
Tugs	6	5	27	19	9	35	20	9	9	17	17	14	187