

11 Conclusions

11.1 CARBON MONOXIDE

Estimated background concentrations indicate that the objective for carbon monoxide is being achieved across the Borough of King's Lynn and West Norfolk. There are no roads in the Borough with relevant exposure that can be classified as 'very busy' according to the criteria in the guidance. Consequently, the Borough Council of King's Lynn and West Norfolk is not required to carry out a Detailed Assessment for carbon monoxide.

11.2 BENZENE

No monitoring of benzene has been carried out in King's Lynn and West Norfolk since the last round of Review and Assessment, but the background maps indicate low concentrations. Benzene exceedences have been discounted in previous rounds of Review and Assessment following a previous diffusion tube survey at the Pace Petroleum fuel storage depot. However, the PPC permit now requires benzene monitoring at the Pace Petroleum fuel storage depot by way of a diffusion tube, which should be considered in the next progress report. There are no roads that can be classified as 'very busy' in the Borough or any petrol stations with a throughput greater than 2 million litres and with relevant exposure within 10 m of the pumps. A Detailed Assessment is not required for benzene in King's Lynn and West Norfolk.

11.3 1,3-BUTADIENE

Estimated background concentrations and data from national monitoring stations indicate that the objective for 1,3-butadiene was likely to have been achieved by the end of 2003. There are no industrial processes, current or proposed, in King's Lynn and West Norfolk Borough Council that have the potential to emit significant quantities of 1,3-butadiene. The Borough Council is not required to carry out a Detailed Review and Assessment for 1,3-butadiene.

11.4 LEAD

Emissions of lead from industrial processes in King's Lynn and West Norfolk are not likely to exceed the 2004 or 2008 objectives. There are no new or proposed industrial sources of lead in the borough, or in any neighbouring authority. The Borough Council is therefore not required to carry out a Detailed Assessment for lead.

11.5 NITROGEN DIOXIDE

There are no significant industrial sources of nitrogen dioxide in the Borough of King's Lynn and West Norfolk. The previous round of Review and Assessment recommended an extension to the existing Railway Road AQMA, which is being implemented as suggested. Diffusion tubes indicate exceedences of the annual average nitrogen dioxide objective at locations within the proposed, extended AQMA, but no exceedences with relevant exposure are seen elsewhere in the borough.

A neighbouring local authority (Fenland District Council) has modelled a potential exceedence of the NO₂ objective in Wisbech, a town that lies just within the Fenland local authority boundaries. However, part of the exceedence is predicted in the borough of King's Lynn and West Norfolk. Both local authorities have deployed additional NO₂ diffusion tubes along the length of Elm High Road, including the roundabout with the A47 and all relevant receptors in the vicinity.

It is therefore recommended that the Borough Council ensure that all diffusion tubes are located on the façade of the relevant nearest receptor rather than at kerbside locations. All diffusion tube results from this area should be monitored and reviewed over the coming months and presented in the next Progress Report. A decision should then be taken as to whether a Detailed Assessment of this area is required.

11.6 SULPHUR DIOXIDE

There are no significant industrial or domestic sources of sulphur dioxide in King's Lynn and West Norfolk. The Borough Council is not required to carry out a Detailed Assessment for sulphur dioxide.

11.7 PM₁₀

The DMRB screening model indicates that the annual mean objective of 40 µg m⁻³ for PM₁₀ was met at all relevant receptors adjacent to roads and junctions in 2005. Automatic monitoring data recorded no exceedences of the annual mean objective or the fixed 24-hr mean objective for PM₁₀. A Detailed Assessment is not required for King's Lynn and West Norfolk.

11.8 SUMMARY AND RECOMMENDATIONS

No objectives are being taken to a Detailed Assessment at this stage.

A potential exceedence of the NO₂ objective has recently been modelled by Fenland District Council, in an area of Wisbech that also lies in the borough of King's Lynn and West Norfolk. Both local authorities have deployed additional NO₂ diffusion tubes along the length of Elm High Road, including the roundabout with the A47 and all relevant receptors in the vicinity. It is therefore recommended that the Borough Council of King's Lynn and West Norfolk monitor and review the diffusion tube results from this area over the coming months and present them in the next Progress Report. A decision should then be taken as to whether a Detailed Assessment of this area is required.

It is also recommended that monitoring of NO₂ be continued in the Borough to validate the extension of the Railway Road AQMA in King's Lynn.