

Annex 2 - Strengthening LTP4 in its aims to reduce air pollution

Background

Last year's report by the Director of Public Health Oxfordshire included a section on air quality. The main points were as follows:

1. Burning fuel produces pollutants such as Nitrogen Oxide, Nitrogen Dioxide, Nitrous Oxide and Sulphur Dioxide, as well as ozone and 'Fine particles'.
2. These pollutants can cause adverse effects on health, both short term and long term. It may be the fine particles that have the most long term impact but these are hard to measure.
3. Impacts are mostly generic, i.e. many people will be slightly affected. The impact is very difficult to measure credibly and statistics should be viewed with caution. On the whole, levels in Oxfordshire are about the same as the England average.
4. Local situations cause local people considerable aggravation and thus, air quality as a health issue is frequently raised as one of a number of objections about a proposed development or to argue for a new development such as a bypass.
5. The long term view is that air quality gradually continues to improve and that standards and legislation can gradually reduce pollutants.
6. Greener options such as solar panels and electric cars are becoming gradually more accepted and more feasible and may be the way of the future.
7. This situation needs close monitoring as population numbers rise.

Current Position on LTP Update

In Oxfordshire, there are a number of air pollution hotspots where excessive levels of oxides of nitrogen have been identified. These are associated with emissions from vehicles, particularly diesels. They have been declared as Air Quality Management Areas by the City and District Councils, and are shown in the following table:

District	AQMA	NO² level µg/m³
Cherwell	Banbury Hennef Way	79
Oxford	Whole of city	65
South	Henley-on-Thames town centre	59
West	Chipping Norton town centre	58
South	Watlington town centre	55
Vale	Botley A34	53
Vale	Marcham village centre	50
West	Witney, Bridge Street	47
Cherwell	Bicester town centre	47
Vale	Abingdon-on-Thames town centre	45
Cherwell	Kidlington Bicester Road	44
Cherwell	Banbury town centre	42
South	Wallingford town centre	41

The figures in the table represent the highest annual average concentration of Nitrogen Dioxide measured in each AQMA in 2014. They are set out in descending order with the highest first. All of the above figures exceed the Government target of less than 40 µg/m³ annual average concentration of Nitrogen Dioxide.

Most AQMAs in Oxfordshire are relatively small geographical areas, typically in urban centres. However, in the case of Oxford the whole of the city has been declared an AQMA. The Oxford figure above for the worst location is in the city centre, although the Government target is also exceeded in some district centres and at some junctions on the Oxford ring road.

Air pollution can have a profound effect on those with particular health conditions, including premature deaths.

Last year, the council resolved that its LTP should be strengthened in its aims to reduce air pollution. Four approaches were specified and these are set out below with a description of how the LTP is proposed to be updated to achieve them.

1. Encouraging walking and cycling

The new Active and Healthy Travel Strategy, developed with input from Public Health sets out our plans to enable more walking and cycling, including how they can be promoted in combination with bus and rail services for longer journeys. These have the potential to improve air quality by replacing car trips, particularly in congested urban areas where traffic is the main cause of poor air quality. They can also improve public health - recent research has found that the exercise benefits of active travel outweigh the adverse health impacts of poor air quality on pedestrians and cyclists. The availability of quiet pedestrian and cycle routes which avoid heavy traffic flows can help to reduce exposure to poor air quality.

2. Restricting diesel vehicles in town centres

In December 2015 the Government published a policy paper '*Improving Air Quality in the UK Tackling Nitrogen Dioxide in our towns and cities UK overview*'. This sets out a framework for local authorities to introduce Clean Air Zones, based on Euro 6 for diesel and Euro 4 for petrol, with four options for what vehicles they would cover:

- Class A – buses, coaches and taxis
- Class B – buses, coaches, taxis and heavy goods vehicles (HGVs)
- Class C – buses, coaches, taxis, HGVs and light goods vehicles (LGVs)
- Class D – buses, coaches, taxis, HGVs, LGVs and cars

Five cities with the poorest air quality will be required to introduce Class B (Derby, Nottingham, Southampton) or Class C (Birmingham, Leeds) Clean Air Zones. London's proposed ultra-low emission zone is likely to include cars i.e. Class D. Other local authorities are encouraged to consider introducing Clean Air Zones, including the upgrade of existing Low Emission Zones (LEZ)s.

In Oxfordshire, currently, only central Oxford has a LEZ, applying to buses only. This was introduced primarily to reduce oxides of nitrogen (NOx). It requires local buses operating in affected streets to comply with the Euro 5 emission standard.

However, the ambition of the Oxford Transport Strategy is to start a city centre zero-emission zone for all vehicles by 2020, with the zone being gradually expanded over time as the required infrastructure and technology develops. This will support objectives to improve air quality and targets to reduce emissions from vehicles. Further private sector investment from operators on all routes will be required, not just the short to medium range services, and be achieved through the deployment of electric buses, advanced electric-diesel hybrid vehicles with an electric drive mode for emission-free operation in built up areas, and routeing changes as outlined above.

As battery and induction charging technology improves, vehicles will be able to cross the whole city whilst on full electric power, enabling the creation of a city-wide zero-emission zone by 2035. Vehicles which cannot comply with specific emission standards will be required to terminate at Park & Ride sites outside of the city. However, it is important to stress that each stage in the development of the Oxford zero-emission zone would be subject to consultation and would depend on the widespread availability and affordability of zero-emission vehicles before their use becomes mandatory.

In parallel with the development of the initial Oxford city centre zero-emission zone, the whole city plus other towns where Air Quality Management Areas (AQMAs) have been declared, will be considered for Class B Clean Air Zones. The aim would be to start by 2020; however, this will be subject to other factors which will need to be taken into account:

- It will be important to take account of the costs and benefits, learning from experience elsewhere, particularly the larger UK cities – which suggests reviewing progress and issues on the five cities referred to above, before committing Oxfordshire to a solution on a more quantifiable basis.
- Enforcement costs could be significant as the Government envisages camera enforcement for all but Class A restrictions. Only Oxford has camera enforcement, covering certain streets.
- With the theoretical benefits of Euro 5/6 not being matched by real on-the-road emission levels, it be sensible to wait until the real world outcomes of the latest Euro 6 standards are clearer before committing to this approach in Oxfordshire.

3. Working more proactively with the City and District Councils to develop and enact Air Quality Action Plans

There is a commitment to work with District Councils in a more co-ordinated way on Air Quality Action Plans. However, further resources – probably the equivalent to half a FTE, plus at least a nominal revenue budget - will need to be identified if the Council is to develop partnership working with District and local councils to help deal with the most sensitive air quality areas.

The division of responsibility between air quality (districts) and transport (OCC) is not ideal when transport is seen as the both as the main cause of poor air quality and the most effective solution to addressing it. The combined responsibility for these closely related areas is one of the benefits of unitary status; the County Council's recently commissioned study of options for local government in Oxfordshire will need to take this into account.

4. Introducing low or zero emission mass transit vehicles

The main bus operators have responded to the Oxford LEZ and to customer preference by introducing the latest low emission buses – either hybrid electric or Euro 6 standard - into their fleets.

Looking to the future, we are supporting trials of wireless induction charged electric buses, which run fully on electricity. As technology develops we expect electric buses and other types of low emission public transport vehicles to become more widespread. We will support pilots where appropriate, working with businesses and research institutions. If successful and if funding is available, we will support the provision of the required infrastructure, taking into consideration safety and environmental factors. We will ensure that new infrastructure considers the flexibility to enable the take-up of future low emission vehicle technologies, for example through incorporating sensor or wireless technology in new roads or bus lanes.

Finally, Network Rail's programme of electrification means that the proportion of diesel trains through Oxfordshire will reduce significantly over the period of this plan. By 2031 we expect that most of Oxfordshire's passenger rail services will be electric.

Conclusions:

1. Air Quality and Public Health continues to be a recognised problem, both overall and in specific locations in Oxfordshire.
2. In updating our LTP, there is a commitment to focus more on this area. Part of this can be achieved by continuing to strengthen the importance of Active Travel and its health as well as transport potential.
3. A new national framework is being put forward for Clean Air Zones as a means of consistent approach to managing problem areas. Class B Clean Air Zones will be considered for Oxfordshire, but there would be a resource implication to progress this that cannot easily be quantified, without more evidence. This should be obtainable from the cities where there is requirement to introduce Clean Air Zones.
4. The aim would be to progress Clean Air Zones in parallel with the proposals for an Oxford city centre zero-emission zone, starting in 2020.