Chapter 8

Oxford

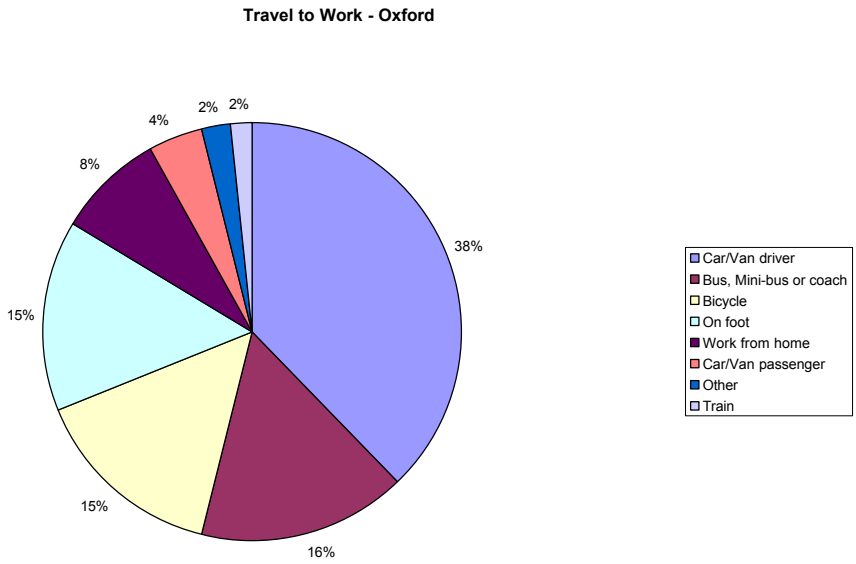
Background

Oxford is the county town of Oxfordshire and has historic assets of international significance. It is a world-class educational centre, an international business and manufacturing hub, a global tourist destination and a world renowned centre for medical science.

In population terms, Oxford is the largest district in Oxfordshire with a population of approximately 134,000. Two-thirds of the population (approximately 86,000) live in the eastern suburbs of the city.

Oxford is Oxfordshire's main employment hub. Therefore, it is not surprising that 47,000 of the 61,000 in employment, according to the 2001 census, work within Oxfordshire and three-quarters in the city while only 9% travel outside of the county to work.

Analysis of the 2001 Census data has revealed that 61,000 residents of Oxford were in employment at the time of the Census. A breakdown of people's main mode for the journey to work is set out below:



Transport Network

Oxford's road network is a combination of local residential roads, radial routes accessing the City Centre and a ring road that includes part of the A34 trunk road. The City also has a rail station that is one of the country's main railway lines. Oxford is extensively served by buses, with every area of Oxford being served by at least one hourly bus service.

Car ownership, despite doubling over the past 20 years, in Oxford remains lower compared to the other districts in Oxfordshire. 66% of households have access to one car or more.

Within the city the road network consists of a number of radial routes (Botley Road, Woodstock Road, Banbury Road, Marston Road/Marsh Lane, Headington Road/London Road, Cowley Road Iffley Road/Abingdon Road) with only partial connections between them inside the Ring Road (examples being Donnington Bridge Road/Between Towns Road/Hollow Way in the south and Marston Ferry Road/Headley Way in the north of the city.

Local Plan Policies

The key elements of the Oxford Local Plan, that are relevant to this Local Transport Plan, are:

- To reduce the need to travel, particularly by private car, and to give people greater choice in the way they travel by walking, cycling and public transport;
- Proposals for developments that are likely to have significant transport implications will require a transport assessment and travel plan to be submitted;
- All developments will need to be in accordance with maximum parking standards, provide good access and facilities for pedestrians and cyclists, comply with minimum cycle parking standards and provide access for powered two wheelers
- Seek to secure contributions through planning obligations to improve access for pedestrians, cyclists and powered two wheelers, improve bus services and park & ride;
- Implement a high quality public transport service along the defined corridors and support controlled parking schemes, through securing contributions;
- Seek to reduce the number of private non-residential parking spaces; and
- Proposals involving freight movements will need to address the potential for transportation by rail and water.

The Oxford Local Plan has not identified any strategic housing sites although a large number of sites across the city are identified for development, redevelopment or intensification for residential, commercial and institutional uses. The transport impacts will depend on the site location and the scale and type of development that comes forward.

Community Strategy for Oxford

The Strategy was prepared by the Oxford Strategic Partnership. Key aims for the Strategy are:

- To improve quality of life in Oxford; and
- To develop a framework that encourages closer partnership working between local agencies.

A number of these themes are likely to embrace transport measures although none are specifically identified within the community strategy.

Tackling Congestion

Oxford is the by far the county's largest urban area, and many of the roads in Oxford suffer from some congestion at peak times. Generally speaking, the congestion problems that cause the most delay to the most people are on the city's radial routes – all of which are major bus routes. The main congestion problems in Oxford are outlined below.

Actions for Tackling Congestion in Oxford

The actions for tackling congestion, as outlined in chapter three, are:

Action 1	Manage, develop and maintain the county's road network to reduce the impact of bottlenecks (including roadworks) and make better use of existing road capacity to improve the flow of traffic
Action 2	Make public transport faster, more reliable and more user-friendly
Action 3	Make walking and cycling safer and more convenient
Action 4	Enable people to make better informed travel choices
Action 5	Manage parking to support transport improvements and initiatives
Action 6	Ensure that new development is planned in such a way as to minimise congestion problems from being created or exacerbated

The County Council intends to focus its efforts over the Plan period on the following congestion hotspots in Oxford (in order of severity of current problem, but not necessarily the order in which it will be possible to address them). Using the Problem Prioritisation Framework highlighted in Chapter Five these problems have been ranked as high, medium and low problems.

High Ranking Congestion Problems in Oxford

Problems on the following routes are likely to have an impact on the role of Oxford as a sub-regional centre. Therefore, these problems are being addressed in the Central Oxfordshire Transport Area (chapter six):

- London Road
- Abingdon Road
- Banbury Road
- Botley Road

Medium Ranking Congestion Problems in Oxford

Woodstock Road

Problems on this route are likely to have an impact on the role of Oxford as a sub-regional centre. Therefore, this problem is being addressed in the Central Oxfordshire Transport Area (chapter six).

Cowley Road
This is a generally very busy road with large volumes of conflicting traffic movements along its length, but the main location for congestion on the Cowley Road is at the Plain junction at its northern end.

To tackle congestion problems along this route, the County Council is developing a major congestion, road safety and street environment scheme, which is being implemented between April and October 2005. The scheme is expected to have the following congestion-related benefits:

- Reduce the impact of minor bottlenecks along the length of road
- Make public transport along the route faster, more reliable, and more user friendly
- Make walking and cycling along the route safer and more convenient
- Help to manage parking along the route to reduce trips and bottlenecks caused by inconsiderate parking

Other Medium Ranking Congestion Problems

Solutions to the problems outlined below will be developed using an appropriate combination of the Actions for tackling congestion identified earlier in this chapter. Further analysis will be required, in the context of the Oxford Transport Strategy, to establish exactly which combination of these Actions will be appropriate and effective in each case.

Iffley Road
Outbound queueing centres on the approaches to the Donnington Bridge Road. This can occur in both morning and evening peaks. In bound congestion occurs both back from this junction and at the approach to The Plain, primarily in the morning peak.

Headley Way
Headley Way forms part of a cross city route and also one of the main access routes into the John Radcliffe Hospital. Queueing occurs at the junctions at each end of Headley Way throughout the day.

Garsington Road
Queues can tail back from the junction with the ring road beyond the junctions with Hollow Way and Between Towns Road and onto Oxford Road, Cowley.

Marston Road
Inbound queues can tail back from the junction with Headington Road affecting bus travel on this busy route.

Windmill Road
Queues form back from the junction with London Road, Headington throughout the day extending back to the Nuffield Orthopaedic Hospital and Old Road junction.

Marston Ferry Road
There can be queues at any time at the junctions at each end of this cross town road, although these are worst during peak periods, particularly the double mini-roundabout with Marsh Lane/Marston Road during the morning peak period.

Old Road
Queues extend for almost the whole length of this road during the morning peak period back from the junction with Windmill Road/The Slade. There is also queueing at the westbound junction with Gipsy Lane/Warneford Road, particularly in the morning peak.

Low Ranking Congestion Problems in Oxford

High Street
Buses can be delayed at any time along this road, part of the city centre bus priority route, particularly at the junction between with St Aldates where there are conflicts between the high bus flow and heavy pedestrian and cycle movements.

Donnington Bridge Road
This cross town route has heavy traffic flows in both directions during both morning and evening peaks. The traffic signals at either end are heavily congested with the result that queues form back from them over a considerable part of the road's length.

Hollow Way
With Donnington Bridge and Between Towns Road, Hollow Way forms part of the cross town route through the south and east of the city's suburbs. The main source of congestion is on the approaches to the junction with Garsington Road in Cowley.

Delivering Accessibility

By its very nature, Oxford has the best level of accessibility anywhere in the County, underpinned by a very well used public transport system. It also contains many of the services that many in the County need to access, sometimes on a regular basis, sometimes only on an occasional basis. It has the County's main medical facilities and highest concentration of major shops. However even here there are a number of Accessibility problems that need to be addressed. Access is good to the centre along radial routes but cross city journeys can be difficult, involving more than one change. In particular access to healthcare from the most deprived wards in the south of the City have poor public transport links to healthcare facilities.

Access to Work

- The County's main centre of employment, with a few major employers.
- 31,000 people are employed in the city centre, mainly retail, local authority or university.
- The number of jobs in this location has not changed over the last 10 year census period.
- Growth in jobs has been away from the centre of Oxford, predominantly on the eastern edge of the city.
- Growth in jobs away from the city centre has been 19%, at approximately 9,000.
- The location and nature of the growth employment areas makes access by public transport and in some cases also cycling and walking far more difficult.
- This has created a greater reliance on the private car for these employment sites.
- Providing efficient public transport access is more difficult because of the dispersed nature of the sites.
- Very high house prices in Oxford generally have also reduced the ability for people to choose to live near their employment location.

Access to Education

- Access issues to schools are primarily associated with the perceived and actual risk that parents feel their children are exposed to, particularly if cycling or walking unaccompanied.
- The Oxford College of Further Education is located in the city centre, a highly accessible location by public transport.
- The university has a high level of provision of residential accommodation and this is generally within a mile of the colleges. Further rules apply to those living out of college that they should live within a mile of the colleges.

- Oxford Brookes University's main campus is located approximately 2 miles east of the city centre. It has a higher number of part time students, and the location away from the city centre means that providing access right across the city by public transport is more difficult.
- The majority of full time students are able to consider living within 2 miles in private accommodation. The university has increased the number of student accommodation places available and have improved pedestrian/cycle accessibility.

Access to Health

- Through NHS reorganisation the provision of healthcare in Oxford is gradually being concentrated in the Headington area, with major expansion at the John Radcliffe and Churchill sites.
- Provision of bus services to these sites from the city centre is good, but cross city services are poor and often have change bus in the city centre.
- The situation is exacerbated by the layout within the sites, which is largely designed for people arriving by car. Those who use buses have to walk greater distances than those from the car parks.
- A lot of joint work with the hospital trusts in Headington has been undertaken since 2002 with the County Council.
- This includes improving information on bus services, subsidising bus services, improving pedestrian and cycle routes for local trips.
- The work on social exclusion in Oxfordshire has highlighted that it is in the south of Oxford, in wards such as Blackbird Leys and Littlemore that many who suffer from poor health and low incomes do not have good public transport access to healthcare.

Access to Food/Shopping

- The centre of Oxford has three medium sized supermarkets, plus a number of smaller more convenience type stores.
- There are also a number of delicatessens around the centre but these tend to supply more expensive specialist food products.
- The City Centre has a traditional weekly food market.
- The suburban centres in Oxford have a substantial amount of foodshops as well as supermarkets.
- There are a number of other small local foodstores/mini-supermarkets in the city suburbs, all of which cater reasonably well for the local market and are accessible by bus.
- Three hyper-markets are located on the ring road.

Social Exclusion

In social terms Oxford is a city of extremes: it has some of the wealthiest areas in the country, and some of the most expensive properties, but also some of the most deprived both for Oxfordshire and the south east. Some

of the findings of a study commissioned from Oxford Consultants for Social Inclusion relating to Oxford are given below:

Multiple Deprivation:

- The south-eastern fringes of the district of Oxford have the county's most deprived areas with levels of multiple deprivation relatively high compared to England as a whole.
- The only area in the county to fall into the most deprived ten percent of super output areas in England is located in the Northfield Brook ward, in the most south-easterly area of the city.

Work:

- Oxford has the highest rate of worklessness in Oxfordshire at 6.1%; a higher rate than the south-east region average.
- Northfield Brook ward in Oxford has the highest county's worklessness rate of above 10.6%, almost twice as high as the south-east region average and 20% higher than the England average.
- Eight out of ten wards with the highest worklessness rates in Oxfordshire are in Oxford.
- There are pockets of considerable employment deprivation where a large proportion of people are claiming Jobseekers Allowance, Incapacity Benefit, or Severe Disablement Allowance.
- These areas are located mainly in the south of Oxford in the wards of Northfield Brook, Blackbird Leys, and Littlemore.
- Oxford is the only district in Oxfordshire to register proportions of people through unemployment above the county and regional averages (1.6% in oxford compared to county average of 0.8% and the south-east region average of 0.9%).
- The ten wards with the highest Jobseekers Allowance claims are located in Oxford. Each of these wards also show people workless through unemployment only rates above the England average.
- At 4.5%, Oxford has the highest proportions of people workless through sickness in Oxfordshire, with a rate slightly higher than that of the south-east (4.4%), but still considerably lower than the England average.
- The ward of Littlemore in Oxford has the highest proportion of any ward in the county, 9.2% - almost three times the Oxfordshire average (3.3%) and over twice the regional average (4.4%).
- Four of the five wards with the very highest proportions of people workless through sickness are in Oxford (Littlemore, Blackbird Leys, Northfield Brook, Barton and Sandhills) - all have rates above the England average.
- Oxford has the highest proportion of people living on a low income within the county at 7.3%.
- Northfield Brook has the highest proportion of people living on a low income of any ward in Oxfordshire.

- A over 17%, this ward's rate is over three and a half times higher than the Oxfordshire; almost three times as high as the south-east region average; and almost as high as the England average.

Low Income:

- Oxford has proportions of people under 20 living on a low income that is higher than the county average.
- Of the ten wards in Oxfordshire with the highest proportions of people under 20 living on a low income, four lie within Oxford.
- Oxford, at 12.4%, has significantly the highest proportions of people aged 60 and over living on a low income of the five districts in Oxfordshire which is higher than both the county and the regional average, but well below the England average.

Education:

- Two of the three wards with the lowest performance at GCSE are in Oxford (Blackbird Leys and Northfield Brook). In these areas less than one in six pupils achieve five or more A-C GCSE passes.
- Of the lowest twenty wards in the county, nine are in Oxford. Two of the six wards in Oxfordshire which have post-GCSE staying on rates below 50% are in Oxford: Northfield Brook and Blackbird Leys.
- In Blackbird Leys ward, more than two in five adults have no qualifications, while in Barton and Sandhills ward, more than one in three adults have no qualifications.

Health:

- In Oxford health deprivation tends to be concentrated along the southern fringes of the city, in areas such as Rose Hill and Blackbird Leys and on the eastern edge of Barton and Sandhills.
- There is also a "hotspot" in the centre of the city, including one in Carfax, ranked in top 1% of all areas in England.
- Five of the nine wards in the county with proportions of people needing higher rates of care than the England average are in Oxford: Littlemore, Northfield Brook, Cowley and Barton and Sandhills.

Safer Roads

In a countywide context, Oxford experiences a relatively high level road safety problems, owing largely to its generally high traffic levels, and high levels of walking and cycling compared to the rural districts. There are, however, various sites in Oxford at which accident rates are higher than average, and the County Council plans to investigate solutions to these problems as an urgent priority, and build on existing work where previous attempts have been made to improve matters.

Actions for Safer Roads in Oxford

The actions for safer roads, as outlined in chapter three, are:

Action 1	Improve the design and layout of the highway where necessary to address known safety problems
Action 2	Better management of vehicle speeds
Action 3	Provide effective road safety education, training and publicity
Action 4	Ensure that new development is located in such a way as to prevent road safety problems from being created or exacerbated

Developing Solutions to Road Safety Problems

By their nature, road safety problems and their causes vary enormously from one site to another. The actions above represent general approaches to reducing casualties, both at specific sites such as those listed below and more widely across the network.

In addressing the site-specific problems identified below, the Council will investigate carefully all possible causes of incidents, and use this information to develop appropriate solutions.

High Ranking Road Safety Problems in Oxford

A420 High St and St Aldates (City Centre)

112 injury accidents (2 fatal, 10 serious, 100 slight) were reported on this stretch between 2000 and 2004. Over 80% involved cyclists (57 accidents) or pedestrians (35 accidents). Particular concentrations include the High St / Longwall St junction, High St / Queens Lane area, Carfax, St Aldates / Pembroke St and the St Aldates / Speedwell St junctions. The frequency of accidents showed relatively little change following the traffic restrictions introduced as part of the Oxford Transport Strategy in 1999. An experimental 20mph zone came into effect in October 2004, and the effectiveness of this is being monitored.

B480 Cowley Road between Magdalen Road and The Plain (East Oxford)

107 injury accidents (3 fatal, 16 serious, 88 slight) were reported on this stretch between 2000 and 2004. Over 70% involved cyclists or pedestrians. The accidents are fairly evenly distributed along the length of the road. A higher than average proportion of the accidents happen at night, reflecting the high level of night time activity on the road. A major road safety improvement scheme – largely funded by the Department for Transport – is due to be constructed in 2005, and the effectiveness of this scheme will be closely monitored.

A420 London Road between Lime Walk and Stile Road (Headington)

58 injury accidents (1 fatal, 8 serious, 49 slight) were reported on this stretch between 2000 and 2004. 50% involved either pedestrians or cyclists. The accidents are particularly clustered near the Lime Walk, Windmill Road and Holyoake Road junctions. Conflicts between road users in the frequently congested traffic conditions are a particular feature here.

A4165 Banbury Road through Summertown (Summertown)

49 injury accidents (7 serious and 42 slight) were reported on this stretch between 2000 and 2004. Over 70% involve pedestrians or cyclists, and many are conflicts in the frequently congested traffic conditions that are often experienced in this busy shopping area.

A40 Headington Roundabout (Oxford Ring Road)

49 injury accidents (5 serious and 44 slight) were reported at this location between 2000 and 2004. Although the accident frequency is high, the overall accident rate is as would be expected taking account of the very high traffic flows through the junction. A major improvement scheme is planned for 200x.

A420 Botley Road east of Binsey Road to rail station (City Centre)

32 injury accidents (1 fatal, 6 serious and 25 slight) were reported on this stretch between 2000 and 2004. A high proportion (almost 70%) involved pedal cyclists, who are particularly vulnerable to conflicts involving traffic turning to and from the side roads in the frequently congested conditions. A safety study is in progress to identify safety improvements.

Medium Ranking Road Safety Problems in Oxford

George Street (City Centre)

33 injury accidents (4 serious and 29 slight) were reported at this location between 2000 and 2004. Pedestrians feature highly in the accidents, with many of these being recorded in the later evening, reflecting the high levels of night time activity in the street. A high proportion of the accidents involve buses and taxis.

A420 St Clements (City Centre)

32 injury accidents (1 fatal, 3 serious and 28 slight) were reported on this stretch between 2000 and 2004. 50% of the accidents involved pedal cyclists but otherwise their circumstances were quite varied, with the accidents being fairly evenly distributed along the road (though with a more marked cluster at the Morrell Avenue junction).

A4142 signalled junction with Horspath Road (Oxford Ring Road)

20 injury accidents (3 serious and 17 slight) were reported at this location between 2000 and 2004. The accidents include turning movement conflicts and shunt-type collisions. Remedial measures introduced in 2003 are being monitored.

A4142 junction with Kiln Lane and Beaumont Road (Oxford Ring Road)

16 injury accidents (4 serious and 12 slight) were reported at this location between 2000 and 2004. These were primarily shunt-type accidents on the A4142 approaches to the junction

Low Ranking Road Safety Problems in Oxford

A420 Botley Road / Park End Street – Station area junction (City Centre)

34 injury accidents (2 serious and 32 slight) were reported at this location between 2000 and 2004. The accident frequency at this site appears to have risen appreciably following the major alterations carried out in 1999, though the average severity of injury is low and the specific accident types are quite varied. Approximately 50% of the accidents involve either pedestrians or cyclists.

B480 roundabout junction with A4142 and retail park (Oxford Ring Road)

27 injury accidents (1 serious and 26 slight) were reported at this location between 2000 and 2004. The accidents are particularly clustered by the junction with the retail park (Ambassador Drive) although the detailed circumstances of the accidents are varied.

B4495 Windmill Road junction with The Slade and Old Road (Headington)

13 injury accidents (3 serious and 10 slight) were reported at this location between 2000 and 2004. Accident types are varied, but included conflicts involving right turning movements, and failure to stop for red signals.

B4495 Cherwell Drive – roundabout junctions with B4150 Marston Road and Marsh Lane (Marston)

12 injury accidents (3 serious and 9 slight) were reported at this location between 2000 and 2004. A very high proportion of accidents involve cyclists. Alterations to the junction to help facilitate bus movements were carried out in 2004 and the effects of these are being monitored to determine their impact on safety.

A4142 Oxford Eastern bypass at Rosehill Roundabout (Oxford Ring Road)

23 injury accidents (1 serious and 22 slight) were reported at this location between 2000 and 2004. Accidents include shunt-type collisions on the A4142 Eastern By-pass approaches to the junction.

A4144 St Giles Oxford (City Centre)

49 injury accidents (3 serious and 46 slight) were reported at this location between 2000 and 2004. A very high proportion of the accidents involved cyclists (65%), but pedestrian accidents are also a significant problem here. The circumstances of the accidents are varied, but include turning movements at the Woodstock Road junction and conflicts between southbound buses and cyclists near the junction with Magdalen Street and Beaumont Street.

Better Air Quality

Air quality in Oxford is generally good. Pollutant concentrations in a number of the busiest streets in the city centre exceed national standards, as do concentrations on a number of busy stretches of road elsewhere in the city. The following section outlines the main air quality problems in Oxford.

Actions for Improving Air Quality in Oxford

The actions for improving air quality, as outlined in chapter three, are:

Action 1	Develop and maintain the county's road network to reduce the impact of bottlenecks (including roadworks) and make better use of existing road capacity to improve the flow of traffic through polluted areas
Action 2	Make public transport faster, more reliable and more user-friendly
Action 3	Make walking and cycling safer and more convenient
Action 4	Enable people to make better informed travel choices
Action 5	Manage parking to support transport improvements and initiatives
Action 6	Find ways to encourage the use of vehicles with lower exhaust emissions
Action 7	Restrict vehicles from areas of poor air quality
Action 8	Provide alternative routes for traffic to avoid areas of poor air quality
Action 9	Ensure that new development is planned in such a way as to minimise air quality problems being created or exacerbated

Developing Solutions to Air Quality Problems

Where pollutant concentrations exceed national standards, local authorities are required to declare an Air Quality Management Area covering the affected streets. Authorities must then develop an Air Quality Action Plan which sets out how they reduce concentrations of the pollutants concerned to meet national air quality objectives.

All designated air quality problems in Oxfordshire are caused predominantly by road traffic emissions, so Air Quality Action Plans in Oxfordshire will focus on reducing pollution from traffic using the actions identified in the table above.

Air Quality Objectives Exceeded in Oxford

Air Quality in Oxford is generally good. It is likely that all national Air Quality Objectives will be met across the city, with the exception of:

- The 2005 objective for the annual mean concentration of nitrogen dioxide, of which exceedences are likely in several streets in the city centre, and at a number of other locations elsewhere in the city. There are a number of further locations outside the city centre where exceedances of this objective are possible.

- The 2005 objective for the hourly mean concentration of nitrogen dioxide, of which exceedences are likely in several streets in the city centre.

For more information about this objective and its significance, and about the air quality management process, please refer to the Oxford City Air Quality Action Plan, Review & Assessment.

High Ranking Air Quality Problems in Oxford

Nitrogen Dioxide - Exceedences of the Annual Mean Objective
The national objective for the annual mean concentration of nitrogen dioxide is likely to be exceeded in the following streets in central Oxford (in alphabetical order):

- Beaumont Street;
- Bonn Square;
- Botley Road, east of railway bridge;
- Castle Street;
- George Street;
- Gloucester Green bus station;
- High Street;
- Hollybush Row, north of St Thomas Street;
- Hythe Bridge Street;
- Longwall Street;
- Magdalen Street;
- New Road;
- Old Greyfriars Street;
- Park End Street;
- St Aldates, north of Thames Street;
- St Clements Street, west of public car park;
- St Giles, south of Pusey Street;
- Speedwell Street;
- Worcester Street.

Signficantly for an urban area, exceedances are confined specifically to the streets above: streets, properties, or other spaces near to or between these streets are not likely to experience exceedances – for example, Cornmarket Street and Broad Street. The streets listed above form the Central Oxford Air Quality Management Area, and an Air Quality Action Plan is being developed jointly by the County and City Councils, in the context of the County Council's wider transport strategies.

Medium Ranking Air Quality Problems in Oxford

It is also considered likely that a number of other locations outside the city centre will not meet the 2005 objective for the annual mean concentration of nitrogen dioxide, though AQMAs have not yet been declared for these:

- Wolvercote Roundabout;
- Cutteslowe Roundabout;
- Green Road Roundabout.

Further assessment of these locations will be carried out to establish more accurately the extent of these likely exceedances, and whether sny relevant public exposure is anticipated. Air Quality Management Areas will be considered for these locations in the coming months.

Low Ranking Air Quality Problems in Oxford

It is also possible that the 2005 annual mean objective will not be met in certain other streets outside the city centre, namely:

- Banbury Road/Marston Ferry Road junction
- Abingdon Road/Weirs Lane junction
- Iffley Road/Donnington Bridge Road junction

Further assessment of these locations will be carried out to establish more accurately the likelihood that the objective will be exceeded, and Air Quality Management Areas will be declared if necessary.

Nitrogen Dioxide - Hourly Mean
The 2005 objective for the hourly mean concentration of nitrogen dioxide is likely to be exceeded in eight of the streets in the Air Quality Management Area:

- George Street (Bus Station)
- George Street (Nr. Magdalen Street)
- Queen Street
- High Street (Nr. Covered Market)
- High Street (Nr. Oriel Square)
- St Clement's Street
- St Giles
- Frideswide Square (south side)
- New Road
- St Aldate's

The hourly mean objective for nitrogen dioxide is considered to be less demanding to achieve than the annual mean objective, and as measures are being developed to meet the annual objective in all of the streets where the hourly objective is likely to be exceeded, no specific additional action to meet the hourly objective is required.

Other Pollutants

The 2005 national objectives for all other air pollutants will be met across Oxford. However, it is possible that the 2010 objective for the 24-hour mean concentration of particulate matter (PM10) may be exceeded in some streets in the city centre. The National Air Quality Strategy assessment process will assess compliance with 2010 objectives at a later stage.

Improving the Street Environment

Given the historic and architectural importance of Oxford and the limited road space available within the historic core, it is to be expected that there are a number of areas in the city centre where traffic demands detract from the quality of the overall streetscape. In addition to the city centre, though, a number of the suburban centres have also been identified where there are significant problems.

Actions to Improve the Street Environment in Oxford

The actions for improving the street environment, as outlined in chapter three, are:

Action 1	Improve the design and layout of the streets with a poor quality environment, using high quality materials and street furniture wherever possible
Action 2	Restrict vehicles from areas of poor street environment
Action 3	Make walking and cycling safer and more convenient
Action 4	Enable people to make better informed travel choices
Action 5	Manage parking to support transport improvements and initiatives
Action 6	Provide alternative routes for traffic to avoid streets with a poor environment

Developing Solutions to Street Environment Problems

By their nature, street environment problems and their causes vary enormously from one site to another. The actions above represent general approaches to improving the attractiveness and ambience of streets.

In addressing the street environment problems identified below, the Council will review the quality of the streets concerned, their transport function, and their current and potential usage as a public space. The Council will use this assessment to develop appropriate solutions based on the actions outlined in the table above.

High Ranking Street Environment Problems in Oxford

High Street & St Aldates

These streets feature many of the University's colleges and other high quality buildings. General through traffic was excluded from these streets in 1999 as part of the Oxford Transport Strategy central area measures but relatively high levels of traffic remain including buses, deliveries and access

vehicles. Problems remain due to conflicts of use along this road. The County Council has been pressing since the introduction of for powers to enforce the restrictions through video monitoring.

Cowley Road
This is one of Oxford's busiest radial transport links, connecting a large population to the south-east of the city, to the city centre. It also acts as a major shopping and leisure destination with shops, bars and restaurants serving not only the immediate local area, but also the wider city and county.

The high volumes of cars, buses, and delivery vehicles, combined with poor quality footways and street furniture have made for a poor street environment in Cowley Road. A major congestion, road safety and street environment scheme is being implemented on Cowley Road between April and October 2005, and is expected to have the following street environment-related benefits:

- Improving the design and layout of the street, using high quality materials and street furniture
- Making walking and cycling safer and more convenient on the route

Queen Street and Bonn Square
With Cornmarket and adjoining streets, Queen Street forms the main shopping area in Oxford. It is also at present one of the main locations in the town for buses to both for set down and pick up passengers. The high level of bus traffic and the waiting passengers severely detract from the overall attractiveness of the area for shoppers.

George Street
George Street has developed in the last decade into the main area in the city centre for cafes and restaurants while retaining its traditional role as a shopping street. It suffers from many of the same problems as Queen Street with relatively narrow pavements and a number of bus stops along its route.

Medium Ranking Street Environment Problems in Oxford

Summertown
Major suburban shopping centre split by major radial road into Oxford and with the area dominated by the road and by parking on an adjacent service road. Significant room for improvement in the overall environment of the area. Improvement would be a major undertaking and would need to be very carefully considered both in terms of traffic efficiency and visual impact. Improvements which match with improvements to public transport and road safety improvements have had initial consideration in a study for Banbury Road.

London Road, Headington
This is a significant local shopping centre which is split by London Road – a heavily used radial route which is the city's busiest approach from the east. This acts as major barrier to pedestrian movement between shops, bus stops, and other amenities. Whilst this road is always likely to carry very high volumes of traffic, opportunities may exist to reduce the impact of that traffic on the attractiveness of the street as a public space.

Cowley Centre
The environment around this major shopping area, the second largest in the city after the city centre, is particularly unattractive. A major road also severs the main Templers shopping centre from an adjacent area of larger warehouse-style shops with difficulties for pedestrian movement between them.

St Clements Street
This is a very busy section of the London Road radial route, the city's busiest approach from the east. It is also a shopping and leisure destination. The very high volumes of buses and other vehicles, coupled with narrow footways and sometimes poorly designed and positioned street furniture, make for a generally unpleasant street environment – particularly at peak times. Whilst this road is always likely to carry very high volumes of traffic, opportunities may exist to extend footways in places, rationalize street furniture, and improve the general layout and design of the street.

Low Ranking Street Environment Problems in Oxford

Rosehill
A small local shopping area dominated by the needs of car parking. There is limited scope for major alterations to the layout but some alterations could be made to the parking arrangements to improve the appearance of the area.

Roundway
This area suffers from problems with parked cars, poor use of materials and badly placed street furniture. It presents an unfriendly aspect for pedestrians, unfortunate due to its location at the entrance to the subways under the Green Road roundabout on Oxford's Ring Road. A scheme could improve the overall environment of the area as well as improving its usefulness for drivers and pedestrians alike.

Blackbird Leys
This is a small local shopping centre serving a large edge of town housing estate. Poor quality footways and street furniture have made for a poor street environment.

Marston
A small local shopping area dominated by the needs of car parking and with a major access road passing through it. Improvements are needed for pedestrian crossings and may be some scope for reducing the impact of high volumes of traffic on roads in area by sympathetic re-design of layout and junctions.

Integrated Delivery

The County Council recognises the importance of tackling transport problems of all kinds in a strategic and integrated way to ensure the full impacts of proposed schemes and initiatives are fully understood. The Council has put in place two main mechanisms – the Transport Networks Review and Integrated Transport Strategies - for ensuring schemes and initiatives developed in response to the problems above are considered as strategic elements of a package wherever appropriate, rather than measures implemented in isolation from one another.

Intra-urban Networks: Integrated Transport Strategies (ITS)

ITSs have been developed for many of Oxfordshire's larger towns and for Oxford. The role of the ITSs in the second Local Transport Plan period will be to help the Council deliver the five objectives of the Plan in an integrated, efficient and cost-effective way. To this end, the ITSs will have three key functions:

- Ensuring transport problems in larger urban areas are addressed in an integrated way, recognising the complex inter-relationships that often exist between different parts of an urban transport network;
- Providing an established structure for consultation with local communities, stakeholders and local government partners;
- Providing a framework for integration between transport and land use planning.

Inter-urban Networks: Transport Networks Review (TNR)

The TNR was completed in October 2004, and has helped to guide the County Council's longer-term transport objectives and strategy, as set out in Chapter 1. The review has also provided a strategic framework for the development of schemes which are likely to impact significantly on the operation of the County's strategic transport network. In developing solutions to the problems outlined above, the methods and conclusions of the TNR will be referred to as necessary to ensure any wider network considerations are taken fully into account.