
27. Rural Oxfordshire

- 27.1 Rural Oxfordshire encompasses a wide variety of different settings from the high Cotswolds to the Vale of White Horse, from isolated hamlets to small towns. Oxfordshire is a rural county – the least densely populated in south east England – with attractive countryside, towns and villages. Around 80% of the county is managed for agriculture and the county includes three extensive areas of outstanding natural beauty, four national nature reserves and 109 sites of special scientific interest. Over 2,600 miles of paths, bridleways and byways are open to the public providing extensive access to the countryside. However these routes do not always provide a connected, safe or enjoyable network for walkers or riders.
- 27.2 There are a large number of small communities in rural Oxfordshire. Of the 308 parishes with a population below 10,000 people, three quarters have fewer than 1,000 residents. The rural area also include a number of large villages and smaller towns (including settlements such as Berinsfield, Burford, Eynsham, Wheatley and Woodstock) which still provide some local services although the range available in these locations has usually declined in recent years. Oxfordshire's rural areas show generally low levels of deprivation and crime. Rural people in Oxfordshire are comparatively well involved in their communities. However there are social, economic and environmental pressures which have and will continue to affect and change life in rural communities in Oxfordshire, for example the decline of retail and other services in villages and small towns will worsen access to services by the growing number of older people, and worsen the isolation of vulnerable groups.
- 27.3 Increased centralisation of services particularly affects rural areas because it leads to reductions in local services and facilities and longer journeys to the remaining service locations. People in rural areas, including young people and increasing numbers of older people, are most affected by reduced access, especially in areas where public transport provision is least. Rural communities may feel particular effects from increases in fuel and transport costs; rural businesses and services could be affected disproportionately, increasing access problems as well as increasing running costs which could accelerate their decline.
- 27.4 In transport terms there are a wide variety of different problems and issues and these clearly require a flexible approach to be adopted.
- 27.5 Oxfordshire County Council has adopted an overall preferred scenario for developing transport in the rural areas of the county but

its application will depend on the particular needs and characteristics of each local area. Our rural transport strategy is in two parts:

- i. the overall strategy for rural areas;
- ii. specific plans for the busiest rural travel corridors in the county

27.6 Any proposals in rural Oxfordshire will need to be in line with this strategy to be considered for funding.

Part 1 - Overall Transport Strategy

Buses

27.7 Our aim for rural buses is to encourage improved bus services on the main routes between towns and to retain a basic county bus services network in other areas. Oxfordshire has a very good country bus network at the moment - over 75% of rural households in the county can access their nearest town centre by bus in less than 30 minutes - and we would wish this to continue.

27.8 Most of the bus services in rural areas, excluding those on the main inter-town routes, require funding support from us to run. We need to see if there are better ways that this accessibility can be delivered than through the traditional service buses. Many other organisations also run transport services in rural areas and Oxfordshire County Council will be looking to see if there are ways to integrate these to produce a service which meets local needs through satisfying individual choice rather than necessarily providing universal services.

27.9 Whatever form of service is used there will be a need for better marketing and promotion to enable best use of them to be made. Better bus stops, including a simplified form of the standard bus stop pole which has been developed for the Premium Routes, will be rolled out across the county as resources allow and we would welcome working with local communities to provide better bus shelters or other facilities.

Rail

27.10 The coverage of the county by accessible rail services is uneven but in those areas where rail lines do exist they offer the chance to access services without adding to problems on rural roads. In the time covered by this Plan we would wish to see improved services from Islip station as a result of the Evergreen 3 and East West Rail proposals and also improved services on the Cotswold Line. The main focus of our work will be to improve rail will be in improving access to rail stations. The exact schemes appropriate for each station will depend on the stations location and locality, in particular

the condition and standard of local roads but, where appropriate, we will consider:

- i. Better parking to increase the attractiveness of stations and reduce parking problems in surrounding areas;
- ii. Better walking and cycling links to stations from nearby villages, particularly where there are no safe routes at present; and
- iii. Improvements to connections for interchange with bus services - including better waiting facilities and working with the operators to develop combined ticketing and better integration of timetables.

15.8 The aim of all these measures would be to extend the area over which rail services can play an important part in improved rural access. We will also work with rail companies to improve publicity and marketing of these services.

Roads

15.9 Oxfordshire County Council has no plans for major highway improvements in the rural parts of the county over the life of this Plan. We do currently "protect" the lines of two rural bypasses, Marcham Bypass and Sutton Bypass, but only on the basis that these may be necessary to allow development in adjacent areas and we would expect them to be funded in large part by those developments.

15.10 Over the course of the Plan we will move towards having a speed limit of 50mph on all single carriageway rural roads and support moves to have this adopted as the national speed limit for this class of roads. Proposals for the change in the status of roads, either in terms of its place in the road hierarchy (A-, B-, C-class roads etc) or through restrictions on the use of roads by different types of vehicle would need to be justified in terms of meeting the overall objectives of the Plan in a cost-effective way and without causing problems on other routes. We will generally not look on environmental weight limits as a suitable permanent solution to local problems.

Walking, Cycling & Behavioural Change

15.11 We will look to improve connections from villages to the rights of way network. This may involve converting sections of highway verge to footpath or bridleway use. We will also look to improve connections between villages, and from villages to nearby towns, where this is justified by actual or potential use. This could involve converting footpaths to allow for use by cycles or the creation of new routes. If resources allow we will develop rural cycle routes. These would take the form of signed routes on less busy roads, usually connected to the National Cycle Network or other existing cycle routes. Rural areas will also benefit from a number of countywide initiatives in the

Local Transport Plan, such as the promotion of travel plans at schools and workplaces.

Part 2 - Inter-urban Corridor Strategies

- 15.8 Congestion is generally a problem associated with built-up areas. However, a strategy is also required for the inter-urban network that connects towns to each other and to Oxford. Although predominantly running through rural areas the inter-urban corridors require separate strategies to rural areas in general because the problems and challenges faced in these corridors will be very different.
- 15.9 This chapter does not explicitly consider transport or traffic issues *within* the towns; these are the subject of other chapters. Instead this chapter identifies the corridors with the highest flows, focusing on journey to work data from the 2001 census and describes the problems and challenges on the inter-urban networks – road, rail and bus – which link the towns and settlements to each other.

Trip types

- 15.10 The inter-urban corridors carry a mixture of trip ‘types’, not just catering for trips between the settlements which they link but also for longer distance trips and more local journeys. Journey types in a corridor can therefore be categorised in one of three ways:

Long Distance

- 15.11 Journeys that are using the corridor or part of the corridor for part of a longer trip, for example a trip using the A34 corridor for part of a journey between Southampton and Birmingham,

Settlement to settlement

- 15.12 A trip between two settlements or employment areas located on a transport link (road or rail) within the corridor, for example a trip between Bicester and Oxford.

Local

- 15.13 A trip which is using a major transport corridor for part of a journey but may not lie on a major transport link in the corridor itself, e.g a journey from Middleton Stoney to Oxford; likely to use the A34 for part of the trip but doesn’t itself lie in a major corridor.
- 15.14 The inter-urban strategies need to consider these different types of journeys and how they can best be accommodated by different modes in order to support economic growth, tackle climate change,

improve the environment, quality of life, equal opportunities and safety, security and health.

- 15.15 It needs to be recognised that the inter-urban corridors will continue to carry a mixture of trip types in order to support the local and national economy. An appropriate balance of trip types should be identified for each corridor and schemes developed for each corridor accordingly.
- 15.16 Demand Management will also play a crucial part of any transport strategy and methods of achieving this are described in the area and Oxford strategies.

Corridor types

- 15.17 The majority of journeys in the inter-urban corridors are of a distance too far to reasonably expect people to cycle so not all corridors have cycling strategies. For the same reason, walking has not been considered in the inter-urban strategies.
- 15.18 For each corridor commuter flows between settlement pairs within the corridor have been identified. The corridors also carry significant numbers of longer distance trips or draw in trips from smaller settlements which then make onward journeys along the corridor. Strategies have been developed that cater for each of these journey types in order to address identified problems.
- 15.19 Whilst the problems are mainly on the highway network the strategies often involve transferring trips to other modes, in which case strategies are also required to address problems on those modes.
- 15.20 The corridors catering for most trips have been designated Primary Corridors. Those catering for fewer but still significant numbers of trips are Secondary Corridors.

Primary Corridors:

A34 south of Oxford corridor
A34 north of Oxford corridor
A4260/A4165 corridor
A40 west of Oxford corridor

Secondary Corridors:

A44 corridor
A40 east of Oxford corridor
A4074 corridor
A420 and A338 corridor

A34 South of Oxford

Description

The A34 is a trunk road managed by the Highways Agency, providing a direct link between the M40, M4, M3 and south coast. It is designated a 'National Route' within the Trunk Road network and in particular carries high volumes of freight between the south coast ports and the Midlands.

As well as this strategic function, the A34 has an important local role, being the predominant road route between Didcot, Abingdon and Oxford. Table 1 shows journey to work data between Didcot, Abingdon and Oxford from the 2001 census.

From Didcot the A34 is accessed via the A4130 and Milton Interchange. It is 11km from Abingdon, and 23km from Didcot, to the centre of Oxford if travelling via Abingdon Road in Oxford.

Although the predominant flow in the corridor is tidal (towards Oxford in the morning peak, vice versa in the afternoon peak) the strategic nature of the A34 means that the corridor does cater for significant movements counter to the predominant flow.

Along with the A338/A420, the A34 is the key road link between Oxford and Science Vale UK. The A338 is described in more detail as part of the Science Vale UK Strategy. The A420 is designated a secondary corridor and described in more detail later in this chapter.

Challenges/Problems

Road

Around 70% of journeys between Didcot, Abingdon and Oxford are made by car, largely because of its convenience to most people. Congestion is a problem in the following locations:

- Oxford southern bypass, particularly on the approaches to Kennington roundabout. This can queue back on to the A34 itself in peak times which is a safety concern.
- On the A34 itself, in both directions, caused by high volumes of traffic. This is a problem for much of the day, particularly during peak hours and can lead to significant delays when there is an incident on the route which can impact on other local roads.
- At Milton Interchange. Recent improvements have relived congestion at this busy A34 interchange but with considerable future growth planned for Didcot it is likely to experience pressure in the future unless numbers of car trips can be managed.

Modelling shows that, as congestion increases in the future, the amount of traffic using alternative routes into Oxford will increase. In particular, traffic growth is likely to occur on alternative routes to the A34 such as through Kennington and Boars Hill. Traffic from south Abingdon to east Oxford will increasingly use the A415 and routes through Clifton Hampden whilst traffic from Didcot to Oxford will increasingly use routes through Long Wittenham and Clifton Hampden and into Oxford via A4074 or B4015/B480.

One way of increasing capacity in the corridor would be to increase the capacity of the A34 by adding additional lanes. However, this would not be environmentally sustainable and would cost several billions of pounds and would therefore be unaffordable.

Measures need to be implemented that better manage traffic volumes on the A34 and encourage people to make journeys by alternative modes.

Bus

There are opportunities to maximise the use of public transport to cater for many of the large numbers of trips in the corridor between Didcot, Abingdon and Oxford.

There are already frequent bus services from most parts of Abingdon into Oxford; around 20% of commuter journeys between these two settlements are made by bus. Services operate between Abingdon and Oxford City Centre at least every ten minutes for most of the day, routed via Oxford Road in Abingdon, the A34 and Abingdon Road in Oxford. Half of these services (one every twenty minutes) are extended to the railway station and half to the JR Hospital. This principal service is complemented by several less frequent and less direct services.

Peak services into Oxford from Didcot and Abingdon are operating at capacity and are often full and standing before they reach the Abingdon Road in Oxford.

Peak time journeys on the bus from central Abingdon to central Oxford are timetabled to take 33 minutes. Off peak journeys are timetabled to take 23 minutes.

Although there are through buses to the JR Hospital (every 20 minutes) and Rose Hill (every hour), destinations in north Oxford and some of the larger employment areas in east Oxford are not accessible without a change of bus in the City centre.

Data shows that there is high bus use amongst those travelling into Oxford who live close to the main bus corridors in Abingdon. However, bus use is much lower away from the main corridors.

In contrast, bus use between Didcot and Oxford is relatively low; less than 5% of commuter journeys are made by bus. A service runs hourly direct from Didcot to Oxford via the A4130, A34 and Abingdon Road. The service actually commences in Chilton, entering Didcot via Wantage Road which it serves as well as Didcot Railway Station. The journey is timetabled to take 35 minutes during the peak and 26 minutes off peak.

An alternative service operates to Oxford via Steventon and Abingdon every 45 minutes but takes significantly longer. This service that provides the bus link between Didcot and Abingdon but bus use between the settlements is low. Only around 5% of journeys are made by bus.

There is no bus priority in the corridor except for a small length of bus lane in Oxford on Old Abingdon Road (benefiting the service that runs through Kennington) and at the south end of Abingdon Road, between Redbridge Park & Ride and the Weir's Lane junction. This means the majority of buses get caught in the congestion on the A34 and on the southern bypass as described above, and on the Abingdon Road, meaning there is little incentive to use the bus as an alternative to the car from a journey time perspective.

Destinations located in the north and east of Oxford are not accessible without a change of bus in the City Centre, or a long journey that is routed via the City Centre.

Although not all local trips in this corridor are between Didcot, Abingdon and Oxford these settlements provide the greatest majority of trips and therefore offer most opportunity to transfer trips to the bus. The bus will also play a role in transporting people from smaller settlements in the corridor that may otherwise use the A34 but it is recognised that bus services operate most efficiently when providing a mass transit function which is more deliverable between urban centres.

In Oxford, Park & Ride has provided a successful way of achieving a critical mass of passengers for which to provide a commercial bus service. In order to access Oxford from the south the Redbridge Park & Ride site is most convenient. However, this still requires users to drive the A34 corridor and negotiate some of the most congested junctions in the county to access it. Implementing measures to intercept journeys nearer to their source, whilst recognising that a bus network that caters for every end-to-end journey is not possible, must therefore be an objective and the County Council will continue to explore opportunities to deliver Park & Ride sites at locations more remote from the city, particularly to relieve pressure on the A34.

Rail

A reason for the relatively poor level of bus service between Didcot and Oxford is that these settlements are linked well by rail services. There are around three services an hour throughout most of the day with journey times between 12 and 20 minutes; the non-stop services being quicker than those

that stop at Appleford, Culham and Radley. Just fewer than 20% of commuter journeys between Didcot and Oxford are made by train.

Passenger capacity has dropped in recent years because fewer trains now stop at Didcot. Despite this, there is some capacity for additional passengers, although services are busy and this capacity would arguably be better utilised for passengers making longer distance journeys.

Although the rail services are more frequent and quicker than the bus services the bus is cheaper. For journeys into the City Centre, once walking time from the station to the City Centre is accounted for, the bus and train journey times are similar.

The branch line to Abingdon closed to passenger services in 1963. The nearest station to Abingdon is Radley, which during peak hours has half-hourly services to Oxford and Didcot with journey times around 10 minutes to each. There is not much evidence that residents of Abingdon use Radley station to access rail services to Oxford because this is not an attractive option compared to the bus, which operates between Abingdon town centre and Oxford rail station. Residents of Abingdon do use Radley station to make rail trips to destinations further afield but there are capacity constraints at the station car park.

Some areas of Abingdon, notably Peachcroft are within 2km of Radley station and a walkable distance for many people.

Rail offers opportunities to intercept local trips and also plays a role in removing strategic trips from the road network. As well as long distance south-north passenger journeys on the Cross Country network, the rail network offers significant opportunities to reduce the number of freight trips on the A34. Network Rail is currently upgrading the route between the south coast and West Midlands to accommodate larger freight containers and when complete this, along with proposed rail capacity improvements at Reading and Oxford, will significantly increase the amount of freight that can be carried by rail.

Cycling

There is a National Cycle Route (5) between Didcot, Abingdon and Oxford. It is off road for much of the route but at around 22km is too long for most people to reasonably be expected to cycle on a regular basis between Didcot and Oxford. Bicycles can be carried on board rail services between Didcot and Oxford but at peak times there is limited space.

For shorter journeys in the corridor, cycling is a realistic option; Abingdon to Oxford (12km) and Didcot to Abingdon (10km) are reasonable cycling distance for some people. The 2001 census indicates over 100 people a day cycle between Abingdon and Oxford on their journey to work, though

interestingly almost all of those are people living in Abingdon and working in Oxford, even though a quarter of total journeys are in the opposite direction.

Live	Work	Total Work Trips	Car	Bus	Train	Cycle
Oxford	Didcot	324	261	21	24	9
Didcot	Oxford	1194	861	45	232	14
Total: Oxford – Didcot		1518	1122	66	256	23
Oxford	Abingdon	1085	888	149	6	6
Abingdon	Oxford	3204	2289	670	18	131
Total: Oxford – Abingdon		4289	3177	819	24	137
Didcot	Abingdon	831	726	55	3	18
Abingdon	Didcot	415	364	21	0	12
Total: Didcot – Abingdon		1246	1090	76	3	30

Table 1: Numbers of Work Trips between Oxford, Abingdon and Didcot taken from 2001 census.

Some of the problems associated with the cycling in this corridor are as follows:

- Distances are too far for many people
- Between Abingdon to Milton Park there is poor surfacing and lighting, and poor layout particularly the on-road section from Peep-O-Day Lane to Milton Park.
- Between Didcot to Milton Park (Milton Rd) the route is generally good and direct but also lacks lighting.
- Route NCN5 suffers from bad surfacing and lighting throughout but, apart from the Peep-O-day Lane section, it is generally only used for leisure.

Between Abingdon to Oxford there are three 'real' alternatives for distance commuters; Route NCN5 (less confident/slower cyclist), Kennington/Radley (slower cyclist but more direct, although some very dark sections), and Bagley Wood (fast/very confident cyclist).

A34 north of Oxford

Description

The A34 is a trunk road managed by the Highways Agency, providing a direct link between the M40, M4, M3 and south coast. It is designated a 'National Route' and in particular carries high volumes of freight between the south coast ports and the Midlands. Journeys to Oxford from the east also use the A34 north of Oxford, with strong connections to Milton Keynes, Northampton and further afield to Cambridge, none of which can be accessed easily by train.

The A34 has an important local role, as well as accommodating longer distance journeys, being the predominant road route between Bicester and Oxford. Traffic from the wider Bicester area also joins the corridor at various junctions on the route, in particular at Weston-on-the-Green. The A34 also caters for the majority of journeys between Banbury and Oxford, which travel via the M40 and A34, a much quicker route than the alternative route via the A4260.

From Bicester the A34 is accessed via the A41, at Junction 9 of the M40. It is 19km from Bicester to the centre of Oxford if travelling via the Woodstock Road in Oxford.

Although the predominant flow in the corridor is tidal (towards Oxford in the morning peak, vice versa in the evening peak) the A34 carries many longer distance journeys in both directions all day. There are also significant numbers of off-peak journeys to Bicester Village (a large retail park just south of Bicester town centre), particularly during weekends and Bank Holidays.

Table 2 shows journey to work data between Oxford and Bicester from the 2001 census.

Challenges/Problems

Road

Around 80% of journeys between Bicester and Oxford are by car, largely because it is most convenient for most people. Congestion is a problem in the following locations:

- Approaching M40 Junction 9, particularly on the southbound A41 and M40 during the morning peak and on the A34 northbound during evening peak. This is due to capacity constraints of the junction.
- On the A34 itself, in both directions, caused by high volumes of traffic. This is a problem for much of the day, particularly during peak hours and can lead to significant delays when there is an incident on the route which can impact on other local roads.

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- The A41 approaching Bicester is subject to significant congestion when Bicester Village is busy. This is described further in the Bicester chapter.

Park & Ride services are available as an alternative for motorists requiring access to the City Centre. There is also a Park & Ride service to the JR and Churchill hospitals from Water Eaton but no services to other areas of the City. Park & Ride services are described further in the Oxford chapter.

Modelling shows that in the future as congestion increases, the amount of traffic using alternative, less suitable, routes into the City, will increase. In particular traffic accessing the east of the City will increasingly use local routes such as those through Merton, Islip and Woodeaton to avoid congestion.

Bus

There are bus services from most parts of Bicester into Oxford. Around 15% of commuter journeys between the settlements are made by bus. There are hourly services from Launton via Glory Farm, Langford via Glory Farm and Arncott, which combine to give a 20 minute frequency from Bicester town centre to Oxford city centre via Gosford and the Banbury Road. This is complemented by a high quality coach service which operates every 30 minutes between Oxford and Cambridge, via Bicester and the Woodstock Road, giving a total of five buses per hour throughout the day. Peak services are approaching capacity.

There is no bus priority between Bicester and Oxford until services reach Banbury Road or Woodstock Road in Oxford. This means buses get caught in the congestion on the approach to M40 junction 9 and on the A34 as described above, meaning there is little incentive to use the bus from a journey time perspective.

Peak journey times on the bus from central Bicester to central Oxford are timetabled to take 45 minutes. Off peak journeys are timetabled to take 36 minutes.

Destinations other than north Oxford and the City Centre are not accessible without a change of bus, which requires a five minute walk through the city centre.

The bus service between Banbury and Oxford is hourly and considerably slower than the train, it does not cater well for journeys between the two settlements.

Rail

The rail service between Bicester, Islip and Oxford offers a reliable alternative to road transport taking just under 30 minutes, but there are currently just 11

journeys in each direction on a weekday, only one of which caters for 'peak' journeys. There is capacity to cater for additional passengers on this service but the perceived slow journey and infrequent service limit its attractiveness.

Chiltern Railways has plans to improve this service significantly, proposing a half-hourly service between Bicester and Oxford via a new parkway station at Water Eaton from 2012. This is likely to make the train a much more attractive option, with the potential to open up journeys to other areas of the City if new express public transport services are operated from Water Eaton.

East-West Rail Consortium's proposals to reopen the line for passenger services between Bicester and Bletchley, which closed to passengers in 1967, will also lead to a further increase in services between Bicester and Oxford as well as accommodate longer distance journeys that cannot currently be made by rail and could transfer from the A34.

Two fast trains an hour operate between Banbury and Oxford, with a journey time of around 20 minutes. This is competitive with the journey time by car for journeys between the centres but many trips will require connecting journeys to be made to/from from the rail stations which adds time to end-to-end journey time.

Cycling

There is a National Cycle Route (51) between Oxford and Bicester but, at 28km, cycling is not a viable option for the vast majority of people for regular commuter journeys. The direct route via the A41 and A34 is shorter (19km) but not attractive, because it is alongside the busy dual carriageways for most of the route. It is possible to cycle the short distances from Islip to Oxford and other smaller settlements to Bicester.

Bicycles can be carried on rail services between Bicester and Oxford as well as on the Cambridge to Oxford coach; this provides a more viable option for people who wish to have bicycles available for onward journeys at each end of the route.

Live	Work	Total Work Trips	Car	Bus	Train	Cycle
Oxford	Bicester	342	291	30	6	0
Bicester	Oxford	2440	1926	394	41	24
Total: Oxford – Bicester		2782	2217	424	47	24

Table 2. Numbers of Work Trips between Bicester and Oxford, taken from 2001 census.

A4260/A4165 Corridor

Description

The A4260/A4165 is an important route into Oxford when accessing the City from the north of the county. It accommodates significant movements from settlements between, and including, Banbury and Kidlington, and also Bicester, to Oxford. At the Kidlington roundabout (A4260/A4165 junction) the corridor is joined by traffic coming off the A34 at Gosford and heading to Oxford or Water Eaton Park & Ride. It is the predominant road route between Kidlington and Oxford (to Cutteslowe roundabout and then into the City Centre via Banbury Road or to East Oxford via the A40). It is also a main route from settlements in the north of the County that are not located close to A34 or M40 junctions in order to access east Oxfordshire and beyond via the A40 and M40 east of Oxford. For journeys to south or west Oxford from the A4260 access is via Frieze Way to the A34, and then via Botley or Abingdon Roads. Kidlington is 8km from the centre of Oxford if travelling via Banbury Road (A4165).

Table 3 shows journey to work data between Oxford, Kidlington and Banbury from the 2001 census. The main route for trips between Banbury and Oxford is via the M40 and A34.

Challenges/Problems

Road

Just fewer than 60% of journeys between Kidlington and Oxford are by car. This is relatively low compared to car use in other corridors, mainly because of the attractive sustainable alternatives available, but still represents the most popular mode, largely because of its convenience to most people.

Congestion is a problem in the following locations:

- Approaches to Kidlington roundabout (junction of the A4260 with the A4165), particularly southbound and westbound during the morning peak, suffer from congestion which is caused by southbound traffic exiting the roundabout, rather than the roundabout itself. Traffic exits the roundabout slowly, either as a result of a queue, or because drivers anticipate a queue at the Water Eaton Park & Ride junction, which is not visible over the brow of the A34 and rail bridge.
- The approach to the Water Eaton Park & Ride junction experiences congestion because traffic on the A4165 is stopped, to enable buses to cross the junction, and traffic and buses from the south to turn into the site.
- Traffic from Kidlington entering Oxford by other routes can be delayed in congestion on the A34.
- Cutteslowe roundabout, to the south of Kidlington roundabout, is also at capacity and traffic queues build up on the approaches. However,

the length of queues at Cutteslowe roundabout is limited because southbound traffic is held up on its approach to Cutteslowe roundabout by the delays at the Water Eaton junction. If additional capacity is provided at the Water Eaton junction congestion will worsen on the approach to Cutteslowe roundabout.

Although most parts of Kidlington are close to regular bus services to the city centre (described below), Park & Ride services are also available as an alternative for motorists requiring access to the City Centre. Water Eaton is the most accessible site from Banbury and Kidlington and the settlements in between. It gives access to the City Centre, and also to the JR and Churchill hospitals. Park & Ride services are described further in the Oxford chapter.

Bus

Kidlington is extremely well served by bus services to Oxford and around 30% of commuter journeys between the settlements are made by bus. The core bus service operates every five minutes throughout most of the day. Route variations give regular services to Grovelands in the east of the town, and Mill Street and Evans Lane in the west. Lyne Mead has a service every 15 minutes and peak time services go to Langford Lane and the airport north of Kidlington every 15 minutes.

These services are supplemented by services every 20 minutes from Bicester, which leave the A34 at Gosford and serve stops at the Kings Arms public house and Sainsbury's superstore.

Bus priority is good for much of the route between Kidlington and Oxford, with a continuous southbound bus lane commencing 350m before the Kidlington roundabout to Cutteslowe. Delays can be caused by the sheer volume of buses; buses picking up passengers block the bus lanes for non-stopping services because the majority of stops do not have lay-bys.

Peak time journeys on services from Kidlington to central Oxford are timetabled to take around 30 minutes, which is competitive when compared to the car. As a result of the good bus priority, off-peak services are only timetabled to be about 10 minutes quicker; buses pick up fewer passengers off-peak hence the reduced journey times.

Destinations in south and east Oxford are not accessible without a change of bus and a five minute walk across the City centre. The exception to this the Park & Ride service to the JR and Churchill hospitals which runs about every 15 minutes during the day from Grovelands, via Garden City, Kidlington, Water Eaton and Summertown.

Rail

Until 1964 Kidlington had a railway station on the Cherwell Valley line. It was located off Banbury Road, about a mile north of the village centre and was

therefore not particularly convenient for much of the population compared with the bus. Over recent years the County Council has lobbied for a new station at Kidlington on the Cherwell Valley line. In 2008 Chiltern Railways proposed a new station at Water Eaton with direct services to Oxford, Bicester and London. Although the primary market at Water Eaton Parkway will be those driving to the site, the station will be within walking and cycling distance of many areas of Kidlington and Gosford. In terms of door-to-door journey time between Kidlington and Oxford it is still expected that the bus journey will be quicker than the rail journey but is likely to be attractive to those making longer distance journeys and residents of Kidlington who currently travel to Oxford Station.

Train services run every 20 to 30 minutes throughout the day from Banbury to Oxford and take approximately 20 minutes. Five or six of these per day are stopping trains that call at Tackley, Heyford, and Kings Sutton and end to end journeys timetabled to take 31 minutes. This provides a competitive journey time with the car into Oxford for these villages, but catchments are small and the infrequent service does not make rail an attractive option for most people.

Cycling

There is a National Cycle Route (51) along the A4165 between Kidlington and Oxford. Kidlington and Gosford are about 4.5 miles from Oxford and are therefore cycling is a viable option for some people to commute. 6% of people cycle to work between Kidlington to Oxford.

Current problems with cycling in this corridor include the following:

- Difficulties crossing at the Water Eaton Park & Ride site.
- Narrow shared use path and intermittent (southbound – Haslemere Gardens to Lovelace Road on road – Bus Lane).
- Poor surface on shared paths.
- Wide side roads to negotiate for example at Five Mile Drive.
- Conflicts between buses and cyclists.
- Difficulties negotiating/crossing Wolvercote and Cutteslowe roundabout whether on road or pavement.

Live	Work	Total Work Trips	Car	Bus	Train	Cycle
Oxford	Kidlington	716	527	120	0	38
Kidlington	Oxford	2842	1584	972	6	187
Total: Oxford – Kidlington		3558	2111	1092	6	225
Oxford	Banbury	170	137	3	15	0
Banbury	Oxford	729	571	30	92	15
Total: Oxford – Banbury		899	708	33	107	15

Table 3: Numbers of Work Trips between Kidlington, Banbury and Oxford, taken from 2001 census.

The A40 west of Oxford

Description

The A40 corridor accommodates significant movements of both long distance inter-county journeys and more localised commuter journeys. The A40 in Oxfordshire was de-trunked in 2003 but is still a key route to and from Gloucestershire, south and mid Wales, London, and the M40 corridor.

Although the predominant flow in the corridor is tidal (eastbound in the morning peak, vice versa in the afternoon peak) the strategic nature of the A40 means that the corridor does cater for significant movements counter to the predominant flow.

The A40 is the predominant road route between Carterton, Witney and Oxford and then into Oxford via one of the radials, depending on the destination within Oxford. Most journeys enter the City via Banbury Road or Woodstock Road or stay on the A40 to access the east of the City. The more direct route to and from west Oxford is along the B4044 (via Eynsham and Botley). It is 30km from Carterton and 19km from Witney to the centre of Oxford if travelling via the A40 and Woodstock Road, and a similar distance via the B4044 route.

From Carterton, Witney can be accessed by the A40 or via Minster Lovell or Curbridge routes which provide good access to the business and industrial areas to the north and east of the town.

Table 4 shows journey to work data between Oxford, Witney and Carterton from the 2001 census.

Challenges/Problems

Road

Almost 80% of journeys to work between Carterton, Witney and Oxford are by car, largely because of its convenience to most people. Congestion is a problem in the following locations:

- The A40 approaching Wolvercote roundabout, particularly eastbound during the morning peak, is congested due to capacity constraints of the Wolvercote roundabout.
- The A40 westbound is congested, particularly in the evening peak, because of the volume of traffic and Cassington/Eynsham junctions.
- At the B4044 approaching Swinford Bridge toll there is delay in collecting the 5 pence toll from cars at the bridge.
- The Cutteslowe roundabout, to the east of Wolvercote roundabout, is also at capacity but because of the congestion at Wolvercote eastbound A40 traffic is held up on its approach to Cutteslowe roundabout which limits the length of queues building up here. If

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- additional capacity is provided at Wolvercote roundabout congestion will worsen at Cutteslowe.
- High volumes of traffic on local roads (particularly the A4095 and B4044) as vehicles avoid queuing on the A40. This can lead to severance and safety concerns in settlements on these routes, such as Long Hanborough and Bladon on the A4095 and Farmoor on the B4044.

Park & Ride services are available as an alternative for motorists requiring access to the city centre. Seacourt is the most convenient Park & Ride site for access from the west and is accessed via the B4044 route described above. Pear Tree Park & Ride to the north of the City is situated on the A44, between Wolvercote and Pear Tree roundabouts but requires drivers from the west to turn away from the City at Wolvercote roundabout in order to access it, which is counter-intuitive. Park & Ride services are described further in the Oxford chapter.

Modelling shows that as traffic increases in the future, the amount of traffic on the A40 and B4044 is unlikely to increase significantly in the peaks because these roads are already operating at capacity. Instead, residents of West Oxfordshire will be deterred from travelling into Oxford or will seek alternative, less suitable parallel routes to avoid the A40, such as the A4095 and smaller roads through villages.

Bus

There are frequent bus services between Carterton, Witney and Oxford. Around 20% of commuter journeys between the settlements are made by bus.

The principal Witney to Oxford service (up to every 15 minutes) serves Burford Road in Carterton then proceeds to Witney via Curbridge and the Thorney Leys estate. A less frequent service (up to every 30 minutes) serves Upavon Way and west Carterton before proceeding to Witney via Minster Lovell and employment areas to the north of the town.

Both services then leave Witney by Bridge Street, Newland and Shores Green. The more frequent service travels into Oxford via Eynsham, the B4044 and Botley Road. The half hourly service travels via the A40 and Woodstock Road in Oxford. Throughout most of the day these services combine to provide a bus every 10 minutes between Witney and Oxford.

There is no bus priority between Witney and Oxford until services reach Botley Road. This means that buses get caught in congestion at the Swinford Bridge toll, and approaching Wolvercote roundabout as described above, meaning there is little incentive to use the bus from a journey time perspective.

Peak time journeys on the more frequent service from central Witney to central Oxford are timetabled to take a maximum of 66 minutes, and 100

minutes from Carterton. However, the timetable caveats that the bus may arrive up to 20 minutes earlier depending on traffic. During peak times the less frequent service avoids the A40 approaching Wolvercote roundabout and uses the B4044 due to the unreliability of journey times when using the A40. Off peak journeys are timetabled to take between 29 and 41 minutes to and from Witney and just over an hour to or from Carterton.

Destinations in the south and east of Oxford are not accessible without a change of bus in the City centre.

Rail

Witney and Carterton formerly had rail stations located on the Oxford to Fairford rail line, which closed to passenger traffic in 1962 and freight traffic in 1970. The track was removed and the Eynsham southern bypass and industrial estates south of Witney have since been built on part of the alignment. A study in 2001, by Mott MacDonald for Oxfordshire County Council and West Oxfordshire District Council, explored possibilities of reopening the alignment between Oxford and Witney either for heavy or light rail, but this was ruled out on cost grounds.

Hanborough is the closest railway station to Witney and Carterton. It is on the Cotswold line and has regular services to Oxford. It is 10km from Witney on the A4095, which is too far for most people to access by bicycle. There is a bus service from Witney to Hanborough but no integration between bus and rail services, and no service at all from Carterton. The train service from Hanborough into Oxford takes just over 10 minutes so provides a quick reliable alternative to the road journey but currently there are just two services that would be classed as 'peak' arrivals in Oxford. Network Rail is currently upgrading the capacity of the Cotswold Line which may enable additional services to operate in the future.

Cycling

There is a National Cycle Route (57), which travels in part along the A40 and via Eynsham, between Oxford and Witney but at 19km cycling is not a viable option for most people living in Witney or Oxford for regular commuter journeys. However, there are small numbers of people who do make this journey by bike. This accounts for around 1% of trips.

There is more scope to encourage cycling between other settlements that are located more closely to each other such as Carterton and Witney, and Eynsham and Oxford. There are no officially designated cycle routes between Carterton and Witney but the settlements are only 9km apart which is a reasonable cycling distance for some people. Despite over 1,000 daily work journeys between the towns there were only three people in the 2001 census who claimed to cycle between Carterton and Witney on a regular basis.

People may be deterred from cycling between these settlements for the following reasons:

- There is not a safe or direct cycle link.
- There are high levels of vehicle traffic travelling at high speeds on the roads and the roads are not lit.
- Bus services in the corridor do not carry bicycles.
- There may be a lack of facilities for cyclists at either end. Further investigation would be required to establish if this is the case. Cycling facilities are described further in the Workplace chapter.

Live	Work	Total Work Trips	Car	Bus	Train	Cycle
Oxford	Witney	336	300	27	0	6
Witney	Oxford	1755	1299	376	22	24
Total: Oxford – Witney		2091	1599	403	22	30
Oxford	Carterton	12	12	0	0	0
Carterton	Oxford	530	374	135	6	0
Total: Oxford – Carterton		542	386	135	6	0
Witney	Carterton	131	121	10	0	0
Carterton	Witney	974	806	146	0	3
Total: Witney – Carterton		1105	927	156	0	3

Table 4: Numbers of Work Trips between Carterton, Witney and Oxford, taken from 2001 census.

The A44 Corridor

Description

The A44 begins in Aberystwyth and ends in Oxford at the Wolvercote roundabout. The A44 corridor in Oxfordshire accommodates significant movements of both long distance inter-county journeys and more localised commuter journeys. The A44 is an important alternative to the M40 and A40 routes from Gloucestershire, Worcestershire and mid Wales to Oxford and onwards to London and the south via the A34. It is also the key road route from many Cotswold towns and villages to Oxford and to Worcester. It passes through a number of Cotswold settlements, including Chipping Norton and Woodstock in Oxfordshire.

The A44 is single carriageway for the majority of its route through Oxfordshire but becomes dual carriageway from the Bladon roundabout just south of Woodstock for the remainder of the route to Oxford. The speed limit is 50mph for the majority of the route. However, it ranges from national speed limit to 30mph because it passes through residential areas.

The strategic nature of the A44 means that the A44 corridor within Oxfordshire caters for significant movements in both directions. The predominant flow in the early morning peak is southeast-bound towards Oxford and vice versa in the evening.

Most journeys enter the City via the Peartree Interchange and then the Woodstock Road, or along the Banbury Road via the Loop Farm roundabout and Frieze Way. Both routes lead to north Oxford and the City Centre, and also to the Oxford ring road eastern bypass for access east Oxford.

Chipping Norton is about 32km from the centre of Oxford via the Woodstock Road. Woodstock is 13km from the Oxford.

Table 5 shows journey to work data between Chipping Norton, Woodstock and Oxford from the 2001 census.

Challenges/Problems

Road

Almost 80% of journeys to work between Chipping Norton and Oxford are by car, largely because of its convenience to most people and because journey times to Oxford by car is less than by public transport. Congestion is a problem in the following locations:

- The A44 approaching Wolvercote roundabout is severely congested due to the volume of traffic and limited capacity of the roundabout. This backs often backs up to Pear Tree and Loop Farm roundabouts.

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- The A44 approaching the Bladon roundabout south of Woodstock is often slow moving due to the volume of traffic.
 - The A44 passes through Woodstock, Enstone and Chipping Norton, leading to severance and air quality issues, particularly related to the relatively high number of HGVs.

Park & Ride services are available from Peartree and Water Eaton as an alternative for motorists requiring access to the City Centre and to the Nuffield, Churchill and JR hospitals. Park & Ride services are described further in the Oxford chapter.

Bus

There is a half-hourly bus services between Oxford and Woodstock, which alternately continues to Charlbury and Chipping Norton. Around 15% of commuter journeys between Chipping Norton and Oxford are made by bus.

Peak time journeys, on the more frequent service, from Chipping Norton to central Oxford are timetabled to take a maximum of 73 minutes. From Woodstock, buses are timetabled to take 38 minutes to Oxford.

There is no bus priority between Chipping Norton or Charlbury and Oxford until services reach Pear Tree roundabout. An inbound bus lane is then provided, although there are gaps in provision across the entrance to Pear Tree park and ride site and on the immediate approach to Wolvercote Roundabout. In the morning peak buses are delayed in congestion approaching Pear Tree and Loop Farm roundabouts (caused by capacity constraints at Wolvercote). There is no northbound bus priority approaching Wolvercote Roundabout, leading to delays in the evening peak.

Destinations in the south and east of Oxford are not accessible without a change of bus in the City centre.

Although not all local trips in this corridor are between the major settlements of Chipping Norton, Woodstock and Oxford these settlements provide the greatest majority of trips and therefore offer most opportunity to transfer trips to the bus. The bus will also play a role in transporting people from smaller settlements in the corridor that may otherwise use the A44 but it is recognised that bus services operate most efficiently when providing a mass transit function which is more deliverable between urban centres.

Rail

Chipping Norton was formerly located on the rail line between Banbury and Kingham but the station closed to passengers in 1962 and line removed in 1965. The branch line to Woodstock closed in 1957. However, nearby Charlbury and Kingham have railway stations on the Worcester – Oxford – London Paddington (Cotswold) line.

There are three services that operate during the morning peak, and services that operate throughout the day. Services from Kingham are timetabled to take between 25 and 31 minutes and from Charlbury they are timetabled to take between 13 and 23 minutes.

Railbus services operate from Chipping Norton, and many other villages located on the A44 Corridor, to Kingham and Charlbury railway stations and link in with the rail timetables. Using the Railbus and then the train, Oxford can be reached from Chipping Norton in just under one hour, and London in just under two hours.

Rail does offer opportunities for local trips to be taken off the road network if people are able to access local stations on the Cotswold line.

Cycling

There is a National Cycle Route (5) between Woodstock and Oxford which uses the A44 and then travels along the canal to Wolvercote. Cycling accounts for around 3% of trips to work between Chipping Norton and Oxford. There is no formal cycle route between Chipping Norton and Oxford but the distance is too far for most people to cycle. Woodstock is 13km from Oxford and is therefore only a suitable cycling distance for a few people.

There is more scope to encourage cycling from Chipping Norton, and some of the smaller settlements, to local railway stations such as Kingham. Chipping Norton is just over 7km from Kingham but the route currently involves cycling along minor B-roads with fast moving vehicles and blind corners.

Live	Work	Total Work Trips	Car	Bus	Cycle
Oxford	Chipping Norton	168	138	21	3
Chipping Norton	Oxford	1020	759	172	57
Total: Oxford – Chipping Norton		1188	897	193	60
Oxford	Woodstock	215	185	18	12
Woodstock	Oxford	394	320	53	3
Total: Oxford – Woodstock		609	505	71	15

Table 5. Numbers of Work Trips between Chipping Norton, Woodstock and Oxford, taken from 2001 census.

A40 East of Oxford

Description

The A40 corridor accommodates significant movements of both long distance inter-county journeys and more localised commuter journeys. The A40 in Oxfordshire was de-trunked in 2003 but is still a key route to and from London and the M40 corridor from Gloucestershire and south and mid Wales.

The A40 east of Oxford is the predominant road route between London and Oxford (along the M40). The M40 westbound diverges east of Wheatley with one section continuing northwards towards Birmingham and the other turning into the A40 towards Oxford which follows a route between Wheatley and Holton, Thornhill Park & Ride (services to London and to Oxford), and Sandhills, Risinghurst and Barton. The A40 becomes the northern part the Oxford ring road at the Green Road roundabout and continues past Oxford towards Witney, west Oxfordshire and beyond.

The strategic nature of the A40 means that the corridor caters for significant movements in both directions.

Most journeys enter the Oxford via the Green Road roundabout then use the eastern bypass, or the London Road (A420), to access east Oxford, or stay on the A40 to access the north of the City or beyond. It is 10km from Wheatley to the centre of Oxford if travelling via the A40 and London Road, and a similar distance via Horspath and the Cowley Road (B480).

Table 6 shows journey to work data between Wheatley, Thame and Oxford from the 2001 census.

Challenges/Problems

Road

About 75% of journeys to work between Wheatley and Oxford are by car, largely because of its convenience to most people. Congestion is a problem in the following locations:

- The A40 approaching Green Road roundabout, particularly westbound during the morning peak, is busy due to the volume of traffic. However, this has greatly improved since the roundabout was reconfigured in 2006.
- The A40 eastbound, particularly in the evening peak, is busy due to the volume of traffic, although again this has improved since the roundabout was reconfigured.

Park & Ride services are available from Thornhill as an alternative for motorists requiring access to the City Centre and to the Nuffield, Churchill and

JR hospitals. Park & Ride services are described further in the Oxford chapter.

Bus

There are good bus services between Wheatley and Oxford. A service runs from Oxford Brookes University's campus in Holton, via Wheatley. This service has five trips in the morning peak, hourly services throughout the day and also a late night service (with stops at Thornhill Park & Ride, the London Road, City Centre, Botley Road, and the Harcourt Hill Campus at Hinksey). This service runs less frequently during the University holidays. Another service runs half hourly from Aylesbury via Thame and Wheatley to the City Centre and railway station. There are five buses per day that travel through the Haseleys, Miltons, Cuddesdon, Wheatley, Horspath, Garsington to Cowley and Oxford city centre but only one of these operates during the morning peak. There is also a 24-hour service between Oxford and London that runs every 15 to 20 minutes during the day that stops at the Thornhill Park & Ride and along the London Road.

Around 16% of commuter journeys between Wheatley and Oxford are made by bus. Between Thame and Oxford around 12% of journeys are made by bus, and between London and Oxford the figure is 28%, via the frequent coach services.

There is some bus priority on the A40, westbound between Thornhill Park & Ride and the Green Road roundabout, but none in the eastbound direction. Some sections of the London Road benefit from bus lanes in the eastbound direction. This means that buses get caught in congestion heading into Oxford on at the Green Road roundabout and along the London Road meaning there is little incentive to use the bus from a journey time perspective, particularly when travelling from villages within the A40 corridor that already experience lengthy journey times due to circuitous bus routes.

Peak time journeys on the more frequent service from Wheatley to central Oxford are timetabled to take a maximum of 23 to 30 minutes, 81 minutes from Aylesbury and 43 minutes from Thame.

Destinations in the south and north of Oxford are not accessible without a change of bus in the City centre.

Rail

Wheatley formerly had a rail station but the line (an extension to the Wycombe Railway) that linked Oxford, Cowley, Wheatley, Thame and Princes Risborough was closed in 1963. The site of the station has now been built on and travel between these settlements within this corridor is now limited to bus or private vehicle.

Chiltern Railway is proposing to link Oxford, the new parkway station at Water Eaton, with High Wycombe via the Bicester branchline, with a journey time expected to be around 30 minutes. This will be competitive with the journey time by car for journeys between the centres but many trips will require connecting journeys to be made to/from from the rail stations which adds time to end-to-end journey time. There are currently no proposals to reconstruct the Thames line to Cowley.

Cycling

There is a National Cycle Route (57) that passes through Holton, Wheatley, Littleworth, and Horspath and then follows the Cowley Road into Oxford. From Wheatley the route is approximately 10.5km which is only a suitable cycling distance for some people to commute. Cycling accounts for around 5% of trips between Wheatley and Oxford.

There is more scope to encourage cycling between Wheatley and eastern parts of Oxford such as Cowley and Headington and from Barton, Sandhills and Risinghurst to Oxford and Wheatley.

Coaches between Oxford and London are able to carry bicycles so there is scope to encourage further bicycle use for onward journeys at Oxford and London.

People may be deterred from cycling between Wheatley and other settlements on the corridor for the following reasons:

- Inclines along the route (particularly Headington Hill)
- There are high levels of vehicle traffic along the Garsington Road and Cowley Road.
- There may be a lack of facilities for cyclists at either end. Further investigation would be required to establish if this is the case. Cycling facilities are described further in the Workplace chapter.

Live	Work	Total Work Trips	Car	Bus	Cycle
Oxford	Wheatley	168	138	21	3
Wheatley	Oxford	1020	759	172	57
Total: Oxford – Wheatley		1188	897	193	60
Oxford	Thame	215	185	18	12
Thame	Oxford	394	320	53	3
Total: Oxford – Thame		609	505	71	15

Table 6 : Numbers of Work Trips between Wheatley and Thame and Oxford, taken from 2001 census.

A4074 Corridor

Description

The A4074 is the primary road link between Reading and Oxford. It is the most direct route between Reading and north and west Oxfordshire so carries long distance traffic but it is also has an important local role, linking villages in the corridor to Reading, Oxford and Wallingford. Between Oxford and Wallingford the corridor also accommodates traffic between Oxford and Henley, the most direct route being via the A4074 and A4130.

A significant proportion of traffic on the route is between Reading, Wallingford and Oxford. Table 7 shows journey to work data between these settlements from the 2001 census. It should be noted that the bus service has improved significantly since 2001.

It is 40km from Reading to the centre of Oxford if travelling via Abingdon Road and 23km between Wallingford and Oxford.

Road signs recommend Heavy Good Vehicle (HGV) traffic uses the M4 and A34 to travel between Reading and Oxford. This route is significantly longer and as are no physical or legal restrictions which prevent them using the A4074 the route does carry a reasonable proportion of HGVs.

Challenges/Problems

Road

Congestion is not currently a significant problem in the corridor itself, except on the Oxford Southern Bypass and the approach to Heyford Hill Roundabout. Significant queuing also occurs on the approaches to Reading at the junction with the A4155 in peak times.

Modelling shows that the amount of traffic using the route is likely to increase significantly in the future, particularly as further development is proposed for Wallingford. Growth in Didcot will also lead to traffic increasingly avoiding congestion on the A34 by using the A4074 to access employment in East Oxford.

More of an issue than congestion in this corridor is safety and severance. Several villages lie on the route, including Nuneham Courtenay, Berinsfield, Shillingford and Benson. Although Benson, Shillingford and Berinsfield lie predominantly on the east side of the road there are requirements for pedestrians to cross, in particular to access northbound bus stops. South of Wallingford the road passes through Cane End and there are some sharp bends which have resulted in a 50mph limit being put in place between Woodcote and Reading

Bus

Because there are large numbers of trips in the corridor between Reading, Wallingford and Oxford there are opportunities to maximise the use of public transport to cater for many of these.

Bus services between Reading, Wallingford and Oxford have improved significantly over recent years. A half-hourly service operates throughout the day on Mondays to Saturdays, with an hourly service in the evenings and on Sundays. There are late night services at weekends. Services also pass through Nuneham Courtenay, Shillingford, Berinsfield, Benson, Crowmarsh and Cane End and also serve stops on the Dorchester bypass, alternate services also divert through Woodcote.

Peak services into Oxford from Wallingford and Reading are operating at capacity and are often full and standing before they reach the Abingdon Road in Oxford.

Bus journey times between Oxford and Wallingford are around 30 minutes and Wallingford to Reading around 30 minutes, giving an end to end journey time of just over an hour. Peak time services are timetabled to take longer as a result of congestion on the approaches to Oxford and Reading; there is little bus priority except a small length of bus lane at the south end of Abingdon Road. Buses therefore get caught in the same congestion described above and there is no incentive to travel by bus in this corridor from a journey time perspective.

For direct journeys between Oxford and Reading the train is also significantly quicker (see below). However, the bus passes through south Oxford and north-west Reading so for journeys between locations in these areas the bus journey time is competitive with the train once time taken to access the station is taken into account.

Destinations in north and east Oxford are not accessible without a change of bus in the City Centre.

Although not all local trips in this corridor are between the major settlements of Reading, Wallingford and Oxford these settlements provide the greatest majority of trips and therefore offer most opportunity to transfer trips to the bus. The bus will also play a role in transporting people from smaller settlements in the corridor that may otherwise use the A4074 but it is recognised that bus services operate most efficiently when providing a mass transit function which is more deliverable between urban centres.

In Oxford, Park & Ride has provided a successful way of achieving a critical mass of passengers for which to provide a commercial bus service. In order to access Oxford from the south the Redbridge Park & Ride site is most convenient. This however still requires users to drive the A4074 and negotiate some of the most congested junctions in the county to access it.

The fact that most settlements in the corridor actually lie on the A4074 itself means that many of the villages do have an excellent service for their size and there is opportunity build on the premium route infrastructure already delivered by improving accessibility of stops, ensuring waiting facilities are attractive and implementing bus priority measures through the southern approaches to Oxford, accompanied by improvements to bus access to other areas of the City, particularly east Oxford.

Rail

There are frequent rail services between Reading and Oxford with four 'fast' trains an hour taking just over 20 minutes. This is much quicker than the car for journeys between the two city centres. Rail also has a role in removing longer distance and freight trips from the road network.

There is not much scope for rail to cater for additional local trips in the corridor. The village of Cholsey, 4km south of Wallingford has a station on the line between Reading and Didcot with a half-hourly service. The branch line linking Wallingford to the rail network at Cholsey closed to passenger traffic in 1959 and now operates as a heritage railway but the track is not linked to the mainline. Journey times between Cholsey and Oxford by rail are around half an hour, with some peak journeys taking as little as 20 minutes but this is similar to the bus journey time so improving sustainable links between Wallingford and Cholsey is unlikely to encourage many more people to use the train for journeys between Wallingford and Oxford or Reading.

Cycling

The main flows in the corridor are between Oxford and Wallingford and Reading. These settlements are too far apart for most people to be able to cycle.

Cycling does have a role in improving access to the public transport network. Several bus stops in the corridor have cycle parking facilities which are well used. These enable people to cycle to bus stops from places near the route that may be too far to walk.

Live	Work	Total Work Trips
Oxford	Reading	300
Reading	Oxford	333
Total: Oxford – Reading		633
Oxford	Wallingford	143
Wallingford	Oxford	353
Total: Oxford – Wallingford		496
Reading	Wallingford	161
Wallingford	Reading	296
Total: Reading - Wallingford		457

Table 7: Work Trips between Oxford, Wallingford and Reading from 2001 census.

A420 Corridor

Description

The A420 is the primary road link between Swindon and Oxford. It also provides a direct link between the West Country and Eastern England. From the eastbound M4, Oxford is signposted at junction 15, via the A420 and Bristol is signposted via the A420 from the A34, it therefore also carries a significant amount of long distance traffic. It also has an important local role, linking villages in the corridor to Swindon, Oxford and Faringdon. Between Oxford and Besselsleigh the corridor also accommodates traffic between Oxford and Grove and Wantage and other areas of the developing Science Vale UK, the most direct route being via the A420 and A338. Issues on the A338 are described in the Science Vale UK chapter.

A significant proportion of traffic on the route is undertaking journeys between the settlements of Swindon, Faringdon and Oxford. Table 8 shows journey to work data between these settlements from the 2001 census. It should be noted that the bus service has improved significantly since 2001.

It is 45km from Swindon to the centre of Oxford if travelling via the Botley Road in Oxford, and 30km between Faringdon and Oxford. Other large settlements on the route include Watchfield, Shrivenham, Southmoor and Cumnor.

Challenges/Problems

Road

The A420 carries large volumes of traffic including HGVs and is subject to congestion, particularly during peak times. There is a 50mph speed limit in place along the route and there are a number of roundabouts. The alternative route between Oxford and Swindon is via the A34 and M4, which although is around twice the distance takes around the same amount of time.

Modelling shows that the amount of traffic using the route is likely to increase significantly in the future, particularly as further development is proposed for Faringdon and Swindon. As Grove and Wantage grow there is likely to be more movements between these towns, Oxford and the north which will put pressure on the A420 junction with the A338 and the A420 between this junction and the A34.

The majority of settlements on the route are bypassed so community severance is not a particular issue.

Bus

Due to the large numbers of trips in the corridor between Swindon, Faringdon and Oxford there are opportunities to maximise the use of public transport to

cater for many of these.

Bus services between Swindon, Faringdon and Oxford have improved significantly over recent years. A half-hourly service operates throughout the day on Mondays to Saturdays, with an hourly service in the evenings and on Sundays.

Bus journey times between Oxford and Faringdon are around 40 minutes and Faringdon to Swindon just over 30 minutes, giving an end to end journey time of around 75 minutes. Peak services are timetabled to take longer as a result of congestion on the approaches to Oxford and Swindon; the service does benefit from bus priority along Botley Road on the way into Oxford.

Due to the majority of settlements in the corridor being bypassed, the bus service is required to divert off the A420 to serve the centres of population. This increases the journey time when compared to the car and to a certain extent limits the attractiveness of the bus for end to end journeys between Oxford and Swindon.

Destinations in south, north and east Oxford are not accessible without a change of bus in the City centre.

Although not all local trips in this corridor are between the major settlements of Swindon, Faringdon and Oxford these settlements provide the greatest majority of trips and therefore offer most opportunity to transfer trips to the bus. The bus will also play a role in transporting people from smaller settlements in the corridor that may otherwise use the A420 but it is recognised that bus services operate most efficiently when providing a mass transit function which is more deliverable between urban centres.

In Oxford, Park & Ride has provided a successful way of achieving a critical mass of passengers for which to provide a commercial bus service. In order to access Oxford from the west the Seacourt Park & Ride site is most convenient. However, this still requires users to drive via the A420 and there are capacity constraints at the site.

Rail

Although rail journeys between Oxford and Swindon require a change of trains at Didcot the journey time by train is still quicker than by bus. There are approximately two trains an hour that complete the journey in less than 45 minutes, which is competitive with the journey time by car from journeys between the centres. However, this is significantly longer than the train journey between Oxford and Reading, which is similar distance. The quickest journeys between Swindon and Oxford take around 20 minutes.

There is not much scope for rail to cater for additional local trips in the corridor. The branch line linking Faringdon to the rail network closed to passengers in 1951. Faringdon and settlements south of the A420 are

located close to the Great Western mainline and could be in the catchment of a new station at Grove but there are not good public transport links at present.

A new station at Grove may also offer opportunities to relieve pressure on the A338 and A420 east of Besselsleigh if it were to be constructed. This is described further in the SVUK chapter.

Cycling

The main flows in the corridor are between Oxford, Faringdon and Swindon. These settlements are too far apart for most people to be able to cycle but there may be opportunities to encourage cycling between some of the smaller settlements and the population and employment centres, such as between Cumnor and Oxford or Shrivenham and Swindon.

Live	Work	Total Work Trips
Oxford	Swindon	146
Swindon	Oxford	286
Total: Oxford – Swindon		432
Oxford	Faringdon	39
Faringdon	Oxford	232
Total: Oxford – Faringdon		271
Swindon	Faringdon	
Faringdon	Swindon	
Total: Swindon - Faringdon		

Table 8: Numbers of Work Trips between Oxford, Faringdon and Swindon taken from 2001 census.

Cycling also has a role in improving access to the public transport network. Several bus stops in the corridor have cycle parking facilities which are well used. These enable people to cycle to bus stops from places near the route that may be too far to walk.

Strategy Measures for Inter Urban Corridors - Centre to Centre Trips	
Road	<p>Implement traffic information and management systems to improve operation of network.</p> <p>Implement capacity improvements at selected junctions to reduce congestion and queuing in places where transferring enough trips to sustainable modes in order to reduce congestion is not a realistic option.</p>
Bus	<p>Build on success of existing Premium Routes and continue to implement Premium Routes Strategy to improve access to Oxford, comprising bus priority measures (e.g. lanes, traffic lights, clearways) that will reduce delays and improve reliability.</p> <p>Work with local bus companies to improve frequency, attractiveness and increase patronage of bus services between settlements located in the Inter Urban Corridors and Oxford and ensure adequate capacity on peak services.</p> <p>Work with bus companies to ensure adequate direct services to a wider range of destinations in Oxford, in particular large employment areas of east Oxford, from other settlements.</p> <p>Promote integration between local bus services and Park & Ride (remote, city edge or both) sites and ensure a wider range of destinations in Oxford, in particular large employment areas of east Oxford.</p> <p>Improve marketing and use of passenger information systems (pre- and en-route information) to encourage travel by bus.</p> <p>Improve walking and cycling routes to bus stops, especially those with Premium Route services, improving safety and reducing severance where these are on busy roads, and market / display information about these walking and cycling routes.</p>
Rail	<p>Work with the rail industry to continue to promote travel by train.</p> <p>Implement measures to improve sustainable access to railway stations.</p> <p>Promote opportunities for sustainable access to railway</p>

	<p>stations for residents within walking and cycling distance of railway stations.</p> <p>Promote railway stations as public transport interchanges for access to a wide range of destinations, by improving integration of bus and rail services.</p> <p>Support capacity improvements and additional services into Oxford, as well as proposals to re-open or open new stations.</p> <p>Support the redevelopment of Oxford Railway Station to ensure it is an attractive gateway that can accommodate passenger growth.</p>
<p>Cycling</p>	<p>Promote opportunities for people to take bikes on trains and coaches to ensure sustainability of onward journeys.</p> <p>Improve cycle links between settlements that are located within reasonable cycling distance to one another, in particular to settlements that have employment opportunities, services and facilities.</p>
<p>Behaviour</p>	<p>Initiate and influence travel behaviour change by encouraging people to make fewer trips by car where possible and to walk, cycle or use public transport and more efficient and lower emission vehicles as they become available.</p> <p>Encourage working from home.</p> <p>Work to improve containment of settlements, ensuring opportunities are available for residents to work in the settlements in which they live.</p>

Strategy Measures for Inter Urban Corridors – Local Trips	
Road	<p>Implement traffic information and management systems to improve operation of network.</p> <p>Implement capacity improvements at selected junctions to reduce congestion and queuing in places where transferring enough trips to sustainable modes in order to reduce congestion is not a realistic option.</p>
Bus	<p>Maintain, improve and promote bus services to settlements away from the premium route network, particularly at times when inter urban corridors are congested.</p> <p>Improve marketing and use of passenger information systems (pre- and en-route information) to encourage travel by bus.</p> <p>Improve access to bus services to increase bus use amongst residents further from current main bus corridors by implementing measures to encourage motorists to transfer to bus services closer to journey origin through the promotion of new remote Park & Ride sites.</p> <p>Promote Park & Ride (remote, city edge or both) services from existing sites to a wider range of destinations in Oxford, in particular large employment areas of east Oxford.</p> <p>Promote integration between local bus services and Park & Ride (remote, city edge or both) sites and ensure a wider range of destinations in Oxford, in particular large employment areas of east Oxford.</p> <p>Improve walking and cycling routes to bus stops, especially those with Premium Route services, improving safety and reducing severance where these are on busy roads, and market / display information about these walking and cycling routes.</p>
Rail	<p>Work with the rail industry to continue to promote travel by train where opportunities exist.</p> <p>Implement measures to improve sustainable access to railway stations.</p> <p>Promote opportunities for sustainable access to railway stations for residents within walking and cycling distance of railway stations.</p>

	<p>Promote railway stations as public transport interchanges for access to a wide range of destinations, by improving integration of bus and rail services.</p> <p>Support capacity improvements and additional services from local services into Oxford.</p>
<p>Cycling</p>	<p>Promote opportunities for people to take bikes on trains and coaches to ensure sustainability of onward journeys.</p> <p>Improve cycle links between settlements that are located within reasonable cycling distance to one another, in particular to settlements that have employment opportunities, services and facilities.</p> <p>Improve cycle links between settlements within reasonable cycling distance of other settlements that have public transport services and public transport interchanges.</p>
<p>Behaviour</p>	<p>Initiate and influence travel behaviour change by encouraging people to make fewer trips by car where possible and to walk, cycle or use public transport and more efficient and lower emission vehicles as they become available.</p> <p>Encourage working from home.</p> <p>Work to improve containment of settlements, ensuring opportunities are available for residents to work in the settlements in which they live.</p>

Strategy Measures for Inter Urban Corridors – Long Distance Trips	
Road	<p>Implement traffic information and management systems to improve operation of network.</p> <p>Implement measures to ensure long distance trips, both people and freight, are using appropriate routes in order to minimise impact on local communities.</p> <p>Implement capacity improvements at selected junctions to reduce congestion and queuing in places where transferring enough trips to sustainable modes in order to reduce congestion is not a realistic option.</p> <p>Work in partnership with the Highways Agency to improve traffic management and reduce congestion on the A34</p>
Bus	<p>Support and work with operators to promote existing long distance bus and coach services and proposals for new services which cater for long distance journeys as an alternative to driving</p>
Rail	<p>Promote opportunities for sustainable access to railway stations for residents within walking and cycling distance of railway stations.</p> <p>Support proposals for new and improved rail services to a range of destinations, including East West Rail.</p> <p>Support Network Rail in delivering improved rail infrastructure in order to accommodate growth in passenger and freight on the network</p> <p>Support proposals to increase movement of freight by rail.</p>
Cycling	<p>Promote opportunities for people to take bikes on trains and coaches to ensure sustainability of onward journeys.</p>
Behaviour	<p>Initiate and influence travel behaviour change by encouraging people to make fewer trips by car where possible and to walk, cycle or use public transport and more efficient and lower emission vehicles as they become available.</p> <p>Encourage working from home.</p>

	<p>Work to improve containment of settlements, ensuring opportunities are available for residents to work in the settlements in which they live.</p>
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