



Where should all the new housing go?

**Background information
to the
South East Plan consultation**

Transport Issues

September 2005



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Central Oxfordshire Housing Development: Transport Issues

General Overview

The aim of this paper is to highlight the key transport issues relevant to potential future development in central Oxfordshire at Bicester, Didcot and Grove/Wantage. As such, it does include other significant transport issues in the County. The paper is in two parts:

1. An overview of the issues surrounding the road network, rail and buses;
2. A table listing the main schemes in the County which are most obviously linked to (and in some cases might only realistically be taken forward in association with) development; the table is divided into national/strategic and local schemes.

The table gives some very broad estimates of possible timescales and costs for these schemes. Timescales are expressed as 'delivered by' years reflecting the end of five-year LTP periods up to the end of the SE Plan. Costs are very indicative and are expressed as 'low' (<£2m), 'medium' (>£2m but <£10m), 'high' (>£10m but <£100m) and 'very high' (£100m+). Where schemes have the most potential to be either partly or wholly funded by Development, the Highways Agency or Network Rail, this has been identified.

Rest of Oxfordshire

This paper focuses on the transport implications of housing growth within the Central Oxfordshire Sub-Region. However, the South East Plan also provides for a lower but still significant level of housing growth in the rest of the county, mainly among existing towns.

The main one is Banbury, the largest town in Oxfordshire (excluding the City of Oxford). There is significant local employment here and local road infrastructure and bus services will be needed to serve new estates. There may also be demand for a South East Link Road as identified through the Countywide Transport Networks Review (TNR).

Elsewhere, many of the towns will look to Oxford for jobs and services, particularly those in West Oxfordshire. However, other Oxfordshire towns will also look to large urban centres outside the county. These include Swindon in the case of Faringdon and Aylesbury in the case of Thame. This may have implications for transport links between these settlements.

Highway Network Issues

The TNR predicted congestion on the road network by 2021. This will affect most of the A34 between Bicester and Didcot and links to it including the A415 west from Abingdon via Marcham and the A4130 between Didcot and Milton Interchange. Other sections of road to be affected include the A415 east of Abingdon, the A4074 approaching Oxford from the south-east (an alternative route to the A34) and some roads in Bicester.

The TNR has identified network enhancements, notably the upgrade of the A415 between Witney and Abingdon, in part to relieve existing congestion on the A40 and A34 corridors. Other study work, for example ITSs at town level, has identified the

need for other schemes (eg local bypasses and junction improvements) closely linked to new housing and other development.

Rail Issues

East West Rail is currently being reviewed by the ODPM in relation to growth at Milton Keynes and Aylesbury. This could significantly improve public transport options from Bicester, although the frequency of service is likely to be just hourly. If the required bus priority measures for a credible premium bus service between Oxford and Bicester cannot be achieved, there may be a case for a greater rail frequency between these towns, which would require double track.

Other significant rail investment schemes include resignalling around and to the north of Oxford station. A related major scheme would be the relocation or expansion of Oxford Station, linked to redevelopment of the city's West End. These are not a prerequisite for East West rail. However, they are needed to cater for growth in passenger and freight traffic on this congested piece of railway. Without this we are likely to see rationalisation of services with fewer trains calling at Didcot and intermediate stations to Oxford as proposed for the new rail franchise from 2006.

Bus Issues

A network of frequent express bus services – “Premium Routes” – is proposed to link Oxford with the surrounding towns with significant commuter flows ie Witney, Bicester and Abingdon. An additional component is the creation of remote Park & Ride sites on the edge of these towns to serve Oxford and potentially the towns themselves. A study of the bus network required to support existing and planned housing and employment in the south of the county is required. This would cover the various services linking Oxford, Abingdon, Didcot and Wantage/Grove and recommend the most suitable route network and pattern of service.

It had been envisaged that Premium Route services to Oxford could use guided busways alongside the railway into Oxford from Peartree in the north and Redbridge in the south. However, the emphasis is now on securing bus priority on the radial approaches to Oxford, especially across the ring road. The Highways Agency is not convinced of the need for bus priority measures but the County Council is emphasising that measures to assist buses will help take local traffic off the strategic road network.

Need for a multi-modal study of the A34 Corridor

Many of these issues are inter-related. For example, extra road capacity on the A34 is an alternative to new road capacity on parallel routes such as a Didcot-A4074 link road including new Thames crossing. Improved rail services could attract both car and freight traffic off the trunk road but this would require significant investment. Premium Routes (enhanced inter-urban bus services) are also an alternative to the car but are likely to require bus priority measures on the A34 both north and south of Oxford. Local bus and cycle networks can remove some local traffic from the trunk road and/or key A34 junctions.

It is important that these various options are considered as part of an integrated package. This is why the County Council has been pressing the Government, so far without success, for a study of the A34 corridor. Ideally this would consider not only the various modes but also the needs of both local and longer distance traffic. The study would ideally cover the whole of the A34 from Southampton to the M40 but with

particular focus on the most congested and complex sections, in South Hampshire and Oxfordshire.

**Potential significant Central Oxfordshire Transport Schemes 2006-2026 linked to
Development proposed in the Structure Plan / South East Plan**

National/Strategic Schemes

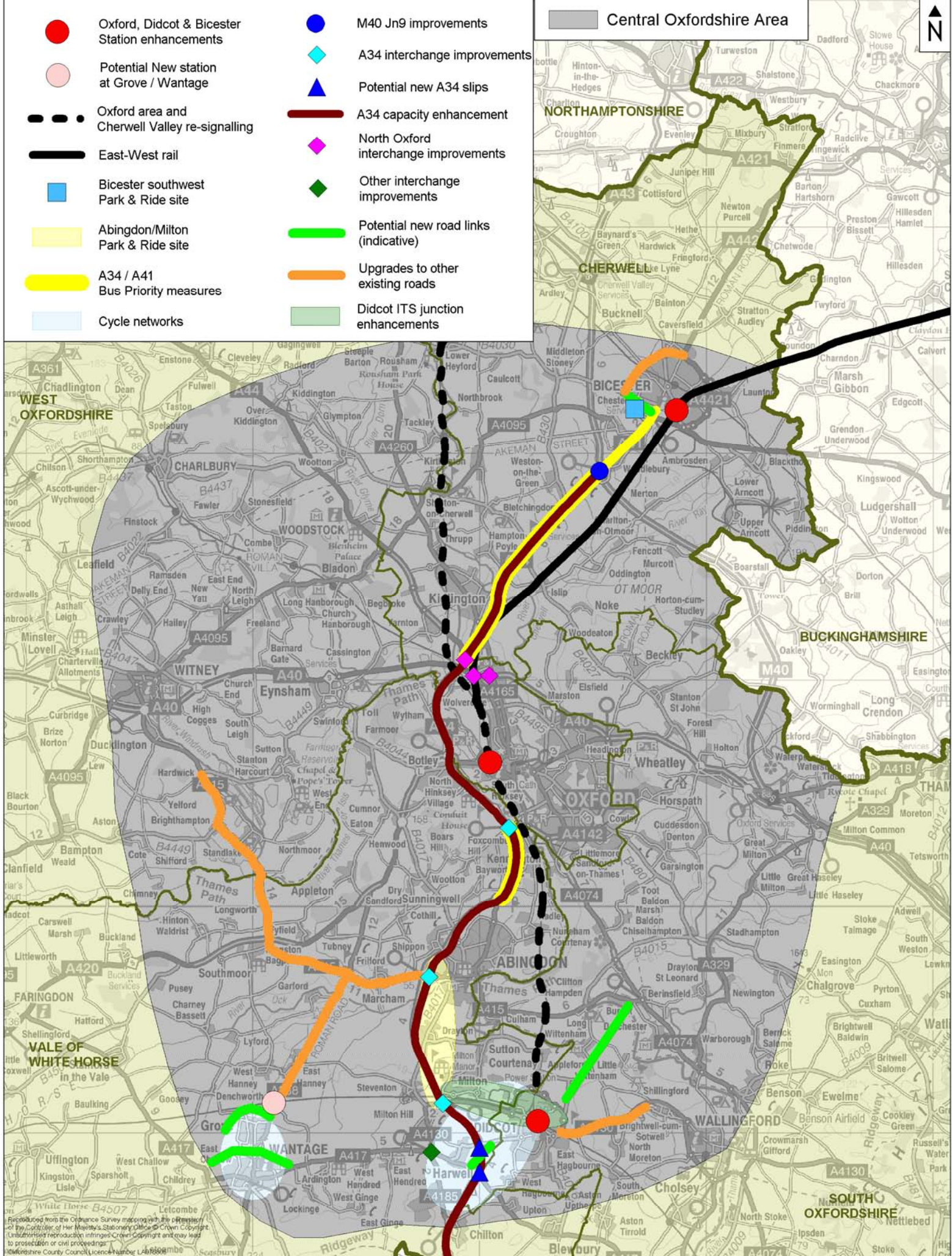
Scheme Description	Main Modes affected	Main Development Locations Affected	Estimated Cost/Funding	Estimated Timescale	Other comments
East West Rail - hourly service between Oxford and Milton Keynes	Rail, less traffic on parallel road corridor including A34	Bicester	High Network Rail (NR)	2016	Mainly for access to Milton Keynes and Oxford West End. Business Case positive, outcome of ODPM study looking at development opportunities delayed to end of August 2005.
Oxford Station capacity enhancement	Rail	All	High (NR)	2016	Enhancement or relocation to new site, in association with West End Development proposals.
Oxford Area / Cherwell Valley resignalling	Rail	All	High (NR)	2016	Proposed for 2014 as in need of renewal but would also enhance capacity for more freight trains.
A34 – significant capacity enhancement between south of Didcot and north of Oxford	Car, lorry	All	Very High Highways Agency (HA)	2026+	On-line widening would have very high financial and environmental costs, with extensive property demolition west of Oxford. A new alignment would have even higher costs.
M40 Junction 9 improvements	Car, lorry, bus	Bicester	Medium (HA)	2006	Programmed for 2006, could congestion shift closer to Oxford?
North East Didcot to A4074 link road including new Thames crossing	Car, lorry, bus	Didcot	High	2026+	Would form alternative route between Didcot and Oxford, relieving parallel section of A34 but at high financial and environmental cost.
Congestion Charging / Road Pricing	Car, lorry	All	High	2026	High on central Government agenda. National scheme could be in place by 2016. Link to significant public transport improvements essential.

Local Schemes

Scheme Description	Main Modes affected	Main Development Locations Affected	Estimated Cost/Funding	Estimated Timescale	Other comments
Enhanced East West Rail – more trains between Oxford and Bicester	Rail, traffic on parallel road corridor including A34	Bicester	Medium	2016	Necessary if bus priority measures required for Premium Bus Route are not achieved.
Bicester SW Park and Ride site	Car, bus	Bicester	Medium Development (D)	2011	Could save car users driving along A34 to Peartree or Water Eaton.
Bicester South West link road	Car, lorry, bus (less town centre traffic)	Bicester	Medium (D)	2011	Linked to proposed housing development in SW quadrant.
Bicester Western Perimeter Road upgrade	Car, lorry, relief for town centre helps bus	Bicester	High (D)	2021	Particularly needed if housing is developed on North West side of town, alignment could differ from current road network.
A41 southbound bus priority (Bicester to M40)	Bus	Bicester	Medium	2011	Proposed to support Premium Bus Route and/or remote P&R. HA says not needed after Junction 9 improvements.
A34 bus priority (from M40 to Kidlington turn)	Bus	Bicester	Medium Highways Agency? (HA)	2016	HA opposed, but TNR shows this section congested by 2021 even without housing growth – need A34 Corridor Study.
A44 Peartree Interchange A40/A44 Wolvercote Roundabout A40/A4165 Cutteslowe Roundabout	Car, lorry, bus	Bicester	Medium	2011-16	Operation of all of these junctions is closely linked and needs to be included in A34 Corridor Study. Primary aim is to address existing A40 issues but this may adversely affect north-south bus movements between Oxford and Bicester/Kidlington. Northbound buses leaving Oxford via the A4165 Banbury Road already face delays.
A423 Hinksey Hill interchange including bus priority to Abingdon Road	Car, lorry but especially bus	Didcot Wantage/Grove	Medium	2016	Important to Premium Bus Route network as all services from Didcot, Abingdon and Wantage / Grove access Oxford via junction.

Scheme Description	Main Modes affected	Main Development Locations Affected	Estimated Cost/Funding	Estimated Timescale	Other comments
A34 Lodge Hill – Hinksey Hill bus priority northbound	Car, lorry but especially bus	Didcot Wantage/Grove	Medium	2016	Important to Premium Bus Route network as most services from Didcot, Abingdon and Wantage/ Grove access the city via this section.
A415 Marcham Interchange	Car, bus	Didcot Wantage/Grove	Medium	2021	Eastbound (morning peak) congestion affects buses from Wantage /Grove to Abingdon and Oxford.
A415 Improvements Stage 1 - Marcham Bypass including A415/A338 Frilford junction	Car, lorry, bus	Wantage/Grove	High	2011	Northbound (am peak) queuing on A338 affects buses from Wantage/Grove to Abingdon and Oxford. Scheme likely to be submitted for LTP funding.
A415 Improvements – Stages 2+	Car, lorry, bus	All	High	2021	Series of individual / linked schemes along A415 (Standlake, Newbridge, Kingston Bagpuise) that could relieve A34 corridor.
A338 north of Grove improvements	Car, lorry, bus	Wantage/Grove	Medium	2016	To address road safety and congestion particularly to buses on Wantage/Grove-Oxford route.
A34/A4130 Milton Interchange capacity improvements	Car, lorry, bus	Wantage/Grove, Didcot	Low Development (D)	2011	Developer funding and proposals agreed to maximise capacity. May need bus priority if on Premium Route network.
Wantage/Grove Cycle Route Network	cycling	Wantage/Grove	Low	2016	For local trips including access to bus services (+ any new station).
Grove Railway Station	Rail	Wantage/Grove	Medium	2021	Requires Network Rail approval and willing rail operator.
A34 Abingdon area or Milton Remote Park & Ride site	Car, bus	Wantage/Grove, Didcot	Medium	2016	Need to consider as part of review of Oxford-Abingdon-Didcot-Wantage bus network.
Link road to North West of Grove	Car, lorry, bus	Wantage/Grove	Medium (D) Development	2016	To link new housing to A338, possible access to station.
Wantage North East Relief Road	Car, lorry	Wantage/Grove	Medium (D)	2016	Likely to be justified through proposed LP development.
Wantage North West Relief Road	Car, lorry	Wantage/Grove	Medium (D)	2026	Further development at Grove / Wantage may justify.

Scheme Description	Main Modes affected	Main Development Locations Affected	Estimated Cost/Funding	Estimated Timescale	Other comments
A417 Wantage-Rowstock roundabout upgrade	Car, lorry, bus	Wantage/Grove	Medium	2016	To address road safety and congestion particularly to buses on Wantage/Grove-Didcot route.
Rowstock Roundabout signalisation and/or capacity enhancement	Car, lorry, bus	Wantage/Grove, Didcot	Low	2011	Could help prioritise east-west bus movements but direct bus access to Harwell IBC from NW avoiding Rowstock is preferable.
Didcot ITS work: identified junction improvements	Car, lorry	Didcot	Low (D)	2016	Milton Park; Power Station; Manor Bridge; Foxhall Bridge; A4130/B4016.
A4130 Didcot to Brightwell-cum-Sotwell	Car, lorry, bus	Didcot	Medium	2016	To address road safety and improve alignment and junctions.
B4493-A417 Harwell bypass	Car, lorry	Didcot	Medium (D)	2016	Identified through Didcot ITS work.
A417-Chilton road improvement	Car, lorry	Didcot	High	2026	Potential extension of Harwell Bypass to link to existing all-movements junction. On-line or alternative alignment.
New A34 slips at B4493 or A417	Car, lorry, bus	Didcot Wantage/Grove	High Highways Agency? (HA?)	2026	Require HA agreement, unlikely to be forthcoming as it would attract local rather than strategic use of the A34.
Harwell/Didcot/Milton Park cycle route network	Cycling	Didcot	Low	2016	Would build on successful network – likely to be important for many shorter trips as alternative to car.
Didcot Parkway interchange	All	Didcot	Medium	2016	Options being progressed through GW franchising.



South East Plan - Possible Central Oxfordshire Transport Schemes for further consideration

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