

Connecting Oxfordshire: Local Transport Plan 2015 – 2031

Volume 2 part ii:

Science Vale Area Strategy &
Science Vale Cycle Strategy

Banbury, Bicester, Carterton &
Witney Area Strategies

A420 Route Strategy

Freight Strategy

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Science Vale Transport Strategy

Local Context

1. The Science Vale area strategy is focused around the UK's leading centres for science, technology and innovation at Harwell, Milton Park and Culham Science Centre and includes the fast growing settlements of Didcot, Wantage and Grove. Figure 1 shows the Science Vale area.
2. Although Science Vale does not include Abingdon and Wallingford, this strategy does contain some schemes to recognise the interaction of Science Vale with these towns, with many trips being made into Science Vale for work and leisure.
3. Science Vale is already one of the most successful areas of science-based industry in the country. The area has a high concentration of employment in industries such as research and development, publishing, education and hi-tech manufacturing activities such as motor vehicles and IT, reflecting the presence of some large and prestigious employers in these industries.

Employment and Housing Growth

4. South Oxfordshire Core Strategy 2027 (adopted December 2012) and the Vale of White Horse Local Plan 2031 Part 1: Strategic Sites and Policies (published November 2014) outline the need to deliver up to 20,000 new jobs, principally at the main employment centres of Harwell, Culham Science Centre and Milton Park.
5. Employment growth is also supported by the Oxfordshire Local Enterprise Partnership Strategic Economic Plan, which recognises Science Vale as being part of the 'Oxfordshire knowledge spine.' In particular it notes that the area provides high value research infrastructure, particularly at Harwell campus and Culham Science Centre, supporting high-tech and science related job growth. This growth is facilitated by the Science Vale Enterprise Zone covering 64 hectares (ha) within Harwell and 28ha within Milton Park. Development within the Enterprise Zone will generate income for the Local Enterprise Partnership (LEP) for investment in infrastructure to support wider economic growth in Oxfordshire. We are working with partners to implement the projects and workstreams identified to support the enterprise zone. Our role is predominately leading projects around transport, skills, inward investment, and broadband.

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6. There is also significant potential for employment growth in Didcot on the site of the decommissioned Didcot A Power Station. The Vale of White Horse District Council supports the redevelopment of the site to provide a high quality mixed use development, supported by improved transport infrastructure. Around 47ha of land at Didcot A is available for redevelopment and up to 29ha of the site has been reserved for employment uses.
 7. Concerning future housing growth, the Oxfordshire Strategic Housing Market Assessment (SHMA) was published in April 2014. The aim of the SHMA is to help local planning authorities understand how many homes will be needed in the period 2011 – 2031. It identified that between 725 and 825 homes are needed per year in South Oxfordshire and 1,028 homes per year are needed in the Vale of White Horse District. Each District Council is planning for the provision of additional homes as part of updating their Local Plans, however this roughly equates to 20,000 new homes across the Science Vale area.
 8. Transport modelling work has been undertaken to assess the impact future developments have on the Science Vale transport network. With the amount of growth proposed a number of schemes are required, working as a package, to collectively mitigate the cumulative impact of that growth and support the continued success in delivery of high value jobs growth within the Enterprise Zone.
 9. Our main focus is to create the conditions to facilitate residential and employment growth, ensure that the transport network can continue to operate efficiently, promote sustainable travel and create a thriving, attractive place in which to live and work. Expansion of the science and technology business and creation of attractive town centres that offer good local services and amenities are essential to achieving this.
 10. Effective partnership working with the public and private sector including Highways England, bus and rail operators, Network Rail, North Wessex Downs Area of Outstanding Natural Beauty, District, Town and Parish Councils, and businesses, will be essential to deliver the vision and transport aims for the area.
 11. In particular, we are working closely with the District Councils to agree a shared vision for growth set out in their Local Plans and supporting documents such as the Science Vale Area Action Plan and supplementary planning documents. This includes working with them to evaluate the transport impacts of the additional housing growth identified by the SHMA. A

number of transport infrastructure improvements are likely to be needed to support additional housing allocations. This will also include collecting S106 contributions/CIL from developments to ensure they mitigate their impact on the strategic transport network.

Connecting Science Vale to wider Oxfordshire and beyond

12. To support planned growth it is vital that new and improved transport infrastructure is provided as well as measures to encourage and facilitate sustainable travel. Movement within Science Vale and connections with the rest of Oxfordshire's transport network also need to be efficient and reliable. High quality, efficient transport links along what is known as the Knowledge Spine which connects Oxford, Science Vale and Bicester are also essential. This is where existing science and technology industries are focussed and where there is the greatest development potential for both employment and housing growth. Connectivity along this corridor will also be supported through development of technology and innovation, with new measures supported by the Science Transit Strategy.
13. Excellent access to international gateways is also vital. Fast, reliable access to Heathrow Airport, Gatwick Airport and international rail at London St Pancras is a critical factor in attracting investment and growing the knowledge sector business in Science Vale. Didcot Parkway station, as the main transport hub for the area, has a key role in achieving this.

Transport Aims

14. The transport priorities for Science Vale are to improve access to the Enterprise Zone sites at Milton Park and Harwell and Culham Science Centre for international, national and local travel, to enable economic growth at other key employment sites in the area, to plan ahead to manage the impact of future housing growth on the transport network, and to improve connectivity between employment, services and areas of housing growth.

To achieve this we will improve:

- access to strategic road and rail networks;
- opportunities for sustainable travel, on foot, by bike and using public transport to help to deliver a real step-change in the provision of alternative modes of travel to the car;
- journeys across Science Vale;

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- the capacity, resilience and reliability of the transport network for all modes of travel;
 - connectivity between employment, services and housing;
 - journeys between Didcot and the Enterprise Zone locations; and
 - trips within Didcot to town centre facilities and amenities;
15. The proposals described in this chapter will be implemented at different stages of the Local Transport Plan period 2015 – 2031. These timescales are influenced by a number of different factors and may be subject to change.

Strategic Transport

The Highway Network

16. Reliable access to and along key routes such as the A34 is crucial to support the global nature of businesses within Science Vale. The A34 provides essential access to Birmingham, Heathrow, and the ports at Southampton. We are working closely with Highways England in the development of their route-based strategy covering the full length of the A34, to ensure that it provides the capacity improvements needed to deliver growth in Oxfordshire.
17. In Science Vale, significant investment has already been made to improve key junctions of the A34 to enhance access to the area and connect businesses to the trunk road network includes schemes at Milton Interchange and Chilton Interchange.
18. In addition, a scheme to provide south-facing slip roads at Lodge Hill Interchange, in Abingdon, is being pursued. The Vale of White Horse District Council's emerging Local Plan 2031 proposes 1,000 new homes to the north of Abingdon. The transformation of Lodge Hill into a full movement interchange will help to accommodate additional traffic generated through housing growth, improve accessibility and connections to the trunk road network, and help to alleviate congestion in Abingdon town centre.
19. As part of the Oxford Transport Strategy we are also evaluating the feasibility of providing new Park and Ride sites on routes approaching Oxford, to enable more people to travel into the city by bus and reduce congestion on key routes. Lodge Hill Interchange is a potential location for a new Park and Ride site. Measures to improve public transport access to Oxford are described in more detail in the Oxford Transport Strategy chapter of LTP4.

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20. With economic growth, particularly in and around Didcot, there will also be increased freight traffic on certain roads. We will seek to ensure that freight uses the most appropriate routes as outlined in Oxfordshire's *Freight Strategy* and Oxfordshire Lorry Routes map, and that development plans leading to increased freight movements are appropriately mitigated. We will also ensure that recommended freight routes are clearly sign posted.

Public Transport

21. Strengthening the public transport networks between Science Vale, Oxford and other important centres of employment is essential to enable the vision for Science Vale to be achieved.
22. At Didcot Parkway station a new transport interchange has created a modern transport hub for Didcot and Science Vale. The new interchange has additional pedestrian space, a larger bus station, two-tier cycle parking, Brompton Dock cycle hire, a taxi rank, drop-off zone and disabled parking.
23. Our ambition is for Didcot Parkway station to be further transformed into a 'state of the art' multi-modal interchange and gateway to the area, fronted by a new public square. The masterplan for the station envisages a new pedestrian / cycle entrance north of the railway, additional platforms, a larger station building, and increased car parking, including a multi-storey car park. This will support the plans for regeneration of Didcot town centre, including the adjacent Gateway development site.
24. Improved rail services are key to improving journeys to connect to rail services from London and airports at Heathrow, Birmingham and Gatwick as well as the growth areas of Oxford, Milton Keynes and Reading.
25. Partners in Science Vale are keen to improve the first impression that people have of Didcot when arriving by train. There are plans to redevelop the area opposite Didcot Parkway station so that a welcoming gateway to Didcot and Science Vale is created. Proposals include a public square and a mixed use development including a hotel, serviced apartments, office, retail, restaurant, nursery and residential units.
26. Culham Science Centre benefits from Culham Station being close to the site. Full utilisation of this by Culham Science Centre and the rail operators is key to support and enable economic growth. Improved services with better station integration will achieve this.

27. As part of our Science Vale and Science Transit strategies, our ambition is to provide a new railway station / interchange at Grove. This will help to serve and meet the needs of new development across the western Vale area, and ensure the future ambition of connecting Wantage and Grove with Didcot, Swindon and beyond.
28. These ambitions are also reflected in the county's Bus Strategy and Rail Strategy documents.

Proposal SV 1 – We will work with partners to improve access to the strategic road, rail and bus network by:

Timescale	Proposal	
2015 - 2020	SV 1.1	Delivering access and journey reliability improvements at Milton Interchange. To improve capacity, relieve congestion and accommodate additional traffic from planned development.
	SV 1.2	Delivering north-facing slips at Chilton Interchange to provide a full movement junction. To enable more direct access to and from Harwell from the A34, helping to attract investment.
	SV 1.3	Delivering south-facing slips and investigating the provision of a new Park & Ride and bus priority measures at Lodge Hill Interchange, Abingdon. The provision of a full movement interchange will improve capacity and accommodate additional traffic from potential future development. A new Park & Ride will enable more trips into Oxford to be made by bus and alleviate congestion on Oxford's approach roads.
	SV 1.4	Developing Didcot Parkway station into a 'state-of-the-art' multi-modal interchange, to meet demand from new development and improved rail services. This includes a multi-storey car park, station access from the north, and a new station building.
	SV 1.5	Working with Network Rail and other partners to support the overhead electrification of the Great Western Mainline.
	SV 1.6	Providing clear signage across Science Vale and establishing a clear hierarchy of routes to assist with way finding for all modes of transport.
Beyond 2020	SV 1.7	Promoting the provision of a station at Grove, working with partners as part of a wider proposal to improve rail connectivity with Didcot and neighbouring areas, such as Swindon and Bristol,

		and in the longer term with East-West Rail to Milton Keynes.
On-going throughout the plan period 2015 – 2031	SV 1.8	Promoting an improved level of rail service at Didcot Parkway , seeking a minimum of four trains per hour to Oxford and Bicester, and securing future direct services to Birmingham and Heathrow airports as new rail infrastructure comes forward.
	SV 1.9	Promoting greater presence, accessibility and an improved level of rail service at Culham Station. To improve accessibility for the local area and Culham Science Centre and to encourage further business investment.
	SV 1.10	Promoting an improved and fully integrated public transport system with bus priority measures , linking Science Vale with innovation hubs and research locations in Oxford, in accordance with Science Transit and the Oxfordshire Bus Strategy.
	SV 1.11	Promoting the efficient transport of freight , using the most suitable routes as outlined in Oxfordshire's Freight Strategy and Oxfordshire Lorry Routes map.

Supporting growth across the Science Vale area

29. People need to be given a real choice about how they travel so that additional travel demand associated with growth can be met across a range of modes of transport. It is therefore essential to promote sustainable travel and provide more opportunities to encourage people to walk, cycle and use public transport.
30. As part of this, a substantial upgrade and expansion of the cycle network is required to provide an attractive and safe alternative to driving within Science Vale. We have therefore produced the Science Vale cycle strategy (see Annex 1) in accordance with the Oxfordshire Cycling Strategy, setting out the vision for improvements to the cycle network. This network is based around strategic corridors linking the main towns, housing developments and Didcot Parkway station to key employment sites. Schemes will include improvements to existing cycle routes, as well as developing new high quality cycle routes. Strategic cycle corridors in Science Vale are outlined in figure 2. More details of the specific proposals are in the Science Vale Cycling strategy.
31. The Oxfordshire Bus Strategy outlines the overall vision for the bus network county-wide. Bus service and infrastructure improvements discussed in this chapter are part of this wider strategy for Oxfordshire. Public transport will be

significantly improved and bus priority measures implemented. This will provide high quality, high frequency bus services linking Didcot Parkway station with major Science Vale residential and employment sites, as well as connecting to other towns outside of Science Vale. Figure 3 shows the indicative strategic public transport routes and proposed bus priority routes required to support development in the Science Vale area.

32. In addition, highways schemes to provide extra capacity and accessibility on key routes to Harwell, Milton Park and Culham Science Centre will offer route choice and travel options between homes and workplaces, helping to spread the impact of increased traffic on the roads.
33. The Science Vale transport strategy contains a key new scheme, involving a proposed new road from north Didcot to the Culham Science Centre; this will require the implementation of an additional Thames river crossing. It will provide improved access to Culham Science Centre and a direct link to the B4015 (north of Clifton Hampden). This scheme will also better connect Science Vale and the major employment areas of Oxford in the Eastern Arc. This route will also provide some relief to the A34 for local movements. Improvements to access to Culham Science Centre through increased connectivity by bus and cycle and improved capacity at Culham station are also important.
34. The following additional schemes are seen as a priority to improve connectivity between new growth areas, key employment sites and residential growth areas.

Proposal SV 2 – We will work with partners to improve journeys across the Science Vale area, connecting new homes with jobs and service centres, by better connecting Didcot, Wantage & Grove, Abingdon, and Wallingford with Milton Park, Harwell and Culham Science Centre through:

Timescale	Proposal
2015 - 2020	SV 2.1 Delivering cycle route upgrades and maintenance on the existing network. This includes the provision of new routes, branded signs, a trial bike hire scheme and marketing measures to provide a high quality, safe and attractive network.
	SV 2.2 Securing new strategic bus services and associated infrastructure between major residential sites at Didcot, Wantage and Grove, Wallingford, Abingdon, town centres / retail and the employment sites at Milton Park, Harwell, Culham Science Centre,

	and Oxford. A minimum of two buses per hour during the morning/evening peak travel periods is required to provide a credible level of service.
SV 2.3	Securing improvements to existing bus services and associated infrastructure between Oxford, Didcot, Wantage & Grove, Abingdon, Wallingford and employment sites in Science Vale.
SV 2.4	Strengthening public transport links from Didcot Parkway through improved bus connections, including segregated priority sections of route, to improve bus reliability and journey times. Bus priority measures will be investigated on the A4130 from Science Bridge into Didcot, through the Valley Park development site located to the west of Didcot; and between Wantage & Grove, Milton Park and Didcot via Steventon.
SV 2.5	Delivering the Wantage Eastern Link Road to support developments in Wantage and Grove and provide relief to central Wantage.
SV 2.6	Delivering Science Bridge and widening of A4130. To provide relief to Manor Bridge and support/enable the redevelopment of Didcot A and the Valley park development.
SV 2.7	Completing the A4130 Didcot Northern Perimeter Road part 3 (NPR3) , to relieve congestion on local roads, and to improve access to Didcot from the east.
SV 2.8	Delivering Harwell Link Road section 1 (B4493 to A417) and Harwell Link Road section 2 (Hagbourne Hill) to improve access and connections to Harwell and Didcot, reduce congestion on the local network, and protect villages from unnecessary through traffic. Supports and enables Valley Park development.
SV 2.9	Improving Harwell campus entrance to facilitate additional trips into/out of the site and supplement the improved Chilton Interchange.
SV 2.10	Delivering improvements along the A417 corridor to address congestion, safety and the conflict between the volume of traffic, east-west travel, and access to the villages along this route. Elements of the strategy include junction improvements, bus stop infrastructure, footpath and cycleway improvements and speed limit reviews.
SV 2.11	Delivering improvements at Steventon traffic lights at the A4130 / B4017 junction and improvements to Featherbed Lane. To remove the 'bottle-neck' and

		improve journey times to the A34, Milton Park, other Didcot employment sites and to Wantage & Grove.
	SV 2.12	Reducing congestion at Rowstock roundabout through measures to increase capacity of the junction.
	SV 2.13	Delivering improved Access to Culham Science Centre to improve connectivity between Science Vale and the Eastern Arc of Oxford. Investigating a new road from north Didcot and associated new Thames river crossing, and a road connecting Culham Science Centre to the B4015 (north of Clifton Hampden).
	SV 2.14	Promoting schemes to provide relief to villages within Science Vale which are affected by high levels of through traffic.
2021 - 2025	SV 2.15	Providing improvements to the A4130 between Didcot and Wallingford to reflect the volume of trips between the two towns. The ability to move reliably and safely along this corridor is important, particularly in helping to support planned employment growth in Science Vale.
2026 - 2031	SV 2.16	Promoting capacity improvements to the A338 /A415 Frilford lights junction to improve accessibility between Wantage, Grove and Oxford.
On-going throughout the plan period 2015 – 2031	SV 2.17	Promoting the use of sustainable transport and reducing single occupancy car use for the journey to work through undertaking travel promotions and marketing measures, particularly with partners at Milton Park, Culham Science Centre and Harwell.
	SV 2.18	Providing new and substantially upgraded strategic cycle routes to Milton Park, Harwell and Culham Science Centre through the Science Vale cycle strategy.
	SV 2.19	Securing safe and attractive walking and cycling routes as part of planning for new developments.
	SV 2.20	Establishing links from new development to Public Rights of Way.
	SV 2.21	Establishing a bus route between Grove, Wantage, Milton Park and Didcot.
	SV 2.22	Promoting improved sustainable access to Culham Science Centre through enhanced bus connections and improved cycle routes to Abingdon and Didcot.

Trips within Didcot to town centre facilities and amenities

35. To attract new residents to the area, Science Vale needs to provide a high quality of life by being an attractive place to live, with good access to vibrant town centres providing a wide range of facilities and services.
36. This section focuses on Didcot to reflect the significant scale of the changes that will be happening in Didcot in the coming years. This includes the regeneration of the town centre, extensive housing and employment growth, and the redevelopment of Didcot Parkway station and the Gateway area.
37. Good transport links to access the town centre, as well as provision for active travel and sustainable travel options will enable Didcot to grow. This will be achieved through the following schemes:

Proposal SV 3 – To improve local connectivity to Didcot town centre facilities and amenities by:

Timescale	Proposal	
2015 - 2020	SV 3.1	Ensuring appropriate bus access, infrastructure and service patterns to complement plans for new development and suitably serve key destinations in Didcot town centre including Didcot Parkway station, the Orchard Centre and Broadway.
On-going throughout the plan period 2015 – 2031	SV 3.2	Securing the delivery of capacity improvements at Jubilee Way roundabout , to improve access to the town centre and support the on-going vitality of the Orchard Centre.
	SV 3.3	Pedestrian and cycle network enhancements providing improved routes to the town centre and Didcot Parkway together with better facilities at employment and residential sites, to encourage the use of sustainable, active modes of travel.
	SV 3.4	Promoting a strategic approach to planning for parking in Didcot to identify an appropriate balance of parking provision in the town and at the rail station to support town centre vitality.

38. Greater accessibility from Ladygrove to Didcot Parkway and Didcot town centre is recognised as important, and the creation of a new northern entrance to Didcot Parkway is promoted as a way to achieve this. The widening of Cow Lane is not

an identified scheme within the Science Vale area strategy due to the significant cost and implications of such a scheme.

Safeguarding

39. We will support South Oxfordshire and the Vale of the White Horse District Councils in safeguarding land for schemes in areas where it is possible that significant development may occur in the future, most likely beyond the period of this Plan.

Proposal SV4 – to support safeguarding of land through the local plan process to enable delivery of strategic pieces of infrastructure considered likely to be required in the future:

Timescale	Proposal
On-going throughout the plan period 2015 – 2031	SV 4.1 Safeguarding and protecting the ability to provide a Southern Didcot road to relieve the B4493, southern residential roads and the town centre if significant additional development is allocated to the south of the town in the future.
	SV 4.2 Safeguarding and protecting the ability to provide a South Abingdon road if significant additional development is allocated to the south of the town in the future. This will provide a direct link from west Abingdon to the A415 to the east and relieve congestion in Abingdon town centre.
	SV 4.3 Safeguarding and protecting the ability to provide a Wantage Western Link Road if there is substantial additional development in west Wantage. This would complete the perimeter route for Wantage and provide relief to key roads within the town.
	SV 4.4 Safeguarding and protecting the ability to provide a station at Grove

A number of other schemes described in this chapter are safeguarded within the Vale of White Horse Local Plan 2031 Part 1: Strategic Sites and Policies (published November 2014).

Funding

40. Funding for the Science Vale area strategy will be from a variety of sources. Due to the large scale of growth we will seek central Government funding where possible and work with the Local Enterprise Partnership, and Local Transport

Board to secure income from the Enterprise Zone business rate retention to fund infrastructure.

41. The County Council has successfully been awarded Government funding towards transport schemes from a number of sources including the Local Growth Deal, Local Growth Fund, City Deal, Local Sustainable Transport Funding, and Growing Places Funding through support from the Oxfordshire Local Enterprise Partnership. We will actively seek and bid for future funding as and when it is announced.
42. Developer funding is also vital. The Science Vale area strategy identifies a package of transport measures that are required to mitigate the cumulative impact of development across the Science Vale area where the impact of development is not attributable to a single development. Developer contributions will be sought for specific schemes within the Science Vale package using the strategic transport infrastructure contribution rate to mitigate the cumulative impact of development.
43. The level of contribution has been calculated by dividing the funding required to deliver the package of transport measures by the amount of planned growth. This calculation will be reviewed and updated following changes in planned housing growth and infrastructure requirements within Science Vale as part of the Local Plan process.
44. When the Community Infrastructure Levy (CIL) is introduced by the Vale of the White Horse District Council and South Oxfordshire District Council, contributions towards the strategic schemes will be sought via this new mechanism, as well as via S106 or S278 agreements as agreed.
45. Major residential development sites are required to fund new or improved public transport services to key locations agreed with the County Council until they become commercially viable. Other residential sites should make a contribution based on the estimated cost of an improved commercially viable service across Science Vale, divided proportionally by the amount of planned growth to give a cost per development site. These will be via a S106 agreement.
46. Developments are also required to provide modern bus stop infrastructure, including shelters and Real Time Information, to enhance access to the public transport network. These are usually secured through Section 106 or Section 278 agreements.

Proposal SV 5 – To mitigate the cumulative impact of development across the Science Vale area and implement the transport measures identified in the Science Vale area strategy we will:

Timescale	Proposal
On-going	SV 5.1 Secure strategic transport infrastructure

throughout the plan period 2015 – 2031		contributions (including cycle schemes) from all new development based on the contribution rate per dwelling or per m2 for non-residential developments.
	SV 5.2	Secure strategic public transport service contributions for new or improved public transport services as well as bus stop infrastructure to support sustainable development.

47. The Strategic Transport Contribution does not include direct mitigation measures, which will be sought separately.
48. This Area Strategy replaces the Didcot Integrated Transport Strategy -2004/2005 (DidITS). The new Area Strategy accommodates the measures of the DidITS. Planning obligation contributions, secured in order to mitigate the impacts of development, towards DidITS will be able to be used on the LTP4 Science Vale Area Strategy and be in accordance with the planning obligations.

Maps and Plans

49. Figures 1- 3 summarise the key pieces of transport infrastructure required to support the proposed growth and investment in the Science Vale area. Figure 1 shows the main employment sites, future housing developments, and required strategic highways infrastructure. Figure 2 shows the cycle network required to support the proposed growth in the Science Vale area. These include both existing routes and future routes. Figure 3 shows the proposed public transport network and indicative bus priority routes.

References

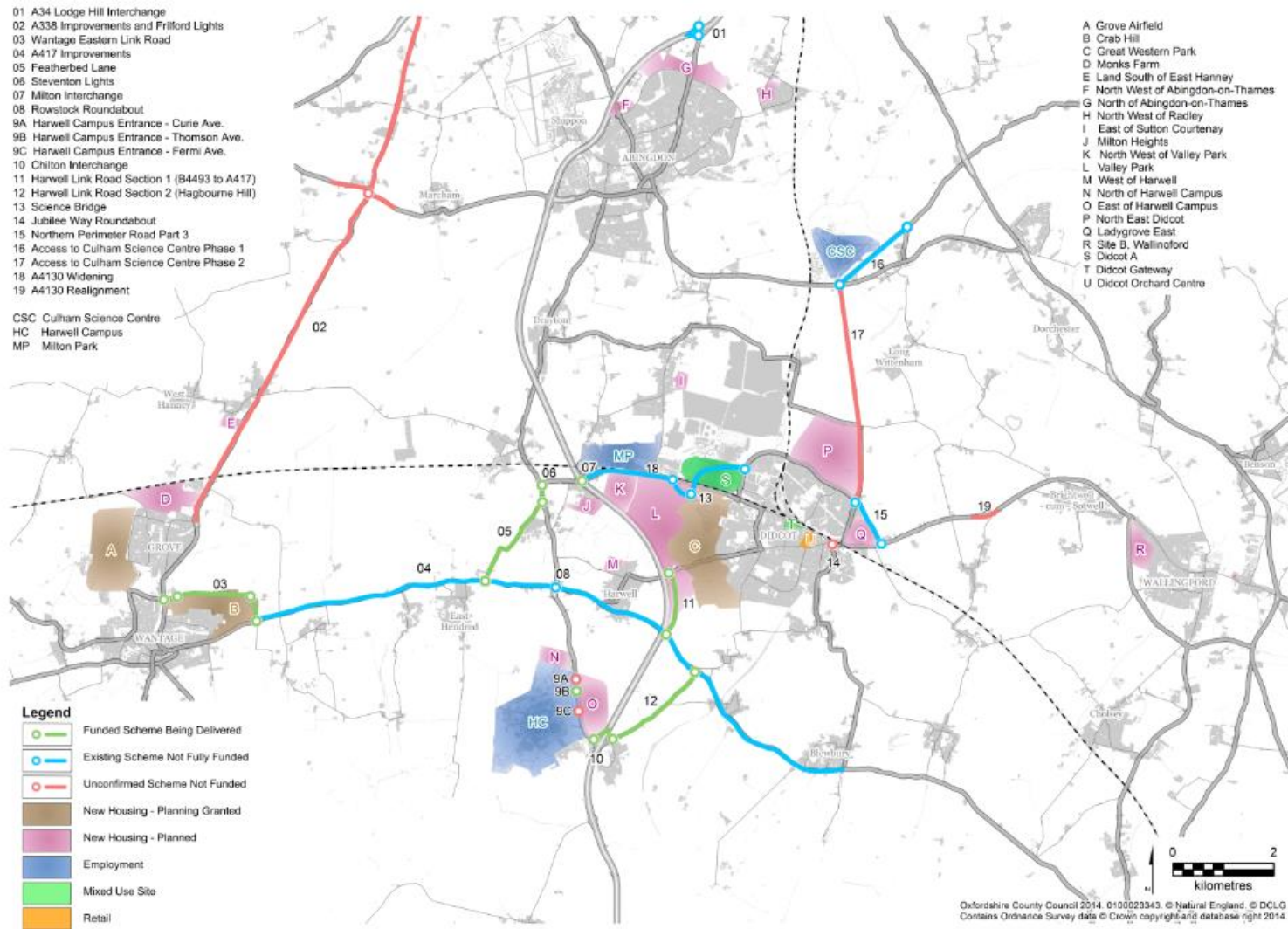
Science Vale Enterprise Zone - <http://www.sciencevale.com/>

Oxfordshire Local Enterprise Partnership <http://www.oxfordshirelep.org.uk/cms/>

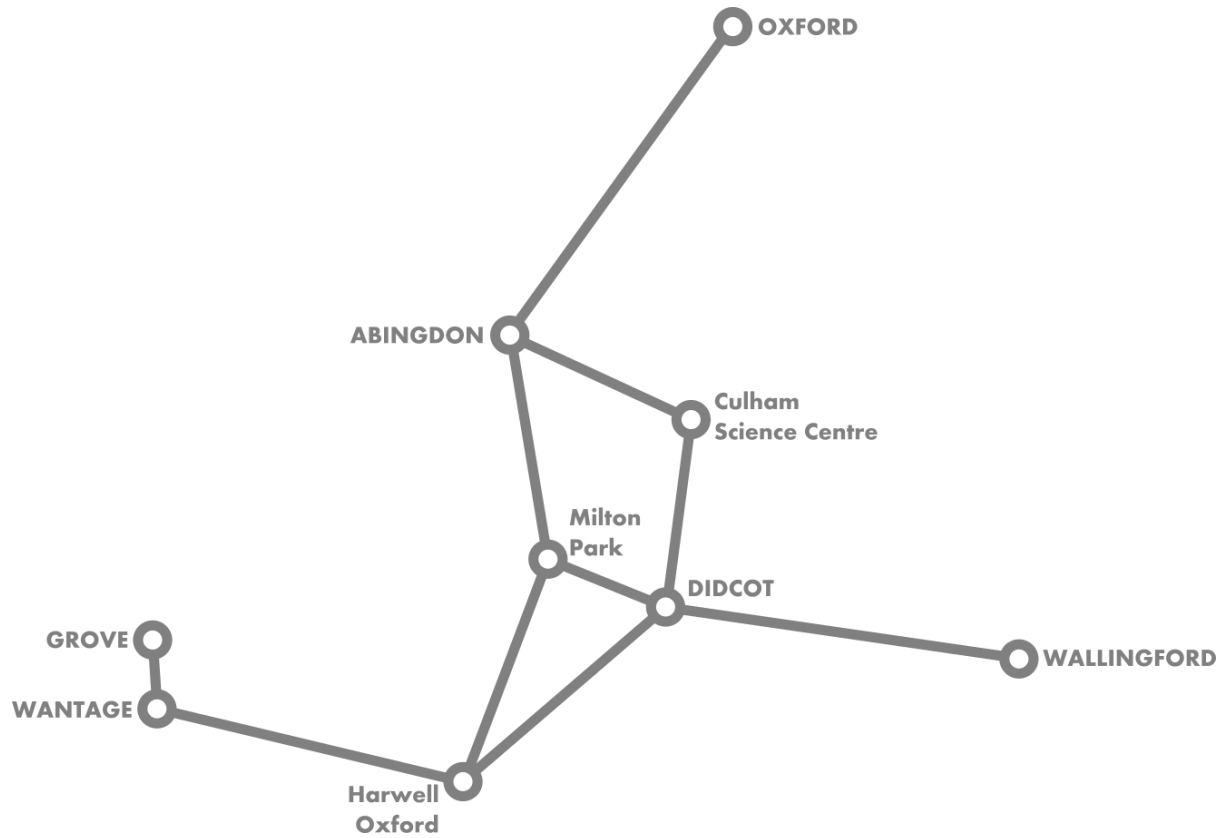
Vale of White Horse Local Plan 2031 Part 1: Strategic Sites and Policies (published November 2014) <http://www.whitehorsedc.gov.uk/services-and-advice/planning-and-building/planning-policy/new-local-plan-2031>

South Oxfordshire Core Strategy 2027 (adopted December 2012) <http://www.southoxon.gov.uk/services-and-advice/planning-and-building/planning-policy>

Oxfordshire Local Transport Board - <http://www.oxfordshire.gov.uk/cms/content/oxfordshire-local-transport-board-0>



Science Vale Figure 1: Indicative plan of highways infrastructure required to support development in Science Vale

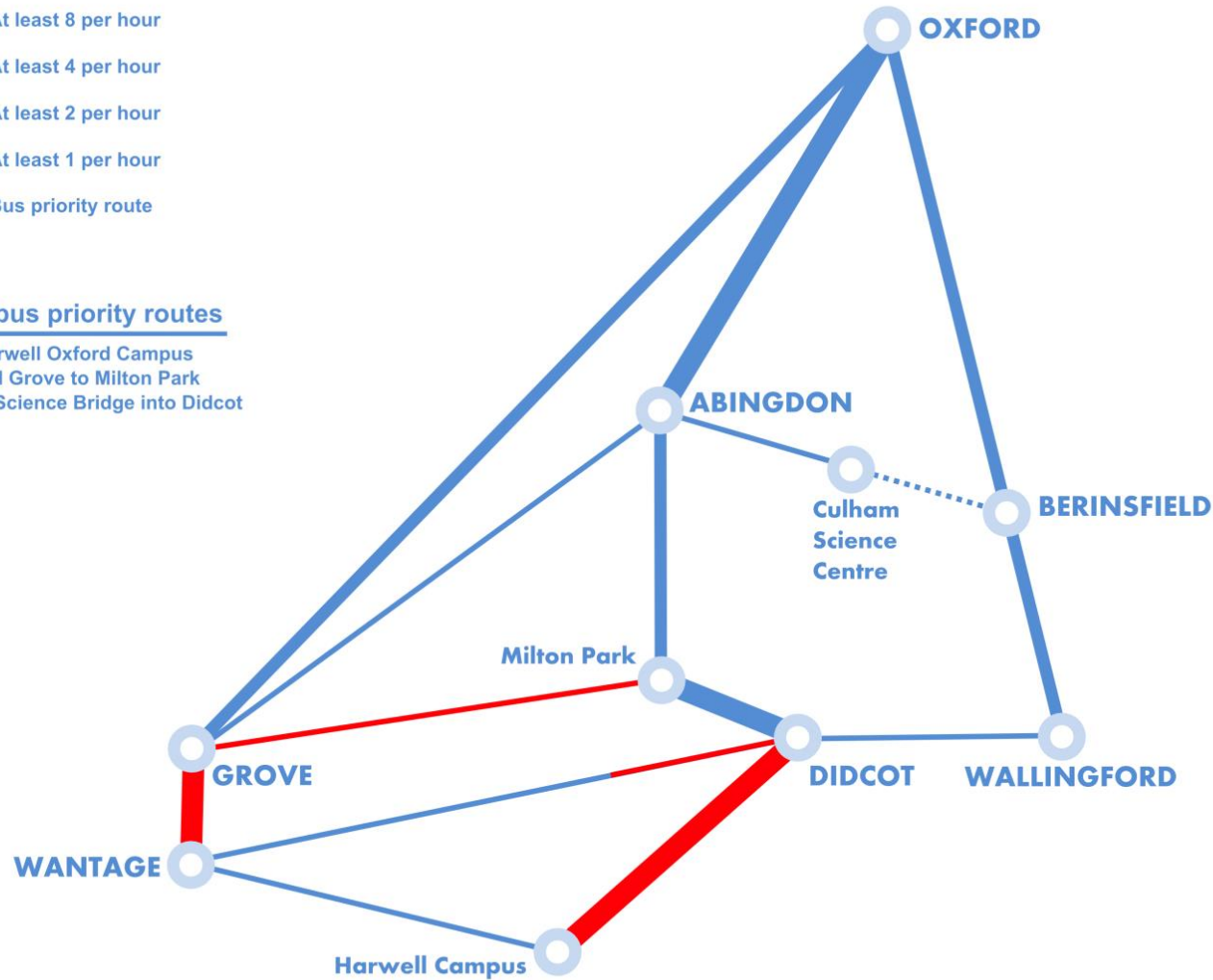


Science Vale Figure 2: Indicative cycle routes required to support development in the Science Vale area

-  At least 8 per hour
-  At least 4 per hour
-  At least 2 per hour
-  At least 1 per hour
-  Bus priority route

Proposed bus priority routes

- Didcot to Harwell Oxford Campus
- Wantage and Grove to Milton Park
- A4130 from Science Bridge into Didcot



Science Vale Figure 3: Potential future public transport routes and bus priority measures required to support development in the Science Vale area

Annex 1: Science Vale Cycling Strategy

Our vision for cycling in Science Vale

**SCIENCE VALE
CYCLING
STRATEGY**

September 2015

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PART ONE: Our vision

“Our vision is for a world-class cycle network enabling users to make safe, efficient, connected journeys by bike.”

“Our ambition is to raise the status of cycling in the Science Vale area through the provision of innovative and high quality cycling facilities comparable with those found in the cycling countries of continental Europe, supporting the growth and investment being made in Science Vale”

Introduction

Science Vale is receiving unprecedented levels of economic investment and associated growth. This investment is creating new jobs, and these new jobs are being supported through new housing in the nearby towns. In the order of 20,000 new jobs and 20,000 new homes by 2031 are being planned for.

Science Vale is an economic growth area that includes three nationally and internationally recognised science and research centres at Harwell Campus, Milton Park and Culham Science Centre. It also includes the settlements of Wantage & Grove and Didcot. Science Vale is home to Oxfordshire's Enterprise Zone and the focus for significant growth and infrastructure investment.

The transport network needs to be upgraded and strengthened to facilitate the investment by ensuring people can move efficiently around the area and easily reach jobs and services. Significant investment is needed to achieve this in the road network together with cycling and public transport. A multimodal approach is needed to provide choice and ensure resilience, sustainability and efficiency. The first schemes are already in progress. This document sets out our vision for cycling in Science Vale and details where investment in cycling will be directed.

With European companies investing and desire to provide good usable alternatives to car travel increasing, cycling is enjoying a renaissance: The profile of cycling is continually being raised at both national and local levels and more people are choosing to cycle. In Oxfordshire, we now have a new Cycling Strategy. The Oxfordshire Cycling Strategy, part of the new Local Transport Plan (LTP4), sets out our policies and targets for cycling in Oxfordshire. The Science Vale Cycling Strategy sets out how we will implement these policies in the Science Vale area and help to deliver the transport strategy set out in the Science Vale Area Strategy.

The government has announced hundreds of millions of pounds of investment in science based industries in Science Vale, which is attracting multi-national

companies to consider locating in the area. These companies are looking to locate where infrastructure is good, and this includes cycling infrastructure. It's essential we take the opportunity to ensure our cycling infrastructure meets the expectations of these companies so that they choose to locate in Science Vale, this will in turn support our aims to increase levels of cycling in Oxfordshire.

There are significant challenges; the dispersed nature of the Science Vale area does not naturally encourage high levels of cycling, unlike cities such as Oxford where short distances between destinations make cycling an attractive option. The greater distances involved also means larger investment is required.

Cycling investment benefits everyone, whether or not they cycle. More people cycling means fewer people driving, which reduces congestion. No one form of transport alone can provide the means to ensure the transport network remains functional. Cycling will be a central part of the transport system for Science Vale, supporting our aims set out in the Oxfordshire Cycling Strategy, the Science Transit Strategy and the new Local Transport Plan.

We have already started. Cycling schemes are in progress and we have secured a further £5million from the Oxfordshire Local Growth Fund to implement the highest priority schemes as the first phase of realising our vision. Future phases will follow once funding has been secured and this strategy will be an important tool in securing that funding.

There are already above average levels of cycling in Science Vale. For example, at the last census (2011), 4.1% of journeys to work were made by bike in Science Vale. This is higher than the average across England and Wales of 2.8%, or within Oxfordshire (excluding Oxford), where the average rate is 3.16%.

We aim to increase the proportion of journeys to work made by cycling in Science Vale by 50% by 2021, as part of the wider Oxfordshire target of increasing cycling to 10% of all journeys by 2031.

Science Vale cycling network: The Premium Routes approach

The Oxfordshire Cycling Strategy introduces our concept of Cycle Premium Routes and Connector Routes. This will focus investment on those routes already popular, building upon their success to raise levels of cycling in the most efficient manner.

The Premium routes concept has been successfully applied to bus routes in Oxfordshire over the past decade. The foundation of a successful route and proven demand can be nurtured through investment into an even more successful route. By focussing on these routes – the core links – investment is concentrated to where it can be used most efficiently, and this has allowed a step change in service delivery for bus passengers on these routes. These routes form the backbone of the commercial bus network in Oxfordshire and are used by the majority of bus passengers.

Cycle Premium Routes takes this concept and applies it to cycling. We have identified a series of strategic corridors across Science Vale where we will establish the Cycle Premium Routes which will become the focus of our future investment. The greatest investment potential lies in those corridors which connect together the areas of growth, and so our corridors are based around connecting the areas of employment growth to transport hubs and areas of housing growth. Many of these corridors already have good levels of cycling. We will build on this to create the Science Vale cycle network.

Our chosen corridors are defined and discussed in detail in part two. A system of prioritisation for investment is also included based on current demand and current route conditions.

A series of discrete schemes will be programmed for each Cycle Premium Route, once defined for each corridor, which when complete will form a continuous direct route providing a high quality cycling experience.

Connector routes

Whilst investment will be focussed on the Premium Routes, additional Connector Routes will also be developed and promoted. These routes will provide important links into the network to ensure the Premium routes network is as easy to access as possible. Further details of these routes are discussed in part two.

National Cycle Network

The National Cycle Network is a network of routes largely established by cycling charity Sustrans, using millennium funding in the late 1990s and early 2000s. The routes consist of a mix of traffic-free paths and quiet roads linking together large towns. Continued investment since 2000 has established complimentary regional routes of a similar standard feeding into the national routes.

There are two National Cycle Network routes in the Science Vale area. National route 5 runs through the area from Oxford, via Abingdon, Didcot and onwards towards Reading via Long Wittenham. Regional route 544 feeds into this route at Didcot from Wantage via the Harwell campus.

These routes will continue to form an integral part of the cycling network and we will work closely with Sustrans to build on this.

Complementary measures

Investment in cycling is not just about infrastructure. In Science Vale we will actively promote and raise awareness of the cycling network. We have initially secured revenue funding for this through the Department for Transport's Local Sustainable Transport Fund. We will make available a series of maps covering the area in both printed and electronic form. The maps will be supported by new, clear signage to destinations and map display boards at key locations and junctions.

Didcot Interchange

Didcot Parkway railway station is at the heart of the Science Vale transport network. It is the gateway into the area for many journeys and recently has had an £8million upgrade with further investment planned for this purpose. It is a significant destination for cycling journeys, and cycle facilities have been substantially improved as part of the upgrade work. We shall continue to look for opportunities for further development of the cycling facilities at the station to reflect its key role in the network. This could take the form of upgraded information points, secure cycle parking, improved local cycle routes, a bicycle repair service or even a fully featured cycle hub. We shall work with partners to achieve this while recognising the station's space constraints and other future development.

Cycle Hire

Cycle hire schemes are currently enjoying significant popularity across the country, with new schemes coming online in different locations each month. In Oxfordshire we have the OxonBike cycle hire scheme in Headington and Brompton Dock points at Oxford and Didcot complementing traditional cycle hire companies operating in Oxford.

The OxonBike scheme has been introduced in Headington with funding from the DfT's Local Sustainable Transport Fund (LSTF). The type of hire scheme is similar to the popular Barclays Cycle Hire scheme in London, which is designed to maximise use of the hire bikes through short hires between hire points. Oxonbike has proved popular and its expansion to other areas is being investigated, including the Science Vale area.

Science Vale is substantially more rural and dispersed than most other areas operating Oxonbike type hire schemes; these tend to be urban areas. This will present challenges to operating a scheme in Science Vale. We have secured funding from the DfT's LSTF to set up a research pilot scheme covering Didcot, Milton Park and Harwell Campus to help us understand the technology, user and commercial challenges.

Our long term vision is for a commercially sustainable, innovative cycle hire scheme covering all of Science Vale, fully integrated into the Science Transit network. This could see the availability of e-bikes to assist with the longer journeys required in Science Vale.

Publicity

Getting the message out about good cycle routes is a key part of encouraging more people to cycle. This will become more important as the network is upgraded. We will communicate through a series of measures including:

- A set of cycling maps covering the Science Vale area in detail and highlighting quieter roads and off-road paths. These will be available both online and in printed form from local information points
- Map boards at key locations and junction points showing the local routes and points of interest. These will be similar to the boards that exist at some points on the National Cycle Network routes 5 and 544, which will be updated where needed

- An occasional cycling newsletter covering the latest route upgrades and events
- Promotion of cycling through the Oxfordshire Travel Choices brand including at events organised as part of the Access to Science Vale Enterprise Zone programme
- Close relationships with large employment sites and cycling user groups

Funding to start some of this work has been secured from the DfT's LSTF.

Signage

Good consistent route signage is important as it helps to ensure the cycling network is easy to use. The National Cycle Network routes within Science Vale are well signed, but other routes are often lacking good clear cycling specific signage. Good signage, particularly when including journey times, is also a good way of raising awareness of the network.

We have secured funding from the DfT's LSTF to create a set of signage guidelines which will be applied to routes in Science Vale to ensure quality and consistency.

Network identity

To complement our work on signage and publicity, we propose to give the Cycle Premium Routes in Science Vale a name or theme that will help to raise awareness of the network. We will then name each of the routes within the theme to help users understand the network better and to find out route destinations.

Our thinking is based on work elsewhere such as in Aylesbury, where cycle routes have been colour coded and named after gemstones.

New Developments

The significant amount of planned development in Science Vale offers the opportunity to make a real difference for cycling. It is essential that new developments are planned with cycling in mind and with facilities to make cycling both convenient and safe. Designing new developments so that cycling or walking is the most convenient transport method for the majority of trips will naturally increase the proportion of journeys made in this way.

For large new housing development sites, we propose establishing the following principles, which we intend to incorporate into our guidance for developers:

- Developers to demonstrate through masterplanning how their site has been planned to make cycling convenient and safe, for cyclists travelling to, from, within and through the site
- We will ask developers to fund cyclability audits, so that the local user view is incorporated into new cycle facilities.
- Sites to be connected to at least one of the Cycle Premium Routes defined in this strategy, including creating feeder routes where needed
- Site road network and junctions to be constructed with cycling in mind, including providing space for cycling on main/spine roads through the provision of, as a minimum, advisory cycle lanes

For large new commercial developments, developers should demonstrate how their development has been planned for users cycling to the site. This should be 'to the door' and as a result should show how cycle parking will be located in the most convenient position.

Until we produce an Oxfordshire-specific guidance document, developers should refer to the new [Sustrans Design Manual Chapter 10 \(Cycling in New Developments\)](#) for guidance on what cycle-friendly design measures should be incorporated in and around new or expanded developments. Our cycling requirements will also be integrated into forthcoming editions of the Oxfordshire Developer Guidance.

For new highway improvement schemes, we will outline where we propose to make improvements for cyclists and engage with cycling user groups, shortly after project inception, so that schemes are developed with improvements built in from the outset.

Where are we now?

The latest census, 2011, shows there are already above average levels of cycling in Science Vale for journeys to work. For 4.1% of journeys to work across Science Vale, the majority of the journey was made by bike. This is higher than the average across England and Wales of 2.8%, or within Oxfordshire (excluding Oxford), where the average rate is 3.16%.

It is difficult to reliably and consistently measure the proportion of journeys overall made by bike. The census only covers journeys to work, and this data only records the main mode of travel used. A journey by train that involves cycling to the station is most likely to be recorded as a train journey, for example.

Where do people cycle to work?

Cyclists from...

Wantage

...work in	% of cyclists
Wantage	45.39
Harwell	21.71
Watchfield	14.47
Grove	12.50
Milton	5.92

Grove

...work in	% of cyclists
Wantage	46.15
Grove	30.77
Watchfield	13.99
Harwell	9.09

Didcot

...work in	% of cyclists
Didcot	62.83
Harwell	20.49
Milton	13.55
Abingdon	1.44
Wallingford	1.23

How do people get to work in Harwell?

Mode	%
Car - drive	77.18
Bus/Coach	4.81
Car - passenger	4.70
Bicycle	3.49
Foot	2.05
Train	1.15

How do people get to work in Milton Park?

Mode	%
Car - drive	75.80
Car - passenger	4.66
Bicycle	4.52
Bus/Coach	3.47
Foot	2.67

Monitoring our progress

We aim to increase the proportion of journeys for all purposes made by bike, where the journey is of a length suited to cycling. This is very difficult to accurately measure and monitor without conducting costly surveys. We therefore aim to monitor and analyse existing sources of data in addition to the census to identify trends. These additional sources will include:

- Travel to work surveys conducted by the main employment sites
- Automatic cycle counters (these already exist on a number of routes)
- General traffic surveys

We will set up a monitoring programme, working with partners, to assess our impact and report on this annually.

The central part of our monitoring will utilise information from travel to work surveys that will be regularly completed on the three main employment sites: Milton Park, Harwell Campus and Culham Science Park.

This will be complemented by analysis of automatic cycle counters positioned at strategic points on the network. These counters are permanent and count all bicycles that pass over them. We will review the current locations and supplement where necessary to ensure there is good coverage.

PART TWO: Routes and schemes

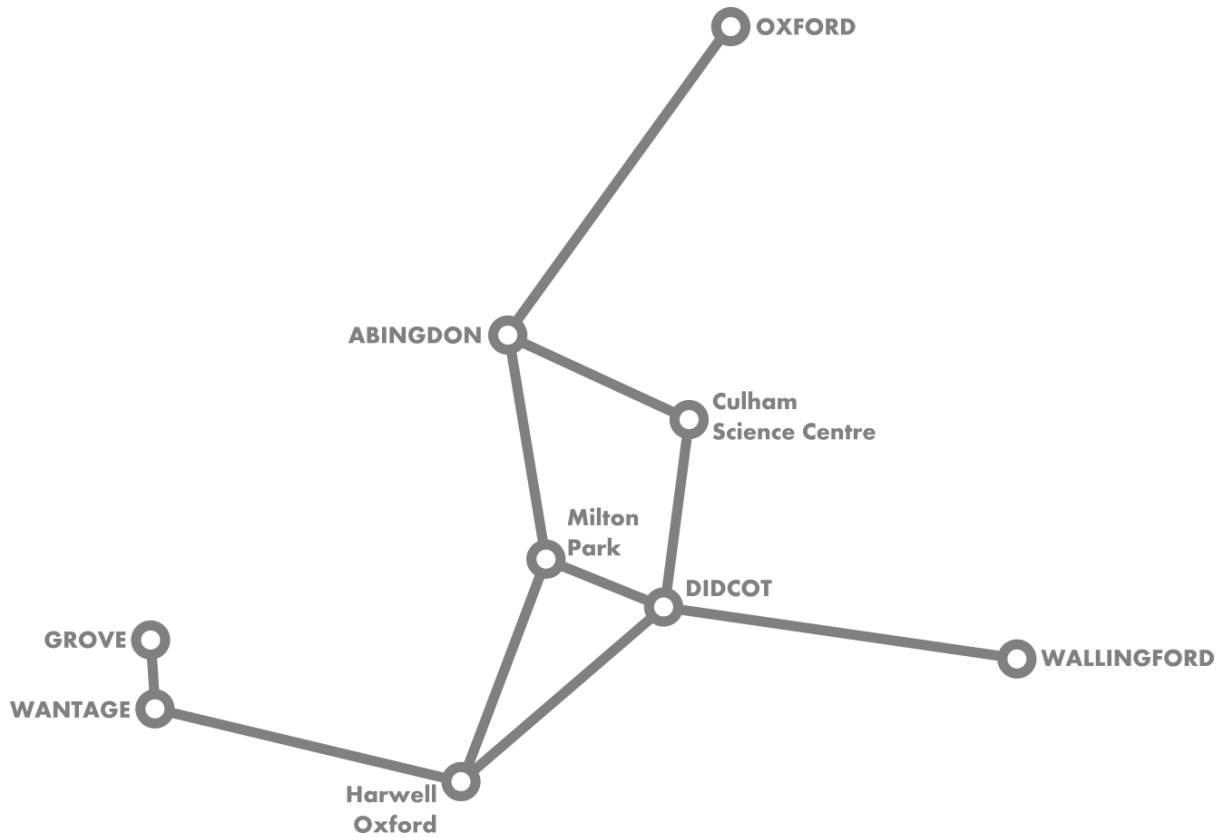
The network of Cycle Premium Routes in Science Vale will be based on connecting the large employment sites: Milton Park, Harwell Campus and Culham Science Park to the towns; Didcot, Abingdon, Wantage and Grove. This enables us to maximise our opportunities for funding and investment by focussing the network on the employment and housing growth areas. There are already good cycling levels in and between these points, which will help us to build on existing success and achieve our vision in the most efficient way.

We have identified a series of corridors for which a future study will determine where best to direct investment to create one Cycle Premium Route along each corridor. The study will review existing routes and previous studies, and recommend a series of schemes required to provide a continuous Cycle Premium Route along each corridor.

The resulting route along each corridor will be high quality, direct, well signed and is likely to be a mix of predominantly segregated and off-road paths. The study for each corridor will assess the possible individual scheme options and consider the benefits and feasibility for each. We will consult on the choice of schemes that are to make up each route.

Our aim for each of these routes is to achieve a quality of infrastructure comparable to that found in the European cycling countries. We may have to be pragmatic about how to achieve this and a staged approach may be required in places if full funding is not immediately available.

The map below shows the corridors that will make up the Cycle Premium Routes in Science Vale. Forthcoming studies will determine the exact routes and required schemes for each corridor. The routes of some corridors may overlap one another.



The corridors

Wantage to Harwell Campus

National Cycle Network route 544 currently connects Wantage to Harwell Campus via an indirect route. A shorter route will make cycling more attractive on this corridor. This promoted Premium Route will most likely make use of the existing route 544 at either end where the route is of a high standard already or is about to be upgraded. There are a considerable number of possible route permutations when considering the possible upgrade of sections of existing rights of way to create this more direct route.

Wantage to Milton Park

This strategy for this route is to create a link route between the Wantage to Harwell and Abingdon to Harwell corridors. Longer term, a separate route possibly running in the shadow of the railway line between Grove and Steventon could be created.

Abingdon to Milton Park

National Cycle Network route 5 already links Abingdon to Milton Park via Sutton Courtenay. Our strategy is to supplement this route and create a shorter distance route from Abingdon to the central and western parts of Milton Park, and to also upgrade the Peep-o-Day Lane section of route 5.

The shorter distance route could be created by upgrading and converting footpaths running north from Milton Park, or use Milton Road and the rights of way east of Drayton to connect with the Drayton to Abingdon roadside shared use path.

Abingdon to Harwell Campus

Our strategy for this corridor will be to either utilise the Abingdon to Milton Park route or make improvements to the B4017 road route through Steventon. Continuing towards the Harwell Campus our strategy will be to either make upgrades for cyclists to the A4130 or to the Hungerford Road restricted byway.

Didcot to Harwell Campus

A substantial investment is being made to upgrade a footpath currently used by cyclists between the north end of the Harwell campus and Harwell village. This path, The Winnaway, is to be converted to a bridleway, widened and resurfaced during 2015. Our strategy is for this to form the southern section of the Didcot to Harwell Cycle Premium Route, which will then continue through Harwell village and utilise the B4493 into Didcot.

Longer term, our strategy will be to utilise the path over the A34 to the north of Harwell (Grove Road) and then define a direct and convenient route through the proposed Valley Park development, leading into Great Western Park.

These proposals complement the existing Sustrans route 544 between Didcot and Harwell via Upton.

Didcot to Milton Park

Our strategy for this corridor will focus on upgrades to the existing routes. To the south of the power station site a shared use path runs along the south side of Milton Road. This path is very popular but suffers from seasonal vegetation incursion and conflict between cyclists and pedestrians, exacerbated by a lack of lighting which is a particular issue during the winter months. We will investigate enhancements to this route including lighting and, as the existing path is constrained between the carriageway and adjacent railway line, either constructing another path on the other side of the carriageway, or moving the carriageway to allow widening of the existing path.

To the north of the power station site is National Cycle Network route 5, which provides an alternative but less direct route to Milton Park. We will look at making this route more attractive by providing lighting, together with new sections of path at either end to create a more direct route.

Abingdon to Culham Science Centre

Our strategy will be to create a new northerly route from Culham Science Centre, possibly crossing the Thames and linking with route 5 into Abingdon and Oxford or staying south of the Thames and entering Abingdon at Bridge Street.

In addition, an existing shared use roadside path follows the A415 but stops short of Abingdon near to Culham village, where the pavement becomes raised into Abingdon; the path known as The Causeway. We will investigate the feasibility of continuing the cycle route along or by the side of The Causeway.

Didcot to Culham Science Centre

Our strategy will be to link the existing Sustrans route 5, which on leaving Didcot heads to Long Wittenham on off road paths and then onwards to Wallingford on quiet roads, to the A415 roadside cycle path which serves Culham Science Centre.

This will enable routes from both Didcot and Wallingford to Culham Science Centre, and from Berinsfield to Didcot and beyond. Additional benefits will include a better route for cyclists and pedestrians between Long Wittenham and Clifton Hampden.

The route passes through an area of forthcoming housing north of Didcot's Ladygrove estate. The route will need to be integrated into the layout of the development while being aware of its importance as a through route, with suitable high specification connections made into the existing network of cycle paths in Ladygrove.

Grove to Wantage

Our strategy will be to create (or upgrade) a route to link Grove and Wantage. This will be essential to ensure cycling is an attractive option for residents of the existing settlements and the new housing developments. In addition this route will ensure that both Grove and Wantage are linked into the network of other Science Vale Premium Routes.

Didcot to Wallingford

There is currently a National Cycle Network signed route (5) between Didcot and Wallingford, which is fairly lengthy compared to the most direct road route, the A4130, which is not ideal for cycling. Another route is via South Moreton. Our strategy will be to consider all these routes and identify what improvements that can be made to them.

Connector routes and other schemes

Connector routes are an important part of the cycle network, however, investment in creating or improving these routes varies significantly in value for money and contributing towards increasing cycling targets within the area. These identified below assume the Vale of White Horse District Council's emerging Growth Strategy comes to fruition and that South Oxfordshire District Council plans growth within the Culham/Berinsfield area.

Steventon to Milton Park

This scheme will provide a link between Steventon and Milton Park avoiding Milton Interchange. The scheme could consist of a new cycle path running alongside the existing footpath which runs next to the railway line, passing under the A34 and connecting Steventon to Milton Park.

Chilton to West Ilsley A34 junction

This scheme will provide a link between the West Ilsley A34 junction and the Chilton A34 junction. Currently cyclists heading north/south have to make use of a section of A34 dual carriageway. Alternative roads add several miles to a journey.

This scheme would create a path between these points suitable for all weather cycling and helping to make cycling a more attractive option between West Berkshire and Harwell campus and beyond. This route will also improve sustainable access to more of the North Wessex Area of Outstanding Natural Beauty.

Backhill Lane tunnel

This scheme will see a currently disused underpass under the railway at Milton Park reopened for cyclists and pedestrians. It will be of particular benefit for cyclists travelling from Didcot Great Western Park to the west of Milton Park. The £1.4million scheme is being delivered by Milton Park as part of a larger scheme including a new junction on the A4130, and is funded from the Oxfordshire LEP's Growing Places Fund.

Berinsfield to Oxford

This scheme is centred on making upgrades to a series of bridleways that connect Berinsfield to Oxford via Marsh Baldon, which largely follow the course of an old Roman Road. The route will provide a direct alternative for cyclists to the busy A4074.

The route joins existing cycling facilities at the Oxford end at Grenoble Road which will enable connections to Oxford Science Park, Greater Leys, Blackbird Leys, Cowley and the wider Oxford Eastern Arc area. At the Berinsfield end the route joins the existing roadside route from Berinsfield to Culham Science Centre and onwards to Abingdon.

Culham village to Abingdon

Our strategy for a route between Culham Science Centre and Abingdon will investigate potential solutions to improving The Causeway for cyclists. To complement this work, the provision of improved cycle and pedestrian facilities between Culham Village and Abingdon will be investigated as well.

A417 cycle path

Study work looking at the A417 corridor has identified possible demand for a cycle path alongside the A417. The study has a wide remit covering all aspects of the road between Wantage and Blewbury. Further investigative work on the possibility of a cycle path alongside the road for all or part of this section will be progressed through the A417 study programme.

Didcot Station to Power Station Roundabout area

Cycling user groups have stated that the Power Station Roundabout (at the end of Basil Hill Road) is a major issue for cyclists travelling between Didcot and Milton Park, and have suggested a solution based on the Hovenring in Eindhoven, the Netherlands, which is a separate junction for cyclists elevated about the road junction, connected by a network of elevated cycle paths.

In addition, railway bridges on Basil Hill Road and Foxhall Road, together with busy roads and roundabouts on Manor Bridge and Foxhall road create a less than ideal cycling environment and a barrier in an area which many cyclists need to travel through.

Future work will look at this area as a whole and at solutions both short and long term and will consider innovative landmark infrastructure to recognise this area's gateway status within Science Vale.

Cow Lane underpass, Didcot

The Cow Lane underpass at Didcot represents a major barrier for cyclists. The underpass, which carries Cow Lane under the railway, lies on National Cycle Network route 5 and is a key link between the north and south of Didcot. It was built prior to the expansion of Didcot to the north, but has not been upgraded. It currently consists of a narrow southbound vehicle carriageway and a narrow pavement, separated from the carriageway with a barrier. Cyclists heading southbound can use the carriageway but heading north have no choice but to dismount and use the narrow pavement.

Several options have been looked at in the past to address the problem, including widening the existing underpass or constructing a new underpass, and funding has been sought unsuccessfully. The age of the underpass, its length and having an operational main line railway running over it contribute to any solution having a very substantial price tag of several million pounds.

A decision to spend several million pounds on one very small part of the network would need to be carefully considered in terms of value for money and compared to what that funding could achieve for the rest of the network if spent elsewhere.

A potentially less costly solution would be to remove the vehicle traffic lane and make the underpass for the exclusive use of pedestrians and cyclists. However, this solution would require widespread support locally and politically among all concerned before it could be considered.

Longer term, a solution may be found through the possible creation of a northern entrance to Didcot station, utilising its associated subway or footbridge.

Wantage Town Network

Wantage Town Council is currently working on a Neighbourhood Plan which will detail plans for several improvements that could be made to cycling facilities within Wantage. Improvements to cycling facilities to encourage more cycling in Wantage will be essential as the area grows. Once the Neighbourhood Plan is adopted, schemes can be considered as funding opportunities arise, and when developer funding opportunities arise.

Other towns and other local schemes

There are many other potential schemes within the other towns and villages that make up Science Vale. Neighbourhood Plans are an excellent way of documenting these and getting local support through the plan preparation and adoption process. A number of schemes have been submitted through the LTP4 consultation process and these shall be reviewed and implemented when funding and resources permit.

Didcot – a mini-Holland?

London's 'Mini-Hollands' programme is providing £100m to three London boroughs to transform local cycling facilities and encourage people to take up cycling. It is hoped that this will help make them as cycle-friendly as their Dutch equivalents.

The Oxfordshire Cycling Network, representing the views of many cycling user groups in Oxfordshire, has suggested that Didcot would make an ideal place to test the mini-Holland approach in Oxfordshire.

Although there is no funding for such schemes outside of London at present, in the future there could be, particularly if the schemes in London are successful.

Future work for Didcot could look at how suitable it is for a mini-Holland type programme and what this might consist of, how successful it might be and what the impact could be.

Banbury Area Strategy

The Local Context

1. Banbury is Cherwell's largest town and Oxfordshire's second largest settlement, with a population of nearly 47,000¹. Banbury acts as a Primary Regional Centre that serves a wide sub-region, with a diverse economy focused on manufacturing, logistics, distribution and services and increasingly, high tech manufacturing. In addition to provision of significant employment opportunities, the town also provides a focus for major retail, housing, cultural, leisure and community activities.
2. Located in north Oxfordshire, Banbury's central position in the wider region and its excellent transport links means that the town has a far-reaching catchment and area of influence extending north to Birmingham, Coventry and Northampton; east to Milton Keynes, Brackley and Buckingham; west to Stratford on Avon and Chipping Norton; and south to Oxford, Bicester and Aylesbury.
3. The aim in Banbury is to strengthen the town centre and its economy by boosting its vitality and attractiveness through strategic investment and regeneration thereby providing a full range of facilities, whilst safeguarding the town's historical character.
4. The *Cherwell Local Plan* anticipates that the town will continue to grow significantly by 2031, with new employment and residential areas proposed, and creation of a more diverse economy. By 2031, the adopted Local Plan² proposed that there will be an additional 7,319 houses³ and 3,500 jobs in Banbury, at key employment sites including Central M40, to the east of Banbury (2,500 jobs);; and on land North East of M40 Junction 11 (1,000 jobs)⁴. These are shown in Figure 15.1. In his report on the Local Plan (June 2015) the Inspector recommends that the scale of employment on land North East of M40 Junction 11 be reduced from 49ha to 13ha, in turn reducing the number of jobs to 1,000.
5. The emerging *Banbury Masterplan* supports the Local Plan proposals and will provide the overall framework and vision for guiding the sustainable growth of the town to 2031. It aims to rejuvenate the town centre with a focus on developing shopping, leisure and night time economy activities, and to secure the long term role of the town centre.
6. This Transport Strategy for Banbury supports delivery of the *Cherwell Local Plan*; the *Banbury Masterplan* and its overall vision for Banbury; and the *Canalside Supplementary Planning Document*.

¹ Census Data 2011, NOMIS

² Cherwell Local Plan 2011-2031 Part 1 (Adopted 20 July 2015)

³ Inclusive of committed development and Cherwell Local Plan 2011-2031 Part 1 (Adopted 20 July 2015)

⁴ Policy Banbury 15: Employment Land North East of Junction 11, Cherwell Local Plan 2011-2031 Part 1 (Adopted 20 July 2015)

Transport in Banbury

7. Banbury has excellent road connections, with access to the M40 via Junction 11 and with several strategic A roads serving the town. Movement to, from and within Banbury has historically been influenced by a range of physical and environmental constraints including the rail line through the centre of the town and the Oxford Canal and River Cherwell, both of which dissect the town from north to south. The historic areas of Banbury also influence traffic movements, particularly around the town centre where there are a number of one-way, narrow and pedestrianised areas.
8. Banbury has a range of bus routes linking residential areas with the town centre, these have developed incrementally overtime and form an inefficient pattern. Many of these routes require subsidy to operate as they are not serving the commercial commuter market. The quantum of development in Banbury, to be delivered through the Local Plan, offers an excellent opportunity to rationalise the bus network to link homes to employment across the town.
9. Banbury rail station is strategically located on the national rail network, between London and Birmingham. New investment in rail infrastructure has substantially reduced the travel time from Banbury to both cities, with regular high quality train services serving Banbury and excellent links to other centres including Bicester and Oxford. Nationally, there are emerging rail proposals for strategic electrification upgrades which are to be undertaken on the Oxford to Banbury line. These are likely to have a significant impact on the town's rail station and adjacent infrastructure and present an opportunity for complementary transport network improvements.

Transport Strategy Aims

10. This Transport Strategy identifies a series of improvements to address the existing transport issues in Banbury, and to manage the increased travel demand that will be generated by development in the town. The Strategy will:
 - **Deliver infrastructure improvements** to increase the overall capacity of the local transport networks whilst also supporting sustainable travel.
 - **Facilitate and promote sustainable travel** for trips to, in and around Banbury, including use of the bus, walking and cycling. A step-change in the increased use of sustainable transport modes is essential to support growth in Banbury. The Sustainable Transport element of the Strategy will play a key role in reducing the volume of traffic associated with the town's significant growth and mitigating the traffic impacts on local roads serving Banbury.

Infrastructure Improvements

11. Infrastructure schemes which seek to improve the operation of the existing highway network, address *current* transport issues in the town, and protect sensitive areas, continue to form a key element of the Transport Strategy for

Banbury⁵. These improvements comprise:

- **Promotion of Bankside, comprising:** i) Modification of traffic calming along Bankside; ii) Signalisation of Hightown Road / Bankside junction; and iii) Signal timing optimisation at Swan Close Road. This is being progressed and funded as part of the Longford Park development.
- **Traffic management along A361 the South Bar Street/ Horsefair corridor.** This is an historic corridor which has recently been declared an Air Quality Management Area (AQMA) primarily due to traffic impact. Measures to encourage alternative routing to reduce the number of vehicles using this route and improve traffic flow will be examined.
- **Developing the Cherwell Street 'Eastern Corridor' as the preferred north-south route through the town.** Due to the Air Quality Management Area at North Bar, and the weight limit restrictions at Queensway, Cherwell Street is the main north-south route through Banbury. While the focus will be to establish this corridor as the preferred north-south route through the town, a key consideration will be the need to balance the conflicting travel needs of vehicular access north-south, pedestrians crossing east-west, and bus movements. The Cherwell Street scheme will include improvements to the Bridge Street / Cherwell Street junction and a review of highway space from Swan Close Road to Bridge Street to improve traffic flow, and bus movements, but also reduce severance and increase the ability for pedestrians to cross the road. This scheme will be developed in conjunction with town centre redevelopment, in particular through the Canalside Supplementary Planning Document. Additionally, this scheme is co-dependent on the Bankside scheme, particularly the changes at Swan Close Road.
- **Provision of additional capacity at the Bloxham Road (A361) / South Bar Street junction** will also be implemented by the Longford Park development.

12. Additional infrastructure improvements will be delivered to support future regeneration of Banbury and the Local Plan Modifications development proposals:

- **A361 Bloxham Road to A4260 Oxford Road Spine Road through the residential development South of Salt Way:** The co-ordinated approach to development to the south of Banbury as proposed in the Local Plan Modifications (August 2014), will enable provision of essential infrastructure including delivery of an east-west link from the A361 Bloxham Road to join White Post Road and the A4260 Oxford Road. This road will support operation of commercially viable bus services through the development, increasing accessibility and long term sustainability of the development. The spine road will be built by the developer.
- **Capacity and traffic flow improvements along the Hennef Way to M40 Junction 11 corridor** (an AQMA), will be investigated in 2016/17 including:
 - Hennef Way/ Southam Road and Hennef Way/ Concord Avenue improvements.

⁵ As identified in the Banbury Movement Study, 2013

- Hennef Way/ Ermont Way improvements: replacement of the existing roundabout with a signalised junction.
 - Ermont Way/ Middleton Road improvements: increased capacity provided at entry to roundabout.
 - Junction improvements/ traffic signal optimisation along Hennef Way and at M40 Junction 11.
- **As developments sites come forward, it is likely further capacity improvements will be required at other sensitive junctions. Where possible improvements will be directly secured from development sites. Improvements at, but not limited to, the following will be sought:**
 - Warwick Road (B4100) roundabout junctions with A422 Ruscote Avenue and Orchard Way
 - Bloxham Road (A361) junction with Queensway and Springfield Avenue
 - A361 Southam Road junction with Castle Street and Warwick Road.

13. In the longer term (post 2024), there is likely to be a need for additional road capacity to manage anticipated traffic growth at M40 Junction 11.

- **A new link road east of Junction 11** will provide a strategic solution to helping mitigate the impact of traffic travelling to/from Banbury from surrounding areas including from the M40.

14. The increase in Local Plan growth to the south of Banbury has renewed the need to investigate the opportunities, costs and benefits of a link road over the railway from Tramway Road to Higham Way, a road linking Higham Way to Chalker Way or a south east link road for the post 2024 period, to manage traffic movements within the town. The study will also consider links from Higham Way to Thorpe Way. These options will be assessed by the County Council in 2015/16. The evidence from this study will inform further decision making.

15. To improve traffic circulation around Banbury, signage will be reviewed and enhanced. Car parking in the town centre will also be reviewed and the distribution of car parks improved. Car parking matrix signs will be introduced to signpost drivers more effectively to car parks with spare parking capacity.

BAN1 – We will seek opportunities to deliver transport schemes which will support the regeneration and growth of Banbury to 2031 and protect the historically sensitive areas of the town through:

- Promotion of Bankside.
- Traffic management along A361 the South Bar Street/ Horsefair corridor.
- Bridge Street/ Cherwell Street eastern corridor improvements.
- Bloxham Road (A361)/ South Bar Street improvements.
- Provision of A361 Bloxham Road to A4260 Oxford Road Spine

Road.

- Hennef Way/ Southam Road improvements.
- Hennef Way/ Concord Avenue improvements.
- Hennef Way/ Ermont Way improvements.
- Ermont Way/ Middleton Road improvements.
- Increasing the capacity of junctions along Warwick Road (B4100).
- Bloxham Road (A361) junction with Queensway and Springfield Avenue improvements.
- A361 Southam Road junction with Castle Street and Warwick Road improvements.
- Provision of a link road East of M40 Junction 11 (Overthorpe Road to A422).
- Investigating the impact of i) a link road crossing from Tramway Road to Higham Way; ii) a link road from Higham Way to Chalker Way at Central M40 site; iii) a road linking Higham Way to Thorpe Way; iv) a south east link road.
- Reviewing the highway signage on routes into the town centre to sign north-south through-traffic away from sensitive areas of the town centre and promote appropriate route choices at key decision making junctions.
- A car park review and improvements, and provision of car park matrix signs.

Sustainable Transport Strategy

16. Travel to Work Census data (2011) highlights the significant opportunity that exists for encouraging sustainable travel in Banbury and delivering a step-change in the use of sustainable modes for travel around the town. Whilst a significant number of Banbury residents travel to Oxford for work, 60% of journey to work trips are currently undertaken within the town i.e. with a home origin and a work destination in Banbury. However, despite the local pattern of work trips, whilst 32% of these trips are undertaken on foot, 57% of these local trips are undertaken by car. Only 3% are undertaken by bus and 6% by cycle.
17. A Bus Strategy (see LPT4 Volume 4) for Banbury is therefore being developed with the aim of improving the bus network. In conjunction with the local bus operators, a review is being undertaken of bus operations in the town which will identify short, medium and long term route changes (including any infrastructure requirements) to provide direct commercial bus routes from residential areas, via the town centre to the employment areas.
18. The first service improvements will be to improve bus links between residential development in the west of Banbury and employment sites on

the east side of town (see Figure 15.2). This will involve working closely with a range of stakeholders including Cherwell District Council, bus operators, developers, local employers and business groups.

19. The aspiration to serve Banbury Rail station with an increased variety of bus services will be explored by examining opportunities to route buses from the town centre to the Thorpe Way employment area via Higham Way, thus serving the new eastern station entrance in the multistorey car park. In addition, on the western side of the station, work will be undertaken with landowners to open Station Approach and Tramway Road to through bus services.
20. Improving bus journey time reliability will be considered as well other improvements, including bus-only access links. This will complement bus service enhancements by enabling faster, more reliable bus journeys to ensure that the bus becomes a genuinely attractive option.
21. The existing bus station in Banbury is unwelcoming for passengers and under-used by operators. The Banbury Masterplan will consider if the current bus station layout and access arrangements can be improved, or whether a bus station at a different town centre location offers greater benefit to the town, including considering if a bus station is required at all or whether a series of on street bus stops could better serve Banbury.
22. We will continue to ensure new development sites are served with high quality commercially viable public transport services, through a variety of mechanisms, including seeking pump priming funding.

BAN2 – We will work closely with Cherwell District Council, bus operators and other strategic partners to deliver the Banbury Bus Strategy, which seeks to deliver a commercial bus network for Banbury. Increased bus use will be achieved by:

- Implementing a bus route serving Bretch Hill>Banbury Town Centre>Rail Station (at Higham Way)>Thorpe Way>Wildmere Road>Banbury Gateway Retail Park. This scheme will include opening a bus-only route from Alma Road to Thorpe Way in order to provide bus journeys direct to the employment site. New bus stops will be introduced along the route.
- Undertaking feasibility work into the costs and benefits of routing buses through the pedestrianised town centre.
- Conducting, as part of the Banbury Masterplan, a comprehensive review of bus interchange facilities including the functionality of the bus station.
- Conducting, in partnership with bus operators, a comprehensive review of town wide bus services to identify short, medium and long term route changes (including any infrastructure requirements) to provide direct commercial bus routes from residential areas, via the town centre to the employment areas.
- Exploring opening Station Approach and Tramway Road to through bus services.

- Developing inter-urban services through enhancement of existing bus services or providing new services.
- Seeking funding from new development sites to ensure they are served by high quality commercial public transport services.

23. The Government's plans to electrify the rail line through Banbury will provide a catalyst for economic growth and will result in increased passengers at Banbury Rail Station. We will take advantage of the opportunities created by electrification, to revitalise the Rail Station and improve access to it. The Bus Strategy will include identification of proposals for improving bus links to the Rail Station.

24. Improvements to the Bridge Street junction, together with supporting public realm enhancements throughout Canalside, will provide greater connectivity to the railway station and the town centre, to accommodate trips associated with development in the area and promote sustainable access.

BAN3 - We will strengthen Banbury's position on the rail network through revitalising the railway station area and improving pedestrian, cycle and bus access to the station.

- We will work with our strategic partners to develop Banbury Station as a transport interchange. This is likely to involve re-designing the station forecourt to create an interchange that will feature a taxi rank, better cycle facilities (including cycle storage), and more pedestrian space, with improved public realm giving a sense of arrival.
- We will improve walking, cycling and public transport links to the station in order to meet future demand and to better connect the station to the town.
- Increase the variety of bus services passing the rail station, including exploring opportunities to route buses via Higham Way, and from Tramway Road to Station Approach.
- We will seek to maximise the opportunities national rail electrification proposals could bring to improving the transport networks, particularly at Bridge Street and around the rail station.

25. Walking and cycling will be promoted and encouraged for short trips in Banbury, through improvements to pedestrian and cycle infrastructure. As well as reducing car trips on the network, this will also promote healthy and active transport, as well as complement Cherwell District Council's emerging Air Quality Strategy.

26. The current cycle network is disjointed and does not encourage cycling. In the medium/ longer term, a network of cycle routes will therefore be developed to serve those areas which are identified as having the greatest potential for an increase in cycling. We will continue to work with developers

of new residential and employment sites to provide facilities for pedestrians and cyclists to access key off-site amenities such as trips to work, school, and access to the rail station.

BAN 4 - We will work closely with Cherwell District Council and other strategic partners, and developers to provide facilities for pedestrians and cyclists and we will work to fill in the gaps in the walking and cycling network, including Public Rights of Way.

- Seek funding from new development sites to ensure they are served by high quality walking and cycling routes to off-site amenities.
- Conduct walking and cycling network assessment studies and prioritise improvements to deficiencies in the networks.

27. Residential Travel Plans and Workplace Travel Plans will be secured for all new developments that meet OCC's thresholds. Residential developers will be expected to support and promote sustainable travel options to new occupiers e.g. through personalised travel planning, whilst occupiers of employment sites will be required to implement a Workplace Travel Plan.

28. With the significant amount of employment proposed in Banbury, Delivery & Servicing Plans (DSPs) will also be an important tool for managing trips on the road network and protecting historic and sensitive areas. For example, DSPs will provide a mechanism for encouraging deliveries to take place outside of peak hours, and for larger vehicles to use designated routes.

29. Construction Logistics Plans will also be required for development sites.

BAN 5 - Travel Plans, Delivery & Servicing Plans and Construction Logistics Plans will be secured for all new developments that meet OCC's thresholds. Travel Plan/ DSP monitoring contributions will be secured.

This policy supports delivery of the Sustainable Transport Strategy.

Scheme Delivery

30. Where transport schemes are needed to mitigate the impact of a particular development, provision of infrastructure and/or financial contributions will be secured from the developer.

31. This Area Strategy also identifies a package of transport measures that are required to mitigate the cumulative impact of development in Banbury. Developer contributions will therefore be sought towards schemes within the Area Strategy using a strategic transport infrastructure contribution rate to mitigate the cumulative impact of development. Additional funding for these strategic schemes may also be sought via the Local Enterprise Partnership and the Local Transport Board to the Local Growth Fund and other sources.

32. Major residential development sites are required to fund new or improved public transport services to key locations agreed with the County Council until they become commercially viable. Other residential sites will be required to make a public transport contribution towards improving bus services based on the size of the development.
33. Developments are also required to provide modern bus stop infrastructure, including shelters and Real Time Information, to enhance access to the public transport network. These are usually secured through Section 106 or Section 278 agreements.
34. When the Community Infrastructure Levy (CIL) is introduced by Cherwell District Council contributions will be sought via this new mechanism, as well as via S106 or S278 agreements.

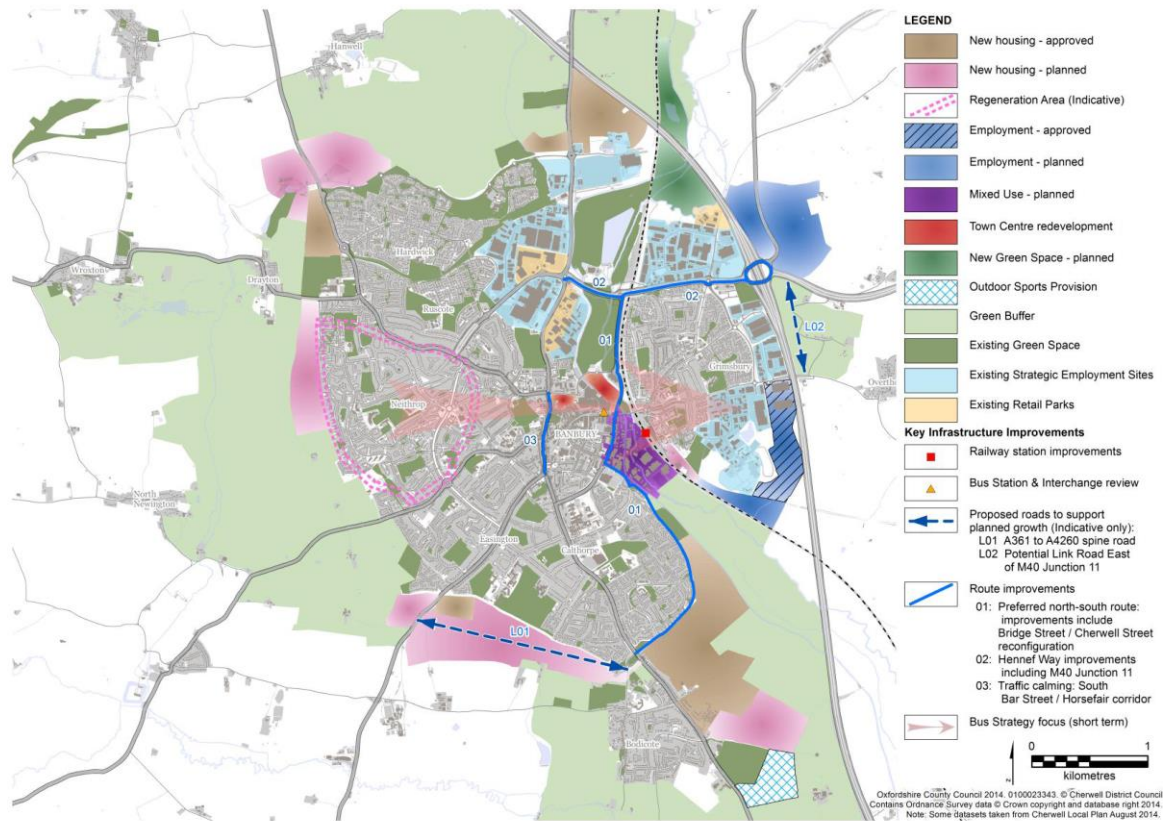
BAN 6 - Where schemes are needed to mitigate one particular development, the developer will be expected to deliver the infrastructure directly, or provide funding for the scheme. Where a scheme is required due to the impact of more than one development, each developer will be expected to make a contribution proportional to the scale of their impact. This will include contributions towards infrastructure improvements set out in Cherwell District Council's Infrastructure Delivery Plan for Banbury, as well as bus service enhancements and infrastructure improvements.

Oxfordshire County Council is working towards establishing a strategic Transport Contribution rate for developer funding, which will be adopted in a future update of this strategy.

35. This Area Strategy replaces the Banbury Integrated Transport and Land Use Study – 2000 (BITLUS). Planning obligation contributions, secured in order to mitigate the impacts of development, towards BITLUS will be able to be used to deliver the proposals in this strategy and be in accordance with the planning obligations.
36. A comprehensive list of transport schemes proposed for Banbury can be found in the Cherwell Local Plan Infrastructure Delivery Plan at: http://www.cherwell.gov.uk/media/pdf/c/e/IDP_Schedule_Aug_2014.pdf

Maps and Plans

37. The maps below show the key pieces of transport infrastructure required to deliver the proposed growth and investment in the area.



Banbury Figure 1: Indicative map of transport infrastructure and proposed growth in Banbury. Note: Development sites sourced from the Proposed Modifications to the Submission Local Plan 2016-2031 (August 2014), to be updated following the adoption of the Local Plan in 2015.

Bicester Area Strategy

The Local Context

1. Bicester is one of the fastest growing economic centres in the country, with a population of approximately 33,000 people. Its economy is focused on storage, defence and distribution activities, food processing and engineering. Bicester Village shopping outlet is a significant UK tourist attraction, drawing in nearly six million visitors a year, including many from overseas. It benefits from good rail connections with London, which will be improved by a direct connection to London from Bicester Village Station as part of East-West Rail Phase One. Further improvements will come forward as part of East-West Rail Phase Two which will connect Bicester with Milton Keynes, Bletchley and Bedford to the north and Didcot and Reading to the south.
2. The Oxfordshire Local Enterprise Partnership identifies Bicester as part of the Oxfordshire Knowledge Spine (Science Vale – Oxford – Bicester) and within the Strategic Economic Plan this is seen as a key driver for economic growth. Given its advantageous location on the transport network which connects the town with Oxford, Science Vale and the wider south-east region, Bicester is identified for significant residential and economic growth. This is demonstrated through the expansion of Bicester Village, proposed business parks and employment sites allocated in the emerging Local Plan, investment in the town centre as shown by the recently completed £70m town centre redevelopment, and the shift to a low carbon community exemplified by North West Bicester eco development.
3. The Cherwell Local Plan seeks to use this potential to deliver jobs-led growth, supported by housing, with 138.5 ha of employment land, and approximately 10,000 further new homes are planned for Bicester. The Local Plan also sets out an ambition for Bicester to become a greener more pleasant place to live, work and visit.
4. This strategy supports the *Cherwell Local Plan*. The implementation of the *Local Plan* will be helped by proposals and initiatives in the *Bicester Masterplan*. These documents promote an enlarged and vibrant town with a comprehensive range of employment opportunities and local amenities to complement its substantial role in the wider region's economy. The *Local Plan* stresses the importance of securing jobs-led growth in the town to address the critical employment shortfall and high levels of out-commuting.
5. The *Local Plan* will enable employment development on allocated sites, with the aim of creating a diverse economy that attracts growth and investment from the business, manufacturing, science and hi-tech sectors. Amongst other sites, employment sites include the Bicester Business Park and South East Bicester that are expected to create up to 9000 jobs. The *Local Plan* also seeks to strengthen the town centre and create additional green and recreational space.

6. Bicester has been awarded Garden Town status by the government, which will provide funding to help with the delivery of homes, jobs and open space as well as transport infrastructure. The proposal for this includes the provision of a new motorway junction to the south of Junction 9, near to Arncott. This needs further investigation to determine its impact and how this could fit within the overall transport strategy in the area, in the context of study work for the proposed Oxford to Cambridge Expressway being led by Highways England.
7. Enhancing access to the strategic transport network and making it easier for people to travel between homes and jobs is critical in accelerating and accommodating future growth in Bicester. Investment in core transport infrastructure will boost the attractiveness and desirability of Bicester as a place where businesses want to locate and grow, and where people want to live and work.

Transport Strategy Aims

8. The priority for Bicester is to provide the transport infrastructure which supports the aspirations set out in the *Local Plan* and the initiatives for their implementation in the forthcoming *Bicester Masterplan*. This includes tackling the challenges identified in the *Bicester Movement Study* and the further technical reports prepared as part of the Main Modifications to the Local Plan, as well as those specific to Central Government standards for transport in Eco Towns which will be re-stated within the Supplementary Planning Document for NW Bicester. These plans and policies will enable the town to thrive and realise its full growth potential, and its essential role in Oxfordshire's economy.
9. This strategy identifies a series of improvements to increase the overall capacity of transport networks and systems within the locality, enabling them to accommodate the additional trips generated by development; to adapt to their cumulative impact and to mitigate the local environmental impact of increased travel. Where schemes are needed to mitigate one particular development, the developer will be expected either to construct or provide funding for the scheme; where a scheme is required due to the impact of more than one development, each developer will be expected to make a contribution proportional to the scale of their impact. Additional funding may also be sought via the Local Growth Board to the Local Growth Fund and other sources.
10. There is a need for a significant increase in the proportion of trips to be made by public transport, cycling and walking if the anticipated level of growth is to be accommodated. It is essential to provide high quality access to the strategic highway and railway network to secure business investment and encourage people to make Bicester their home.
11. Therefore Oxfordshire County Council will seek to:

- Increase highway capacity on the peripheral routes to make these attractive to employment and longer distance traffic and thereby reduce the strain on the town centre and central corridor.
- Implement a sustainable transport strategy within the town centre, reaching out to residential areas and key destinations.
- Accommodate proposed strategic rail initiatives, including East West Rail and plans for electrification, and a possible future Rail Freight Interchange, in order to strengthen Bicester's position on the national rail network and maximise access to regional economic centres, such as Milton Keynes, Oxford, Banbury, London and Birmingham.

BIC1 – Improve access and connections between key employment and residential sites and the strategic transport system by:

- **Continuing to work with the Highways Agency to improve connectivity to the strategic highway, including future proposals for the A34, Junctions 9 and 10 of the M40.** We will continue to work in partnership on the A34 and A43 route strategies, as well as the two motorway junctions to relieve congestion, particularly in the peak periods, and connect Bicester into the Science Transit proposals to emphasise the town's attractiveness as an end destination, as well as accommodating trips to Oxford, Science Vale, Banbury, and other nearby centres (along the A41, A34, M40, A43).
- **A new motorway junction** will be investigated as part of the Garden Town work. This has been identified as a possible long term solution for strategic movements between the motorway network and the A41. Any impact on the area transport strategy will need to be identified, particularly any implications for the south east perimeter road (see below).
- **Delivering effective peripheral routes around the town.** This would enable the delivery of the sustainable transport strategy within the central area by providing a local distributor function as well as offering effective connections to strategic corridors for new residential and employment sites. A package of phased improvements will be agreed alongside the introduction of the sustainable transport measures, including:
 - **Western peripheral corridor:**
 - **Increasing capacity at the Howes Lane / Bucknell Road junction and approaches** to maintain this as part of the strategic peripheral route corridor and to accommodate the increase in traffic using this route, further enabling development in the area, including the North West Bicester development.
 - **Realigning A4095 Howes Lane**, as part of improving the strategic western peripheral route for Bicester.
 - **Improvements to the Lord's Lane / B4100 roundabout** to enable this junction to cope with future growth at an important radial route into / out of the town.

- **Eastern peripheral corridor:**
 - **Improvements to the Buckingham Road / A4221 junction** to provide the necessary capacity for the additional trips generated from nearby employment and residential development, as well as support the heritage tourism development of the neighbouring Former RAF Bicester site.
 - **Upgrade link to dual carriageway on the A4421 between the Buckingham Road and Gavray Drive** to complement the transport solution at the railway level crossing at Charbridge Lane and facilitate development in the area. This scheme will improve the operation of this section of the eastern perimeter road, and enhance the integration of the North East Bicester Business Park site with the rest of the town.
 - **A new link through the South East Bicester development site** is required from the A41 Pioneer Road junction up to Wretchwick Way as an extension to the south east perimeter detailed below and also to provide connectivity through the site, in particular for buses.
- **Southern peripheral corridor:**
 - **Junction improvements to Boundary Way** – the schemes to be implemented by Bicester Village’s expansion and by the Graven Hill development will provide essential improvements to this corridor.
 - In the longer term link capacity issues along Boundary Way are assessed as being a major transport issue for the town, with the Movement Study identifying two options for a **south east perimeter road** as the solution. The Graven Hill development will deliver the section round to the south of this site, joining the A41 at the Pioneer Road junction. This will need extending westwards to join the A41 north of junction 9. Two route alignments for this western section have been identified and further work will be undertaken to confirm the preferred option. This area strategy will be reviewed once this work has been completed, consultation has been undertaken and a preferred route approved.

Possible future improvements to the peripheral route may include a potential new link road to the **north of the NW Bicester site**. Although not required during the timeframe of the Area Strategy, assessment and viability will be undertaken and opportunities to safeguard a route will be taken if they arise.

- **Working closely with the rail industry to deliver solutions at the Charbridge Lane level crossing affected by the East West Rail Project.** A dual carriageway road bridge over the railway at Charbridge Lane is critical for this crucial part of the highway to remain open. We are working with the rail

industry to deliver an effective solution that meets the overall transport strategy in terms of the peripheral route corridor and considers the impact on the village of Launton.

- **Working closely with the rail industry and the Department for Transport to develop a solution to the likely restrictions affecting the London Road as a result of the East West Rail project.** The increased rail traffic as a result of the significant rail network improvements will significantly restrict access at the London Road level crossing in the future. We will explore options through engineering and economic benefit assessments to identify possible solutions to retain vehicular and pedestrian access at that crossing. This options assessment work will inform a local discussion across all local authority tiers in Bicester in order to agree a preferred solution. The County Council will work across partners and central government departments to identify funding and establish a delivery programme for this preferred solution.
- **Supporting the proposals to secure a potential freight interchange at Graven Hill and working with the district and developers to achieve this.** This would reinforce Bicester as a distribution hub within the region's economy and make a significant contribution to the future employment provision in Bicester, especially in the Graven Hill site, which in itself could provide 26 ha of employment land. The south east quadrant of Bicester is viewed to be the most appropriate area for B8 employment uses given the strategic road and rail access. The facility would also assist in removing freight traffic on the M40, A34 and A43, further reducing strain on the strategic road network and benefiting the environment.
- **Delivering a Park & Ride facility adjacent to the A41, close to the Vendee Drive junction,** to serve Bicester town centre, employment centres and rail stations, Bicester Village and Oxford, alleviating congestion along the A41 by intercepting car trips and promoting increased use of the high quality bus services.
- **Reviewing key county road links out of Bicester, including those that cross the county boundary.** A review of whether the B4100 between Bicester and A43 is still fit for purpose will be undertaken including whether an upgrade is required from its 'B' road status. Similarly a review of A41 to Aylesbury and A4421 to Buckingham will also be undertaken, again in the context of Oxford to Cambridge Expressway work. The interrelationship of development at Upper Heyford with that of Bicester, connected by the B4030, will be considered carefully.

12. Providing the above infrastructure and connections will be critical to attracting employment growth in Bicester, especially for the peripheral development sites. Effective transport links between the residential areas, employment sites and other facilities will facilitate economic growth, and provide more opportunities for people to live and work in Bicester, thus reducing the current level of out-commuting. The reduction in the length of people's journeys provides opportunities for them to use non-car modes of

travel. Complementary investment in the town's bus, walking and cycling network will have an essential role in accommodating growth, encouraging sustainable travel choices, and raising the quality of the environment. A sustainable transport strategy for Bicester is being developed by Cherwell District Council and has particularly concentrated on the cycle infrastructure improvements and changing travel behaviour through Smarter Choices. This needs to be imbedded within the overall transport strategy.

13. Bus priority measures may be required at anticipated pinch points on the main approaches to the town centre as future developments come forward. This is likely to include the Bucknell Road/Field Street junction, and the Buckingham Road approach to the three arm roundabout.

BIC2 – We will work to reduce the proportion of journeys made by private car by implementing a Sustainable Transport Strategy by:

- **Implementing Bicester town centre highway modifications.** In combination with improvements to the peripheral routes, highway restrictions in Bicester Town Centre will be considered on through routes in order to reduce through traffic in the town centre, constraining it to the peripheral routes and promoting more sustainable travel options in the town.

A review of the purpose and impact of the Buckingham and Banbury Road chicanes will be undertaken to understand whether they have a positive impact on reducing town centre through traffic movements any more, particularly for HGVs. If there is no clear benefit, they shall be removed.

- **Enhancing pedestrian, cycle and public transport links to the Bicester Village Station and Bicester North Station and key employment sites.** Sustainable access between the railway stations and business areas will also be improved and promoted to attract businesses to locate in Bicester. New employment should be located where there are effective, reliable, frequent and well-timed bus and rail services and safe and appropriate cycle access. Accessibility should be considered not only to and from the sites within the town itself, but also to key external destinations.
- We will use the opportunities offered by the redevelopment of **Bicester Village Railway Station** to create a 'state-of-the-art' multi-modal interchange offering high quality facilities for pedestrians, bus users and cyclists, including a cycle hub incorporating hire and repairs. We will also improve walking and cycling routes leading to the station, in particular, the walking route between the station and the town centre, as well as creating a new walking route linking the station with Langford Village and the expanded Bicester Village outlet and the Kingsmere estate.
- **Improving Bicester's bus services along key routes** to connect residential areas with existing and future employment centres, particularly Graven Hill, North West Bicester, the Launton Road Industrial estate, Bicester Business Park, South-East Bicester and North-East Bicester Business Parks. This will be achieved by using funding from development to enhance the quality and

frequency of existing services, with the aim of services reaching full commercial viability.

- **Providing bus priority where feasible to ease movements** – in particular there is the need to find a solution to issues at the Bucknell Road / Field Street junction which is proposed to become an important bus route as North West Bicester builds out and consider the need for bus lanes along the A41 to connect with the park & ride scheme.
- **Significantly improving public transport connectivity with other key areas of economic growth within Oxfordshire**, through access to high-quality, high frequency services on the core network between Bicester, Oxford (including further developing direct bus connections into Oxford's Eastern Arc), Banbury, Witney and Science Vale, operating on a 'turn up and go' basis throughout the day; integrated connections between local bus services and services on the core network; and flexible, cashless payment, with the ability to switch between modes of travel without penalty or the need to make separate payments. Proposed network improvements are shown in Figure 2.
- **Growth at Upper Heyford** will need to be considered in terms of improved public transport frequency and connectivity with Bicester.
- **Providing improved public transport infrastructure** where there are identified needs arising from strategic development sites and working with Bicester Town Council to enhance passenger information at strategic locations, and potential bus priority measures.
- **Improving access to Bicester Village.** An essential element of mitigating Bicester Village's impact is to improve connectivity with the local area through walking and cycling route improvements to key destinations. This in combination with Highway and Public Transport Infrastructure improvements will reduce the local impact in the area. Specifically a new Park and Ride service in close proximity to Bicester Village will be provided in 2015, improving its connections with Oxford and Bicester town centre.
- **Providing new sections of urban pedestrian and cycle routes to better connect residential developments with the town centre and key employment destinations.** The sustainable transport strategy has identified a number of cycle improvement schemes. This work and other strategy work has included the need for:
 - i. Off road cycle facilities will be considered along Premium cycle routes;
 - ii. A direct link from the centre of North West Bicester (Eco Town) to Bicester North Station and onwards to the Launton Road industrial estate;
 - iii. Options along Buckingham Road will be investigated, such as a shuttle working system under the rail bridge for vehicular traffic, in order to enable higher quality cycling and pedestrian improvements along this key corridor into the town centre;
 - iv. Improved pedestrian connections to Graven Hill including A41 crossing options to reduce severance and increase the accessibility of this site;

- v. A new link from the town park to Kings End to reinforce the east-west pedestrian and cycle links across Bicester;
 - vi. Promoting George Street as a pedestrian route linking to the Sports Centre, Community College and town centre;
 - vii. Providing a pedestrian footbridge over the railway as part of East West Rail to maintain access to the national cycle route;
 - viii. Southern connectivity project to provide sustainable connections between housing and employment developments to the south of the town;
 - ix. Improved cycle provision on the north side of Boundary Way would provide clear connectivity benefits; and
 - x. Middleton Stoney Road will become increasingly heavily trafficked in the coming years; the provision of a cycle facility along this route is considered necessary.
- This is not an exhaustive list and other projects may come forward for addition to the Plan.

- **Public realm improvements in Bicester Market Square and The Causeway** to enhance the quality of the pedestrian environment by creating a sense of 'place'. This will complement the major investment in the town centre redevelopment and will be progressed once other developments impacting on the Market Square are completed.
- **Securing green links between proposed development sites on the outskirts of the town and existing Public Rights of Way, providing a series of leisure / health walks.** We will also pursue opportunities to join a number of missing links in the Public Rights Of Way network through working with developers.

14. The Eco Bicester Travel Behaviour Demonstration Project showed that working closely with a small number of adults to get them back into cycling was effective. The Bike Loan element of this project has now been taken on by the community through Bicester Green. It is clear that a combination of behavioural change, as well as physical improvements, is required to really make a difference. The sustainable transport strategy is identifying ways to continue with influencing behaviour through Smarter Choices.

BIC3 – We will increase people’s awareness of the travel choices available in Bicester, which should improve public health and wellbeing, by:

- **Undertaking travel promotions and marketing measures** to complement the wider Bicester Vision place-making initiatives to strengthen the town as a place to live, work and invest in commercial enterprises. With the Park & Ride and significant rail service improvements due to be available over the next few years, there is an opportunity to work collaboratively with others to promote these modes. Developer’s Travel Plans will also offer the opportunity to increase the use of walking, cycling and public transport measures by increasing people’s awareness of the travel choices available.
- **Developing a coordinated parking strategy in partnership with Cherwell District Council** to identify commuter parking areas and provide an

appropriate balance of parking provision in the town and around the railway stations, including the quantity and location of short stay and long stay parking, as well as appropriate parking management and pricing mechanisms. This may require rationalising parking in some areas.

- **Discourage undesirable routeing of traffic by developing a signage strategy**, improving the directional signage on the town's road network by directing strategic traffic away from the town centre. This will alleviate congestion on the central corridor and enhance the quality of the environment in the town centre. It will also support Cherwell District Council's emerging Air Quality Strategy, which aims to tackle air pollution in the Kings End / Queens Avenue Air Quality Management Area.
- **Encouraging changes in travel behaviour through Smarter Choices**
- **Coordinated information and advance notice of construction closures and traffic related issues** will be needed to ensure that the town's transport network operates efficiently during the various improvement and building works.
- **The North West Bicester development site** will provide new approaches to transport, including a heavy emphasis on sustainable modes and travel choice advice, as well as early provision of bus services and cycle routes. This may unlock opportunities for wider travel choice options.

Scheme Delivery

15. Where transport schemes are needed to mitigate the impact of a particular development, provision of infrastructure and/or Transport Contributions will be secured from the developer.
16. This Area Strategy identifies a package of transport measures that are required to mitigate the cumulative impact of development in Bicester. Developer contributions will therefore be sought towards schemes within the Area Strategy using a strategic transport infrastructure contribution rate to mitigate the cumulative impact of development. Additional funding for these strategic schemes may also be sought via the Local Growth Board to the Local Growth Fund and other sources.
17. Major residential development sites are required to fund new or improved public transport services to key locations agreed with the County Council until they become commercially viable. Other residential sites will be required to make a public transport contribution towards improving bus services based on the size of the development.
18. Developments are also required to provide modern bus stop infrastructure, including shelters and Real Time Information, to enhance access to the

public transport network. These are usually secured through Section 106 or Section 278 agreements.

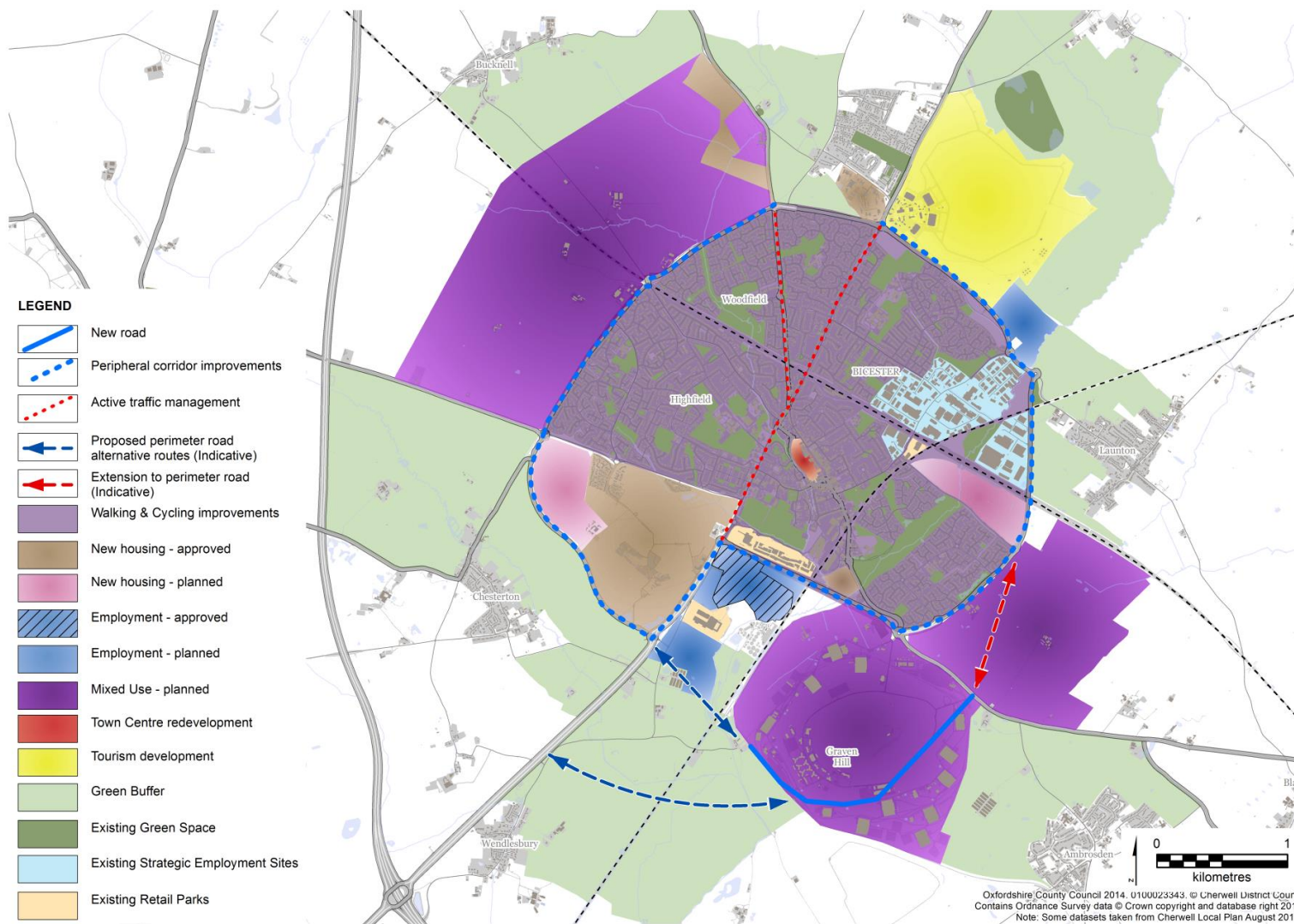
19. When the Community Infrastructure Levy (CIL) is introduced by Cherwell District Council contributions will be sought via this new mechanism, as well as via S106 or S278 agreements.
20. This Area Strategy replaces the Bicester Integrated Transport and Land Use Strategy – 2000 (BicTLUS). Planning obligation contributions, secured in order to mitigate the impacts of development, towards BicTLUS will be able to be used to deliver the proposals in this strategy and be in accordance with the planning obligations.

BIC4 – to mitigate the cumulative impact of development within Bicester and to implement the measures identified in the Bicester area transport strategy we will:

- **Secure strategic transport infrastructure contributions** from all new development
- **Secure strategic public transport service contributions** for new or improved public transport services as well as bus stop infrastructure to support sustainable development.

Maps and Plans

21. The maps below show the key pieces of transport infrastructure required to deliver the proposed growth and investment in the area.



Bicester Figure 1: Indicative map of transport infrastructure and proposed growth in Bicester (to be amended when the area strategy is updated later in 2015/16).

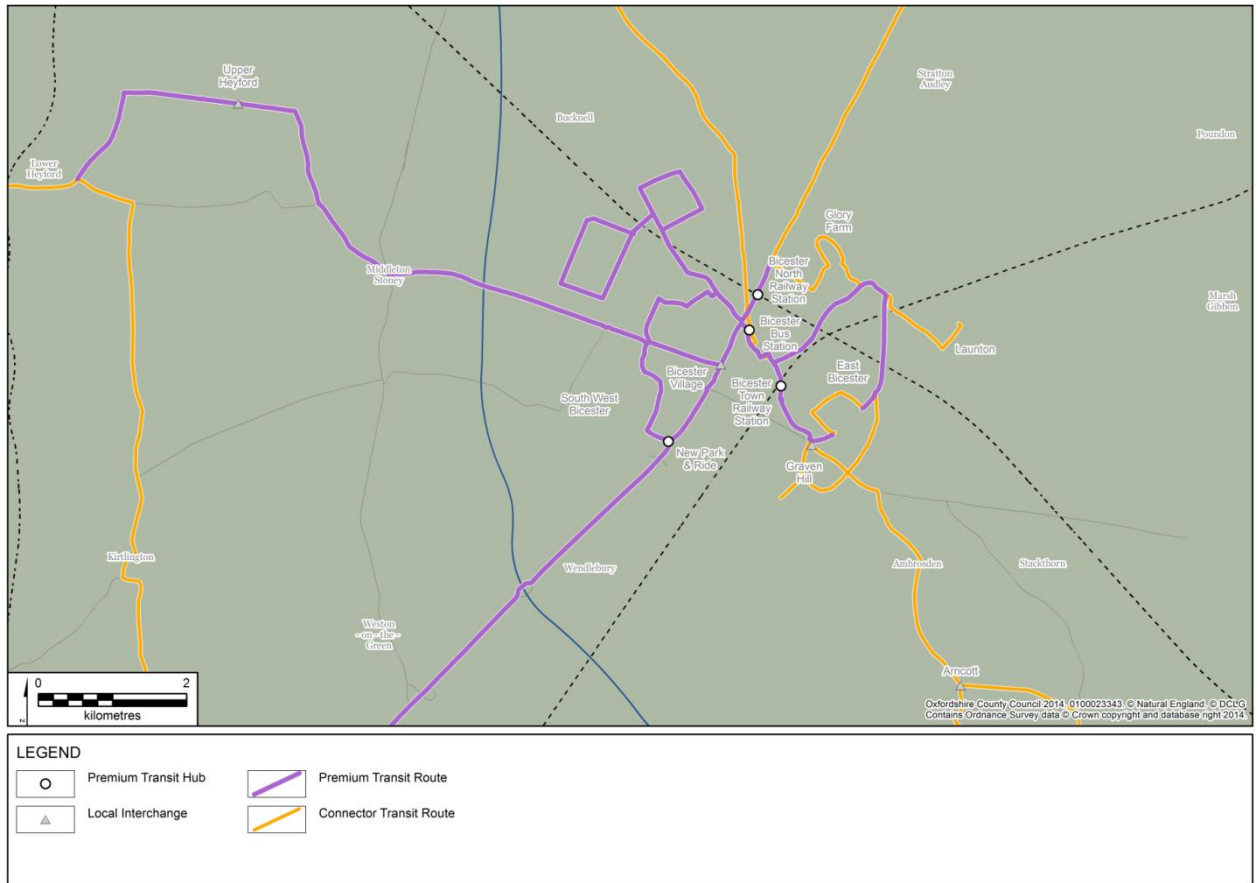


Figure 2: Bus routes in and around Bicester

Carterton Area Strategy

Carterton, the second largest settlement in West Oxfordshire, is a relatively modern town which has grown, in the main, to serve RAF Brize Norton. It has a small but varied economy, largely focused around the provision of local services, and has been identified as a growth area by West Oxfordshire District Council, and Carterton Town Council with opportunities for both residential and employment growth.

The travel to work data from the 2011 Census indicates that 38% of all trips to work by residents of Carterton are to workplaces within Carterton. Of those internal trips, 45% travel by car, 30% by foot, and 20% by bicycle, indicating that Carterton is a small enough settlement for walking and cycling to be attractive travel options. Only 1% travel by bus, which may indicate routes are not serving the areas people live or work; or that other factors make bus use unattractive, such as car ownership, or timetable or cost implications of using the bus.

For residents that work outside of Carterton, there are strong trends for travel to employment at Witney and Oxford. For trips to Oxford, 75% are travelling by car (this would include those using Park and Ride facilities), whilst 17% are using the bus services. Travel to work in Witney is also dominated by car use at 73% of trips, compared to 14% using the bus, and 2% cycling.

The role of the Ministry of Defence (MOD) within Carterton is very strong with many local people associated with RAF Brize Norton. The MOD seeks to sustain the strategic importance of RAF Brize Norton, as the largest RAF base in the country through Programme Gateway – the RAF's plan for the future as the UK's Global Air Mobility hub. In recent years Air Mobility operations have consolidated at Brize through the transfer of C130 Hercules air transport operations and introduction of Voyager aircraft (undertaking air to air refuelling). This has led to an increase in activity at the base, which is likely to continue in the short term, with the introduction of A400M Atlas aircraft from 2014 to 2019.

West Oxfordshire's growth proposals as laid out in the district council's Pre-submission Draft Local Plan 2011-2031 (March 2015) comprise 2,600 new homes by 2031 in the Carterton sub area, including Strategic Development Areas to the east of Carterton (700 homes) and a net increase of about 200 homes REEMA Central (current military personnel housing area). The draft Local Plan also seeks to deliver a more attractive and vibrant town centre.

Carterton Town Council's emerging master plan for Carterton will focus on strengthening the employment offering in the town and local area, which will in turn, present greater opportunities to work and live in the Carterton area, thus reducing out commuting and the need to travel. The master plan will seek transport infrastructure and services to support regeneration initiatives, sustain the local economy and attract business investment.

The Carterton Area Transport Strategy will be revised following the adoption, by West Oxfordshire District Council, of the Local Plan and Carterton master plan. This chapter has been updated since the publication of Local Transport Plan 3 (May 2014) in light of changes to overarching policy, and progress on schemes in the Carterton area.

Transport Strategy Objectives

The key transport objectives for Carterton are to:

- Establish a transport network that supports residential and employment growth, attracts economic investment and enables the operation of RAF Brize Norton;
- Encourage people to access jobs and services by sustainable modes of transport by improving opportunities for people to travel on foot, by bike, and public transport;
- Improve the environment of the town centre, and reduce the impact of traffic accessing the town centre.

This strategy divides travel demands at Carterton into three categories, which are discussed in turn:

- Carterton's Strategic Transport Networks
- Carterton's Local Transport Networks
- Beyond Carterton

Carterton's Strategic Transport Networks

The routes between Carterton and the A40 are currently only of 'B' road standard. This results in military freight using unsuitable routes, particularly through Carterton town centre and local traffic using a variety of routes, of varying standard, to access Witney and the A40. Improving access to the A40 is therefore a key objective reflected in Proposal CA1 below.

Policy CA1 – To establish a transport network for Carterton that supports residential and employment growth, attracts economic investment and enables operation of RAF Brize Norton. The County Council will work closely with the District Council and key local partners to:

- **Improve the B4477** between Carterton and A40 at Minster Lovell, which includes cycle provision, and upgrade from B classification road to A classification. Complementary measures in the surrounding rural area

may also be sought to support this scheme.

- **Promote West facing slip roads at A40/B4477 Minster Lovell junction**, to serve operations at RAF Brize Norton, and future employment growth.
- **Continue to work with RAF Brize Norton to establish the implications of Programme Gateway** on the existing transport network, to ensure new infrastructure is provided by the Ministry of Defence to enable its intensification of activity.

Carterton's Local Transport Networks

Public Transport

There are frequent bus services operating between Carterton, Witney and Oxford, including a service of approximately two buses per hour to Oxford Rail Station. The introduction, in July 2014, of a bus service from Carterton to Headington has improved access to the hospitals and Oxford Brookes University, although the attractiveness of this service to commuters is limited by the timetable. Whilst there is good patronage of bus services to Oxford and Witney, increasing the frequency and journey time will make these more attractive to users, which is essential to reducing reliance on private car, particularly for commuting.

The Carterton to Swindon bus service frequency, at one bus every two hours, restricts the attractiveness and usefulness of the bus service, particularly for commuters and people in education. Improving the number of services at peak times will increase the opportunity to travel by bus to jobs and education in the Swindon area.

Policy CA2 – To enable people to access jobs and services by public transport we will work with the District Council, bus operators and developers to make improvements to public transport and encourage its use by:

- **Improving the frequency of bus services between Carterton, Witney and Oxford**; including City Centre, Oxford rail station, hospitals and Oxford Brookes University;
- **Improving the frequency of bus services to Swindon**, through pump-prime funding from new developments, to eventually run these services on a commercial basis;
- **Providing bus stops close to the RAF Main Gate**;

- **Improving the environment and quality of bus stops** along these routes, pedestrian and cycle paths to them and the facilities available such as cycle parking.

Walking & Cycling

Walking and cycling are the most sustainable form of travel. It is recognised that Carterton already has good levels of walking and cycling for cross town journeys. Maintaining the attractiveness of walking and cycling is a key challenge as Carterton's population grows. In some locations within Carterton, poor quality surfaces, personal safety concerns and lack of directional signage deter walking and cycling. Ensuring high quality walking and cycling routes throughout the town is essential to enabling people to travel sustainably. Cycle networks linking the town to Witney and nearby villages could also be improved to enable cycling to work and for leisure.

Policy CA3 – the County Council will improve facilities for pedestrians and cyclists focusing on enhancing links between homes, employment and the town centre. Improvements will include:

- **a high quality cycleway from the employment and residential areas in the north and east** of the town to Carterton town centre via Brize Norton Road;
- **high quality cycle links from the west** of the town to the town centre;
- **establishing a network of high quality cycle routes** throughout Carterton;
- **work with RAF Brize Norton to improve traffic flow for all modes at RAF Brize Norton's Main Gate** including pedestrian and cycle routes;
- **support for the redevelopment of Ministry of Defence housing stock** within Carterton to provide excellent pedestrian access throughout the redeveloped site and clear pedestrian links to facilities across the town, including, where financially practical, the removal of the Upavon Way pedestrian subway;
- **providing a high quality cycle route between Carterton and Witney** as part of the B4477 improvement scheme; and
- **seeking funding from new development sites to ensure they are served by high quality walking and cycling routes to off-site amenities.**

Carterton Town Council is working on a masterplan for the town. The main aims are to promote retail and service growth by improving the environment in the town centre

including reducing the impact of traffic, whilst maintaining access. On completion of the strategy the County Council will review the transport issues that are highlighted.

Policy CA4 – To improve the environment of the town centre, and reduce the impact of traffic accessing the town centre the County Council will work with the District Council, Town Council, key local partners and developers to secure improvements to:

- **reduce queuing traffic and improve the environment in the town centre;**
- **discourage undesirable routing of traffic** by improving directional signs and traffic calming measures;

Beyond Carterton

Congestion on the A40 to the east of Witney causes very lengthy delays for journeys to and from Oxford (and other eastern locations) at peak times. This impacts on the ability of local businesses to achieve growth, and makes Carterton a potentially less desirable place for new businesses to locate. Bus services are vulnerable to delay because of congestion within Witney, through Eynsham and approaching Oxford on the A40.

Improving journeys by all modes on the A40 in Oxfordshire is vital to serving the residents and economy of West Oxfordshire as well as operations at RAF Brize Norton. A long term strategy for the A40 is under development which will look at the potential role of public transport improvements, increased highway capacity and/or traffic management improvements.

In the short term, there are a number of schemes current part of the county's delivery plan which will offer some improvements to capacity on the A40. Most recently, the County Council has been successful in a bid to the Local Growth Fund for £35M in funding to deliver public transport improvements in the A40 corridor.

POLICY WIT6* - We will improve access between towns in West Oxfordshire, and Oxford, including the new employment site at Oxford's 'Northern Gateway' by utilising the Local Growth Fund to deliver public transport improvements in the A40 corridor. The proposed scheme includes:

- **An eastbound bus lane** between Eynsham Roundabout and the Duke's Cut, Wolvercote;
- **Westbound bus priority** on the approaches to Cassington traffic signals

and Eynsham Roundabout;

- **A Park and Ride car park adjacent to the A40 in Eynsham;**
- **Junction improvements along the A40 corridor** between Witney Bypass and Eynsham Roundabout, including bus priority on the approach to Swinford Tollbridge;

In implementing this scheme the current Witney to Oxford cycle route will be retained and will be developed into a part of the Oxfordshire Cycle Premium Route network.

**This policy will be supported by the A40 Route Strategy, and updated accordingly as the proposals develop.*

Funding

Funding for the Carterton area strategy will be largely secured from developer contributions using the strategic transport infrastructure contribution rate.

The Carterton area strategy identifies a package of transport measures (excluding public transport) that are required to mitigate the cumulative impact of development across the Carterton area, where the impact of development is not attributable to a single development.

The level of contributions has been calculated based on the scale of funding required for the identified transport infrastructure necessary to support growth at Carterton and the quantum of planned growth. This approach has been taken to ensure contributions are directly related to the development; and fairly and reasonably related in scale and kind to the development. The contribution rate will be reviewed as the planned housing growth or infrastructure requirements change. Funding will be sought from both allocated development sites and speculative or windfall development sites.

The Strategic Transport Contribution does not include direct mitigation measures, which will be sought separately.

Policy CA5 – To mitigate the cumulative impact of development across the Carterton area and implement the transport measures identified in the Carterton area strategy we will:

- **Secure strategic transport infrastructure contributions** from all new development based on the contribution rate per dwelling or per m2 for non-residential developments.

Every development site will be required to fund improvements to public transport services and infrastructure serving Carterton in order to mitigate the cumulative

impact of development, including development sites that are not allocated in the Local Plan and sites that are considered speculative.

Policy CA6 – To mitigate the cumulative impact of development across the Carterton area and implement the public transport measures identified in the Carterton area strategy we will:

- **Secure strategic public transport service and infrastructure contributions** based on the contribution rate per dwelling or per m2 for non-residential developments.

In addition to developer funding, funding may also be sought via the Local Enterprise Partnership and the Local Transport Board to the Local Growth Fund and other sources.

References

RAF Brize Norton Programme Gateway

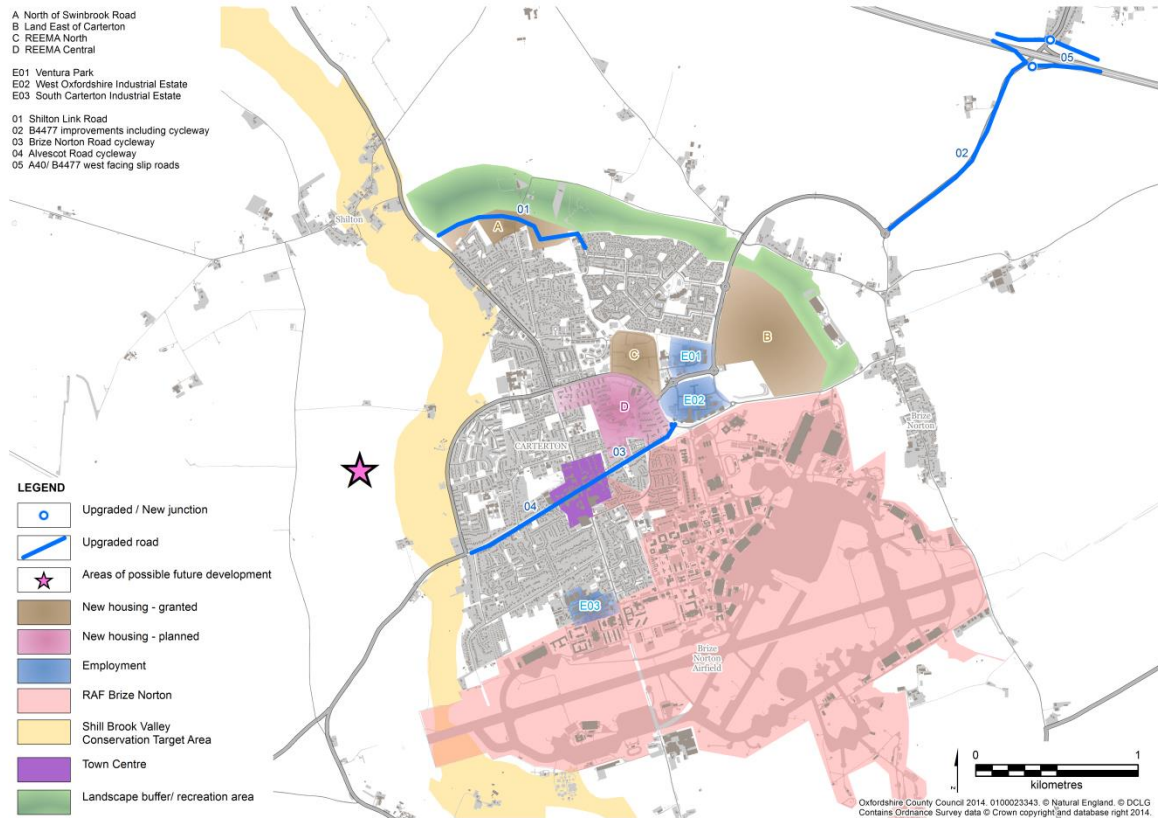
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Carterton Figure 1: Indicative map of transport infrastructure and proposed growth in Carterton

Witney Area Strategy

50. Witney is the largest town in West Oxfordshire, containing the main commercial, leisure, health and other services for the district. It has a diverse economy and is home to some of Oxfordshire's most successful high technology manufacturing and engineering firms. The historic Market Square, High Street, Woolgate Centre and Marriott's Walk make Witney an outstanding retail and leisure attraction.
51. The travel to work data from the 2011 Census indicates that 32% of all trips to work by residents of Witney are to workplaces within Witney. Of those internal trips, 47% travel by car, 34% by foot, and 11% by bicycle. Only 2% travel by bus, indicating that existing bus routes may not be providing attractive travel between residential areas and employment areas. The level of walking and cycling at 45% may mean the size, and character of Witney makes walking and cycling convenient travel options.
52. For residents that work outside of Witney, there are strong trends for travel to employment at Oxford and locally in West Oxfordshire. For trips to Oxford 71% are travelling by car (this would include those using Park and Ride), whilst 19% are using the bus services, and 2% cycling.
53. This Area Strategy is being developed alongside the emerging West Oxfordshire Local Plan. Growth proposals from the WODC Pre-submission Draft Local Plan 2011-2031 (March 2015) comprise 3,700 new homes in the Witney sub area by 2031. Three Strategic Development Areas are identified: 1,000 homes at West Witney, 400 at East Witney and 1000 homes at North Witney. Twenty hectares of land has been identified for employment to enable Witney to attract inward investment and new jobs. The draft Local Plan also contains policies to maintain and enhance Witney's town centre shopping, leisure and cultural attractions.
54. The Witney Area transport Strategy will be revised following the adoption, by West Oxfordshire District Council, of the Local Plan. This chapter has been updated since the publication of Local Transport Plan 3 (May 2014) in light of changes to overarching policy, and progress on schemes in the Witney area.

Transport Strategy Objectives

55. The key transport objectives for Witney are to:

- Establish a transport network that supports future growth and attracts economic investment by improving access to the strategic transport networks and managing through traffic;
 - Mitigate the local environmental impact of increased travel by addressing congestion, and poor air quality through improving opportunities for people to travel on foot, by cycle, and public transport;
 - Support town centre vitality, by providing a local transport network that enables easy access to services by sustainable means.
56. This strategy divides travel demands at Witney into three categories, which are discussed in turn:
- Witney's Strategic Transport Networks
 - Witney's Local Transport Networks
 - Beyond Witney

Witney's Strategic Transport Networks

57. The A40 is the main strategic route through West Oxfordshire, however there is limited access to the A40 at Witney. The A415 Ducklington Lane junction acts as the main all movement junction with the A40; this has recently been upgraded to improve capacity. To the east of Witney the B4022 Shores Green junction provides west facing slip roads only for trips to and from Oxford. This restricted movement junction, coupled with Bridge Street providing the only river crossing which links central and east Witney, results in considerable congestion and journey time delay. Housing and employment growth at Witney will place increasing demand on the existing junctions with the A40.
58. Access to the A40 from West Witney will be enhanced by an all movement junction at Downs Road, which has been secured through the Strategic Development Area at West Witney. The A40 Downs Road junction will relieve some pressure on Witney's roads and reduce levels of through traffic by providing direct access from the A40 to both the West Witney housing and employment sites. Better access from east Witney is planned by upgrading the A40/B4022 Shores Green junction to an all movement junction. This will allow the A40 to be used for trips from east Witney to employment areas at West Witney, as well as for a wide range of trips.
59. Witney's main bottleneck is at Bridge Street. With an average of 29,000 vehicles a day, it is the only vehicular crossing of the River Windrush for local journeys and through traffic from the northeast. The constraint of the river combined with the level of demand for vehicular travel, results in severe congestion, delays to buses and air pollution (it is an Air Quality Management

Area). The environment deters cyclists and pedestrians from using the route. Proposals WIT1 and WIT2 identify a sequence of schemes to overcome these issues by enabling traffic to use peripheral routes, thus freeing up routes within Witney for walking, cycling and bus use.

POLICY WIT1 – To establish a transport network that supports future growth and attracts economic investment at Witney we will work closely with the District Council, developers and local partners to improve access to the strategic transport networks and manage through traffic by securing:

- **An all-movement at-grade junction on the A40 at Downs Road, related to the West Witney strategic housing and employment site** to provide a new access to the A40 for businesses and residents to the west of the town;
- **West-facing slip roads at A40 Shores Green junction and improvements to the B4022 Oxford Hill junction with Jubilee Way and Cogges Hill Road to be delivered by housing development at East Witney.** This will provide an all-movement junction east of Witney, and a second river crossing for local journeys. Complementary measures in the surrounding rural area may also be sought to support this scheme.
- **A feasibility and viability assessment of West End Link Road 2 (WEL2), a new road bridge crossing the River Windrush,** to be provided by housing development at North Witney and assuming West-facing slip roads at A40 Shores Green has been delivered.

60. Following the opening of the Shores Green slip roads, a series of further improvements can be realised to initiate greater opportunity for travel by sustainable transport:

POLICY WIT2 – We will work with the District Council, Town Council, bus operators, local businesses and residents as well as local transport interest groups and developers to manage through traffic and improve the environment of Witney's central areas by:

- **Re-designating the A4095 via Jubilee Way, Oxford Hill, A40, Ducklington Lane and Thorney Leys** so through traffic travels around the edge of the town rather than through it;
- **Implementing schemes to deter through traffic from using Bridge Street and the Woodstock Road** to improve the environment and safety and encourage through traffic to use the re-designated A4095
- **Improving the environment in the town** centre by reducing congestion, and enhancing the Air Quality Management and Conservation Areas.
- **Discouraging undesirable routing of traffic** by improving directional signs.

POLICY WIT3 – We will work with West Oxfordshire District Council to safeguard land for future transport infrastructure, to support Local Plan growth, by:

- **Protecting the line of the Shores Green Slip Roads and promoting its safeguarding in the Local Plan.**
- Continuing to **safeguard land for the proposed West End Link stage 2** pending adoption of the WODC Local Plan.
- **Ensuring development at North Witney is served by a Northern Distributor Road** running from Woodstock Road to Hailey Road, (in the event North Witney is allocated in the Local Plan).

Witney's Local Transport Networks

61. The proposed Local Plan presents a significant transport challenge, particularly to accommodate trips within Witney. Whilst proposals for increased road capacity, such as A40 Shores Green, will be brought forward by strategic developments sites, road schemes alone will not mitigate nor reduce the levels of congestion experienced now, and predicted to persist in the future. There needs to be a significant shift away from dependence on private cars, towards more people walking, cycling, or using public transport. Improving opportunities for people to travel on foot, by cycle, and public transport, for trips within Witney and for commuting Oxford, is essential to reduce the proportion of journeys made by private car, improve air quality, and improve journey times for trips by all modes.

Public Transport

62. Congestion currently delays buses on the key Oxford-Witney routes via Newland and Bridge Street. Buses are significantly delayed in the morning peak due to the way the double-mini roundabouts favour traffic from West End and Woodgreen, despite Newland being the more important route for buses.

63. Witney benefits from high quality, high capacity frequent bus services to Oxford, including Oxford rail station. Whilst development will place increased pressure on bus services, it also offers the opportunity to improve services and make bus travel more attractive and practical for journeys to work.

64. Proposal WIT4 identifies how access to public transport and service enhancements will be achieved:

POLICY WIT4 – We will work with the District Council, bus operators and developers to make improvements to public transport and encourage its

use by:

- **Improving the frequency of bus services** by using pump priming funding from new developments:
 - i. Between Witney to Oxford; including City Centre, Oxford rail station, hospitals and Oxford Brookes University;
 - ii. Between Woodstock and Burford via Hanborough rail station and Witney;
 - iii. Between Witney's main residential and employment areas;
- **Implementing measures to reduce delays to bus services**
 - i. through Witney particularly along Corn Street, Market Place, Bridge Street and Newland;
 - ii. joining the A40 eastbound at B4044 Shores Green
- **Improving the environment and quality of bus stops** along these routes, pedestrian and cycle paths to them and the facilities available such as cycle parking.

Walking & Cycling

65. Walking and cycling are the most sustainable form of travel. It is recognised that Witney already has good levels of walking and cycling for some journeys, particular via the Cogges/Church Lane path. However, in some locations high levels of traffic, poor quality surfaces and on-street parking deter walking and cycling. Improving and maintaining the attractiveness of walking and cycling is a key challenge as the population grows. Providing high quality walking and cycling routes will enable people to seriously consider walking or cycling for some trips within Witney as an alternative to travel by car. Witney has some good foot and cycle paths, but signing to and along them could be improved and there are many gaps in the provision of cross town cycle routes. There is scope to join up existing foot and cycle paths to improve the overall network and to link through to Rights of Way in the countryside
66. Developing the Cycle Premium Route networks between Witney and nearby settlements, specifically Carterton, will enable greater levels of commuting by cycle between the two towns, as highlighted in Proposal WIT5.

POLICY WIT5 – the County Council will improve facilities for pedestrians and cyclists focusing on enhancing links between homes, schools, employment and the town centre by:

- Providing a cycle route between Witney and Carterton, as part of the B4477 improvement scheme.
- Seeking funding from new development sites to ensure they are served by high quality walking and cycling routes to access off-site amenities.
- Conducting walking and cycling network assessment studies to:
 - a) Develop a network of high quality, continuous cross town cycle

- routes linking residential and employment areas;
- b) Improving cycle routes from residential areas to schools;
- c) Improving conditions and infrastructure for pedestrians and cyclists in Bridge Street, the town centre and Station Lane areas;

67. Once the Local Plan is adopted the County Council will work with West Oxfordshire District Council to develop proposals for a Witney Town Centre Transport Strategy, to address the cumulative impact of transport needs arising from new housing and employment sites. Initial modelling has indicated that even with the Shores Green and potential West End Link 2 the highway demand exceeds capacity at several junctions and links across Witney.

Beyond Witney

68. Although the A40 Witney by-pass is generally free flowing, congestion on the A40 to the east of the town causes very lengthy delays for journeys to and from Oxford, especially at peak times. This impacts on the ability of local businesses to achieve growth, and makes Witney a potentially less desirable place for new businesses to locate. A long term strategy for the A40 corridor is under development and will consider the potential role of public transport improvements, additional highway capacity and/or traffic management measures. In the short term we have been provisionally awarded £35 million from the government's Local Growth Fund for public transport improvements in the A40 corridor for delivery between 2019 and 2021.

POLICY WIT6* - We will improve access between towns in West Oxfordshire, and Oxford, including the new employment site at Oxford's 'Northern Gateway' by utilising the Local Growth Fund to deliver public transport improvements in the A40 corridor. The proposed scheme includes:

- **An eastbound bus lane** between Eynsham Roundabout and the Duke's Cut, Wolvercote;
- **Westbound bus priority** on the approaches to Cassington traffic signals and Eynsham Roundabout;
- **A Park and Ride car park adjacent to the A40 in Eynsham;**
- **Junction improvements along the A40 corridor** between Witney Bypass and Eynsham Roundabout, including bus priority on the approach to Swinford Tollbridge;

In implementing this scheme the current Witney to Oxford cycle route will be retained and will be developed into a part of the Oxfordshire Cycle Premium Route network.

**This policy will be supported by the A40 Route Strategy – for consultation in*

autumn 2015 - and updated accordingly as the proposals develop.

Delivery and Funding

69. Providing transport services and infrastructure in a timely manner is essential to support and enable growth. The proposed Local Plan Strategic Development Areas (SDA) will be required to mitigate the transport impact arising from the development. Where schemes are needed to mitigate one particular development, the developer will be expected to either construct or provide full funding for the scheme. Schemes identified as direct delivery by the developer are:

- A40 Downs Road by West Witney SDA
- A40 Shores Green by East Witney SDA
- West End Link 2 and Northern Distributor Road by North Witney SDA

70. The package of investment in Witney's transport infrastructure be undertaken in four phases:

Witney Transport Infrastructure Package		
Phase	Scheme	Estimated Delivery
Phase 1	Ducklington Lane/Station Lane junction improvement	Completed 2014/15
Phase 2	A40 Downs Road junction	January 2015 – Summer 2016
Phase 3	A40 Shores Green slip roads	2017 - 2019
Phase 4	Bridge Street	Linked to Shores Green slip roads

71. The Witney area strategy identifies a package of transport measures that are required to mitigate the cumulative impact of development across Witney where the impact of development is not attributable to a single development. Developer contributions will be sought for specific schemes within the Witney package using a strategic transport infrastructure contribution rate to mitigate the cumulative impact of development.

72. The level of contribution will be calculated by dividing the funding required to deliver the package of transport measures by the amount of planned growth. This calculation will be reviewed and updated following changes in planned housing growth and infrastructure requirements within Witney as part of the Local Plan process.

73. When the Community Infrastructure Levy (CIL) is introduced by West Oxfordshire District Council, contributions will be sought via this new mechanism, as well as via S106 or S278 agreements.
74. In addition to developer funding, funding may also be sought via the Local Enterprise Partnership and the Local Transport Board to the Local Growth Fund and other sources.

Policy WIT 7 – To mitigate the cumulative impact of development across the Witney area and implement the transport measures identified in the Witney area strategy we will:

Secure strategic transport infrastructure contributions from all new development based on the contribution rate per dwelling or per m2 for non-residential developments.

75. The Strategic Transport Contribution does not include direct mitigation measures, which will be sought separately.
76. Every development site will be required to fund improvements to public transport services and infrastructure serving Witney in order to mitigate the cumulative impact of development, including development sites that are not allocated in the Local Plan and sites that are considered speculative.

POLICY WIT 8 – To mitigate the cumulative impact of development across the Witney area and implement the public transport measures identified in the Witney area strategy we will:

Secure strategic public transport service and infrastructure contributions based on the contribution rate per dwelling or per m2 for non-residential developments

77. This Transport Strategy replaces the Witney Integrated Transport Strategy (WITS) 2003 and Local Transport Plan 3. The new Area Strategy accommodates the measures of the previous strategies. Planning obligation contributions, secured in order to mitigate the impacts of development, towards WITS will be able to be used on the updated LTP4 Witney Strategy and be in accordance with the planning obligations.

References

WODC Housing Consultation paper (July 2014)

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West Oxfordshire's Draft Local Plan 2012

<http://www.westoxon.gov.uk/planning/CoreStrategy.cfm?frmAlias=/corestrategy/?frmAlias=/draftlocalplan/>



Witney Figure 1: Indicative map of transport infrastructure and proposed growth in Witney

A420 Route Strategy

The Local Context

Role/function of A420 as a principal route

1. The A420 is the principal and only direct route between Swindon and Oxford. It is an important strategic link in the Oxfordshire hierarchy, and a primary route which the Council expects to be of a standard to allow for free passage of current (20,000 vehicles per day) and expected future traffic for the majority of the traffic day. It should therefore operate with minimal congestion in order to avoid rat running on minor roads.

A420 route within Oxfordshire

2. In addition to providing a direct route to Oxford city centre from Swindon, the A420 serves the many settlements along the corridor including, for example Shrivenham, Watchfield, Faringdon, Kingston Bagpuize and Cumnor. At peak times, certain points operate over capacity resulting in congestion, particularly at the northern end near Botley. Although lorries are advised to use the M4 and A34, locals report 'significant and growing' HGV usage of the route for through as well as local journeys. Up-to-date traffic surveys have been commissioned to quantify this.
3. The A420 is also a Premium bus route corridor, and is served by a highly successful commercial bus route with a frequency of up to three buses per hour Monday to Saturday, plus evening and half hourly Sunday services. Usage of the service has doubled over the last 5 years: this significant growth has resulted in increased service frequency and plans for further upgrades. At times of congestion, buses are subject to the same delays as all other vehicles.

Growth Context - Oxfordshire growth, Vale of White Horse Local Plan, Swindon Local Plan and Eastern Villages

4. This Strategy will take account of and evaluate the likely individual and cumulative effect on the capacity of and operational effect on the A420 of planned growth in Swindon Borough and the Vale of White Horse District. The cumulative effect will be quantified using the county council's strategic traffic model, the results of which are published as part of the Vale of White Horse Local Plan evidence base titled "Evaluation of Transport Impacts".
5. Any planning application for development in Swindon Borough or the Vale of White Horse District that will generate significant amounts of movement shall be

supported by a Transport Statement or Transport Assessment that takes into account the planned growth in both authorities and the proper accommodation of its traffic consequences on the network.

6. The Vale of White Horse Local Plan 2031 aims to make provisions for growth of 23,000 new jobs and at least 20,560 new homes by 2031. It lists 21 strategic site allocations: six of these are along the A420, as shown on the plan at the end of this chapter. These housing figures include the allocation for the Vale arising from the Oxfordshire Strategic Housing Market Assessment, although as yet they do not take into account any unmet need arising from neighbouring authorities. This will be assessed in the future but as there are a number of methods for addressing this, no timescale can be put on it at present.
7. Swindon Borough Council's Local Plan (2026) identifies an area called 'Eastern Villages' with an allocation of around 8,000 new homes plus employment land on the eastern edge of the town, adjacent to the Oxfordshire boundary and the A420. A joint A420 Working Group including Swindon Borough Council has been set up, to understand and plan for the transport impacts on Oxfordshire and infrastructure requirements arising from this development.
8. The Council will continue to work with partners and stakeholders on this Group to develop and deliver a strategy for the A420 corridor, including Vale of White Horse District Council, Swindon Borough Council, Western Vale Villages consortium, Town and Parish Councils, the police and businesses, such as the Watchfield Defence Academy.

Transport Aims

9. To have a strategic highway and public transport corridor capable of moving a significant number of people along it whilst maintaining suitable access to and from the A420 from communities along the route, both for vehicular access to the A420 and pedestrian or cycle access to bus stops for the Premium bus route. This will be achieved by:
 - Improved junctions on the A420 to improve access to main settlements including Faringdon and Shrivenham, focusing on where new Local Plan development is proposed and existing 'priority' junctions require upgrading. Critical junctions within Oxfordshire on the A420 for evaluation in the Route Strategy will include the following:
 - A new access onto the A420 at/near Highworth Road in the vicinity of the Shrivenham strategic site and the A420/B4508 roundabout at Watchfield, to be funded and delivered by the development sites.
 - A new roundabout will be located on the A420 at Great Coxwell to replace the existing slip road. This upgrade is funded and will be delivered by the developers of the nearby strategic sites
 - A420 / A417 Park Road, Faringdon – in particular increased capacity on the approach from Faringdon
 - Additional junctions may be identified through transport modelling work.

- Enhancement of the A420 Premium bus route, focusing on enhancing service frequency to four buses per hour in each direction, improved bus stops (including changing on-carriageway stops to bus stop laybys where feasible), better walk/cycle connections and crossing provision, cycle parking and high quality waiting/shelter provision (including real time passenger information) and, where appropriate, parking provision at selected bus stops.
- Improved access and increased capacity of the A420 and associated junctions on the approach to Swindon, including White Hart Junction, Gablecross Roundabout, Police Station access, Old Vicarage Lane, new Eastern access to Rowborough and new/existing access to the Eastern Villages development area south of the A420, as identified in the Swindon and Wiltshire Growth Deal package of schemes.
- Improved access into Oxford, including approaches to the A420/A34 interchange at Botley, to be developed as part of the Oxford Transport Strategy, including a new A420 corridor Park & Ride site at Cumnor and improvements to Botley Interchange by Highways England.
- Reviewing and managing the impact on the surrounding road network, including parallel roads to quantify the likelihood of rat running being caused by proposed and allocated development traffic and identifying effective measures to combat this. Potential mitigation measures required to reduce the impact of through traffic on these include local traffic calming and traffic/speed management measures, to be agreed with the relevant local communities. Oxfordshire County Council will request that planning applicants consult local communities and bring forward measures with their application for development, subject to funding. Routes to be evaluated include:
 - B4508 east of Shrivenham
 - B4000 south of Shrivenham
 - B4507 Swindon – Wantage

Baseline Information

8. Traffic accident data for 2009 to 2014 shows there were 157 accidents along the A420 between Botley and the county boundary. Of these, 5% were fatal, 22% serious and 73% slight. They led to 251 casualties: 4% fatal, 17% serious and 80% slight. 146 (93%) of the accidents were motor vehicle only. The forecast increase in traffic flows could increase the number of accidents along the route. Automatic traffic counter data along the route for the period 2009 to 2014 shows a 4.4% increase in vehicle numbers travelling towards Oxford, and a 2.5% increase in vehicle numbers travelling towards Swindon.
9. Traffic modelling data for forecast year 2030 (base year 2007) shows that:
 - The eastbound route will be over capacity in the AM peak period at Botley Interchange, Fyfield, Buckland, Faringdon.

- The eastbound route will be over capacity in the PM peak period at Botley Interchange
- The westbound route will be over capacity in the PM peak period at Fyfield and Buckland
- Many other sections of the route will be near capacity in both the AM and PM peak periods

Strategy

10. A major upgrade of the A420 corridor is not proposed for the current LTP period. Any significant scheme (such as further dualling of all or part of the route) would attract more traffic and be likely to encourage further sites on this corridor to be identified for development. However there is a need to balance this approach with allowing for the significant transport impact arising from planned development, particularly in terms of providing appropriate route/junction improvements, enabling access onto and off the A420 from local communities and preventing rat-running.
11. The Strategy is based upon 4 main proposals:

Proposal 1 - Ensure the A420 continues to perform a strategic function operating as a principal road moving people quickly and efficiently between Swindon and Oxford by:

- **Promoting improvements to Botley Interchange as part of Highways England's A34 Route Strategy**
- **Ensuring junction designs continue to support the main east-west general traffic and bus flow, with a consistent approach to junction type**
- **Reviewing speed limits to ensure that changes in limit are at the most appropriate locations**
- **Identifying opportunities for bus priority as required**
- **Working with partners and agencies to ensure the A420 is resilient to issues such as flooding, ensuring that the network can continue to operate**

Proposal 2 - Maintain suitable access from settlements along the A420 ensuring:

- **Safe and timely movement onto and off the A420 by ensuring new and enhanced junctions enable local access and egress along the route, including (other junctions are described in the tables and map below):**
 - **the proposed new A420/Great Coxwell junction and provision of a new access onto the A420 at/near Highworth Road in the vicinity of the Shrivenham strategic site,**
 - **Safe access to and from bus stops along the A420**

- **High quality bus stop facilities, including cycle parking at key locations**

Proposal 3 – to safeguard and maintain the ability to deliver strategic pieces of infrastructure if required in the future due to significant additional development. For the A420 corridor these include:

- **the Townsend Road junction with the A420 (Local Plan reference E17)**
- **the Great Coxwell Road junction (E18).**

Proposal 4 – To mitigate the cumulative impact of development across the Western Vale area and implement the transport measures identified in the A420 strategy to ensure development can be accommodated.

Safeguarding

12. To achieve proposal 3, we will support the Vale of the White Horse District Council in safeguarding land for transport schemes in areas where it is possible that significant development may occur in the future, including that which is more likely to take place beyond the period of this Plan.

Funding

13. To achieve proposal 4, funding to deliver the strategy will primarily need to be secured via Developer Contributions, which will either be sought through Section 106 agreements or the Community Infrastructure Levy (CIL) when it is introduced by the District Council. It may also be appropriate for development to directly deliver proposed strategy schemes. We will secure strategic transport infrastructure contributions from all new development based on the contribution rate per dwelling or per m² for non-residential developments, based on the total cost (tbc) of the transport package.
14. Contributions would also be sought from major residential and other development sites towards the strategic bus service identified in the A420 strategy, including funding service enhancements until they become commercially viable and bus stop infrastructure. Other residential sites would make a contribution based on the estimated cost of an improved commercially viable service across the western Vale area, divided proportionally by the amount of planned growth to give a cost per development site.
15. Developments are also required to provide modern bus stop infrastructure including shelters and Real Time Information, and high quality access to the bus network, usually secured through section 106 or section 278 agreements.
16. The Strategic Transport Contribution does not include direct mitigation measures, which will be sought separately. These schemes are delivered by

developers when specific mitigation measures are solely linked to enabling that development. This is as opposed to the county council pooling funds for schemes to mitigate the impact of more than one development proposal.

Timescales

17. The schemes and projects described in this chapter will be implemented at different stages of the Plan period, as outlined in the table below. The most likely source of funding will be to secure these improvements through the planning application process for housing and other development sites. Some schemes have already been secured or are the subject of discussion as part of current applications. Others can only come forward in line with development yet to enter into this process. Some schemes will be the responsibility of delivery partners, such as Highways England. Timescales are influenced by a number of different factors, including when development applications come forward and when other funding opportunities are available. The timeframes for delivery will be monitored and updated if necessary in conjunction with the future Local Transport Plan updates.

Proposed Junction schemes

18. The following schemes are for upgrades to existing junctions or completely new junctions and will be requested through the planning application process, to mitigate the impact of development along the A420:

Project/Scheme	Timescale period
Secure a new junction (roundabout) at Highworth Road, Shrivenham in proximity to the Strategic Site allocation for 500 dwellings.	Exact timing dependent upon application and planning permission: 2015-2020.
Investigate upgrading of the T-junction at the Little Coxwell/Fernham Road on the A420 junction to a roundabout or other upgrade to improve access, safety and the vision through this junction	To be determined
Investigate upgrading of the A420 / A417 Park Road junction, Faringdon	To be determined
Review the Buckland Road/A420 junction, to include assessment of the junction splay and right-turn lane on the A420.	To be determined
Investigate improvements to signage at the Pine Woods Road/Charney Road junction, Southmoor, on the A420.	To be determined

Proposed new/upgraded crossings

24. The following proposed schemes are to ensure communities are accessible by sustainable travel, and movement across the A420 between towns and villages located on it or nearby can be undertaken safely. As above, they will be requested through the planning application process to mitigate the impact of development along the A420:

Project/Scheme	Timescale period
Secure a crossing on the A420 to link Kingston Bagpuize with Fyfield.	Exact timing dependent upon application and planning permission: 2015-2020
Investigate opening up of the subway under the A420 near Fyfield, for use by pedestrians and cyclists to link Kingston Bagpuize to Cumnor via Fyfield and Appleton.	To be determined
Investigate a new crossing on the A420 at the Little Coxwell/Fernham Road junction.	To be determined

Proposed Speed Limit changes and safety improvements

Project/Scheme	Timescale period
On the A420, investigate speed limit changes on the Faringdon 'bypass' between Little Coxwell and Littleworth - reduce from 60mph to 50mph.	To be determined
Investigate speed limit changes on B4507 through Ashbury Village – reduce to 20mph.	To be determined
Investigate speed limit changes on B4507 Ashbury to Wantage – reduce from 60mph to 50mph.	To be determined
Investigate speed limit changes on B4508 Watchfield to Pusey Common Wood – reduce from 50mph to 40mph.	To be determined
Investigate speed limit reduction on B4000.	To be determined

Public Transport

Project/Scheme	Timescale period
Investigate providing car park(s) for bus users in Shrivenham to enable an alternative to public on-street parking.	Exact timing dependent upon application and planning permission: 2015-2020
Provide cycle parking at suitable	To be determined

locations next to bus stops and shelters to encourage more journeys by sustainable modes.	
Review footway access and hard-standing facilities at bus stops on the A420.	To be determined
Improved frequency of Premium Bus Route service (number 66) between Swindon and Oxford	On-going
Investigate new Oxford outer Park & Ride site proposal on the A420 corridor, in the vicinity of Cumnor	To be determined

Measures to improve safety and deter rat-running through local communities

Project/Scheme	Timescale period
On the B4019 Highworth to Faringdon road, replace the "Village Only" sign with a "No Right Turn" sign at the T-junction onto "The Hollow Road", to deter rat-running via Great Coxwell to reach the A420.	Exact timing dependent upon option feasibility: 2015-2020.
At Bourton, investigate traffic calming measures on the Bishopstone entrance to the village and on the Avenue Road entrance.	To be determined
At Bourton, investigate the feasibility of installing traffic lights on the railway bridge at Lower Bourton. This is a narrow bridge and would improve safety.	To be determined

Delivery Partner Schemes

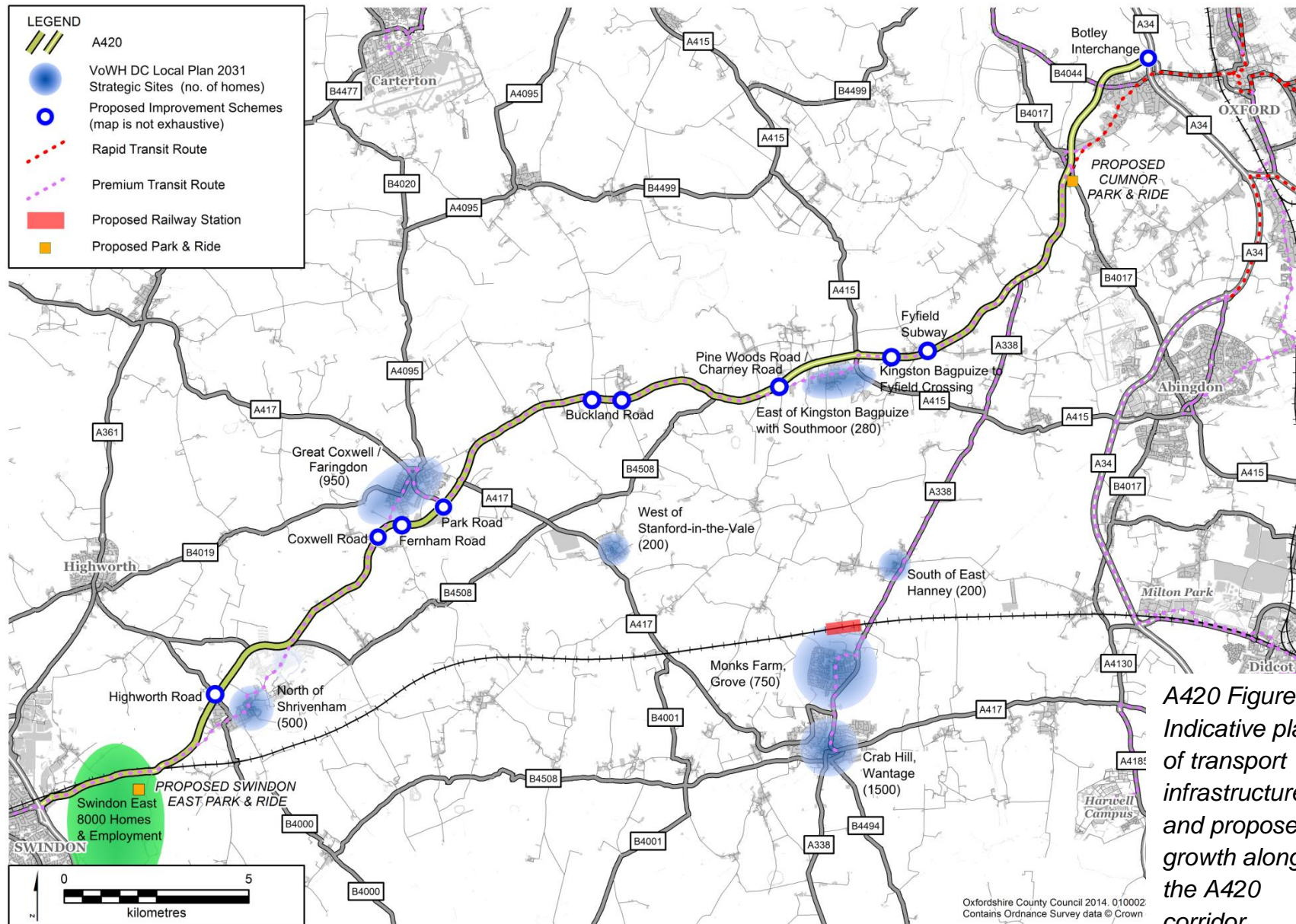
Project/Scheme	Timescale period
Highways England capacity improvements at Botley Interchange.	Exact timing dependent upon option feasibility: 2015-2020.

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Oxfordshire Growth Board - <http://www.oxfordshire.gov.uk/cms/content/oxfordshire-local-transport-board-0>

Swindon Local Plan <http://www.swindon.gov.uk/localplan>

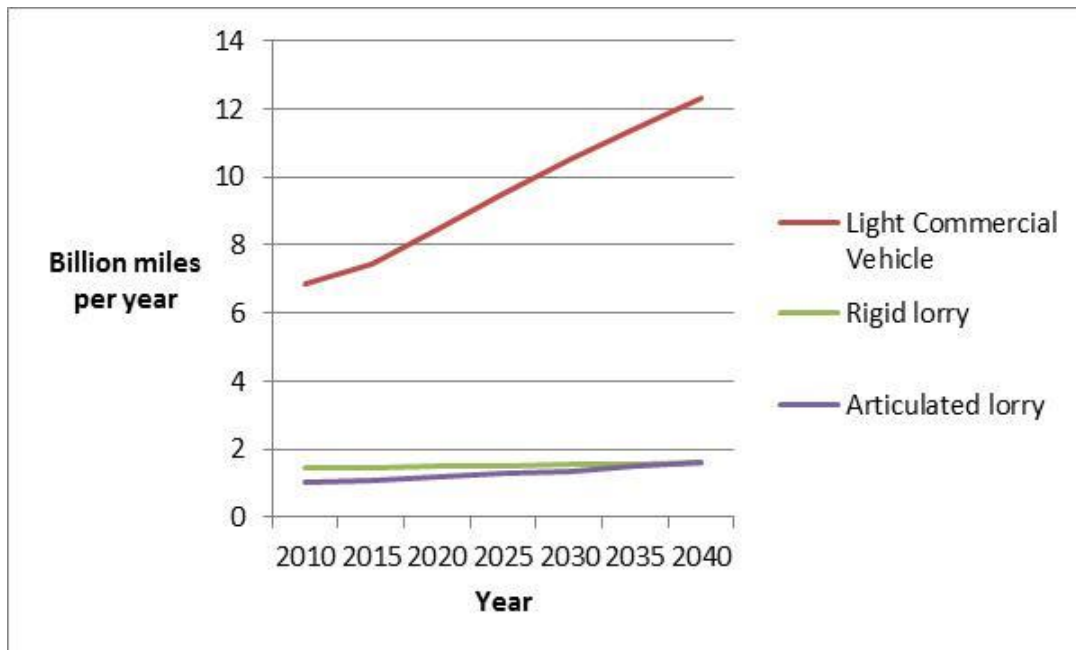


*A420 Figure 1:
Indicative plan
of transport
infrastructure
and proposed
growth along
the A420
corridor*

Oxfordshire Freight Strategy

Introduction

1. We rely on an efficient and reliable freight network for our daily lives, to bring food to our supermarkets, parcels to our doors and link our manufacturers with their suppliers. We need to enable reliable freight transport between businesses, their supply chains and their customers and so make Oxfordshire an attractive location for business and employment.
2. The nature and volume of freight traffic is likely to change substantially over the period of this strategy. All of the Department for Transport's forecast scenarios for south-east England involve a substantial road traffic increase for light commercial vehicles and articulated lorries in proportion to present (see Figure 1). Freight traffic growth from our Strategic Economic Plan, with its aim to promote high tech industry, is likely to reflect and even exceed this pattern of growth in light commercial vehicles.



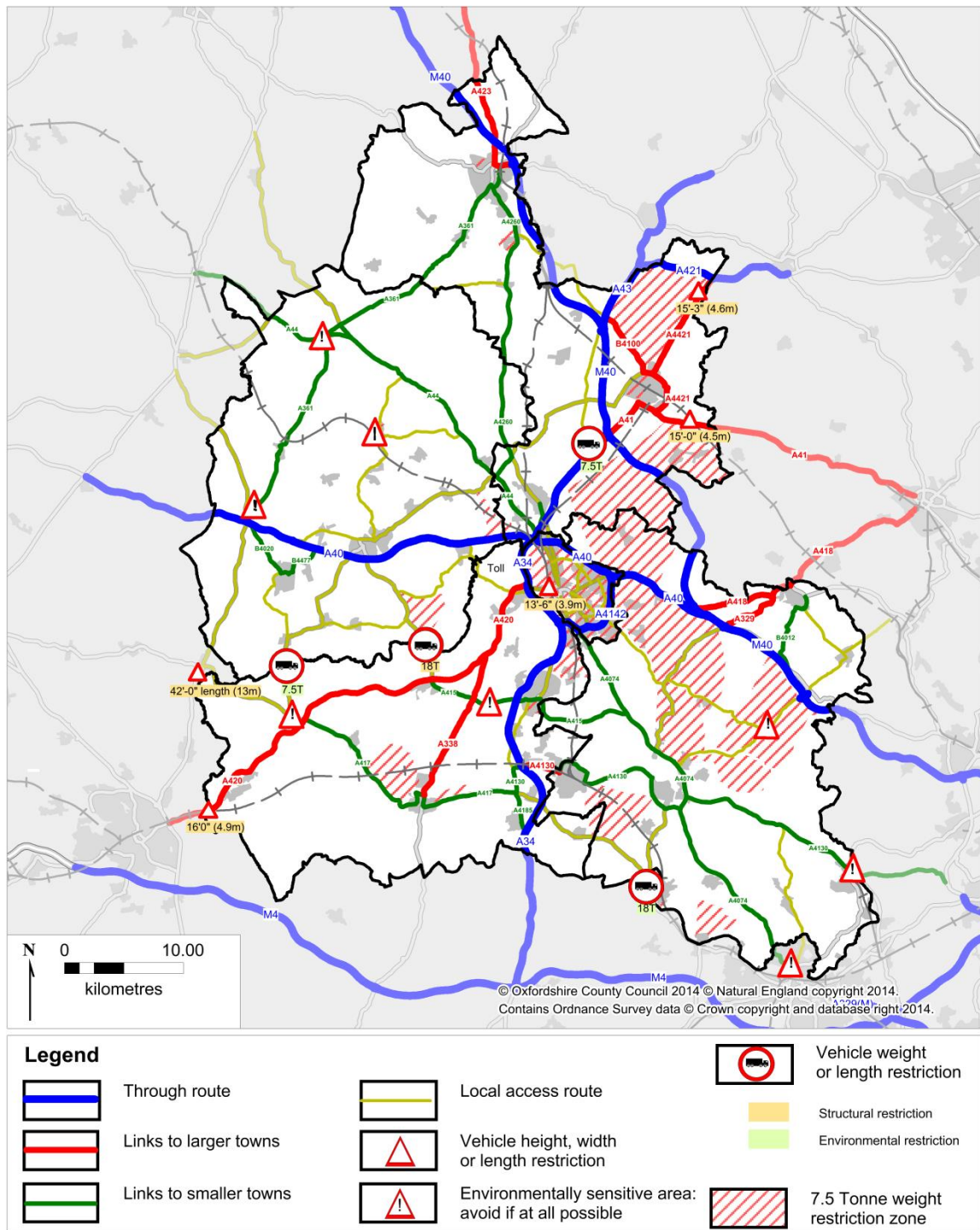
Freight Strategy Figure 1: Forecast growth in freight on all types of roads in south-east England excluding London, billion miles per year (source: Department for Transport Road Traffic Forecast 2015 – extrapolated trend)

3. To provide for this we need to make more efficient use of transport networks and systems across all modes of transport, including use of the rail network. However, the majority of freight movements in our predominantly rural county will continue to be by road. It is essential that we make use of our road network as efficient as possible, with larger goods vehicles using the strategic road network in preference to minor roads, encouraged by measures to reduce journey times and increase journey time reliability on these important major routes.
4. Freight vehicles can have negative effects on congestion, road safety, air quality and the wider environment. These depend very much on time and particularly place, with

lorries negotiating narrow streets through villages and market towns generating numerous complaints from local residents. This can also impact on other modes of transport that LTP4 is seeking to encourage, for example delays to buses particularly from on-street loading and the risks to cyclists and pedestrians from large lorries which can deter use of these active modes of transport.

5. However, it is not a simple trade-off between economic benefits and environmental costs. A safe and attractive environment where people and goods can move around freely is a vital component of the county's economic offer as a place to live, work and visit. This is what our freight strategy aims to deliver for Oxfordshire.
6. The Department for Transport has published the estimated external cost per lorry mile of using different categories of road.⁶ These vary from 82 pence for A class roads to 235 pence for other (lower classification) roads. This reflects various environmental costs but the critical factor is infrastructure, where the costs are 7 pence for motorways, 24 pence for A roads and 171 pence for other roads. This illustrates the economic and environmental benefits of keeping lorries on the strategic road network as far as possible.

⁶ *Freight mode shift benefit values technical report: an update*, DfT, 2014



Freight Strategy Figure 2: Oxfordshire lorry route map

Key Principles

7. We will base our freight strategy on the following six principles:
- a. **Understand** patterns of freight movements including time, origin and destination, as well as any problems encountered by operators and their customers and those experienced by local communities and other road users. Surveys may be required to improve our evidence base in an area where data is currently limited and will be undertaken when resources allow.
 - b. **Inform** freight operators of the best routes to use and routes and locations which should be avoided where possible. As funding and priorities allow, we will take advantage of new technology and best practice to help manage freight movements, particularly where this would help meet other Plan objectives.
 - c. **Encourage** use of the strategic road network by traffic management measures, working with Highways England on the A34. This could include better provision of high quality rest facilities, coupled with the removal of sub-standard laybys where these can adversely affect road safety and congestion. This also means using the opportunity presented by investment in rail in Oxfordshire to shift freight from road to rail in support of our Route Based Strategies in the county.
 - d. **Deter** use of inappropriate minor roads and movements through towns and villages and other environmentally sensitive areas, except where this is essential for local access. This also helps to minimise damage by lorries to road surfaces and bridges. We will set out our policy on the introduction of further environmental weight limits in Oxfordshire and on their enforcement.
 - e. **Manage** freight and logistics in partnership with public sector organisations and businesses to achieve maximum efficiency and reduce waste by eliminating unnecessary trips. This might involve consolidation of items from diverse origins, combining them for onward delivery to the same destination, possibly including the use of smaller or low emission vehicles in sensitive environments such as urban centres with poor air quality.
 - f. **Plan** the location of new employment sites and any related transport infrastructure so that these can function well, with efficient freight access to and from the strategic transport network without adverse impacts on local communities, road users and the environment.

These principles are developed further below.

Understand patterns of freight movements

8. We will improve our understanding of freight transport, the needs of freight operators and their customers as well as the impacts on local communities. This may involve surveys but also knowledge gained from the national freight journey planner, the development of Construction Logistics Plans and Delivery and Servicing Plans.

Inform freight operators of the best routes to use and those to avoid

9. There has been growing public and political concern in recent years about the number of lorries passing through towns and villages in Oxfordshire. In 2012 the Oxfordshire lorry routes map was updated to show both recommended routes and restricted locations. However, few drivers and freight operators use individual local authority maps such as these so the impact on route choice is limited.
10. Oxfordshire County Council has therefore signed up to the National Freight Journey Planner offered by the specialist mapping data consultancy PIE. This is an opportunity get our lorry route data to a wider audience. Drivers and companies are more likely to use the national Freight Gateway journey planner product than individual local authority maps such as Oxfordshire's.
11. Freight Gateway allows an operator to enter details of a particular vehicle (size, weight, etc.) and routes it accordingly. Freight Gateway shows the user the location of restrictions so that it is clear why a particular route is being recommended. It will incorporate all the details of our restrictions and recommended routes. Features include a lorry watch link to allow local people to report breaches of weight restrictions and detailed local mapping.
12. This data is also made available to other portals and to logistics companies with their own software to inform how they plan their activities. It also feeds in to certain lorry-specific satnav products.

Encourage use of the strategic road network and of rail freight

13. The rationale for our Route Based Strategies for the A34, A40 and A420 is to encourage lorries and through traffic to stay on the strategic route network as much as possible. There are various traffic management measures that can help to achieve this objective. For example, removing laybys from main roads can help because large vehicles pulling out slowly onto a road with fast traffic can be a safety hazard as well as a significant cause of congestion. It is important to note that, while major development is concentrated in areas well served by the strategic route network, this can lead to increased congestion on the routes we want lorries to use.
14. Rest areas for lorry drivers are an important element in an efficient freight network. Proper facilities with security, refreshments, washing and toilets also cater better for drivers in terms of health and safety. They also help to avoid inappropriate use of laybys and parking on-road, which can cause obstruction and serious environmental problems to local residents. Unfortunately, in recent years the smaller service stations have withdrawn from catering for HGVs, leaving only motorway service areas and a few lorry parks. Motorways and trunk roads are better served including Oxford services at M40 junction 8, Cherwell Valley services at M40/A43 junction 10 and Chieveley services (outside Oxfordshire) at M4/A34 junction 13. However, the

Road Haulage Association (RHA) and Freight Transport Association (FTA) have identified a need for additional capacity at a site or sites close to the Oxford ring road.

15. One potential location could be adjacent to the A34 at Lodge Hill (north Abingdon) if this is expanded to a full all-movements junction, subject to planning approval. This could also fit with plans for a Park & Ride at this location. Similarly alternative options will be considered for this.
16. Significant volumes of rail freight pass through Oxfordshire, particularly between the port of Southampton and the Midlands and North of England. A recent project to increase the loading gauge, enabling larger containers, has removed thousands of HGVs from the A34. Other rail freight includes aggregates, waste, MOD supplies and finished cars. It is heavy and bulky items like these for which rail is most competitive, and we will support the provision of appropriately sited rail freight facilities, subject to funding being available and having regard to the impacts on local communities and on the road and passenger rail networks.

Deter use of inappropriate minor roads through towns and villages

17. Subject to resources, we will consider environmental weight restrictions across the County, particularly areas which are subject to significant levels of HGV traffic. This will prioritise Burford, Chipping Norton and Henley-on-Thames, when funding is available.
18. Our policy on new environmental weight limits is that we will first need to establish that a particular location has a problem in terms of environmental and economic impacts as reflected in congestion, air quality, road danger and public concern. We will then need to identify the share of HGV traffic that does not constitute local access based on origin and destination surveys and other data, as well as analysis of alternative routes. Consideration of weight limits will also need to have reference to the road hierarchy set out earlier in this Local Transport Plan.
19. In the case of Chipping Norton, a scheme to change the status of the A44 would be required before a new environmental weight limit could be considered. In line with policies 4 and 29 of the Local Transport Plan, taking note of Table 2 of the LTP, we will seek to remove the primary route status on the A44 between Oxford and Moreton-in Marsh. This would open opportunities to reduce HGV movements through Chipping Norton and address the air quality problems. We will seek developer contributions toward traffic and freight management and air quality improvement schemes at Chipping Norton.
20. In Oxford we will review signing on the ring road to ensure that lorries are directed to their destinations within the city by the most appropriate routes. It is sensible to co-ordinate this with work to develop the cycle network to try to reduce the danger that lorries pose to cyclists.
21. Neighbourhood Weight Watch is an existing scheme using volunteers, often in partnership with parish and town councils, to report lorries contravening weight and

other restrictions. We will integrate this scheme with the LorryWatch on line reporting facility that is part of Freight gateway. It can supplement the limited resources available for enforcement (Thames Valley Police and OCC Trading Standards). Trading Standards have a separate policy for prioritising the enforcement of the various weight limits in Oxfordshire in the most appropriate and effective way.

Manage freight and logistics to achieve maximum efficiency

22. We will engage with freight and logistics operators and other stakeholders, reflecting our resource levels and prioritising action over discussion. This could involve ad hoc working with particular partners on particular issues, for example with the National Farmers Union on agricultural and rural freight issues and with district councils to rearrange refuse collection outside peak periods.
23. The County and City Councils have discussed with local stakeholders the possibility of freight consolidation and trans-shipment to reduce the negative impacts of goods vehicles in the city. These include congestion, poor air quality resulting from (diesel) emissions, and accidents, particularly involving cyclists and pedestrians.
24. Freight consolidation means combining loads from various sources to one or a number of closely located destinations. It is a technique already practised by large retailers with sophisticated logistics operations and it reduces the number of separate goods vehicle journeys and total goods vehicle mileage. Trans-shipment means switching to smaller, sometimes electric delivery vehicles for the “final mile”. In Oxford there are two areas that could benefit from freight consolidation - the city centre and the Headington area including the hospitals and University sites.
25. Other options include Construction Logistics Plans (for major developments while under construction) and Delivery & Servicing Plans (for existing and newly completed developments). These are like travel plans and help businesses to organise their deliveries and collections to reduce lorry trips but also to bring efficiency savings. They can be linked to the use of approved operators under a Freight Operator Recognition Scheme (FORS) with standards for safe and environmentally friendly operation.

Plan the location of new employment sites and any related transport infrastructure

26. We will influence the location and design of new development, particularly employment sites and any related transport infrastructure so that these can function well, with efficient freight access to and from the strategic transport network without adverse impacts on local communities, other road users and the environment. We will work closely with local planning authorities within the National Planning Policy Framework.
27. We will ask developers of major sites to prepare Construction Logistics Plans to minimise the impact of the large scale residential and business development planned for Oxfordshire, as well as Delivery and Servicing Plans to ensure that businesses make ongoing arrangements for sustainable freight and logistics.

28. We will take careful account of the need for an efficient and sustainable freight network as we look to refine Infrastructure Development Plans as part of emerging Local Plans. We will seek developer contributions to mitigate the impact of freight traffic on the environment and on the local and strategic road network.