Connecting Oxfordshire: Local Transport Plan 2015 – 2031

Banbury, Bicester, Carterton, Science Vale & Science Vale Cycle Strategy and Witney Area Strategies



		Pages
1	Banbury Area Strategy	3
2	Bicester Area Strategy	14
3	Carterton Area Strategy	28
4	Science Vale Area StrategyScience Vale Cycle Strategy	35 53
5	Witney Area Strategy	76

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 sites 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 have required 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, including Door to Door travel (e.g. walking or cycling combined with bus/rail). Further details can be found in the Active & Healthy Travel section. 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 northsouth 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 development proposals:
 - A361 Bloxham Road to A4260 Oxford Road Spine Road through the residential development South of Salt Way: The coordinated approach to development to the south of Banbury as outlined in the Cherwell Local Plan 2011 2031 (July 2015), 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 for the post 2024 period, to manage traffic movements within the town. A study will consider several route options such as Tramway Road to Higham Way and Bankside to Chalker Way and review other south east link road routes. These options will be assessed by the County Council and 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 Chalker Way at Central M40 site to Bankside (crossing either the railway, river and / or canal) 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 an increase 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. 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 multi-storey 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:

- Promoting 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 explore the option of 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, in line with 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.
- Identifying suitable routes into and through the town centre.

- Opening up Tramway Road as an access for cars into and out of the station car park and access to the Canalside development.
- Exploring opening Station Approach to through bus services via Tramway Road.
- Developing inter-urban services through enhancement of existing bus services or 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.
- 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 access and facilities (including secure cycle storage); an improved route to the station for people on foot, and 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 Oxfordshire County Council's Air Quality strategy. More information on our strategy for active travel in Oxfordshire can be found in Oxfordshire County Council's Active & Healthy Travel Strategy.

26. The current cycle network is fragmented 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. In line with the Active & Healthy Travel Strategy, 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, as previously mentioned, access to the rail station.

BAN4 - 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.
- As identified in the Cherwell Local Plan 2011 2031 (part one) seek new pedestrian and cycle bridges, as part of the Canalside development, crossing the Oxford Canal and River Cherwell which will connect the rail station to the town centre.
- 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. We will work with HS2 Ltd to understand and identify means to mitigate the impact of the construction works associated with HS2 across North Cherwell, particularly at Banbury.
- 30. Construction Logistics Plans will also be required for development sites.

BAN5 - 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.
- We will seek mitigation from the impact of High Speed 2 (HS2) construction traffic across North Cherwell and Banbury.

Scheme Delivery

- 31. 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.
- 32. 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.
- 33. 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, including improved pedestrian/cycle routes to bus stops and cycle parking if appropriate, based on the size of the development.
- 34. 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.
- 35. 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.

BAN6 - 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.

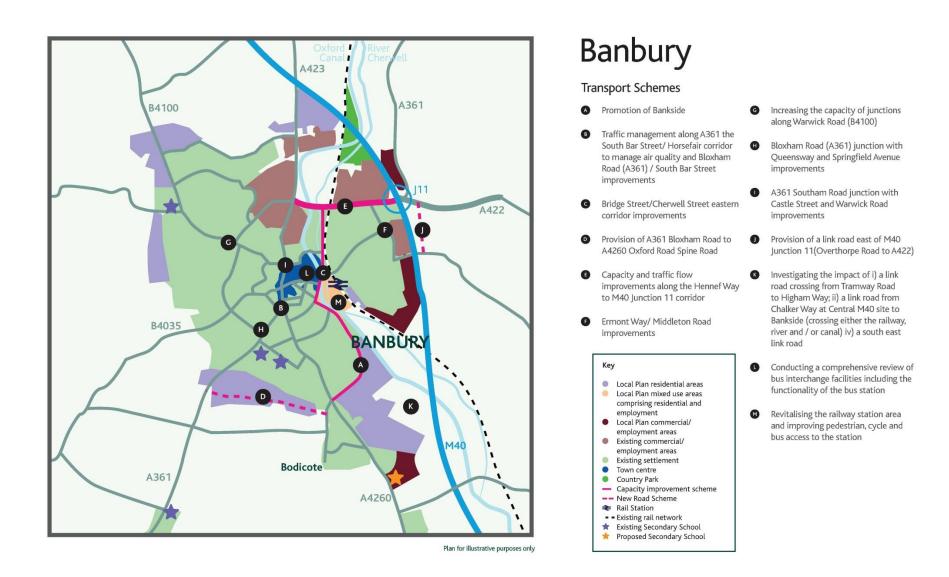
Oxfordshire County Council is working towards establishing a strategic Transport Contribution rate for developer funding, which will be adopted in a future update of this strategy.

36. This Area Strategy replaces previous strategies. Planning obligation

contributions, secured in order to mitigate the impacts of development, towards previous strategies will be able to be used to deliver the proposals in this strategy and be in accordance with the planning obligations.

Maps and Plans

37. The map below shows 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

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 has been 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 Local Plan, investment in the town centre as shown by the town centre redevelopment, and the shift to a low carbon community exemplified by North West Bicester eco development.
- **3.** The adopted Cherwell Local Plan (July 2015) seeks to use this potential to deliver economic growth, supported by housing, with 138.5 ha of employment land and approximately 10,000 further new homes 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 as set out in the Eco Bicester One Shared Vision.
- 4. This strategy supports the *Cherwell Local Plan*. The Local Plan, together with the development of a *Bicester Masterplan* to be adopted as a Supplementary Planning Document (SPD), will provide the means to establish an integrated delivery plan for the growth of the town that respects its setting, meets the needs for a stronger economy, housing and community facilities and which helps deliver sustainable development. 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. Cherwell's Economic Development Strategy (2011-2016) highlights the current opportunities for Bicester to develop a low-carbon economy by developing green technologies and knowledge around existing and new employers, sectors and clusters to create a centre of expertise and potential competitive advantage. 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 transport infrastructure includes the exploration of the potential for a new motorway junction to the south of Junction 9, near to Arncott. Study work is needed to determine the impact of such a scheme and how it could fit within the overall transport strategy in the town and wider area. The study will also be carried out 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, including the walking and cycling network and low emission vehicle technology, is one of the aspects that 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 Cherwell Local Plan and the overall goals and policies of Connecting Oxfordshire as set out in volume 1 of the Local Transport Plan. This strategy needs to tackle the challenges identified in the *Bicester Movement Study* and the further technical reports prepared in The principles of sustainable transport for support of the Local Plan. Bicester were set out within the Supplementary Planning Document for North West Bicester as the trigger for modal shift across the town and have been worked up into a Sustainable Transport Strategy, which has been used to inform this overall transport strategy. Cherwell District Council has also commissioned a study to support the preparation of the future vision for Bicester Garden Town, working closely with local people to establish the tone, character and content of Bicester's emerging identity. 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

the cumulative impact of proposed development and to mitigate the local environmental impact of increased travel.

- **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 key locations by walking and cycling and the public transport network to secure business investment and encourage people to make Bicester their home. More details of our cycling strategy across the county can be found in our Active & Healthy Travel Strategy.
- 11. The Strategy has already seen initiatives implemented in Bicester. A new Railway Station to replace the Bicester Town Station was completed in October 2015, which sees frequent trains between Oxford and London. It makes way for a new East-West rail service which will provide a service east to Milton Keynes and Bletchley. In addition, a new Park and Ride site to the south west of Bicester off the A41 at Vendee Drive opened in November 2015. The site provides 580 spaces and has been built to help tackle congestion. Use of the Park and Ride car park is free of charge and is served daily by the Stagecoach S5 service, offering direct links to Bicester and Oxford.
- **12.** 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, enabling active and healthy travel options e.g. walking and cycling links to and from 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.

A detailed delivery plan for future infrastructure programmes to understand the most appropriate phasing given the anticipated growth and resources will be important.

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

• Continuing to work with Highways England to improve connectivity to the strategic highway. We will continue to work in partnership on the A34 and A43 strategies, as well as Junctions 9 and 10 of the M40 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).

- Investigating a new motorway junction 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).
- 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 in the context of Oxford to Cambridge Expressway work. In addition, Upper Heyford has been allocated for significant growth and a Development Framework is currently being produced that will consider improved connectivity with Bicester, whilst reducing impact on sensitive locations such as Middleton Stoney.
- Investigating options for infrastructure improvements and bus priority to enable greater reliability on the A41 corridor to/from Junction 9 to A41 Bicester Services roundabout. This will be in addition to the schemes to be implemented by Bicester Village's expansion and by the Graven Hill development, which will provide essential improvements to this corridor.
- 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. Our overall plans for sustainable travel in the county are outlined in the Active & Healthy Travel Strategy chapter of LTP4. A package of phased improvements will be agreed alongside the introduction of the sustainable transport measures, including:
 - Western peripheral corridor: realigning A4095 Howes Lane, as part of improving the strategic western peripheral route for Bicester and to accommodate future growth including North West Bicester. This will include increasing capacity at the Howes Lane / Bucknell Road junction by the provision of a new tunnel under the railway and realignment of the connecting roads and junctions in order to maintain this as part of the strategic peripheral route corridor whilst enabling connectivity between the new development and the existing town. Improvements to the Lord's Lane / B4100 roundabout will also be required.
 - Eastern peripheral corridor: upgrade 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. This will include 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.

- Southern peripheral corridor: provide a South East Perimeter Road to support the significant housing and employment growth in Bicester. In the longer term, link capacity issues along Boundary Way are assessed as being a major transport issue for the town. Land is safeguarded at Graven Hill for the section of road to the south of this site, joining the A41 at the Pioneer Road junction - this prevents development on the land that would be required, but does not remove the need for full assessment, justification and planning processes to be undertaken. This will need extending westwards to join the A41 north of M40 Junction 9. The preferred alignment for this extension has been approved as a connection from the Little Chesterton junction across to Graven Hill (see Bicester Figure 2). The solution will also include a new link through the South East Bicester development site from the A41 Pioneer Road junction up to Wretchwick Way, providing connectivity through the site, in particular for buses.
- Investigating solutions to East-West Rail Phase 2 challenges. More rail traffic means that there is more disruption to the road network where the two cross. A new rail bridge at Charbridge Lane is already being planned, but there are other challenges such as the rail crossing at London Road where options need to be developed further. We are:
 - 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 and national rail programme. 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 are exploring options to identify a preferred solution to retain vehicular and pedestrian access at that crossing. The County Council will work with 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.

- **13.** 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. Combining walking or cycling with bus/rail as outlined in the Door to Door section of the Active & Healthy Travel Strategy will be a key element of this.
- 14. A Sustainable Transport Strategy for Bicester has been developed by Cherwell District Council and has particularly concentrated on the cycle infrastructure improvements and changing travel behaviour towards more sustainable travel. The principles are embedded within this overall transport strategy.
- **15.** Cycle-friendly measures must be incorporated into all new road schemes and new housing developments. It is essential that new developments are planned with cycling in mind and with facilities to make cycling both convenient and safe. This will link in with developing a connected, comprehensive cycle network across the town.
- **16.** We will review walking networks and focus capital improvements on routes with the greatest potential for increasing the numbers of people walking, particularly where improving the pedestrian environment would support economic growth and reduce car use. We will also prioritise strategically important walking routes for maintenance.
- **17.** Bus connectivity improvements may be required at anticipated pinch points within the town as future developments come forward. This will include connections between North West Bicester and the town centre.

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

• Significantly improving public transport connectivity with key areas of economic growth within Oxfordshire, through access to high-quality, high

frequency services on the core network between Bicester, Oxford, 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.

Where possible, we will encourage and support bus operators' proposals to develop innovative bus services and alternative routes, especially more direct and express services; for example a strategic bus link between south-east of Bicester and Oxford Eastern Arc.

- Improving Bicester's bus services along key routes and providing improved public transport infrastructure considering requirements for and integrating strategic development sites. Working with Bicester Town Council we will also enhance passenger information at strategic locations. The aim is to connect residential areas and transport hubs with existing and future employment centres including, but not limited to:
 - Graven Hill;
 - North West Bicester;
 - Launton Road Industrial estate;
 - Bicester Business Park;
 - South-East Bicester;
 - North-East Bicester;
 - Town centre; and
 - Bicester Village.

Growth at Upper Heyford will also need to be considered in terms of improved public transport frequency and connectivity with Bicester.

Bus connectivity improvements may be required at anticipated pinch points within the town as future developments come forward. This will include connections between North West Bicester and the town centre and consider the need for bus lanes along the A41 to connect with the Park and Ride scheme.

This will be supported by using funding from development to enhance the quality and frequency of existing services, with the aim of services reaching full commercial viability.

• Enhancing pedestrian, cycle and public transport links to the Bicester Village Station, 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.

In particular, making use of 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, including a cycle hub incorporating hire and repairs will be considered further. We will also improve the walking route between the station and the town centre, as well as creating a new walking route linking the station with Langford Village, the expanded Bicester Village outlet and the Kingsmere estate.

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, such as the new Bicester Park and Ride, will reduce the local impact in the area.

Securing green links will be considered 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.

• 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. Radial connectors into the town centre will be assessed in terms of their role in the overall transport network and opportunities for providing improvements for sustainable modes of transport.

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 anymore, particularly for HGVs. If there is no clear benefit, they shall be removed.

Public realm improvement studies will be progressed for Bicester Market Square and The Causeway to investigate enhancing 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.

- The Bicester Sustainable Transport Strategy has identified a number of new sections of urban pedestrian and cycle routes to better connect residential developments with the town centre and key employment destinations. This work and other strategy work has included the need for*:
 - Consideration of off road cycle facilities along key cycle routes;
 - Central Corridor pedestrian/cycle improvements along the A41, Oxford Road, Kings End, Queens Avenue;
 - Development of a preferred option for a pedestrian/cycle shared use facility

along Buckingham Road between its junctions with Field Street and Churchill Road. Options such as a shuttle working system under the rail bridge for vehicular traffic will be assessed, as the width of highway is constrained at this point;

- Churchill Road pedestrian/cycle improvements improving connectivity, particularly for Cooper School;
- The provision of an off-road cycle facility along Middleton Stoney Road to be assessed, as this route will become increasingly heavily trafficked in the coming years;
- A direct link from the centre of North West Bicester (Eco Town) to Bicester North Station and onwards to the Launton Road industrial estate;
- Improved cycle provision on the north side of Boundary Way to provide clear connectivity benefits;
- Options for relaxing the cycle ban on Sheep Street will be investigated as this could be a key route for cyclists, particularly between the two railway stations;
- Improved pedestrian connections to Graven Hill including A41 crossing options to reduce severance and increase the accessibility of this site;
- London Road pedestrian/cycle improvements, improving connectivity to Graven Hill;
- Improved provision for cyclists along Manorsfield Road;
- Investigating options for good quality connectivity to Launton Road employment destinations;
- Reviewing potential locations for additional cycle parking at key locations and bus stops, particularly in the town centre.

* This is not an exhaustive list and other projects may come forward for addition to the Plan.

• Progressing a Wayfinding Project for Bicester with the aim of improving signage across the town. The current wayfinding signs in Bicester were introduced over 10 years ago. There is a mix of freestanding signs, map based signs and "finger" signs, both pole and wall mounted. These are often in poor condition, occasionally in the wrong place and expensive to update and maintain. Some are out of date and no longer adequate for their purpose. Inadequate signage creates a poor impression of the town centre, can be frustrating for those trying to navigate the town and does little to support businesses and tourism.

However, good wayfinding can greatly enhance the visitors' experience, can facilitate an increased number of visitors to key destinations within the town centre and can support local businesses which are of increasing importance to Bicester's economy and regeneration. As a result, Bicester requires expansion of and where necessary updating of the existing signage for pedestrians and cyclists.

- **18.** The strategy supports the achievement of national carbon reduction targets by minimising the need to travel, and getting more people to walk, cycle or use public transport instead of driving, which not only reduces emissions, but also supports growth by helping to meet the overall demand for travel, and reducing congestion. We will also support the uptake of zero and low emission vehicles for both private and public transport.
- **19.** 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 the Centre for 'Sustainability, Skills and Second Hand Stuff'. 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.

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 and 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.
- Providing 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. A strategic system of Variable Message Signs for Bicester could support this coordinated approach and so will be investigated. Such a system could also be used on event days in Bicester and coordination of the

use of the Park and Ride with Bicester Village.

• **Providing new approaches to transport through the North-West Bicester development site**, 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.

Funding

- 20. Due to the large scale of growth we will seek central Government funding where possible for the Bicester Area Strategy.
- 21. Where infrastructure 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, with a limit of five contributions towards any one scheme.
- 22. Major residential development sites are required to fund and provide new or improved public transport services to key locations agreed with the County Council until they become commercially viable. Other development sites will be required to make a public transport contribution towards improving bus services based on the size of the development and the sustainability of their location.
- 23. 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.
- 24. 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.
- 25. 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 sustainable transport measures through all major new development. For large new or expanded housing development sites, the following principles for cycle provision apply:
 - a. Developers must 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
 - b. Site road network and junctions must 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
 - c. We will ask developers to fund cyclability audits, so that the local user view is incorporated into new cycle facilities.

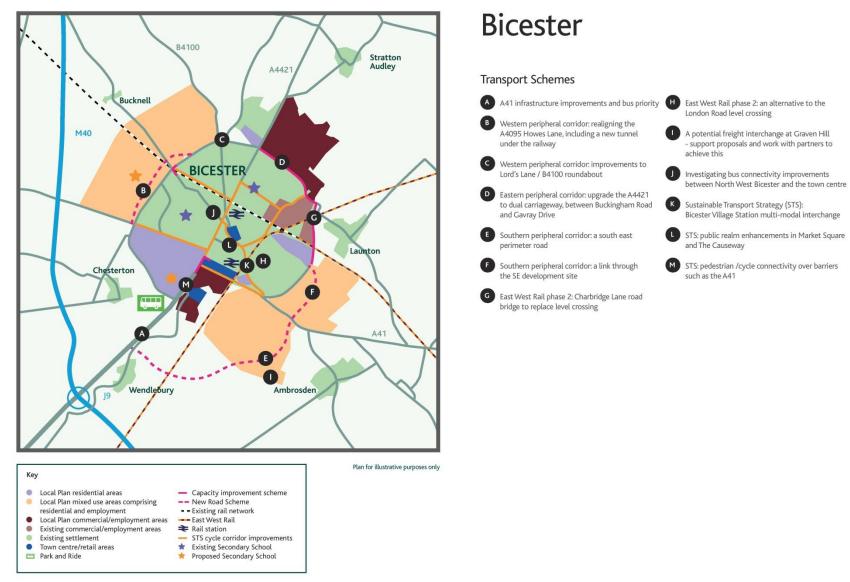
For large new or expanded commercial developments, developers should demonstrate how their development has been planned for users cycling to the site. This should be 'to the door' and as a result should show how cycle parking will be located in the most convenient position.

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

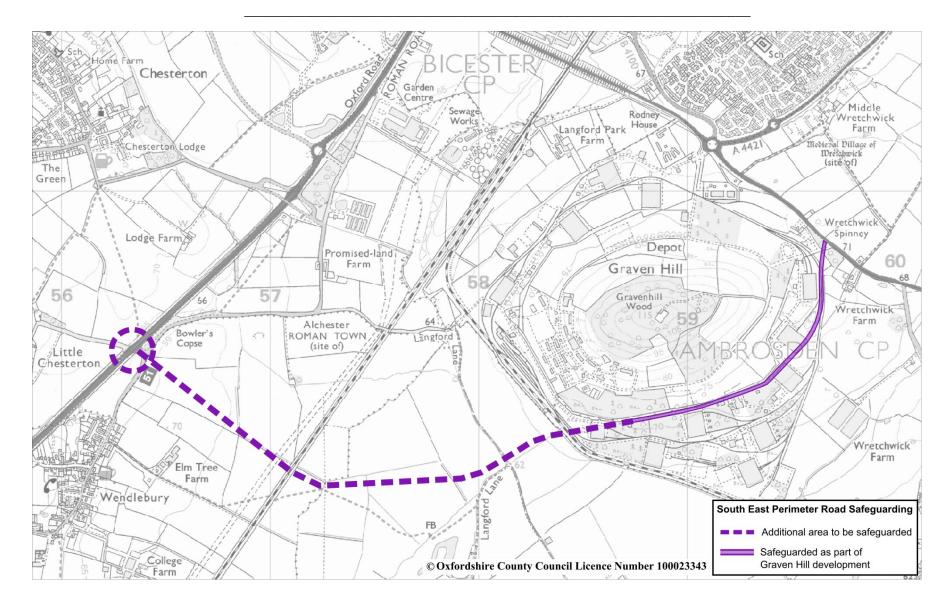
Maps and Plans

26. The map below shows the key pieces of transport infrastructure required to deliver the proposed growth and investment in the area.

Updated 2016



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



Bicester Figure 2: Safeguarded alignment for the South East Perimeter Road

Carterton Area Strategy

- 1. 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.
- 2. 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.
- 3. 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.
- 4. 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.
- 5. West Oxfordshire's growth proposals as laid out in the district council's Presubmission 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.
- 6. 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.
- 7. The Carterton Area Transport Strategy will be revised following the adoption, by West Oxfordshire District Council, of the Local Plan. This chapter will continue to be reviewed in light of changes to overarching policy, and progress on schemes in the Carterton area.

Transport Strategy Objectives

- 8. 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.
- 9. 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

10. 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 provision of cycle premium route, 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

11. 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. Consideration of cycle parking at main premium bus hubs between Carterton and Witney would encourage and enable Door to Door integrated travel for longer distances. See Active & Healthy Travel Strategy for more details of Door to Door travel.

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;
- 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

12. Walking and cycling are the most sustainable and non-polluting forms 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, (also see updated Cycle Strategy within the Active & Healthy Travel Strategy chapter).

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 local 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 premium 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, including cycle parking and improved walking and cycling routes for popular bus hubs
- 13. 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

- 14. 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.
- 15. 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.
- 16. In the short term, there are a number of schemes currently 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. This is discussed further in the A40 Route Strategy chapter.

Funding

- 17. Funding for the Carterton area strategy will be largely secured from developer contributions using the strategic transport infrastructure contribution rate.
- 18. 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.
- 19. 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.
- 20. 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.

21. 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.
- 22. 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.

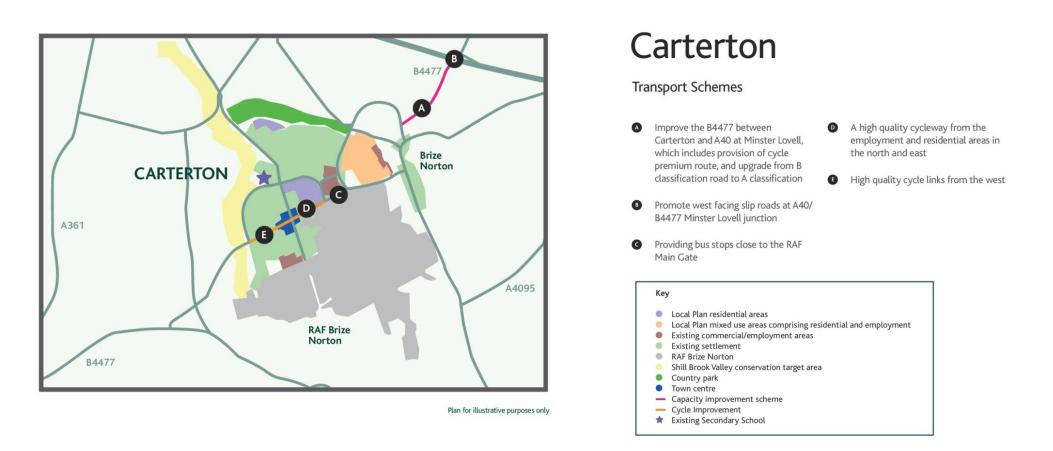
References

RAF Brize Norton Programme Gateway

http://www.raf.mod.uk/rafbrizenorton/organisation/proggateway.cfm

WODC Local Plan 2031 (March 2015)

http://www.westoxon.gov.uk/residents/planning-building/planning-policy/localdevelopment-framework/local-plan-2031-examination



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

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 Campus, 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 hitech 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 Campus, 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 Campus 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.

- 6. In late November 2015 the Chancellor announced that the Science Vale area will get a second Enterprise Zone called the Didcot Growth Accelerator. The area covered is 95ha and covers sites around northwest Didcot including Didcot A and Milton Gate service area. The district councils will be able to keep the business rates from the second Enterprise Zone; this means there will be more money available to spend on infrastructure across the whole of the Science Vale area around Didcot, and extending out to Grove and Wantage.
- 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. In early December 2015 the Housing and Planning minister announced that Didcot is to become a Garden Town, which will help with the delivery of 15,000 houses and 20,000 high-tech jobs.
- 9. 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.
- 10. 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.

- 11. 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.
- 12. 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

- 13. 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.
- 14. 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

15. The transport priorities for Science Vale are to improve access to Culham Science Centre and the Enterprise Zone sites at Milton Park, Didcot and Harwell Campus 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 (including combinations such as cycling to a bus stop to catch a bus) to help to deliver a real step-change in the provision of alternative modes of travel to the car;
- journeys across Science Vale;
- 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;
- 16. 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

- 17. 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.
- 18. 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.

- 19. 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.
- 20. 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.
- 21. 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

- 22. 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.
- 23. 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.
- 24. 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.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.

- 25. 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.
- 26. 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.
- 27. 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.
- 28. 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.
- 29. 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
		Campus 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

		Outand to be made by bue and alloviate conception
		Oxford to be made by bus and alleviate congestion
	SV 1.4	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, grade separation and
		a new station building.
	SV 1.5	Working with Network Rail and other partners to
	541.5	support the overhead electrification of the Great
		Western Mainline.
	SV 1.6	Providing clear signage across Science Vale and
	01.0	establishing a clear hierarchy of routes to assist with
		way finding for all modes of transport.
Beyond	SV 1.7	Promoting the provision of a station at Grove,
2020		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	SV 1.8	Promoting an improved level of rail service at
throughout		Didcot Parkway, seeking a minimum of four trains
the plan		per hour to Oxford and Bicester, and securing future
period 2015		direct services to Birmingham and Heathrow
– 2031		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
	SV 1.10	further business investment.
	501.10	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
	SV 1.11	Oxfordshire Bus Strategy. Promoting the efficient transport of freight , using
	5.1.11	
		The most suitable fource as outlined in Liviordenire s
		the most suitable routes as outlined in Oxfordshire's Freight Strategy and Oxfordshire Lorry Routes map.

Supporting growth across the Science Vale area

30. 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. We will promote and enable active, healthy and sustainable travel and provide more opportunities to enable people to walk, cycle and use public transport.

- 31. 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 (an element of the Active & Healthy Travel 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.
- 32. 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. The indicative strategic public transport routes and proposed bus priority routes required to support development in the Science Vale area can be found in the Bus Strategy.
- 33. In addition, highways schemes to provide extra capacity and accessibility on key routes to Harwell Campus, 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.
- 34. The Science Vale transport strategy contains a key new scheme, involving a proposed new road from north Didcot to 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 as well as network resilience. Improvements to access to Culham Science Centre through increased connectivity by bus and cycle and improved capacity at Culham station are also important.

35. 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 Campus 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, new substantial infrastructure (including bridges), branded signs 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 & Grove, Wallingford, Abingdon, town centres / retail and the employment sites at Milton Park, Harwell Campus, 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 development in the area including Didcot A, NE Didcot, Valley Park and NW Valley Park

	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. Supports and enables Ladygrove East development.
	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 Campus 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 (at the three main entrances on the A4185) 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 (CSC) Phase 1 (new road from CSC entrance to the B4015 north of Clifton Hampden) to improve connectivity between Science Vale and the Eastern Arc of Oxford and direct access to CSC.
	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	Delivering improved Access to Culham Science Centre (CSC) Phase 2 - new river crossing (between Didcot and CSC) to improve connectivity between Science Vale and the Eastern Arc of Oxford and direct access to CSC. This scheme also increases capacity for north/south movements across southern Oxfordshire and reduces pressure on the A34, whilst increasing network resilience across the Thames floodplain.
	SV 2.17	Delivering capacity improvements on the B4015 between Access to Culham Phase 1 and the A4074 to improve connectivity between Science Vale and the Eastern Arc of Oxford.
	SV 2.18	Delivering capacity improvements at the Golden Balls Roundabout (junction of A4074 and B4015) to improve connectivity between Science Vale and the Eastern Arc of Oxford.
	SV 2.19	Delivering capacity improvements on the A4047 north of Golden Balls roundabout to improve connectivity between Science Vale and the Eastern Arc of Oxford.
	SV 2.20	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 2.21	Promoting the use of sustainable transport by providing strategic cycle routes (see paragraph below) 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 Campus.
	SV 2.22	Providing new and substantially upgraded strategic cycle routes to Milton Park, Harwell Campus and Culham Science Centre through the Science Vale cycle strategy
	SV 2.23	Securing safe and attractive walking and cycling routes as part of planning for new developments.
	SV 2.24	Establishing links from new development to Public Rights of Way.
	SV 2.25	Establishing a bus route between Grove, Wantage, Milton Park and Didcot.

SV 2.26	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

- 36. 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.
- 37. 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.
- 38. 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:

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	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.
- 2031	SV3.3	Central Didcot Transport Corridors (Jubilee Way to Science Bridge and the Broadway) to transform the transport corridors through central Didcot, prioritising space for public transport, cyclists and pedestrians, address pinch point junctions and improve linkages between new development sites, the rail station and the town centre.
	SV 3.4	Pedestrian and cycle network enhancements

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

	providing improved routes with better signage 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 3.5	Promoting and delivering the Didcot Garden Town Green Corridors , we will work with the District councils to deliver green corridor routes for pedestrians and cyclists between the urban areas of Didcot and the surrounding countryside.
SV 3.6	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.

39. 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

40. 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.

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, and beyond this plan period:

Timescale	Proposal	
On-going	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
SV 4.5	Safeguarding and protecting the ability to provide A34 - Milton Park north facing slips if additional significant development comes forward in the Didcot area. This will provide a direct link between the A34 and Milton Park for traffic travelling to/from the north.
SV 4.6	Safeguarding and protecting the ability to provide a Marcham bypass this may be required to help mitigate the Air Quality Management Area declared in Marcham village.

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

- 41. 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, District Council's and Local Transport Board to secure income from the Enterprise Zone business rate retention to fund infrastructure.
- 42. 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.
- 43. 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 and to contribute to facilities for active and healthy modes of travel (cycling, walking and Door to Door travel).

- 44. 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.
- 45. 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.
- 46. 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.
- 47. Developments are also required to provide modern bus stop infrastructure, including shelters, Real Time Information and cycle parking, 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 throughout the plan period 2015 – 2031	SV 5.1	Secure strategic transport infrastructure 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.

- 48. The Strategic Transport Contribution does not include direct mitigation measures, which will be sought separately.
- 49. 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

50. Figures 1 & 2 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. The proposed public transport network can be found in the Bus Strategy.

References

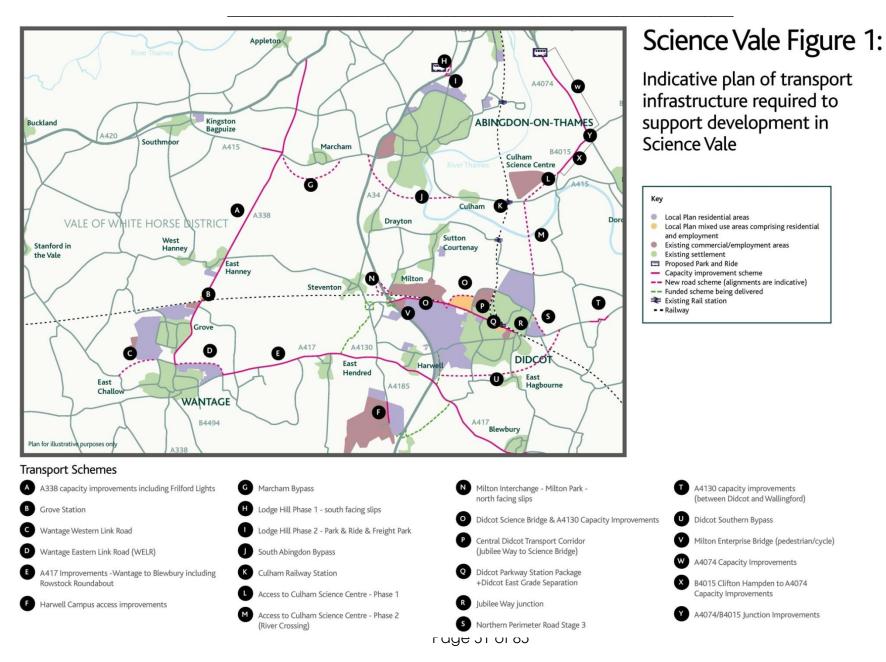
Science Vale Enterprise Zone - http://www.sciencevale.com/

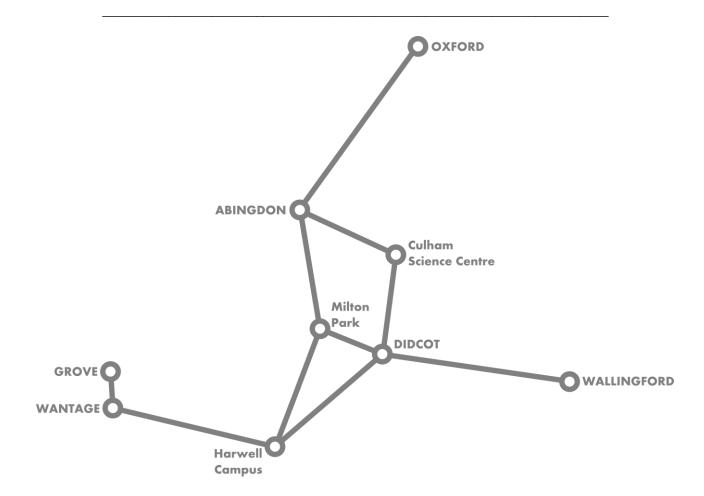
Oxfordshire Local Enterprise Partnership http://www.oxfordshirelep.org.uk/cms/

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

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

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





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

Page 52 of 85

Annex 1: Science Vale Cycling Strategy

Our vision for cycling in Science Vale

SCIENCE VALE CYCLING STRATEGY

CONTENTS

Introduction

PART ONE: Our vision

Science Vale cycle network

Feeder routes National Cycle Network

Complementary measures

Didcot interchange

Cycle hire

Publicity

Signage

Naming the network

Where are we now?

2011 census

Monitoring our progress

PART TWO: Routes and schemes

The corridors

Wantage to Harwell Campus

Wantage to Milton Park

Abingdon to Milton Park

Abingdon to Harwell Campus

Didcot to Harwell Campus

Didcot to Milton Park

Abingdon / Oxford to Culham Science Centre

Didcot to Culham Science Centre

Grove to Wantage

Didcot to Wallingford

Connector routes and other schemes

Steventon to Milton Park Chilton to West IIsley A34 junction Backhill Lane tunnel Berinsfield to Oxford Culham village to Abingdon A417 cycle path Didcot station to Power Station Roundabout Cow Lane underpass, Didcot Wantage Town Routes Other towns and local schemes Didcot – A mini-Holland?

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 refreshed Cycling Strategy which can be found in the Active & Healthy Travel Strategy which also covers walking and Door to Door integrated journeys. The Cycling Strategy 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 and makes a contribution to the reduction of air pollution. No single 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 introduced 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. More details of the Oxonbike scheme can be found in the Active &Healthy Travel Strategy element of LTP4

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.

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, modern hybrid style 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 <u>Sustrans Design Manual Chapter 10 (Cycling in New Developments)</u> 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.

Our forthcoming updated Design Standards for cycling, which draws from best practice, will be used for guidance on what cycle-friendly design measures should be incorporated in and around new and expanded developments.

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 Grove

work in	% of		
	cyclists	work in	% of
Wantage	45.39		cyclists
Harwell	21.71	Wantage	46.15
Watchfield	14.47	Grove	30.77
Grove	12.50	Watchfield	13.99
Milton	5.92	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 Campus?

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

How do people get to work in Culham Science Centre?

Mode	%
Car - drive	79.0
Car - passenger	5.9
Bicycle	6.4
Motorbike	1.3
Bus	1.1
Train / Foot	6.3

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 Centre.

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

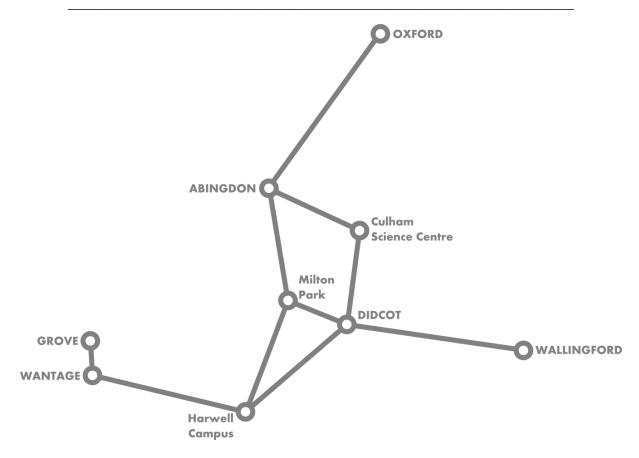
The network of Cycle Premium Routes in Science Vale will be based on connecting the large employment sites: Milton Park, Harwell Campus and Culham Science Centre to the towns; Didcot, Abingdon, Wantage and Grove. This enables us to maximise our opportunities for funding and investment by focussing the 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.

Science Vale Figure 2 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.



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

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

The strategy for this route is to create a link route between the Wantage to Harwell Campus and Abingdon to Harwell Campus 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 has been made to upgrade a footpath between the north of Harwell Campus and Harwell village. This path, The Winnaway, has been 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.

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 IIsley A34 junction

This scheme will provide a link between the West IIsley 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 \pounds 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.

In order to connect the proposed new housing development at Milton Heights with the services and jobs at Milton Gateway, Valley Park and Milton Park, a cycle pedestrian bridge will need to be provided over the A34. This will reduce the need for active modes to negotiate the unattractive, slow and circuitous Milton Interchange whilst at the same time relieving one of the most congested parts of the road network. This piece of infrastructure will complement the scheme to reopen Backhill Lane tunnel, joining up housing with enterprise zones.

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.

Witney Area Strategy

- 1. 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.
- 2. 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 at 34% may mean the size, and character of Witney makes walking a convenient travel option. There are some good cycling routes in and around the town, and many opportunities for improving the network and enable more journeys to be undertaken by cycle.
- 3. 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.
- 4. 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.
- 5. The Witney Area transport Strategy will be revised following the adoption, by West Oxfordshire District Council, of the Local Plan.

Transport Strategy Objectives

6. 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/or public transport, including Door to Door integrated travel (e.g. walking or cycling with bus/rail). More details of Door to Door travel can be found in the Active & Healthy Travel Strategy
- Support town centre vitality, by providing a local transport network that enables easy access to services by sustainable means.
- 7. 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

- 8. 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 was upgraded to improve capacity in 2014. To the east of Witney the B4022 Shores Green A40 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.
- 9. 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.
- 10. 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.
- 11. 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

12. 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, and/or using public transport (e.g. Door to Door sustainable travel) . 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

- 13. 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.
- 14. 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. There is an existing off road long distance cycling route between Witney and Hanborough station which would benefit from improved signage in order to reduce car journeys and encourage Door to Door integrated travel.

15. 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

- 16. Walking and cycling are the most sustainable and non-polluting forms 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.
- 17. 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 (Our overall policies on cycling can be located in the refreshed county cycling strategy which is an element of the Active & Healthy Travel Strategy Strategy.

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 premium 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/Cyclability Audits to:

a) Develop a network of high quality, continuous cross town cycle routes linking residential and employment areas;

b) Improving local 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.

18. 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

- 19. 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.
- 20. 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.
- 21. In the short term, there are a number of schemes currently 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. This is discussed further in the A40 Route Strategy chapter.

Delivery and Funding

- 22. 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
- 23. 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	Completed 2014/15
	Lane junction improvement	
Phase 2	A40 Downs Road junction	Revised – delivery linked to West Witney SDA timescales.
Phase 3	A40 Shores Green slip roads	Revised – delivery linked to East Witney SDA timescales.
Phase 4	Bridge Street	Linked to A40 Shores Green slip roads

- 24. 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.
- 25. 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.
- 26. 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.

27. 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.

- 28. The Strategic Transport Contribution does not include direct mitigation measures, which will be sought separately.
- 29. 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

30. This Transport Strategy replaces previous strategies. Planning obligation contributions, secured in order to mitigate the impacts of development, towards previous strategies will be able to be used on the updated LTP4 Witney Strategy and be in accordance with the planning obligations.

References

WODC Local Plan 2031 (March 2015)

http://www.westoxon.gov.uk/residents/planning-building/planning-policy/localdevelopment-framework/local-plan-2031-examination/



Plan for illustrative purposes only

Witney

Transport Schemes

- An all-movement at-grade junction on the A40 at Downs Road, related to the West Witney strategic housing and employment site
- 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
- A feasibility and viability assessment of West End Link Road 2 (WEL2), a new road bridge crossing the River Windrush

Re-designating the A4095 via Jubilee Way, Oxford Hill, A40, Ducklington Lane and Thorney Leys

0

- Implementing schemes to deter through traffic from using Bridge Street and the Woodstock Road to manage air quality
- Ensuring development at North Witney is served by a Northern Distributor Road

 Key

 Local Plan residential areas

 Local Plan mixed use areas comprising residential and employment

 Existing commercial/employment areas

 Existing settlement

 Town centre

 - New Road Scheme

 - Re-designation of the A4095

 Y Proposed Secondary School

 ★ Existing Secondary School

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