OCN Response to LTP4 Consultation

Introduction

The Oxfordshire Cycling Network speaks up for the 170,000 people in the county who cycle at least once per month, and for the 460,000 who would cycle if we achieved European best practice levels. 29 Oxfordshire cycling organisations are represented in the OCN, covering all types of cycling; a current list is appended.

GENERAL COMMENTS

The Draft LTP4 contains much that is positive for people who cycle or wish to cycle. We strongly support LTP4's ambition to achieve a modal shift towards healthier, less polluting, less congesting and types of transport, which will enable the county's economy and its people to thrive and prosper. Our main concern is to ensure that this ambition becomes reality, and that we achieve this modal shift.

We support Active Travel as a whole, including walking. We support Public Transport where it does not cause negative impacts for Active Travel modes, and particularly where it works in harmony with Active Travel to enable longer-range door-to-door journeys.

The structure of 'Volume 1' creates some problems and inconsistencies. The strategies for most modes of transport are included in the section on 'growth and economic vitality', but Active travel is not covered until 'Cutting carbon', although it can contribute significantly to economic growth as we point out in 'Recognise the benefits' below. In fact, **Active travel is unique in that it contributes positively to all five Goals of LTP4**, and hence all three policy sections. A consistent approach would be to cover the policies first across all modes, and then describe the strategies for each mode. However, we recognise that this would require a lot of re-drafting and we would be satisfied if 'growth and economic vitality' described the economic benefits of Active Travel, included a policy to evaluate and maximise them, and referred to the main Active Travel strategies being in subsequent sections.

The Area/Route Strategies are a useful concept. It is clear that the Oxford and Science Vale strategies are much more developed than the others included. The others should be developed to a similar standard and should include the whole area/corridor not just the town/road they are based on.

Area Strategies for *all* parts of the county should be developed:

- Chipping Norton/A44 could be included in a **Northwest** Area Strategy with Witney and Carterton.
- The **Southwest** of the county should be covered by an area strategy, not one focused on a single road. Calling it the 'A420 corridor' is a very poor way to consider the needs of all people and enable a move away from the historic motor-centric approach to the main LTP4 strategy of modal shift.
- The **Southeast** of the county should also be covered. The Wallingford, Thame and Henley area could be grouped in a Southeast Area Strategy.

These Area Strategies should all include definition of corridors for Super and Premium Cycle Routes, to be quickly followed by assessment of options to identify the preferred routes. These routes should not just be within each area, but should also link the areas together. Defining the routes quickly has two benefits: first it enables the routes to be safeguarded and every funding or development opportunity can contribute to them. Secondly, they can be built up into the design of the Strategic Cycling Network for the county, giving a strong sense of vision and something worth striving for.

To achieve the potential benefits of cycling, our response has five main themes:

1. Recognise the benefits. Of the five goals of LTP4, the benefits of cycling are well recognised for 'Cutting carbon' and the three combined in 'Improving quality of life'. However they are not yet recognised for 'Supporting growth and economic vitality'. There is strong evidence that cycling can play an important role here, by improving health and productivity, reducing congestion and by making the county an attractive place to live and work. We set this out in the section on Growth below. **We urge that the economic benefits of cycling are included in the final version of LTP4**.

2. Complete and Compelling Vision. The Draft LTP4 Cycling Strategy makes significant steps towards a vision for cycling, with a target and the Super/Premium Cycle Route concepts, but needs to be extended to a business case, a network plan, quality standards and funding. **We support LTP4's Cycling Strategy, but urge that it is developed into a full vision in conjunction with cycling groups.**

3. Quality Matters. Experience shows that to encourage cycling, infrastructure needs to be of high quality from end-to-end on an individual's route, and there are five key requirements. **We recommend that the Council embeds best practice design standards, assessment tools, and skills.**

4. Engage early and often. We have already seen the benefit of Council and cycle users working together on strategy development, route selection and detailed design review. **We look forward to extending this cooperation from vision to delivery.**

5. Spend and Deliver! Past LTPs and Council decisions have also contained positive wording about cycling, but these have not been delivered to the scale and quality required to encourage more people to cycle. Less than 1% of OCC's Transport Capital Budget has been spent of cycling. **We strongly support the inclusion of an implementation plan, recommend some additions and urge that this is backed by a financial commitment and a programme delivery board.**

These themes are developed further in Growth section (Theme 1) and the Cycling Strategy section (Themes 2 to 4) of our response below.

The 'acid test' will come where a decision needs to be made between modal priorities. In recent decades, motorised vehicles (including buses and trains) have almost always been prioritised above Active Travel modes, and so Active Travel has gradually been discouraged and marginalised. LTP4 provides a framework to reverse this literally unhealthy trend and we look forward to working with the Council, LEP and other organisations to deliver it.

Volume 1 (Overall Policy) - Supporting Growth and Economic Vitality

To what extent do you agree or disagree with this section? Strongly disagree (in one main respect).

OCN supports all of the policies in this section, with some comments below.

However for consistency and completeness, **this section needs to include the economic benefits of Active Travel**. A consistent approach would be to cover the policies first across all modes, and then describe the strategies for each mode. However, we recognise that this would require a lot of re-drafting and we would be satisfied if 'Growth and Economic Vitality' described the economic benefits of Active Travel, included a policy to evaluate and maximise them, and referred to the main Active Travel strategies being in subsequent sections.

OCN Theme 1: Recognise the benefits.

There is strong evidence that cycling delivers economic benefits in at least three ways. The omission of these benefits from this section is a serious oversight that needs to be corrected to ensure that cycling receives appropriate consideration and investment.

Time savings

For typical cycling journeys, cycling saves time over other modes. On congested routes this applies even to longer journeys. A 'Commuter Challenge' from Eynsham to Oxford in 2011 saw 11 cycle users of varying speeds arrive before a motorcyclist and then a car driver, saving up to 23 minutes.

Cycling journeys times are more reliable. A 5 mile commute from Steventon to Didcot station takes 21 to 23 minutes door-to-door by bicycle. By car it can be as quick as 18 minutes, but can be 30 or even 40 minutes when there are traffic jams.

Cycling is also very resilient. OCN was able to hold a meeting in Oxford at the height of the 2014 floods with full attendance despite many roads being closed to motor traffic.

People who focus their time and energy on their work, which from personal experience includes many in the knowledge and technology economy, find it difficult to find time for the exercise

necessary to keep healthy. Active travel enables them to build exercise into their busy schedules. It also gives them time to think and to come up with new ideas.

The time-related benefit that is best quantified is the benefit of cycling in reducing congestion for other road users. For Oxfordshire with 10% of trips by cycling, this is estimated as £16m per year[1].

Health and productivity

The health benefits of cycling are well documented. Regular cyclists live two years longer than inactive people, and are as fit as people 10 years younger. They take one day less of sick leave each year. Physical activity has mental health benefits as well[2].

Healthier people reduce the burden on an increasingly expensive health service. This frees public money to spend on other priorities, or to reduce taxation, both of which can boost the economy.

For Oxfordshire with 10% of trips by cycling, the increase in benefits of health and productivity is estimated as £80m per year[3].

Creating and attractive environment for people and businesses

The highest skilled people have a choice where to work. The businesses that rely on them are increasingly locating to places that will attract them. Polluted and congested roads do not make an attractive environment. Places with good green infrastructure where you can combine exercise with your journey to work will attract the best businesses and people. Throughout the media, from holidays to life insurance, you can see cycling imagery used to imply happy, healthy lifestyles – and this works for business locations too.

This is why over 160 companies in London have joined the 'CyclingWorks' campaign in London. As Michel Van Der Bel, Microsoft's UK MD puts it: "We look forward to using the protected routes to help us attract and retain the people we need to continue to thrive." London understands this and is investing in infrastructure[4] and promoting the business benefits of cycling[5]. The number of cyclists on London roads has more than doubled in the past decade[6].

Cities like Cambridge, Freiburg and Leiden are well known for their cycle-friendly environments. But, increasingly US cities are realising this is important to their competitiveness. Not just California and Portland, but Minneapolis, Chicago, New York, Washington DC, and even oil-state capital Austin

[1] Based on 'The Economic Cycle' (http://www.ctc.org.uk/economic-cycle) scaled to Oxfordshire by Gross Value Added (19% above the average for England) and Oxfordshire's higher starting point (3% of journeys).
[2] http://www.ctc.org.uk/sites/default/files/file_public/health1crv.pdf
[3] Based on 'The Economic Cycle' (http://www.ctc.org.uk/economic-cycle) scaled to Oxfordshire as above.
[4] https://www.tfl.gov.uk/corporate/about-tfl/how-we-work/planning-for-the-future/vision-for-cycling
[5] http://www.tfw.org.uk/documents/Cycling-to-work.pdf
[6] https://www.tfl.gov.uk/modes/cycling/cycling-in-london

Texas are investing in cycle infrastructure to make their locations more attractive to business[7]. If Oxfordshire wants to compete, it needs to improve its cycling infrastructure and to promote it.

The Tourist Economy

Cycling and Walking on pleasant routes are already part of the county's tourism industry. Cyclists are welcome and well-known in many of the county's cafés for their consumption of tea and cake. However, many more drive out of or through the county on their way to excellent cycling facilities such as the Bristol-to-Bath cycle route, or the Welsh Mountain Bike centres.

An expansion of safe, attractive, signposted and well-promoted routes could attract more of this business into Oxfordshire. A well-documented example for walking is the South West Coast Path, which in 2012 attracted 8.6m walking visitors spending £436m[8].

Recommendation

With £96m per year potential economic benefit from de-congestion, health and productivity alone, it is clear that there is a strong case for investing in cycling, at or above the £7m a year implied by the £10 a head level set out in LTP4 (which is less than 1½ A34 slip roads). **We recommend that the Council and LEP develop a full 'business case' for cycling, to fully understand the potential benefits, and to prioritise their attainment.**

Other feedback on 'Supporting Growth and Economic Vitality'

In addition to the four maps of motorised modes and congestion problems, this section should include a draft map of the future Strategic Cycling Network. OCN has been developing a model of future potential cycle traffic that could inform this, and we have direct knowledge of relevant routes. We would be very happy to work with OCC planners to create an illustrative draft.

Policy 02: We agree that management of the road network should happen before improvement or extension, as the latter two will work against the main LTP4 strategy of modal shift.

Policy 05: Our support for this policy depends on the choice of an appropriate hierarchy of users in setting priorities.

Policy 07: Public transport does not provide a door-to-door service, so enhancing the PT network should place emphasis on improving the interchanges with the sustainable door-to-door modes of walking and cycling.

Policy 12: We support recognition that parking plays an important role in transport policy. This can be enabling as well as restricting: cycle use to Didcot station has increased considerably with the

[7] http://www.yesmagazine.org/happiness/how-bicycling-is-transforming-business
[8] Unlocking our Coastal Heritage along the South West Coast Path National Trail, Report March 2014

expansion of good cycle parking facilities, so much so that further expansion may be desirable to encourage continued mode shift.

Volume 1 (Overall Policy) - Cutting Carbon

To what extent do you agree or disagree with this section? Strongly agree

OCN supports all of the policies in this section, but has some important comments. It is important that these policies receive as much weight in decision-making as those in other sections.

We strongly support "Treating cycling as a major mode of transport, considering it at an early stage in all policy decisions, new projects, maintenance schemes and developments".

We support "Allocating more investment to cycling, working towards the £10 per annum per resident spend on cycling recommended…". Much of this funding will need to come from other sources, but OCC should immediately raise the amount of its own Capital budget it spends on cycling from the invisibly small 0.7% seen over the last four years.

Policy 18: OCC should not just 'seek to ensure' that new developments encourage walking and cycling, it should **insist** on this. To achieve growth in walking and cycling **every new development must make active travel relatively easier than other modes**. And, just as important, **new developments must never make walking and cycling harder** – this requires thinking ahead, for example to ensure that developments do not introduce breaks in continuity, diversions or difficult junctions into potential future cycling routes.

Policy 21: In addition to safety improvements on school routes, OCC should make improvements to the other four key requirements (see OCN Theme 4).

Volume 1 (Overall Policy) - Improving Quality of Life

To what extent do you agree or disagree with this section? Strongly agree

OCN supports all of the policies in this section, but has two important comments. It is important that these policies receive as much weight in decision-making as those in other sections.

Policy 29: Social Inclusion. We support this policy and take it to include the specification of cycle routes that enable inclusive cycles and cycles with trailers as well as bicycles. The paragraphs supporting this policy ignore the positive impact on social inclusion of active travel. It is low cost, so enabling to people on low incomes, and it brings self-reliance and hence personal empowerment to anyone. Cycling increases the one-hour travel range from about 3 miles to 12 miles or more – multiplying the accessible area by 16. The range of inclusive cycles now available, and the popularity of 'Wheels for All' demonstrates that cycling inclusivity extends to people with significant physical disadvantages.

Policy 31: Accidents. In identifying solutions it is important to understand the behaviour of the road users involved in accidents. For example, even adding a segregated cycle track may not attract 'fast commuters' and 'sports' cyclists on to it if it is not of suitable quality. OCN will be very happy to help OCC to understand how and where cyclists choose to ride to help minimise accidents.

Volume 1 (Overall Policy) – How we will implement this Plan

While a response is not specifically asked for on this section, our main concern is that the ambition of LTP4 for modal shift towards Active Travel becomes reality, and so this section is among the most important in the whole plan.

To what extent do you agree or disagree with this section? Strongly agree

OCN supports all of the policies in this section, but has some important comments.

We strongly support OCC's intention to use all available levers to achieve the plan, including its role in the planning system and all aspects of transport, which should include maintenance. To achieve a tripling in cycling to work will not be easy, and it will require the best use of all available resources. **Every development, capital and maintenance scheme should take us towards the target, not push us further away.**

Input on Policy 35

- Point 1: Developer contributions should not just mitigate adverse impacts, they need to move us positively towards the target. Every housing or workplace development that does not achieve 21% of people cycling to work pushes us further away form the target.
- Point 3 should also include Community Infrastructure Levy.
- Every development should fund its connection to the 'Active Travel Network', and many should also fund improvement to the network.
- Development plans (and changes to plans) should be reviewed to ensure that they do not make future potential Active Travel routes more difficult to implement or lower quality.
- It is important that OCC will "ensure that developers promote sustainable travel" as in the last point of Policy 35. OCC should put in place sufficient targets, incentives and penalties to ensure that each new development moves us towards the target, not away from it.

Volume 2 – General comment

In responding to Volume 2, we have included some ideas from OCN's Missing Links survey, which has so far had 98 responses. A digest of these responses is included in Appendix 4. These may be useful in identifying route improvements and understanding the issues that cycle users encounter, but they are not yet a prioritised plan.

Volume 2 section I (Oxford Transport Strategy) – Mass Transit

To what extent do you agree or disagree with this section? Mostly agree

- Ensure that Mass Transit works in conjunction with cycling. For example, ensuring there is good cycle parking at stops, ensuring that sufficient numbers of cycles are carried on mass transit, and ideally that carrying inclusive cycles is possible.
- Ensure that Mass Transit does not impact negatively on cycling and walking. For example learn from London's experience and abandonment of 'bendy-buses'. Tram lines can cause problems for cyclists and any adoption would require careful design.
- Every existing and new Park & Ride should be developed to make an attractive hub for Cycle & Ride and Park & Cycle journeys, including attention to routes to and from the main towns and workplaces within cycling range.
- Rather than closing Park & Ride car parks at Water Eaton, Peartree, Seacourt and Redbridge, these locations should be considered as ideal 'Park & Cycle' interchanges as they are closer to the city.

Volume 2 section I (Oxford Transport Strategy) – Walking and Cycling

To what extent do you agree or disagree with this section? Mostly agree

- We strongly agree with the ambition that Oxford should become a world-class cycling city. Do we have to wait until 2035? The sooner it can be achieved, the sooner people will gain the benefits.
- Super and Premium Routes are a good concept, but the definitions are very broad, and could be met with facilities that are not good enough to encourage large scale cycling and achieve the modal shift objectives. OCC's standards should be developed further with reference to up-to-date materials and should state for example the lane widths to be used. Excellent design standards and assessment tools have been developed by TfL and the Welsh Assembly, and even better these are available for free (See 'Theme 3: Quality Matters').
- Super / Premium Route Network – This should include routes that connect to all major (and future) sites of employment, education, shopping and leisure. (e.g. Do the routes connect to Oxford Science Park and the Kassam Stadium?). They should also connect to a Super/Premium route network across the rest of the county.
- Routes should be planned end-to-end in advance and developed as funding, maintenance and other development enable them. This will get the maximum benefit from the publicity and travel habit changes accompanying the development. Examples are shown below (but should not be viewed as a complete list).
    - Example 1: The Premium Route to Water Eaton / Oxford Parkway should have been planned and implemented in parallel with the new station.
    - Example 2: The Botley Road route should be developed in parallel with the Oxford Station Masterplan. In particular, it is essential to improve cycle provision across the

river 150m west of the station bridge, otherwise the benefits of widening the bridge will be lost as cycle users are forced back in to busy traffic.

- Example 3: Following the redevelopment of Frideswide Square, the opportunity to complete the 'western gateway to the city' for people arriving by train. Without change, people will walk or cycle from the redeveloped square into congested, polluted Hythe Bridge Street. This should be restricted to pedestrians and cyclists (and maybe one day small automated vehicles). Essential motor traffic could be routed via Park End Street and Worcester Street. The results would be a clean, attractive and inspiring entrance to the city.

- Signage is important, both in practical terms and as in-situ publicity. It is good to see this recognised. In particular, clear and connected East, West, North and South corridors should be identified.
- OCC with the City Council should take the opportunity to test what can be achieved with a high level of cycle 'permeability' and other measures (both 'hard' and 'soft') in an urban area of Oxford. Pick one area for the 'full treatment' rather than do smaller changes across the city. TfL has adopted this approach with the creation of 'Mini-Hollands' in Kingston, Enfield and Waltham Forest.[9]
- The Western Conveyance Channel may be planned or constructed in the period of this LTP. LTP4 should include the intent to maximise the Active Travel benefit opportunity from the Western Conveyance Channel.

Volume 2 section i (Oxford Transport Strategy) - Managing Traffic and Travel Demand

To what extent do you agree or disagree with this section? Strongly agree

- The city should develop towards the practice on many cities where through routes and the traffic they bring are eliminated. This leaves more capacity for in-and-out access (which will be more economically productive) and active travel.
- As the Ring Road increases in capacity, it is essential that it does not become a barrier to people without motor vehicles or not wishing to use them. Many crossings will be needed, and these must not disrupt the continuity of walking and cycling routes, so should in general be under or over the road.
- The measures deployed should highlight the time saving benefits of cycling.

Volume 2 section ii (Area/Route Transport Strategies) - Science Vale

To what extent do you agree or disagree with this section? Mostly agree

[9] http://www.tfl.gov.uk/travel-information/improvements-and-projects/mini-hollands

- The Transport Aims for Science Vale should include an aim to make the area attractive as a location for businesses, skilled workers and their families. Active Travel can play an important role in this.
- SV1.1, 1.2: We note that both of these schemes make it more difficult to cycle, and the initial plans for Chilton Slips significantly reduced safety for cycle users.
- SV 1.3 Enabling quality cycling access to a Lodge Hill P&R should be a priority. This would enable 'Cycle and Ride' from Abingdon and a practical bus/cycle route from Oxford to Culham and Milton Park.
- SV 1.4. To underpin Didcot station's transformation into a '"state of the art' multi-modal interchange and gateway to the area", the plan should include a 'cycle hub', offering maintenance and enhanced cycle hire and parking.
- SV 1.8 Improved access to Culham station should include cycle access and parking.
- SV 1.9 An integrated public transport system should include good connections to Active Travel routes so people can start or end their journeys without resort to private cars or taxis.
- SV 2.1 We strongly support these proposals and will work with the Council to make them as attractive as possible to all types of cycle user and potential cycle user.
- SV 2.6. Didcot to Milton Park should be one of the best-used cycle routes outside Oxford, but a major problem is the dangerous power station roundabout on the A4130. A solution to this is essential. A cycle-able over-bridge would be one solution, and would be iconic of the encouragement to cycle in Science Vale. Or, could Science Bridge and re-routing the A4130 enable removing traffic from the current route and roundabout and maybe a cycle-friendly re-design? In the short-term, the £150k maintenance planned for 2015/16 provides an opportunity and funding that should not be missed.
- SV 2.7 The A4130 north of Didcot is very poor for cycling, being busy with much HGV traffic, several roundabouts and no cycle provision. Again, there is an opportunity in the maintenance spend planned for 2015/16. Any extension certainly needs to provide safe facilities for cycling or a high quality alternative.
- SV 2.8 The plans for Harwell Link Road consulted on last year include good provision for cycling. However, they are not the most direct route from Didcot to Harwell. The alternative via Harwell village has poor provision. This leaves potential cycle commuters with a choice between two poor options. We hope that the route via Harwell can be improved as this would be the best option.
- SV 2.9 Improving Harwell Oxford campus entrance should reduce the delay for cyclists by giving cyclists priority across the junction.
- SV 2.10 On the A417 corridor, recent Focus Groups gave an excellent opportunity to input on the cycle route options between Wantage and Harwell/Didcot. We applaud this approach and look forward to similar discussions of other corridors. Our preferred option is a cycle route through the villages (1D and 2D/C) rather than along the A417.
- SV 2.11 Steventon Lights and Featherbed Lane are very poor for cycling in every direction. The plans recently consulted on did not improve things and will probably make them worse by increasing levels of motor traffic. This area is already well used by people cycling to

Harwell Campus and there is potential for more. We urge that these plans are reviewed with cycling groups before construction begins.

- SV 2.12-16 These routes all have sections that are very poor for cycling and they all have the potential to improve conditions for cycling or to make them worse. We urge that options are discussed at an early stage with cycling groups.
- SV 2.17-22 We support all these proposals.
- SV 3, Didcot. Add: Turn Cow Lane tunnel into an attractive Active Travel route between Ladygrove and Didcot centre and station. This would also improve its role as a link in NCN Route 5, and the future Premium Cycle Route between Didcot and Culham.
    - The current situation discourages active travel due to dark, polluted tunnel with a narrow path on which cycle users must dismount. Two wheelchair users are not able to pass each other on this path.
    - The current situation stops physically disadvantaged people from making an independent trip from Ladygrove to the town, making them dependent on someone who will take them by car, and hence potentially trapping them in their homes.
    - We propose closing the (one-way) motor access and using the tunnel for pedestrian and cycle traffic, to include wheelchairs, mobility scooters and inclusive cycles (and emergency vehicles if necessary). The tunnel connects to other cycle routes on both sides. The lights could be re-phased to create extra capacity at the junction.
    - Compact emission-free driverless vehicles could be added to traffic through the underpass following safety approval.
    - We note that motorists using the tunnel have:
      (A) Already decided they are happy to take a longer route on their return journey
      And are either:
      (B) Going to the town, a trip well under a mile and ideal for active transport, or
      (C) Going beyond the town, in which case they are taking a short cut which adds congestion to the town centre that could easily be avoided if they drove out on the major road that they will be driving back on, or
      (D) From outside Didcot using the residential area as a 'rat-run' to get to Didcot or the station.
    - How many of each there are could easily be established with a survey, but none of them have an over-riding need to drive on this section.
    - When Hitchcock Way was built, the tunnel was closed to cars for several months and this appeared to work fine. If a further test was needed, it could be done quickly and cheaply by installing a temporary barrier and re-phasing the lights.

  This is a great example of where a small change can make active travel relatively more attractive than private car use. The benefits will accrue to all those who are capable of a short journey without a car. There appears to be no good reason not to go ahead with this plan.
- SV 3, Didcot. Add: Develop Didcot into a 'Mini-Holland' pilot. LTP4 Cycling Strategy aims to "demonstrate that cycling can transform travel problems throughout a county". Testing the 'complete solution' in a pilot area would test and prove these principles to roll out elsewhere.

This approach is being used in 3 London areas, dubbed 'Mini-Hollands'[10]. Didcot may be an ideal place to test this approach in Oxfordshire as it benefits from:

- Compact centre with housing, shops and schools all within 1-2 miles
- Major employment sites in town, and 3 and 5 miles distant (Milton Park, Harwell)
- Major transport hub with rail and bus for longer journeys (Didcot Parkway)
- Mix of urban environments from 'traditional' (South of High St), to recent with cycle paths (Ladygrove), to brand new (GWP etc.)
- Advantaged access to funding as part of Science Vale
- Strong local support for cycling including Councillors and many cycle users including sizeable local groups: Milton Park BUG, HarBUG, Culham BUG and Didcot Phoenix Cycling Club.

- SV4, Safeguarding. Add: Safeguard space for strategic cycling and walking routes. Opportunities may be lost for ever (or for large expense) by recent developments. This is essential with the pace of development in Science Vale. Without rapid action, development may damage the ability to **ever** provide high quality cycling facilities.

Volume 2 section ii (Area/Route Transport Strategies) – Bicester

To what extent do you agree or disagree with this section? Mostly disagree (because there is not yet a strategy for cycling for this area)

With 'Garden City' status, Bicester should be an important area for Active Travel development. We acknowledge the Transport Strategy Aim for a "significant increase in the proportion of trips to be made by public transport, cycling and walking".

Several cycling improvements are mentioned, but they look piecemeal. Bicester would benefit from a strategic cycling vision and map (like the Science Vale section) and we urge that one is developed.

The SEP states that "Surveys undertaken as part of the Travel Behaviour Demonstration work identified over 40% of all journeys throughout the day being less than 3.0km (1.86 miles) in length, suggesting that there is potential for a large proportion of local journeys to be carried out on foot or by cycle." Also "Main movements are largely between the residential areas to the west of the town and the employment areas to centre and east of the town, particularly at Launton Road and in the town centre". So Bicester and these routes in particular should be ideal for cycle route development.

Particular issues in Bicester, mentioned in responses to our Missing Links survey are crossing the A41 near Tesco and access to the stations.

[10] http://www.tfl.gov.uk/travel-information/improvements-and-projects/mini-hollands

Volume 2 section ii (Area/Route Transport Strategies) – Banbury

To what extent do you agree or disagree with this section? Strongly disagree (because there is not yet a strategy for cycling for this area)

We acknowledge the Transport Strategy Aim to "Facilitate and promote sustainable travel for trips to, in and around Banbury, including use of the bus, walking and cycling."

Banbury currently has many problems for people wishing to cycle, with cycle paths that are frequently interrupted or just end, and sections of road where cycle users must choose between riding in front of traffic that cannot pass or cowering in the gutter.

Given the scope for improvement, the action point "We will work closely with Cherwell District Council and other strategic partners, local users 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." appears vague and unambitious. It contrasts poorly with the 15 improvements in BAN1 that appear to benefit mostly motorised traffic.

We urge that a strategic cycling vision and map for Banbury (like the Science Vale section) is developed. 'A blueprint for cycling in Banbury', developed by Sustrans Rangers in 2009 would be a good place to start.

Volume 2 section ii (Area/Route Transport Strategies) – Witney

To what extent do you agree or disagree with this section? Mostly disagree (because there is not yet a strategy for cycling for this area)

We acknowledge the three Transport Strategy Objectives – all of these would be supported by high quality Active Travel provision.

Policies WIT1 and WIT2, to enable traffic to use peripheral routes, thus freeing up routes within Witney for walking, cycling and bus use, which sounds positive, but there is little detail on the improvements that people wanting to walk or cycle would see. It would be necessary to avoid the high-traffic routes being a barrier to cycling or walking parallel or perpendicular to them.

Policy WIT5, to "improve facilities for pedestrians and cyclists focusing on enhancing links between homes, schools, employment and the town centre" is positive but needs more detail. The note that Cycle Premium Routes would be developed "in collaboration with users" is positive and this working with cycle users should apply to not just all cycle schemes, but all transport schemes that could affect cycling (almost all of them).

We support a cycle route between Witney and Carterton if it is high quality on the five key requirements for cycle infrastructure.

We are glad to see the retention of the Witney to Oxford cycle route along the A40 as this is a key commuting route for many cyclists, even in its current form. Development of this into the Oxfordshire Cycle Premium Route network should improve conditions and usage.

We urge that a strategic cycling vision and map (like the Science Vale section) is developed to cover Witney and the whole 'Western corridor' into Oxford, including routes through Eynsham and Farmoor (B4044) and linking Woodstock/A44 to Hanborough station.

Volume 2 section ii (Area/Route Transport Strategies) – Carterton

To what extent do you agree or disagree with this section? Mostly disagree (because there is not yet a strategy for cycling for this area)

We acknowledge the three Transport Strategy Objectives – all of these would be supported by high quality Active Travel provision.

Policy CA3 to "improve facilities for pedestrians and cyclists focusing on enhancing links between homes, employment and the town centre" is positive but needs more detail. This should be developed with local cycle users and potential cycle users.

Policy CA4 to "improve the environment of the town centre, and reduce the impact of traffic accessing the town centre" we support. Active Travel can make a positive contribution to this.

We urge that a strategic cycling vision and map (like the Science Vale section) is developed to cover Carterton – this could be included in a 'Western corridor' cycle strategy including Witney, Eynsham, Farmoor and other places west of Oxford.

Volume 2 section ii (Area/Route Transport Strategies) - A420

To what extent do you agree or disagree with this section? Mostly disagree (because the strategy does not address the main issues for cycle users)

Calling this the A420 strategy starts it from a motor-centric position, which moves away from the LTP4 modal shift strategy and considering what is best for people. This should instead be the 'Southwest Oxfordshire Area Strategy'.

The A420 creates problems for people wishing to cycle either parallel to the route, or across it.

The A420 is not safe for cycling, with no cycle provision for most of its length. But alternatives are often indirect: for example Faringdon to Watchfiled is 4 miles via the A420, but 6 miles on via the safer B4508 – although the B road would still put off most cycle users. (Some areas are better provided with parallel alternatives).

Crossing the A420 at various points is also difficult. The road is very busy and fast, and there is often no central refuge.

Integrating bus services with cycle parking is a good idea. How about testing bike-racks on buses on A420 routes?[11]

We urge the development of a cycling strategy for the Southwest area of Oxfordshire, and would support the Council in developing this.

Volume 3 (Science Transit Strategy) - Our approach to delivering Science Transit

To what extent do you agree or disagree with this section? Mostly agree

We support the Science Transit concept as an integrated transport system that makes the best use of all available modes including Active Travel.

With the expertise based in Oxfordshire, there is a real opportunity to create a world-leading multi-modal, information-rich system. With better information, interchanges and 'nudges', more people will see when walking or cycling is an advantageous mode and be encouraged to choose it for some or all of their journey.

- 2. Strategic context. In addition to 100 years of car manufacturing, Oxfordshire has a history of 122 years of bicycle manufacturing. William Morris's first enterprise was a bicycle shop founded in 1893 and he manufactured and raced his own bicycles for nearly 20 years before moving on to cars. Bicycles continue to be manufactured in Oxfordshire at Oxford Bike Works in Steventon[12].
- 3. The Vision. Science Transit information should include the health benefits of active travel, for example keeping track of calories burned or activity relative to the Chief Medical Officer's Guideline of 150 minutes of physical activity each week.
- 4.9 Existing assets. These should include people's own feet and cycles, and the Oxonbike rental facilities.
- P23 'Smart Mobility Information' should include walking and cycling times and directions to start or complete a journey from Stage 1.

Volume 4 (Mode Strategies) – Cycling

To what extent do you agree or disagree with this section? Mostly agree

We applaud the aim "to create the foundation for cycling to become a major mode of travel in Oxfordshire" and "to make cycling a safe, simple and accessible option for people of all ages".

[11] http://www.action.act.gov.au/rider_Info/driving_and_cycling/bike_racks_on_buses
[12] http://www.oxfordbikeworks.co.uk

However, the challenge is large. Over the last ten years, the proportion of people cycling to work has scarcely moved, rising only from 6.7% to 6.9% from 2001 and 2011, and the rise was only in Oxford City – outside Oxford it fell from 4.8% to 4.2%[13]. Overall rates of cycling have remained stagnant too[14].

The ambitions of the Cycling Strategy are largely excellent; the question is whether they will be delivered. We are very keen to support the Council in achieving this.

Four of our five themes focus on the aspects that we believe will be critical to achieving modal shift and the economic, environmental and health benefits that will come with it.

OCN Theme 2: A Complete and Compelling Vision

A Vision is an essential enabler of any major change programme, and the programme to return cycling to being a major transport mode is certainly a major change. In our response to the LTP4 Goals Consultation, we identified 9 features of a good 'Vision for Cycling', which the Draft LTP4 and Cycling Strategy deliver in part. Based on that, we identify the key next steps to complete the vision.

Element of Vision	Current LTP4	Recommendations
Overall 'business case' for mode shift.	LTP4 sets out many reasons for mode shift, but not a full 'business case'	• **Construct the economic business case for mode shift**
Target level for cycling	Target of tripling cycling to work by 2031, to 21%. It is excellent to include a bold target. However, 2031 is a long way ahead and commuting is only accounts for 16% of trips[15].	• **Add a target for all cycling – including the other 84% of journeys.** • **Add a shorter-term targets for 2020 and 2025.** (Science Vale has an 'increase by 50%' target for 2021, which is good). • **Understand cycle users and usage, both locally and best practice.** For example, in UK or Netherlands utility cycle usage is strongest for journey *sections* up to 5 miles, and significant up to 10 miles, but for longer trips it can be combined with other modes.
Positioning cycling as a major mode	"create the foundation for cycling to become a major mode of travel in Oxfordshire".	• **Act on the basis that cycling is a major mode, for example in meetings and decision-making.**
Learning from success	For Science Vale "quality of infrastructure comparable to that found in the European cycling countries"	• **Understand the drivers success of these countries in depth.** • **Extend the quality commitment beyond Science Vale.**

[13] Census 2001, 2011
[14] Sport England, Active People Survey
[15] National Travel Survey 2013, NTS0401

A practical vision	Vision of Cycle Super Routes, Premium Routes and Connector Routes. The descriptions of these so far are broad and could cover bad as well as good practice. Commitment to adopt Manual for Streets.	• Commit to adopt the TfL, Welsh or equivalent cycle route standards (and include MFS2 with MFS). (See Theme 4)
Commitment to increase the funding for cycling	"explore how a minimum funding package equivalent to £10 per person per year could be achieved by 2020-21 or sooner"	• Commit to a phased, ratcheted increase of OCC funding from the current <1% of Transport Capital spending. • Commit to making cycling easier in every significant road capital and maintenance scheme, and in every planning approval.
Gap assessment	Commitment to improve the quality of cycling routes in a prioritised way.	• Adopt of TfL or Welsh assessment tools and roll-out across county starting with high priority routes.
Cycling and walking included from the 'objectives' stage in every transport expenditure.	N/A	• Commit to including cycling and walking improvements in the objectives of every transport expenditure.
A plan to Test the Vision.	2015/16: 'completion of first Cycle Premium Route' with audit.	• OCN support this. The route and audit must meet 'Quality' standards (Theme 3). • Other pilot schemes should test what is possible with the full implementation of cycling-friendly infrastructure and promotion by creating 'Mini-Hollands' as TfL is doing[16].

OCN Theme 3: Quality Matters

The Netherlands is a benchmark for cycling as a major mode of transport, with 70% of people cycling for some or all of their 'utility' trips – commuting, shopping, going to school, etc. In establishing this level they found 5 essential requirements in infrastructure to enable high levels of cycle usage.

These 5 requirements or outcomes have already been adopted by TfL[17] (which has already achieved a major increase in cycling) and the Welsh Assembly as the foundation for their own cycling strategies.

The 5 requirements are:

- Cohesion
- Directness

[16] http://www.tfl.gov.uk/travel-information/improvements-and-projects/mini-hollands
[17] TfL adds a 6th requirement 'Adaptability' which covers future-proofing.

- Safety
- Comfort
- Attractiveness

London and Wales have both produced detailed guides to these requirements, which should be used to supplement Manual for Streets and Manual for Streets 2. They include:

- An overview of their approach (see Appendix 3 for an extract from the TfL overview)
- Detailed guidelines, standards and designs for use by scheme designers
- A route assessment tool to evaluate existing or proposed provision. The Welsh version is simple enough to be used by non-experts.

The introductory sections of each should be required reading for all those developing transport policy and strategy, and the detailed guidelines and tools should be understand and used by those planning specific schemes. These guidelines are available free at:

- http://wales.gov.uk/topics/transport/walking-cycling/active-travel-design-guidance/?lang=en
- https://www.tfl.gov.uk/corporate/publications-and-reports/cycling

Important points:

- Falling short on **any one of these five** can stop uptake.
- It is essential to realise that the five requirements need to be considered for the **whole journey** that an individual wants to take. The journey perspective is essential because this will not necessarily correspond to a cycle route – it will more typically run from a dwelling to a workplace, shop or school, etc.)
- **A single problem can block usage**. For example, a single difficult or inconvenient junction (Safety or Directness), a difficult last 100 meters (Cohesion), a section that is very bumpy (Comfort) or feels isolated (Attractiveness).
- Individuals will have **different thresholds** for what constitutes a blocker. E.g. An experienced cyclist may be happy that a rural road is safe, but a novice almost certainly won't be. For commuters, making the same journey every day, Directness will take higher relative priority than it will for other cyclists, but any route will still need to meet their threshold for the other 4 factors.
- We have seen in several meetings that **involvement of experienced cycle users** can identify problems or opportunities that would otherwise not be seen.

Thinking from this, if the objective is mass uptake, then it becomes clear that this will only be achieved by routes that are **high quality on all 5 requirements from end to end**. And hence, that it is better to invest in high quality provision for a small number of routes than to provide cheaper, but flawed, provision on a larger number of routes.

These principles should guide your decisions about long-term network planning, and where to invest a particular 'pot' for maximum effect.

The skills to design schemes to these standards need to be embedded in the design teams. **In the Implementation Plan for 2015/16, 'training in facilitating cycleability audits' should be extended to include:**

- **Adoption of best practice standards: TfL or Welsh design standards, or their equivalent.**
- **Adoption of TfL or Welsh cycle route assessment tools.**
- **Training in these standards for all those who design road infrastructure (with Continuous Professional Development beyond 2015/16).**
- **On the ground experience of best European practice. (Guided tours are readily available).**
- **Extend these standards, training and approaches to those who plan maintenance schemes, to enable the improvement of cycling provision at low or no cost. By 2031, about 50% of the county's roads will have been renewed in some way, and if cycling provision was improved each time, the overall cycling network would be substantially improved at very low cost.**
- **Cycling people/groups to be consulted early and often on scheme design.**

Super and Premium Routes are a good concept, but the definitions are very broad, and could be met with facilities that are not good enough to encourage large scale cycling and achieve the modal shift objectives. **OCC's cycle route standards should be developed further with reference to up-to-date materials.** For example:

- Premium Routes: What is the definition of "Complete or semi-segregation"?
- Premium Routes: "Cycle lanes will be designed for a minimum width of 1.5m; however 2m will be considered the default width for the busiest sections." This should align to MFS2 recommends: "Cycle lanes should be 2 metres wide on busy roads, or where traffic is travelling in excess of 40mph. A minimum width of 1.5m may be generally acceptable on roads with a 30mph limit."
- Super Routes: "Dedicated cycle lanes will be mandatory in places" – this could mean 'mostly they wont be', and there is no width requirement. Super Routes should meet or preferably exceed the MFS2 guidance.
- New and updated roads should be constructed according the MFS2: "The needs of cyclists using the carriageway should be expressly considered when lane widths are being determined." In practice this means lane widths of at least 4.3m and more where bus or HGV traffic is expected to pass cyclists. Alternatively, lane widths should be below 3m to discourage in-lane overtaking.

OCN Theme 4: Engage early and often

In the last year, we have seen the value of working together between the Council and cycling organisations at several levels. A meeting of the Oxfordshire Cycling Network gave early input on the Goals of LTP4. At a workshop with Steer Davis Gleave, we saw the benefits of experienced cycle users examining the detail of proposed schemes. OCN's survey of 'Missing Links' has identified about

100 potential cycle infrastructure improvements ranging from improved signage to major routes (Appendix 4).

We are pleased to now be represented on the LEP Transport Sub-Group, and this should enable us to identify active travel opportunities at the earliest stages of planned projects.

Supporters of cycling come from a wide range of backgrounds and have valuable skills that they may be happy to offer. Within the OCN for example we have experts on marketing, geographic analysis and urban design. In addition through the 29 cycling organisations our members are involved with, we have access to many cycle users and potential users throughout the county.

Draft LTP4 already identifies some areas for further work together in promoting cycling, helping people to become confident cyclists, and setting maintenance priorities. OCN will be keen to support these and other areas.

OCN looks forward to working further with the Council to make Oxfordshire a cycle-friendly county on a journey to rival the best in Europe, to the benefit of us all.

We recommend continued and closer working together between Council and cycling organisations, to develop the strategy, identify and prioritise schemes, secure funding, get the detailed design right, and to communicate with cycle users and potential users.

OCN Theme 5: Spend and Deliver!

Past LTPs and Council decisions have LTP3 also contained positive wording about cycling, but these have not been delivered to the scale and quality required to encourage more people to cycle.

Even in the last year, many schemes delivered on Oxfordshire's roads and developments have made things more difficult for cyclists, rather than easier[18]. To achieve the cycling target, every scheme will need to improve conditions for people who wish to cycle – to bring the target closer, not to push it further away.

We support the Council's inclusion of a target for cycling and an implementation plan. We urge that the Implementation Plan is extended to include the recommendation below, and it backed by a financial commitment and an outcome-focused programme delivery board.

Schemes need to be defined and developed to create a prioritised 'shovel-ready' list that enables advantage to be taken of relevant grants, developer contributions and maintenance opportunities.

Appropriate delivery processes are necessary to enable delivery:

- **To bid for and win grants**
- **To include cycling improvements into development planning approvals**

[18] We can supply details if required, but in this document we prefer to focus on achieving future improvements.

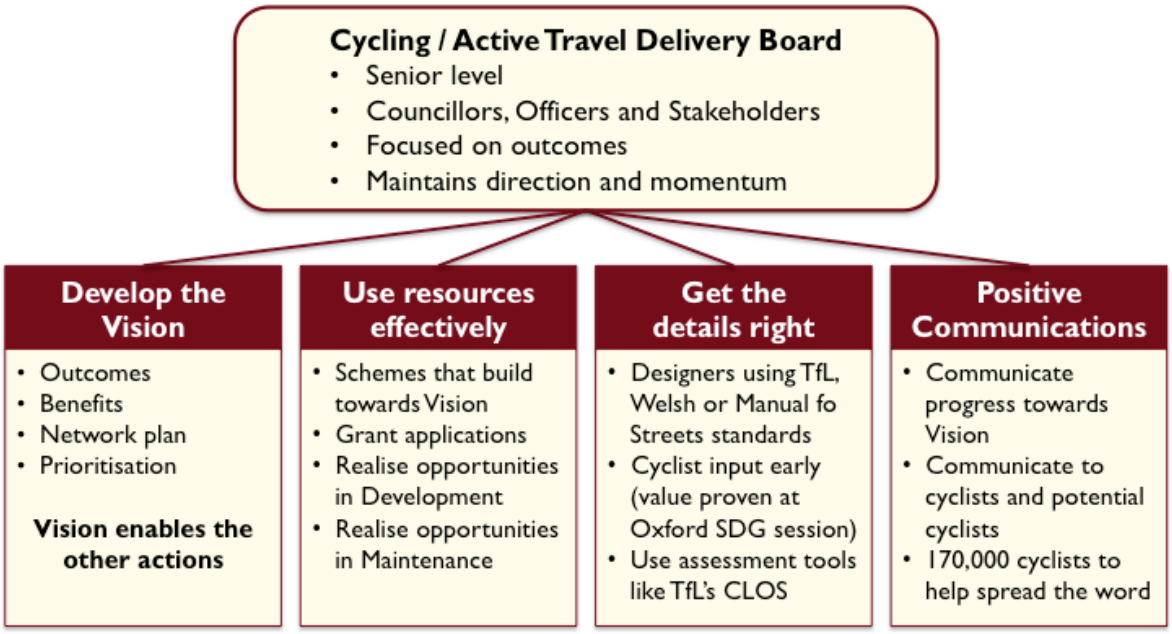
- To incorporate cycling improvements into road maintenance
- To deploy 'Soft' measures to encourage people to cycle

The Draft LTP4 recognises that funding will be necessary to deliver improved cycling infrastructure. While grant and developer contributions should be used to the fullest extent possible, OCC should also commit a higher proportion of its own resources to cycling. In the last 4 years, OCC spending on cycling has averaged £167,000, out of total Capital expenditure averaging over £23,000,000[19]. So for every £1 spent making cycling easier, it has spent £140 on making motorised modes easier. **We call on the Council to commit to a phased, ratcheted increase of spending on cycling infrastructure from its own resources.**

Soft measures are also important and promotion is recognised in LTP4. Cycle training, for both children and adults, is another vital part. **Bikeability training should be available across all schools in Oxfordshire**, and should include Level 3, the level at which people learn how to deal with traffic.

We support the identification of a "dedicated cycle resource" in the Council. In addition, **there should be a 'Cycling Champion' of sufficient clout** to represent Cycling in Oxfordshire effectively to the Cabinet, the LEP and Stakeholder groups – ideally a Councillor with sufficient knowledge and enthusiasm for cycling.

For a programme of this ambition and complexity, a strong governance mechanism is required. Based on our experience of best practice in large organisations in both public and private sectors: **We recommend that a 'Cycling (or Active Travel) Programme Delivery Board' is set up**. This Board would be senior level and oversee the delivery of outcomes (diagram below).



The actions on reporting are positive, but should be extended.

[19] Freedom of Information request responses 4501 and 7799.

- The 2015/16 actions should include 'Collect Baseline data' so that reports have something to measure against
- The paragraph on 'publication of an annual report' should clarify that these will be annual, not just reporting on the first year.

Volume 4 (Mode Strategies) - Cycling (Science Vale Cycling Strategy annex)

To what extent do you agree or disagree with this section? Strongly agree

We strongly support the ambitious and proactive strategy for Science Vale and are keen to see it come to fruition. Each of the corridors identified would benefit from cycling facilities of sufficiently high quality. OCN and our member groups in Science Vale will be keen to support this.

We have a few further comments:

- We support the 'increase by 50% by 2021' target as it covers all journeys and is reasonably short-term. For compatibility, there should be a longer-term target compatible with the overall county target to triple cycling to work by 2031.
- Publicity should include a focus on the points where people are changing their travel habits – e.g. moving house or job.
- Cycle routes and signposting can be valuable publicity tools themselves.
- "The longer-term aspiration is to also have a route alongside the A417". The route for cycling should not be limited to be alongside the main road as this is less direct and attractive than other routes between Wantage/Grove and Harwell/Milton Park/Didcot.
- Didcot to Culham features in the contents, and should be added to the main text.
- Cow Lane underpass. As noted in SV3, Cow Lane creates problems for pedestrians, cyclists and those with physical disadvantages – discouraging active and independent travel to the town centre. All the motoring use cases could be displaced to active travel, or to more appropriate roads that motorists use for the return journey in any case. There appears to be no good reason not to open up the underpass for two-way use by pedestrians, and users of cycles, wheelchairs and mobility carriages.

Volume 4 (Mode Strategies) – Freight

To what extent do you agree or disagree with this section? Strongly agree

The freight strategy provides a good approach for managing the impact of necessary freight traffic.

Understanding freight movements will also aid planning for other modes, particularly cycling. (Which is mentioned).

Volume 4 (Mode Strategies) – Bus

To what extent do you agree or disagree with this section? Mostly agree

Bus journeys are not usually all the way from door-to-door, and cycling considerably increases the 'catchment area' of a bus stop. Thus, 'Integrated transport strategy' and 'Enabling good onwards access on foot' should be extended to include bus/cycle journeys. Positively, the strategy already mentions cycle access and parking at bus stations and bus stops, 'Cycle & Ride' and 'Park & Cycle'.

- To enable 'Park & Cycle', part of the existing Park & Ride sites should be retained, with connection to Premium Cycle Routes, but no bus services.
- Carriage of cycles on buses on longer routes and P&R should also be considered. Many places have found this beneficial to both bus users and cycle users[20].

Volume 5 (Strategic Environmental Assessment)

To what extent do you agree or disagree with this section? Strongly Disagree

The SEA sets a Baseline that the environment will get significantly worse due to growth and climate change. LTP4 is judged to be better than this Baseline, so it passes the assessment. This is a very poor approach that institutionalises a worsening environment and the negative impacts that it has on health and quality of life.

By using a Baseline that is worse than the current situation, the SEA does not respond to the relevant Goal, which is to 'Protect and where possible enhance Oxfordshire's environment and improve quality of health'.

As an example: "In the longer term, there may be increasing risks to cyclists and pedestrians from the estimated increase in large lorries, but these risks will increase at a greater rate in the absence of the LTP4." By accepting this approach, the Council is endorsing that greater risks to cyclists and pedestrians are inevitable.

OCN objects strongly to this approach, and urges that an assessment of environmental and health impacts relative to the current situation is conducted, responding to the agreed Goal.

[20] www.google.co.uk/search?q=bus+bicycle+carrier

Appendix 1 – Cycling groups represented in the OCN

Commuting and utility cycling focused groups

- A40 Cyclists
- BikeSafe, Farmoor and Eynsham
- Culham BUG – Culham Bicycle Users Group
- Cyclox, Oxford
- HarBUG – Harwell Bicycle Users Group
- Milton Park BUG
- Oxford Brookes University 'CycleBOOM' project
- Oxford Civic Society
- Sustrans
- University of Oxford, Sustainability and Travel
- Witney BUG

Inclusive cycling groups

- Broken Spoke Cooperative
- Wheels for All – Oxfordshire

Leisure and touring focused groups

- Abingdon Freewheeling
- Bicester Social Cycling Group
- CTC Midweek
- CTC Oxford City
- CTC Oxfordshire
- CTC Wallingford
- CTC Wantage
- CTC Witney
- Farcycles – Faringdon Cyclists
- Isis Cyclists, bike rides for women
- The Tandem Club

Sport focused groups

- Banbury Stars Cyclists' Club
- Bicester Millennium Cycling Club
- Cowley Road Condors
- Didcot Phoenix Cycling Club
- Zappis Cycling Club

Appendix 2 – Contents of a good vision for cycling, from our LTP4 Objectives Consultation response

A good **Vision for Cycling** would include:

- An **overall 'business case' for mode shift**. A business case would prove the rationale for a long-term sustained mode shift by demonstrating the benefits for the county. It needs to include the full benefits of the shift – health, quality of life, attractiveness to inward investment (it's notable that many documents encouraging businesses into Oxfordshire use pictures of cyclists to create a positive image), air pollution (including meeting legal environmental targets), congestion, road maintenance requirements, etc.
- A **target level for cycling** in the long-term – just as the Mayor of London has set out an ambition for 400% increase and 5% mode share. This is a key assumption for the business case and is a target that can be tracked over time. This level should be used as the basis for planning, not the current level of cycling. The current level is the result of a playing-field tilted strongly away from cycling by decades of high investment in motorised modes and low investment in cycling.
- Positioning **cycling as a major mode**, not a niche. As TfL's recent Design Standards state: *'Cycling is now mass transport and must be treated as such'.*
- **Learning from success** – taking on board the experience of Cambridge, London, Freiburg, the Netherlands and other cycling successes and making them relevant to Oxfordshire.
- A **practical vision** for the specific measures to be adopted, including three main areas:
  (1) Intra-urban permeability – creating a picture of what a walking, cycling and hence human-friendly urban area looks like;
  (2) Longer distance routes which are safe, convenient and enjoyable – a map of a future 'strategic cycling network';
  (3) Non-infrastructure measures such as travel planning, cycle training, incentives – setting out the 'toolkit' that has been proven to be effective.
- Commitment to one of more of the many up-to-date and **cycling-friendly standards** for road and path planning. (e.g. Manual for Streets 2).
- Commitment to **increase the funding for cycling** facilities and initiatives. The planned level should be set with reference to the cost of the practical vision, and the £10 per population level recommended by the All Party Parliamentary Cycling Group's 'Get Britain Cycling' report (£10 is about half the Dutch level). This could be achieved with a phased and 'ratcheted' increase over time, but even at the full level of £6-7m per year it is a small fraction of the total transport spending in the county.
- **Gap assessment** – identifying the change required to move from the current situation to achieve the full vision. This would cover the 3 areas in the practical vision and make it specific to areas and routes in Oxfordshire. It enables prioritisation of cycling investment, and also the ability to take advantage of other investment to move Oxfordshire towards the vision.
- Cycling and walking **included from the 'objectives' stage** in every transport investment and expenditure. Money will continue to be tight, but cycling facilities can be improved greatly over time by using money that would be spent anyway. This includes major investment

schemes, regular maintenance and everything in between. Each expenditure should move us closer to the Vision.

- A plan to **Test the Vision**. A plan to test the impact of a fully-implemented vision in localised areas. For example, choosing 3 urban areas, making them highly permeable to cycles while reducing and slowing motorised traffic, and deploying the range of soft measures to support the change.

Appendix 3 – Requirements of good cycling infrastructure

1 - Safety

Good infrastructure should help to make cycling safer and address negative perceptions about safety, particularly when it comes to moving through junctions.

Space for cycling is important but a narrow advisory cycle lane next to a narrow general traffic lane and guard-rail at a busy junction is not an acceptable offer for cyclists.

2 - Directness

Routes must be logical and continuous, without unnecessary obstacles, delays and diversions, and planned holistically as part of a network.

This track works well on links but requires cyclists to give way at each side road. Cyclists often choose to stay on carriageway rather than take fragmented routes with built-in delay.

3 - Comfort

Riding surfaces for cycling, and transitions from one area to another, should be fit for purpose, smooth, well constructed and well maintained.

Uncomfortable transitions between on-and off-carriageway facilities are best avoided, particularly at locations where conflict with other road users is more likely.

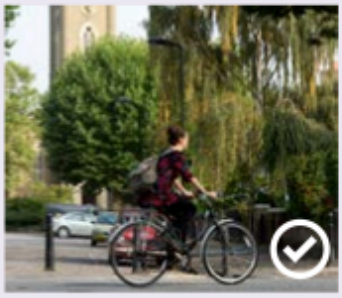
Source: TfL, London Cycling Design Standards, 2014.
https://www.tfl.gov.uk/corporate/publications-and-reports/cycling

4 - Coherence

Infrastructure should be legible, intuitive, consistent, joined-up and inclusive. It should be usable and understandable by all users.

Neither cyclists nor pedestrians benefit from unintuitive arrangements that put cyclists in unexpected places away from the carriageway.

5 - Attractiveness



Infrastructure should not be ugly or add unnecessarily to street clutter. Well designed cycling infrastructure should enhance the urban realm.

Sometimes well-intentioned signs and markings for cycling are not only difficult and uncomfortable to use, but are also unattractive additions to the streetscape.

6 - Adaptability

Cycling infrastructure should be designed to accommodate users of all types of cycle, and an increasing numbers of users over time.

Where streets have been engineered primarily for use by motor vehicles, it is difficult to make infra-structure for cycling that is legible and adaptable.

Source: TfL, London Cycling Design Standards, 2014.
https://www.tfl.gov.uk/corporate/publications-and-reports/cycling

Appendix 4 – OCN Missing Links outputs

– *Missing Links for Cycling* –

Output 1 – 4th Feb 2015

The Oxfordshire Cycling Network have been collecting information on the 'Missing Links' in Oxfordshire's cycling network. These are short pieces of routes where there is a problem for cyclists that could cheaply be resolved – the 'quick wins'. We will feed these in to the County Council as part of our inputs on Cycling Strategy. Separately we are looking at the overall route network.

The survey remains open at: http://goo.gl/forms/GjeiyvTkP7

Output 1 – Outside Oxford

So far (from 20/12/14 to 31/1/15) we have received 76 inputs to the online survey, plus some from other sources. About half of these cover issues in central Oxford and we will produce an output on these shortly. This first output covers issues raised outside the city centre, including some key routes in and out of the city. We have divided them into 3 categories.

- Maintenance, signs and permissions – should be fixed as part of network maintenance, or very low cost.
- Quick wins – links where a small investment could give a significant improvement. We have used our own judgment on this, roughly based on links needing 500m or less of cyclepath.
- Larger links – routes where a significant investment would be required for a more substantial benefit to the transport network.

Within each section, these are organized roughly clockwise around Oxford. Note that we have not been out to check all of these on the ground, checked the practicality of solutions proposed. Neither are they prioritised, although some links have been mentioned by several people, indicating their importance to cyclists.

Maintenance, signs and permissions

Mentioned by several people were:

- Kidlington High Street
- The various links between the canal, A40 and A44 near Wolvercote

Location	Problem	Possible solution
Banbury, Parsons Street	Parsons Street is pedestrian only, blocking cycle access to town centre	Permitting cycling would enable a safe route to town centre
Banbury town parks	Cycle access on paved paths in	Formalise cycle access:

	parks is not formalised	• Bretch Hill park to North Oxfordshire Academy / William Morris Primary • People's Park from west to town centre • Ruscote Park to Hill View Primary and Ruscote Avenue • West Street to Broome Way, Grimsbury • St Louis Meadow Park, Cherwell Heights
Kidlington High Street*	Pedestrianisation has blocked cycle access and NCN 51	Restore cycle access
Bridleway connecting Barton and Sandhills	Signs banning cycling despite this being a brideway, poor surface.	Remove signs, cut back vegetation, improve surface, improve lighting.
Iffley Road to Oxford Science Park, Kassam Stadium and Vue cinema	Good route available (goo.gl/maps/QiYod), but not signed.	Signpost the route.
Southern bypass A423 from Hinksey Hill to Abingdon Road	Routes not clear	Improve signage.
Southern bypass A423 to Hinksey Hill	Cycle path stops though footpath continues. Alternative is to use the busy main roads and roundabout.	Permission to use footpath, and signs.
South Stoke to Little Stoke	Currently a footpath, but could be used for off-road cycling, opening a route from Goring to Wallingford without using B4009.	Upgrade Footpath to Bridleway
Peep-o-day Lane	Poor surface, vegetation	Maintenance and repairs
B4017 at north of Drayton	Cyclepath is on opposite side near junction with Sutton Wick Lane creating a tricky manoeuvre when traffic present.	Signs to alert drivers to cyclists crossing.
Abingdon, top of Bridge Street	NCN 5 crosses road, but motorists often ignore Give Way sign soon after traffic lights.	Enforce the rules, and/or improve signage. Better: create clear cycling priority over this junction (see below)
Abingdon from east end of	NCN 5 eastbound interrupted	Allow cycling in eastbound

Lombard St to Bridge St.	by one way street.	direction. Better: combine this with cycling priority over Bridge St junction.
Abingdon west from E St Helen St along St Helen's Wharf	Eastbound vehicles can swing wide towards westbound cyclists when quiet and spread across road when busy.	Add westbound cycle lane to act as indication and reserve space. Better: curb separated lane.
A40 cyclepath between Eynsham and Oxford	Overgrown and white lines have worn out, making it difficult or dangerous in the dark.	Cut back vegetation and repaint lines.
Road at Barnard's Gate (west of Eynsham)	Badly potholed.	Repair potholes.
A44 cyclepath between Bungalow Loop Farm roundabout and The Turnpike pub	Potholes.	Repair potholes.
Charlbury, Browns Lane	One way street	Allowing cycle contraflow would provide route to station, supermarket and residential areas.

Quick wins

The A34/ Chilton to West Ilsley issue was mentioned by several people and should be considered as a higher priority in this category.

Location	Problem	Possible solution
Banbury, Hardwick/Hanwell Fields	Mineral railway route could be connector between centre, employment and residential areas, but surface is poor, often muddy	Improve mineral railway route (Hardwick/Hanwell Fields) with solid surface and access ramps at Highlands
Banbury, southern section of the Fairway	Heavy traffic, difficult crossing Wood Green Avenue	Shared use pavement and crossing(s)
Banbury, Ruscote Avenue	A busy link, and a cyclist passing parked cars at a safe distance will delay motorists for some distance and feel under pressure, or be harassed.	Reconfigure the wide space to provide cycle paths.
Banbury, Bridge Street across railway	Key link to Grimsbury and Middleton Cheney, but not safe	Convert one road lane into cycle path, or add a bolt-on

	for cycling	pedestrian/cycle bridge.
Bloxham to Banbury	A361 is a busy road and the NCN route adds about 2 miles to the journey.	Turn footpath by A361 into shared use path.
Bicester near Tesco OX26 6WD	Crossing A41 to Bicester Ave is difficult, and will be worse with new retail park and hamburger roundabout	Improve/new crossing(s).
Merger of cyclepath on to southward slip from A423 (51°43'39.3"N 1°15'06.5"W)	Cars may swing off A423 on to slip without signalling or noticing cyclists.	Protected exit from cyclepath (like one at top of Kennington Road)
A415 Dorchester turn to Berinsfield	Need to check if the shared use path stops.	If it does stop, continue shared use path alongside A415.
Little Wittenham to Dorchester	Permissions exist to cross river, but track poor.	Surface existing Bridleway.
A4074 from road past Burcot Farm to old route of A4074	A4074 very busy, fast and dangerous for cyclists.	250m of cyclepath would link the A415 cyclepath to Golden Balls roundabout and points beyond.
Mapledurham to Purley	No river crossing, but weir almost spans river	Add path on top of weir and bridge ~20m gap.
A4130 east of Didcot (51°36'22.1"N 1°13'15.8"W)	Busy road with no cyclepath from Tesco to Fulscot turn. Alternative by railway track is very narrow and bumpy.	Upgrade track by railway or ~200m of new cycle path.
A34 Chilton to West Ilsley*	Very dangerous for cyclists and no sensible alternative.	A few hundred meters of cyclepath alongside A34 or upgrading existing farm tracks.
A4130 just east of Milton interchange (51°37'08.8"N 1°18'06.9"W)	100m gap in cyclepath forces cyclists from Milton Park on to A4130 just after roundabout.	100m of cyclepath on existing verge.
A4130 from Milton Interchange to Steventon lights	Shared use path stops unsigned and unramped at Milton Heights turn, and no crossing at Steventon lights making this path difficult to use.	Drop kerbs and put signs at Milton Heights turn. Put a crossing at Steventon lights.
Steventon to Milton Park	Footpath by railway has cycling permission but is narrow and muddy.	Upgrade path linking Steventon and Drayton with Milton Park without climbing hill or using A4130.
Sutton Courtenay junction of A4016 and High Street	Turning on blind corner is danger (for motorists too)	Permission to use footpaths S of B4016 and W of High St, and upgrading surfaces.

Peep-o-day Lane	Narrow, poor surface and often floods.	Widen and raise the path in worst sections.
Where A40 crosses canal north of Wolvercote	A40 cycle path and canal only linked by steep steps	Create ramp from canal to A40 cycle path
Witney, Tower Hill from Five Way roundabout to Bridleway at north of cemetery	Missing link in key route from north-west Witney to town centre	Upgrade path to shred use
Witney, Langdale Gate	No cycle link from centre to Cogges Farm and cycle path beyond	Provide cycle lanes on Langdale Gate and appropriate junction/crossings
South Leigh to Chilbridge Lane (Eynsham)	Muddy missing link in NCN 57	Upgrading 900m of surface would complete a quiet Witney-Eynsham route
A40 just south of Swinbrook	Quiet route between Brize Norton/Carterton and Swinbrook/Burford requires 100m on fast, busy A40.	100m of shared use path, and maybe a crossing or refuge.
B4022 Fawler turn near Finstock	Dangerous junction on sharp bend, on key route to Finstock station (NCN 442)	Provide safe refuge for cyclists and/or other safety measures
Bladon to Long Hanborough on A4095	Busy road with no safe cycling, key link from Woodstock and Bladon to Hanborough station. Missing link in NCN 442.	Convert footway to shared use.
Kidlington to Yarnton on canal	Canal is quiet route, but surface is poor	Improve surface on this key section
A44 cyclepath between Yarnton and Bungalow Loop Farm roundabout.	East side (southbound) cyclepath appeared to end after the canal, but no clear end or instruction to cross the road. You can continue on the west side, but have to cross a fast and busy road either there or at the roundabout. Going southbound on the west side at night means you are dazzled by vehicle lights.	Continue the path, or clarify where it ends. Make it easier and safer to cross the road either at the roundabout if path extended or at some earlier point.
A44 cyclepath at the A34 roundabout	Crosses 3 busy, fast slip roads.	Install crossings (e.g. Toucan) to enable crossing.

Larger links

Three larger links were mentioned by several people each and should be considered as higher priorities in this category:

- Oxford to Wallingford
- Long Wittenham to Clifton Hampden
- Thames crossings in West Oxfordshire
- Eynsham to Botley

Location	Problem	Possible solution
Worminghall and Ickford to Shabbington. Part of NCN 57	Road is used for a rat-run, thus unfriendly to pedestrians and cyclists wanting to go between villages and via A418 cyclepath to Thame.	Shared use path, 2-3 miles. Partly conversion of existing footpath.
Oxford to Nuneham Courtenay, the Baldons, Berinsfield, Dorchester, Benson and Wallingford*	Fast, busy A4074 is dangerous for cyclists, with no good alternative	Cycle / pedestrian path (upgrading existing tracks for most of its length), or path alongside A4074
Slade End roundabout to Rush Court (near Wallingford)	Footpath avoiding Wallingford centre not open to cyclists (short cut saving ~1 mile).	Permit cyclists and improve surface.
Abingdon/Culham to Nuneham Courtenay	B4105 is not pleasant for cyclists and path by A415 is bumpy and noisy.	Off road route using Thame Lane and the tracks behind it to open up a major E/W corridor – Didcot/Abingdon to Thame. Another option would be to put a cyclepath alongside the railway from Culham to Radley.
Long Wittenham to Clifton Hampden*	Very busy and narrow road. Cyclists often feel intimidated, and motorists feel blocked by cyclists.	~1.5km Cyclepath or an alternative route and river crossing.
A4130 Bix – Nettlebed – Goblin's Glen, linking Wallingford and Henley.	Fast, busy road dangerous for cyclists, with no good alternative	Cycle / pedestrian path (part new, part upgrading existing footway)
River Thames between Streatley and Wallingford	No river crossing.	Put in a pedestrian / cycle bridge at Little Stoke/Cholsey or South Stoke/Moulsford.
Wallingford to Cholsey for railway station	Road is narrow and unlit, but traffic can be fast making in dangerous to cycle 3 miles from	Cyclepath by 2km of minor road or some other solution, maybe alongside C&W railway.

	Wallingford to Cholsey railway station	
A415 between Abingdon centre and Burycroft	No cyclepath on this section north of Burycroft.	Add cyclepath ~1km
A4130 cyclepath from Milton Interchange to Didcot	Path is narrow and one side only, so going to Didcot in the dark means you are constantly dazzled.	Widen and light the path.
Wilts and Berks canal route	A shared use path on the route of the canal would have many uses.	Make this a long distance bridleway and improve worst surfaces.
Northmoor to Longworth*	There is no safe bridge across the Thames for cyclists in West Oxon, the A415/Newbridge is very busy.	When Newbridge is replaced, create safe cycle route using bridleways and minor roads.
Bablock Hythe	There is no safe bridge across the Thames for cyclists in West Oxon. Farmoor and Newbridge both busy roads. The ferry that was here is now gone.	A pedestrian and cycle bridge would open a major commuting and leisure link.
B4044 between Eynsham and Botley*	Fast, busy road dangerous for cyclists, with no good alternative	Cycle / pedestrian path (mostly new)
Witney to Carterton	No good cycle route between these close, major towns.	Create cycle route NCN 577
Witney to Hailey	No good cycle route between Hailey and centre	Create cycle route alongside B4022
Chipping Norton to Kingham station	No safe cycle link between major town and village with station, blocking sustainable transport.	Create cycle route on old railway

– Missing Links for Cycling –

Output 2 – 15th Feb 2015

The Oxfordshire Cycling Network have been collecting information on the 'Missing Links' in Oxfordshire's cycling network. These are short pieces of routes where there is a problem for cyclists that could cheaply be resolved – the 'quick wins'. We will feed these in to the County Council as part of our inputs on Cycling Strategy. Separately we are looking at the overall route network.

The survey remains open at: http://goo.gl/forms/GjeiyvTkP7

Output 2 – Inside Oxford

So far (from 20/12/14 to 8/2/15) we have received 92 inputs to the online survey, plus some from other sources. About half of these cover issues in central Oxford and are covered below. Our previous 'Output 1' covered outside the city centre, including some key routes in and out of the city. We have divided them into 3 categories.

- Maintenance, signs and permissions – should be fixed as part of network maintenance, or very low cost.
- Quick wins – links where a small investment could give a significant improvement. We have used our own judgment on this, roughly based on links needing 500m or less of cyclepath.
- Larger links – routes where a significant investment would be required for a more substantial benefit to the transport network.

Within each section, these are organized from the centre and then roughly clockwise around Oxford. Note that we have not been out to check all of these on the ground, checked the practicality of solutions proposed. Neither are they prioritised, although some links have been mentioned by several people, indicating their importance to cyclists.

Hythe Bridge St/ Worcester St/ Geroge St junction

The most frequently mentioned issue across the entire survey, inside or out of Oxford. The problems with the new junction layout and traffic light timing have been reported to the Council since 22nd December 2014. New markings, setting out a 'cycle refuge' were applied on 10th February 2015, and while it is not yet clear whether these will prove effective, the issue will not be covered in further detail here.

Maintenance, signs and permissions

There was a general call to improve standards of maintenance on routes used by cyclists, on and off the road. Debris, drain covers, holes and uneven surfaces are far more dangerous to cyclists (and motorcyclists) than to other road users.

Location	Problem	Possible solution
Woodstock Road, south of Frenchay Road	One shared use sign, but then nothing, making the cycling rights very unclear. Also very bumpy.	Improved signage to confirm this as shared use path, or provide alternative.
Route between Iffley Rd and Cowley Rd by Cricket Rd etc.	A useful route, but very difficult to follow	Signs to point the way
Marston Rd, between Old Marston Rd and Headley Way roundabout	Painted cycling path has faded, and motorists no longer provide room for cyclists to pass parked	Repaint the lines

	cars	
Bottom of Rose Hill, just before Iffley turn near bus stop	Badly repaired hole at bottom of hill	Fix the bad repair
Gardiner St, Headington, South end	Yellow lines faded so cars park across gate, blocking route through the Nuffield	Repaint the lines
St Andrew's Church, Headington	Cars parked on both sides (legally) force cyclists to weave in and out	Parking on one side only
Iffley Road to Oxford Science Park, Kassam Stadium and Vue cinema†	Good route available (goo.gl/maps/QiYod), but not signed.	Signpost the route.
Southern bypass A423 from Hinksey Hill to Abingdon Road †	Routes not clear	Improve signage.
Bridleway connecting Barton and Sandhills†	Signs banning cycling despite this being a brideway, poor surface.	Remove signs, cut back vegetation, improve surface, improve lighting.

Quick wins

Routes in all parts of Oxford were mentioned, both 'in/out routes' and 'getting around' routes. The highest number of responses were for issues in the Headington Hill / Cowley Road / Iffley Road triangle.

Location	Problem	Possible solution
Catte Street to Radcliffe Square	Close mix of pedestrians and cyclists, with tourist map and bollards restricting separation.	50m of cycle path and moving bolllards etc. would allow better separation.
From Hythe Bridge Street along Oxpens Road southbound	Cyclists squeezed to left on Hythe Bridge Road on approach to lights. Just opposite Jam Factory, road narrows, another squeeze. Through later traffic lights, road squeezes in again due to islands on both sides.	Redesign the lanes to create more space for cyclists.
Junction of Mansfield Road and Holywell Street	Cyclists exit Mansfield Road turning left without slowing, and traffic including cyclists on Holywell Street has poor visibility.	Install a mirror.
Longwall Street between	Cycle path intermittent in both	Mark continuous cycle lane. (If

Holywell Street and High Street	directions, and at south end cars wait on cycle lane for traffic lights.	that is not possible, it may be better to remove it).
Manor Road junction from St Cross Road, which leads to St Catherine's College.	Waiting for right hand turn puts you in middle of road on a bend, and cyclists sometimes position out into oncoming traffic.	Uncertain. Possibly a refuge or markings that indicate where to position.
Marston Road west side from Harberton Mead to Headington Road	No cycle lane on west side	Add cycle lane, and remove parking. Use space for verge, footway or acquiring thin slice of land where needed.
Headley Way	Steep hill with 2 lanes and no off-road provision puts cyclists in way of motor traffic. Cars edge left, blocking cyclists near Marston Road roundabout.	Use large width (has 4 footways in places) to provide off-road cycling option, with a safe approach to Marston Road roundabout.
St Clements, just east of The Plain roundabout	Cycle provision ends forcing cyclists and traffic together	No easy solution apparent. Reduce footway width? Remove one carriageway of road and make it one-way?
Headington Hill	Narrow cycle way with lampposts in it makes this very dangerous as cyclists forced out or lane in to main road.	Mount lights on wall?
Headington Quarry, and probably many other places	Lots of parking for cars, but none for cycles or other means of transport.	Take space of one car to provide parking for 6-10 bikes (or motorbikes)
Old Road, Morrell Avenue	Cars frequently stop in the (westbound only) cycle lane. Cars exceed the speed limit.	Enforce space for the cycle lane and limits. Widen the cycle path to make it more usable.
Cowley Road to Headington via Warneford Meadow	A potential useful route linking Cowley Road with Headington	Upgrade the footpath to a bridleway or cyclepath.
Magdelen Road	One way only, a break in the 'quiet network' between Cowley Road and Iffley Road	A cycling contraflow.
Iffley Road and Cowley Road to Headington via Boundary Brook	A potential useful route linking Iffley Road, Cowley Road with Headington	Upgrade the footpath to a bridleway or cyclepath.
Iffley Road	Cycle path ends a short way up road and parked cars force cyclists into heavy traffic	Continue cycle path, and/or rearrange parking. Or legitimise cycling on footway.

Barns Road, junction with Between Towns Road	No safe way to cross Between Towns Road. High kerbs make crossing difficult for regular cyclists, and impossible for inclusive cycles and trailers. Cycle lane and refuges often blocked by parked cars.	Drop kerbs. Ideally a proper crossing. Parking restrictions to free the lane, enforced.
Blackbird Leys Road	Cycle lanes stop at Blackbird Leys.	On-road cycle path as far as Pegasus Road
Blackbird Leys Road / Cuddesdon Way junction	Difficult to cross Cuddesdon Way, particularly with trailer or inclusive cycle.	Drop kerbs. Ideally a proper crossing.
Abingdon Road between Gordon Woodward Way and Weirs Lane	No cycle lane, and cyclists often toake to (wide) pavement for safety.	Add a cycle lane or shared use to the footway.
Botley Road, eastbound from Cripley Road to Frideswide Square lights	The cycle lane ends abruptly and have to go into the flow of traffic.	Find space to continue the cyclepath. Convert footpath under bridge to cycle lane?
Botley Road west of A34 to Botley	Westbound poor cycle lane followed by no provision on busy road that is important commuting link. Eastbound shared in bus lane	Add proper cycle lane or path.
Woodstock Road, Bus stop near St Edwards School	Bus stop, footpath and two-way cycle path share same narrow pavement.	Extend backwards using school land, or some other solution.
North Way between Cutteslowe roundabout and Jackson Road	Footway on south side used by many cyclists as no safe, practical alternative. Cars turn illegally into Jackson Road	Designate path as shared use, with divider line if needed. Cut back vegetation. Enforce no left turn.
Merger of cyclepath on to southward slip from A423 (51°43'39.3"N 1°15'06.5"W)†	Cars may swing off A423 on to slip without signalling or noticing cyclists.	Protected exit from cyclepath (like one at top of Kennington Road)
Where A40 crosses canal north of Wolvercote†	A40 cycle path and canal only linked by steep steps	Create ramp from canal to A40 cycle path

Larger links

Several people noted the need for a better East-West link across the City. This is reflected in the first three entries below. The other entries are the Oxford sections of links to routes covered in Output 1 (outside Oxford).

Location	Problem	Possible solution
East-West route across the City	There is no safe, convenient and clear East-West route for cyclists through the centre.	Create an East-West cycling route from Botley Road to The Plain and beyond. This links planned improvements at the Railway Bridge, Frideswide Square and The Plain. There are several options for the route between.
Railway station to Bus station and City Centre	The route is congested and polluted, making it an unpleasant way for visitors to enter the city. Soon, there will be a dramatic contrast between the more people-friendly Frideswide Square and the narrow traffic jam of Hythe Bridge Street	Close Hythe Bridge Street to motor traffic, creating a smog-free entry to the city. Motor traffic re-routed by Park End Street. The crossing at the bottom of George Street becomes a simple one: motor traffic N/S and pedestrian/cycle E/W. Buses would ideally enter/leave bus station to Worcester Street, but could share with pedestrians/cycles in George Street in similar way to Queen Street.
South Oxford, Jackdaw Lane*	No link across Thames between The Plain and Donnington Bridge	Foot and cycle bridge aligned with Jackdaw Lane. Or, cycle route around edge of Christ Church Meadow.
Southeast-bound, towards Nuneham Courtenay, the Baldons, Berinsfield, Dorchester, Benson and Wallingford*	Iffley Road or Cowley Road and navigating Blackbird Leys	
Southbound towards Abingdon and Science Vale	Busy Abingdon Road and Kennington, or the bumpy, winding alternatives west of Abingdon Road, on the Thames path, and west of Kennington.	

West to Botley	Path by A420 is interrupted by many driveways. As a result, confident cyclists continue to prefer the road.	There is space for a better solution on most of this route.
North via Canal, Woodstock Road and Banbury Road	Canal path becomes poorly surfaced. Woodstock Road and Banbury Road have some cycling provision, but this is variable in quality.	

† Also listed in Output 1.