

Cycling Vision 2016

Innovative sustainable transport based around cycling is important for a city and its surrounding region. People who cycle are healthier, reducing the burden on health care, they are more productive, increasing the power of the local economy, and spend more money in shops, increasing profits.

This document proposes what Cambridge Cycling Campaign believe are the key projects that could be delivered in the next five years that would make a significant difference to cycling in the region. It is essential that investment in cycling continues if we are to increase rates of cycling and thereby see an efficient, environmentally-friendly city.



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1 Progress in recent years: Cambridge as a Cycling Demonstration Town

Progress has been made with improving the attractiveness of cycling as a mode of transport in the last three years, during the period of funding for Cambridge as a Cycling Demonstration Town. However, a lot more needs to be done, as we outline below. It is important that this momentum is not lost.

The Cycling Demonstration Town programme has seen a higher focus on higher quality infrastructure than has been previously the case. For instance, the CDT programme has avoided the provision of narrow (1.2m) cycle lanes, lanes which tend to cause more problems than benefits.

Much-needed on-road improvement schemes in the city, such as Hills Road Bridge and Gilbert Road, and the upgrading of the Tins Path have finally come to fruition. Cycle links to and between surrounding villages in South Cambs such as the Whittlesford – Sawston – Babraham route, the Fen Ditton to Horningsea route, and the Babraham Road Park & Ride to Wandlebury route have been achieved.

Cycle training has improved, with the introduction of Bikeability cycle training (as well as adult cycle training), more promotion of cycling has been achieved, and the problem of widespread shortage of cycle parking around the city is starting to be addressed, though much more needs to be done.

However, a number of the schemes have been compromised by the tight timescales in what has been a three-year funding period. The Horningsea route includes a very problematic section due to the withdrawal of funding for a signalised crossing at the A14 sliproad which is dangerous and devalues the rest of the scheme. The Madingley Road cycleway (an area long needing improvement) falls far short of Dutch standards, with missing sections, poles remaining in the cycleway and lack of priority at sideroads. And on Gilbert Road, Councillors succumbed to localised pressure to remove the speed reduction element of the improvement there. Elsewhere, poor-quality, pavement-based schemes are still being proposed.

The challenge for the next five years, then, is to build upon the good work that has been achieved, complete the schemes which could not be achieved within the tight CDT timescale, and to ensure that schemes do not contain unacceptable compromises.

2 Geographical Context

Cambridge and the surrounding necklace villages is a compact cycling area. The vision for Cambridge is that the modal shift continues towards cycling, thereby reducing CO₂ emissions from transport for the city. A modal share for cycling of 40% of all journeys for Cambridge city, and 20% for Cambridgeshire, is the desirable level to which the councils should aspire.

For such a high modal shift, major employment and residential centres within the city need to be connected with high-quality cycle super-highways.

Cambridge has **two main axes** that contain most of the employment and destinations for trips. One axis runs between the Science Park area in the north east of the city, through the Eastern Retail area, the Railway Station, to the Medical Campus in the south west of the city. Another axis runs between the western University area through the City Centre, to the Airport area. The main residential areas are to the north, east and south east. The city itself is divided by two major barriers, the river and the railway.

The primary vision is to provide the convenience of an attractive “Cycle Super Highway” along a spinal route between the main three employment centres, and to connect this super cycle highway to the existing cycle network within the city. Parts of this vision has already been built; the cycleway alongside the guided bus route provides links from the medical campus in the south to the railway station, and from the Science Park to residential areas further out. The “Chisholm Trail” that links the railway station to the Science Park is the missing link.

A secondary vision is to improve the *safety* of people who choose to cycle. Major junctions can be both intimidating and dangerous for cyclists. Re-engineering these junctions can provide significant benefits for cycling not just at those junctions, but also to the wider area. These junction improvements can therefore improve the access for people who cycle to reach the main shopping areas and University. Reducing the collision rate through better infrastructure will encourage more people to have confidence to cycle. And cutting speeds in residential areas will help reduce the severity of collisions when they do occur.

Finally, the vision links Cambridge with the wider suburban environment around the city. Some villages have recently seen stronger links to the city, encouraging the desired modal shift. The city needs to be connected with strong cycling links to *all* the surrounding villages.

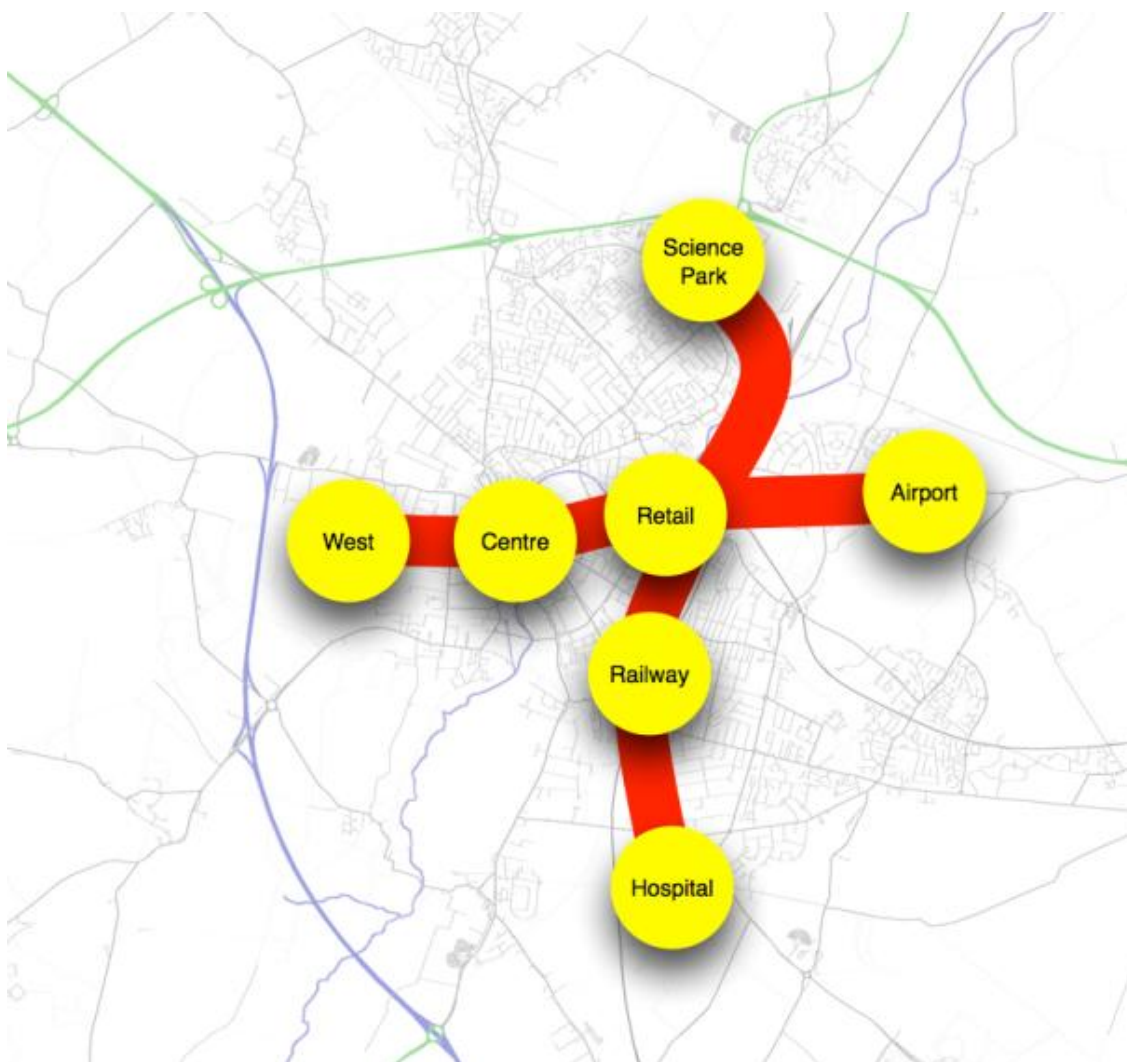
2.1 Existing Cambridge Attractors – two main axes

Cambridge can be seen as having seven major commercial, educational and retail areas:

- Western University area along Madingley Road
- City Centre area
- Eastern Retail area along Newmarket Road
- Marshalls Airport area around Newmarket Road
- Science Park area around Milton Road
- Railway Station area around Hills Road
- Addenbrooke's Hospital area around Hills Road

These areas can be considered to form two main axes of development: one oriented along a north/south axis, and the other oriented along an east/west axis.

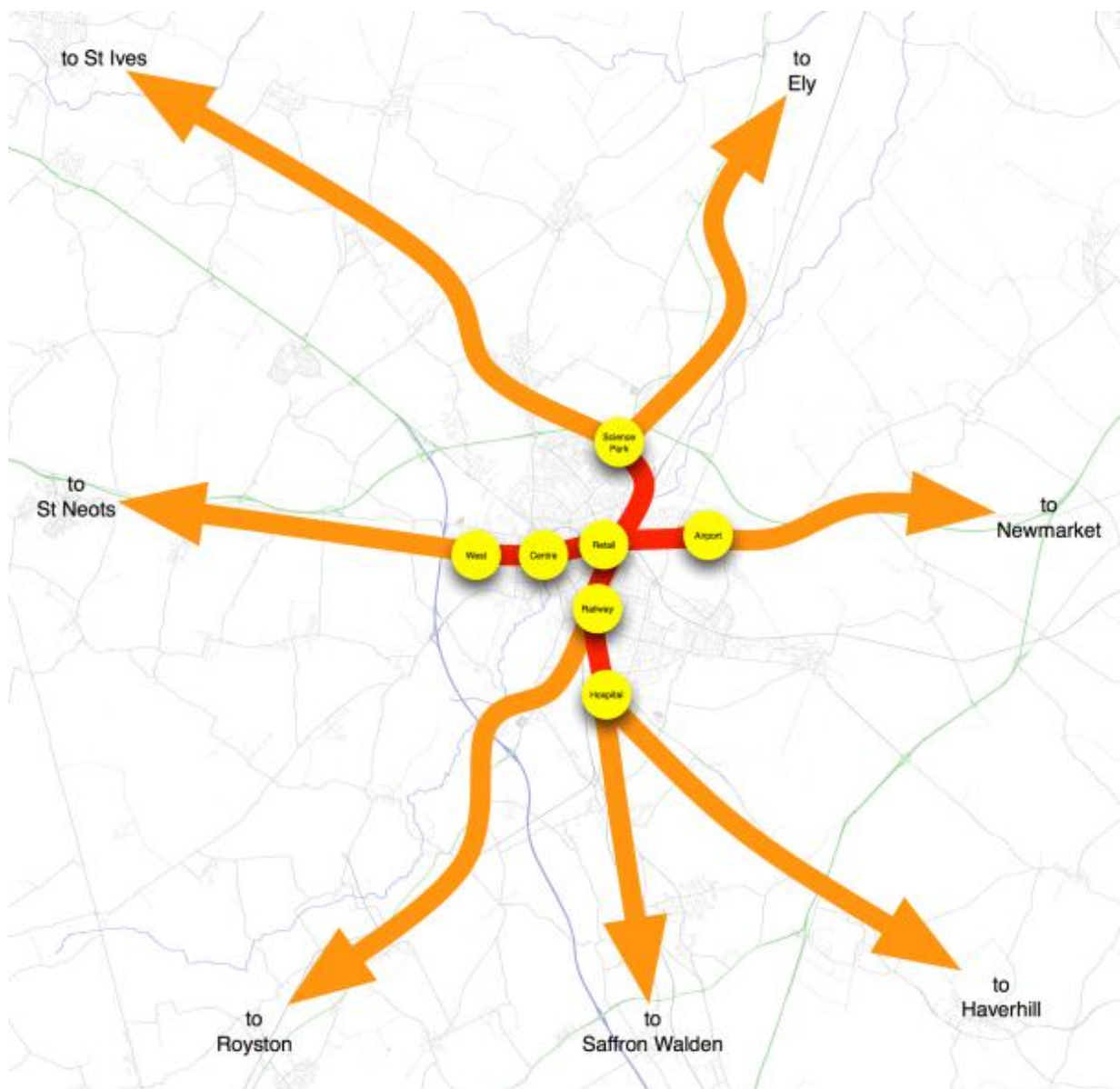
- **The north-south axis** links the Science Park in the north to the eastern retail area and on through the railway station to the hospital in the south.
- **The east-west axis** links the western University area to the city centre through the eastern retail area to the industrial areas around the airport in the east.



2.2 Surrounding villages

The north/south axis can be considered as extended towards Northstowe (planned) and St Ives in the north west, Waterbeach and Ely in the north east, and towards Haverhill in the south east, Saffron Walden in the south, and Royston in the south west.

The east/west axis can be considered as extending out into the semi-rural necklace villages towards Cambourne and Comberton in the west, and towards Burwell, Newmarket and Fulbourn in the east. This would link two major villages through the centre of the city.



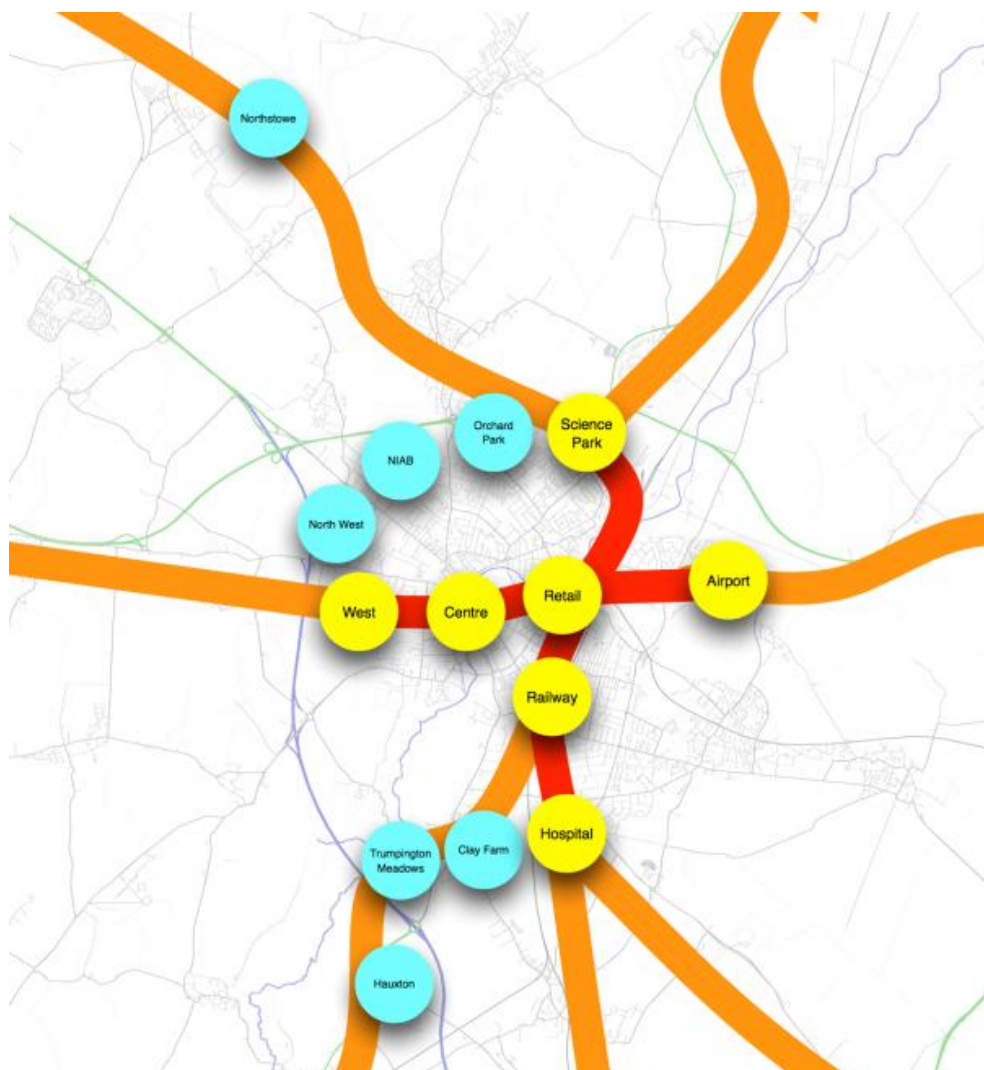
2.3 Adding new housing into the structure

However, there are also eight main areas of new housing being developed within the urban Cambridge region.

- Orchard Park
- NIAB
- Northwest Cambridge
- Clay Farm
- Trumpington Meadows
- Hauxton
- Glebe Farm
- Bell School

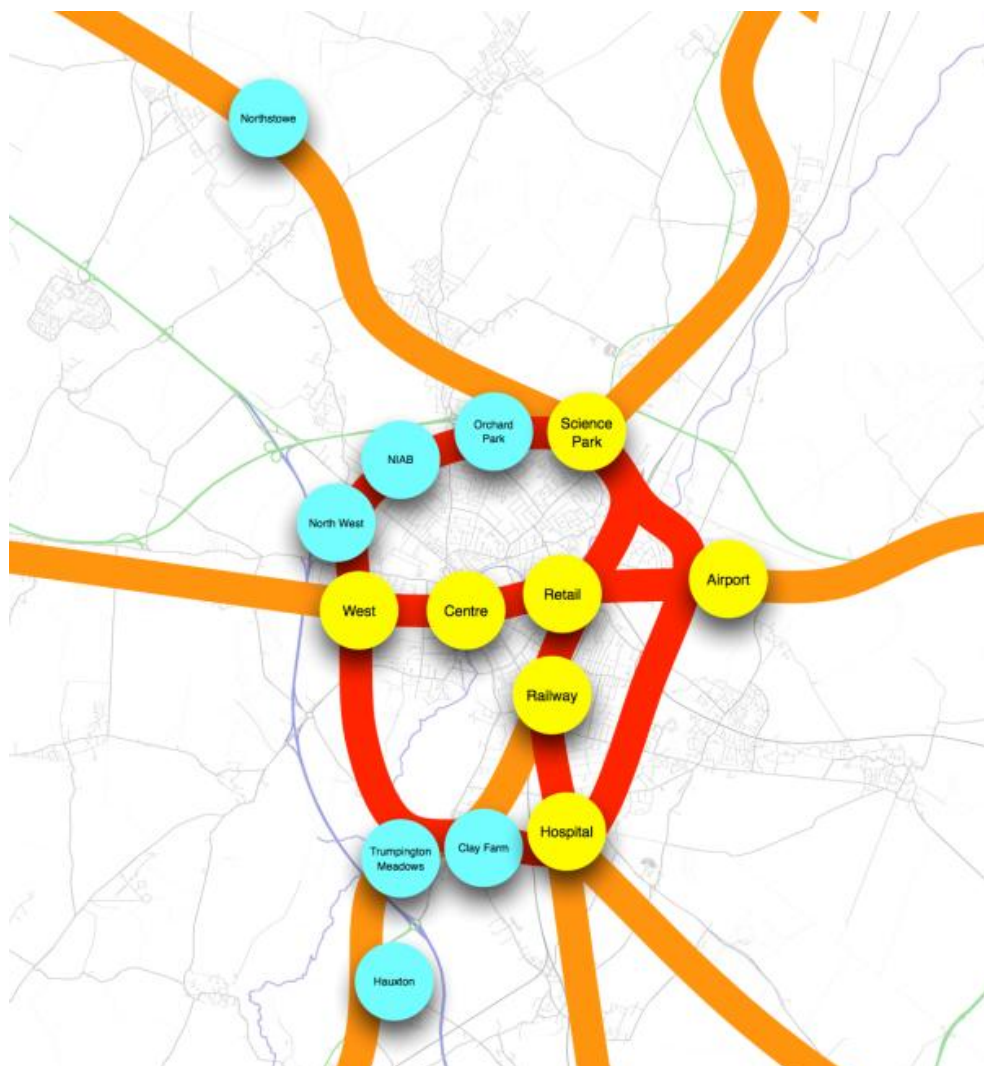
In addition, there is a new town, Northstowe, being developed within cycling distance of Cambridge on the route towards St Ives.

These nine new housing areas need to be connected to the main commercial axes for them to be successful, and for these developments to be sustainable.



The Hauxton, Trumpington Meadows, Bell School, Glebe Farm, and Clay Farm developments are on the extended axis towards Royston. Links from Clay Farm to Addenbrooke's will exist when the cycle route alongside the guided bus route is available. The Orchard Park development is near the extended axis towards St Ives, but it would be useful to link this development to the others, and provide a link between all these developments and the western University area and the Science Park area.

The vision therefore includes an orbital cycling and walking route that links all the housing areas on the north and north west of Cambridge to the western University and Science Park areas. It also links the Science Park area to the airport, providing a vital river and railway crossing. It further links the western area with the housing areas in the south, and these southern housing areas with the hospital area. Finally, it links the hospital area with the airport, removing this traffic from the main axis going through the railway area.



3 Chisholm Trail – catering for the North-South axis

The Chisholm Trail is our proposal for a premier cycling and walking route joining the north of the city to the south.

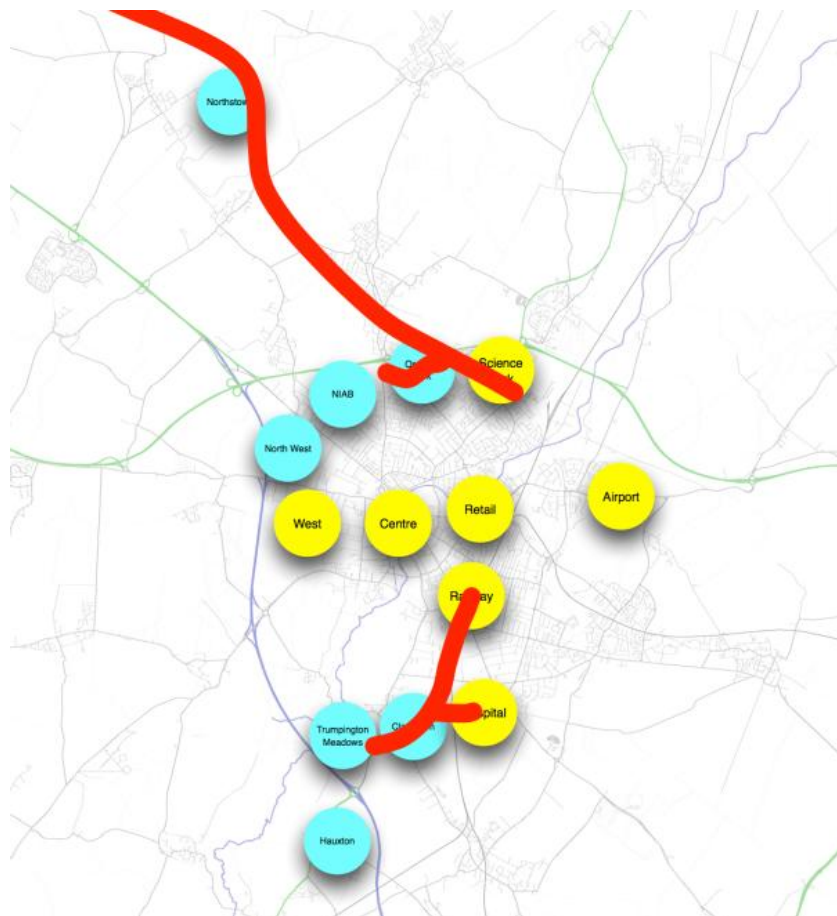
It offers the major possibility of replacing many difficult driving routes with a new route that would be accessible by bicycle easily and quickly, freeing up roads space and reducing congestion. Accordingly, it would benefit both cyclists and drivers.

The central section offers opportunities to create a 'linear park' in some sections, adding greenery to the area, and providing opportunities for leisure as well as utility trips both on foot and by bike.

A feasibility study for the Chisholm Trail has just been completed by the County Council, and further work therefore needs to be done to take the proposals forward.

The cycleway alongside the guided bus route currently provides links from Northstowe and Orchard Park to the Science Park area, and from Trumpington Meadows and Clay Farm and the hospital to the Railway Station area.

There is a major missing link between the Science Park area and the railway station. This missing link has the opportunity to become the main north-south axis from the Science Park area to the hospital. This missing link completes what is known as the “Chisholm Trail”:



3.1 Proposed route

The proposed route would connect North and South busway cycle routes, providing links to many areas of housing, employment and education. Much is already listed in the Cambridge Local Plan.

In the central section, between Coldhams Lane and Hills Road bridge, there is potential for routes on both sides of the rail route, giving improved access to the station and some recent and proposed housing developments.

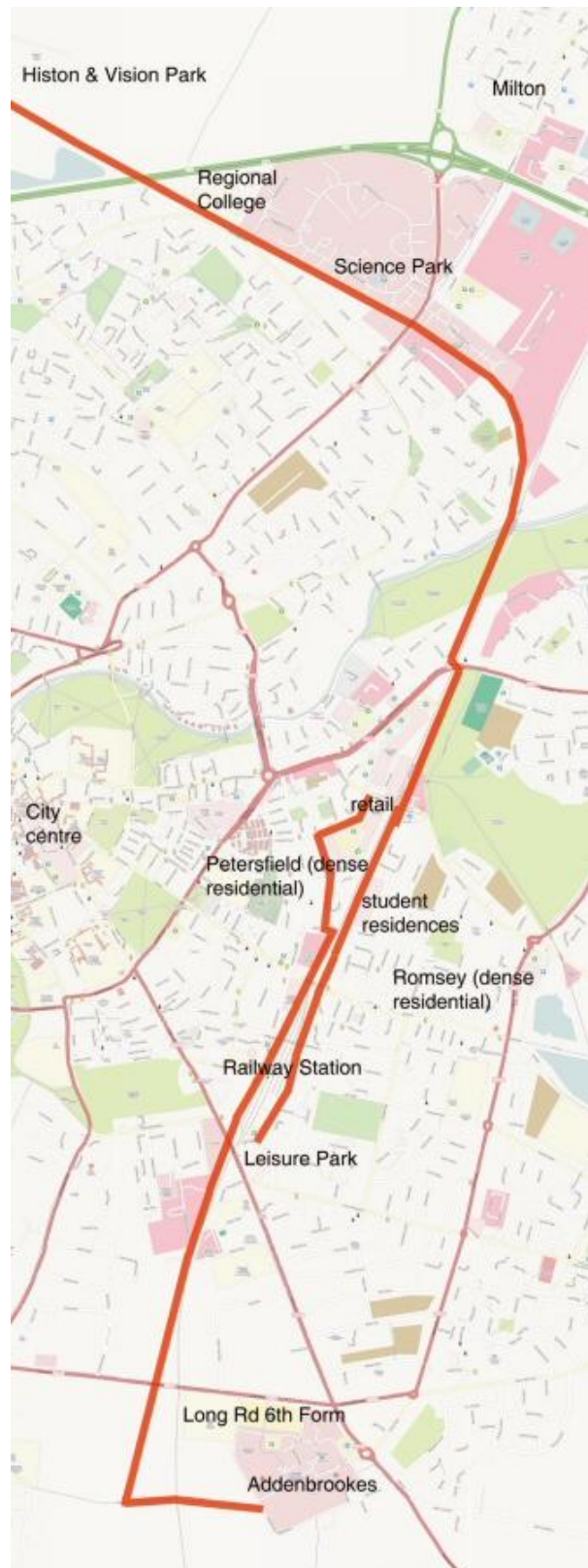
Some sections could use areas or rail land currently out of use or little used.

3.2 Links to the Chisholm Trail

For the Chisholm Trail to be as successful as possible, many points of access must be created.

Numerous access points from existing and proposed developments should be easily available and would greatly add to the value, and hence usage, of the route.

It would provide routes for cyclists over the stretch from Trumpington Meadows to Impington that would be far quicker than by car for average cyclists. Trips to the rail station would be particularly advantageous.



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4 Safety Improvements around the city: overview

For many new to cycling, the fear of riding in traffic is a major disincentive. Any investment in new routes has to be balanced by major investment in improved perceived and actual safety at major road junctions. The typical bicycle journey will not be from one building on a high quality cycleway to another such building. Therefore, part of the time, the journeys will be undertaken on a roadway with other traffic.

To further promote the use of bicycles, and to ease congestion caused by cars, complete corridor schemes will also be proposed. These take an existing corridor where high levels of cycling can be expected but the levels are currently very low, and redesign the use of space to make cycling the easiest and fastest way to move along this corridor. These corridor schemes could also enable the higher public transport patronage as well as cycling rates.

Finally, where engineering solutions are not possible, safety can be improved by reducing the chance of a serious injury when a motorized vehicle crashes into a bicycle. The only way to ensure a high level of safety is to reduce the speed limits in these locations.

In the following sections, we outline a list of schemes which deal with:

- Corridor improvements – key strategic routes used within many cycle journeys
- Junction improvements – fixing hostile junctions that form key breaks in the network
- Residential speed reductions – making local streets easy to cycle in

5 Corridor Improvements

5.1 Cycle lane review

Many of the cycle lanes (i.e. on-road, painted white lines) in the city are unnecessarily narrow, with virtually none meeting the government recommended width of 2m, or even the government's 'minimum width' of 1.5m. Cycle lanes under this width provide little practical benefit to cyclists, and indeed can be actively harmful.

A programme is needed to review all cycle lanes, with a view to removing virtually all of those under the width or widening them to 2m (or, if not achievable, 1.5m, where this is shown to provide real benefits to cyclists). In many cases this is easily achievable as the remaining road width is sufficiently wide.

This programme should be achievable within a 3-year period at most. Changes should be simple and cheap to implement.

5.2 East Road

This corridor goes from Barton Road via The Fen Causeway, Lensfield Road, and Gonville Place to East Road. This is the southern bypass of the city centre.

There is massive scope for creating a proper cycle route that joins the outer end of Newmarket Road with the Newnham part of the city. What is needed is simply to join up the bits of cycleway found along this route, and improve those sections that already exist. This would improve an enormous number of cycle journeys and encourage shift from car to bike.

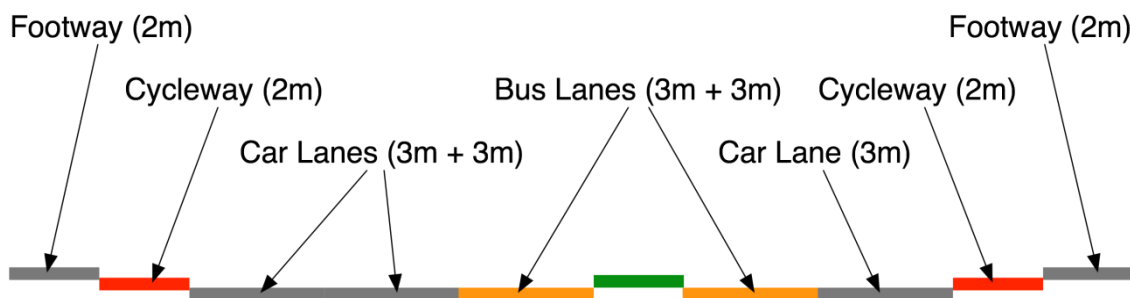
This road has already been identified as having two critical junctions that must be improved. The rest of the route also must be improved. A continuous cycleway should be provided, in the 'hybrid cycle lane' style which we have been promoting. A hybrid cycle lane is an on-road cycle lane of at least 2m width, but with an 'off-road feeling', implemented by making the cycleway on both sides of the road be slightly higher than the roadway and separated by a 3 inch kerb or a cobbled surface. This gives a clear indication that that space is allocated to bicycle traffic. Each cycleway along each side of the road should be an absolute minimum of two-meters wide along the complete length of this route.

Any car parking that is provided should be provided to the right of the cycleway with room for opening passenger doors. This further provides a buffer between fast moving car traffic and cyclists, increasing the perceived safety for cyclists and therefore increasing their modal share.

The hybrid cycle lane format avoids the typical problem experienced with pavement cycleways of loss of priority when crossing sideroads. Because the cycle lane is on-road, it acts as a standard lane passing the sideroad. This requirement for cars to give way to bicycle traffic on the cycleway at junctions, is achieved by maintaining the raised nature of the cycleway throughout the junctions; this would give the clearest indication to motor vehicle

drivers of the presence of the cycleway and the priority of cyclists. It would mean a cycleway worthy of the name: something that would encourage people to cycle, unlike pavement cycle lanes which tend to be disliked and which dilute the message of 'no cycling on pavements'.

From the Newmarket Road junction, past the Grafton Centre, East Road is currently up to six lanes wide. However, further down the road, the road is only two lanes wide. The road can therefore be changed to provide the following configuration:



This gives higher priority for buses, and places the buses in the middle of the road for their most common movements – turning right from East Road into Newmarket Road, and turning from East Road into the Grafton Centre bus station.

At some locations along East Road, the road is significantly narrower. At these locations, a footpath in each direction, a raised cycle lane in each direction, and a general traffic lane in each direction can be provided. In some locations, car parking at the edge of the roadway may need to be removed – however, this could still be provided within the car traffic lanes. This may restrict the flow of motor vehicles, and so should only be allowed outside of rush hours – for example in the evenings.

At the Mill Road junction, there is much road space allocated to traffic turning down Mill Road. Mill Road is a highly trafficked cycle route and also very narrow. It is proposed that this junction is tightened up so that left turning traffic from East Road to Mill Road is not just given a sweeping bypass lane with just a give way sign, but instead has to wait at the traffic lights. This would allow the cycle lane to be safely provided through this junction. Advanced green signals for cycles (where a cycles-only light changes before the main traffic light) would be advantageous for right-turning bicycles. Outside the swimming pool, there are typically three traffic lanes provided, and no space allocated for cycling. It is therefore proposed that the road space is reallocated to provide just two lanes for cars, and two raised cycle lanes for bicycles. Use of yellow boxes can be used to ease the turning movements required for accessing the car park.

Raised cycle lanes should also be provided through the Catholic Church junction. There is much car parking along this road, and this parking should be used to separate fast moving car traffic from the vulnerable cyclists. Turning movements from Lensfield Road into Tennis Court Road should not require additional road space to be provided. During rush hour, the traffic speeds along this road are so slow anyway that a yellow box would be sufficient.

5.3 Newmarket Road

This corridor goes from Maids' Causeway to Newmarket Road out to the Park and Ride site. It is much complained about by Councillors and the public as being poor in transport terms, partly due to a succession of retail developments that are perceived as badly planned. Certainly, the changes that have been made have been piecemeal and not considered in broader terms, leading to the many current problems for transport users of all types here.

Newmarket Road is a major street that connects the Airport area of Cambridge with the retail area and the City Centre. At the moment, the traffic movement along this street is highly problematic, with little provision for pedestrians or cyclists. For example, a pedestrian wishing to go from PC World to Comet has to walk 100 meters in the wrong direction, cross six signalized crossings and then walk 100 meters back, all because there is no provision for crossing the five lanes of high speed traffic. On a Saturday, when the traffic is moving along at a crawl, many people just walk directly across the road with children in tow.

A radical suggestion for this road is to move the bus lane to the centre line of the road space. Next to this bus lane on each side would be a general purpose car lane, then a raised cycle lane and a pedestrian footway raised still further.

Where bus stops need to be provided, large zebra crossings would be provided to allow pedestrians to safely cross the cycle and car lanes to waiting areas in the centre of the road. The zebra crossings would continue over the bus lanes, allowing pedestrians to cross the entire road safely.

Moving the bus lane to the centre of the road would also allow cars turning left into the various retail areas to perform this turning movement safely without risk of a car or taxi suddenly appearing in this lane.

By raising the cycle lane higher than the road, the implicit priority of bicycle traffic that is continuing straight on will be clearly shown to car drivers crossing the bicycle lane.

At each junction along the road, advanced green lights should be installed for bicycles, allowing them to make right turn movements safely. The timing of the traffic lights along this road should also be made such that during the morning rush, the green phase of traffic lights into Cambridge should be timed for a bicycle moving at 20 km/h. Similarly, the traffic lights out of Cambridge in the afternoon should be timed to provide a 'green wave'. Countdown timers for bicycles could be provided to allow cyclists to adjust their speed for maximum speed and minimum effort.

Newmarket Road would thus be changed to provide a single motor traffic lane in each direction. All the additional roadspace that is therefore made available can be allocated to a central bus lane, and raised pedestrian and cycle lanes. Given that this road is effectively a single traffic lane for most of its length already, this change would not reduce the traffic flow along the road, but would increase the number of people that walk, cycle or use the bus, increasing the total flow of people along this corridor.

5.4 Huntingdon Road

This corridor includes Magdalene Street, Castle Street and Huntingdon Road out to Girton College and the A14.

The roadscape can easily be reallocated along most of this corridor by removing central reservations and replacing them with zebra crossings. This would therefore allow a 2m wide raised cycleway along the complete length of this route. In locations where significant cycle turning movements are made, traffic signals should be used to stop the car traffic and allow cycles to turn safely across the road. These traffic signals could also be used by pedestrians by using Toucan signals.

At the moment, the speed limit of this road is 40mph with a lower limit of 30mph near the centre of town. The redesign of the road space to provide cycle lanes and the effective narrowing of the traffic lanes should be accompanied by a reduction in the speed limit along this road to 30mph from Girton College all the way into town.

5.5 Histon Road

This corridor goes from Castle Street along Histon Road out to the A14 junction.

The roadscape along Histon Road can be easily allocated along most of its length to provide a 2m wide raised cycleway, or 3m shared cycleway / footway in each direction.

At major junctions, for example the Gilbert Road / Warwick Road junction, the traffic lanes should not result in the absence of cycleways. For example, a single traffic lane could be provided at each location, and advanced green signals for bicycles provided to allow increased safety for bicycles.

At the southern end of Histon Road, the requirements for car parking may necessitate a different solution. This area may require reduced speed limits so that cycles can safely move along this section of road. Space for cyclists should still be provided, perhaps by moving the centre line of the road where cars are parked on one side of the road.

5.6 Riverside

This corridor goes from Ditton Meadows, through Stourbridge Common to Riverside and then through Midsummer Common to Lower Park Street.

The riverside paths are a major route for cyclists, and pedestrians, yet are currently very narrow. It will become necessary to widen these riparian paths slightly to accommodate ever-increasing levels of bicycle use within the city.

Some locations along the riverside path however provide additional difficulties. For example, the single lane cattle grids under the Elizabeth Way bridge cause significant congestion for cyclists and pedestrians. It is therefore suggested that these are upgraded to dual cattle grids (as used in other locations in the city), allowing unimpeded flow for ever-increasing cycle flows in both directions and pedestrians.

6 Junction Improvements

Junctions are the primary location where cyclists experience fear and uncertainty about how they can safely negotiate traffic. In the most extreme cases, no provision has been made for cyclists at all, and motorised vehicular traffic has complete priority.

Some junctions promote high speeds for traffic by assuming that bicycles will be safe moving around the outside of these roundabouts at 10mph while cars move around at 40mph. High differences in speed promote risky behaviour by both bicycle riders and car drivers.

6.1 Royal Cambridge Hotel Junction

The junction between The Fen Causeway / Trumpington Road / Lensfield Road is probably the worst junction in the city for cyclists, with a poor collision record. Something radical needs to be tried out at this junction to make it safe for cyclists. This junction has been slated for traffic lights before but concerns about reduced traffic flow have meant it has not been improved, even though modern traffic control technology would work much more effectively than the lights of former decades. In other locations similar changes to the road layout have been made, the congestion has not gone worse; instead traffic has often evaporated away as people adapt to changed circumstances.



The junction is currently a double roundabout with up to four lanes for cars, and no space allocated distinctly for cyclists or pedestrians. The dominant flow for cars is from the west to the east, and from the south to the west or east. There is very little flow north by cars at this junction as a result of the recent core stage four improvements.

It is therefore proposed that the left turning entrance roads to each arm of this junction be changed from two car lanes to just one car lane and one bicycle lane, that the roundabouts are removed, and smart traffic lights are installed that ease the flow of all traffic. Left turning cycle traffic should never need to be stopped by a traffic light, perhaps through use of a filter. This would mean that only straight on and right turning bicycles would have possible conflicts with cars. To help resolve these conflicts, bicycles should be given an advance green of 5 seconds, so that they can clear the junction before cars start moving. The cycle lanes should also be continuous through the junction, so left turning cars coming from the south have to give way to cyclists going north. It is more important to give bicycles plenty of space than create two traffic lanes. The raising of the cycleway up a couple of inches, requiring the cars to go over the cycle lanes would further emphasise that cars should give way to bicycles at this difficult location.

6.2 Newmarket Road / Elizabeth Way Bridge Roundabout

This is arguably the second-worst junction in the city for cyclists. It treats walkers and cyclists as second class citizens, expecting them to use an underground labyrinth. The current monstrosity would never be considered if this area were being designed today.

Instead, an at-grade junction must be built that provides an excellent pedestrian, cycling and public transport junction that also caters for motorized vehicles.

It is proposed that left turning bicycles, for example from Newmarket Road to East Road, would not need to stop at any traffic lights. It is also proposed that a separate phase in the traffic lights be provided for cyclists and pedestrians to make any other movements safely, without the risk of motorized vehicles hitting them; and that this all green for pedestrian and cyclists be placed between the normal vehicle traffic lights. This would mean that the sequence would be: peds/cycles, Newmarket Rd (W), peds/cycles, East Rd, peds/cycles, Newmarket Rd (E), peds/cycles, Elizabeth Way, and continue.

If this junction was converted to a 4-way traffic light control, the space that is currently being used to accommodate the large roundabout could be re-used to provide additional bicycle parking, or development opportunities (such as space for more houses) to fund the changes.

6.3 Catholic Church Junction

The Regent Street / Hills Road / Gonville Place / Lensfield Road junction is a hostile environment for all users of this junction. Pedestrians in particular are treated poorly and the whole junction is a poor gateway into the city.

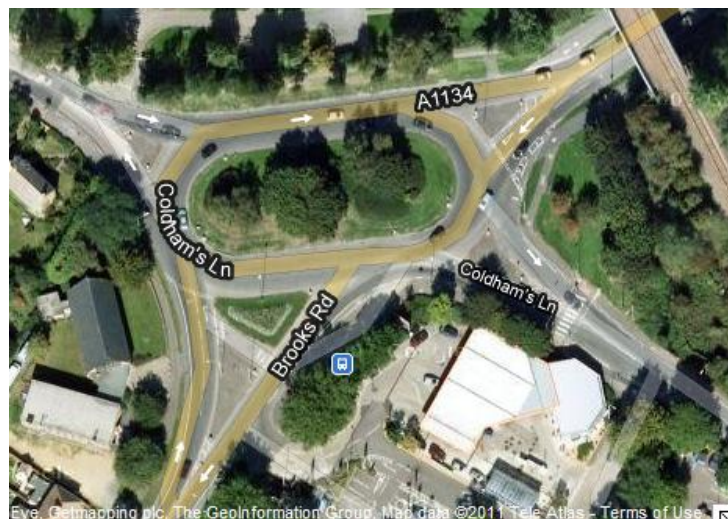
This junction must be improved for the benefit of all users of this area.



Pedestrian traffic from the railway station into the city centre is high, yet it is currently forced to negotiate uncontrolled crossings and narrow holding pens. Changing lane widths here on the Hills Road side would be a sensible start, and reductions of lanes need to be considered for the other approaches. In short, reallocation of roadscape.

6.4 Sainsbury's Roundabout

The Coldham's Lane roundabout with Brooks Road and Barnwell Road is a major barrier to increased levels of cycling through this part of the city. The roundabout has a 40mph speed limit with a very wide roadway.



The obvious solution at this location is to create two roundabouts, one inside the other. The inside roundabout would be for motorized vehicles. The outside roundabout would be for cyclists (and include paths usable by pedestrians). This type of roundabout is very popular in countries with high cycling modal shares like Holland and Denmark. The points where the

cyclists and motorized vehicles meet would either need to be signaled, or provide priority to the bicycles.



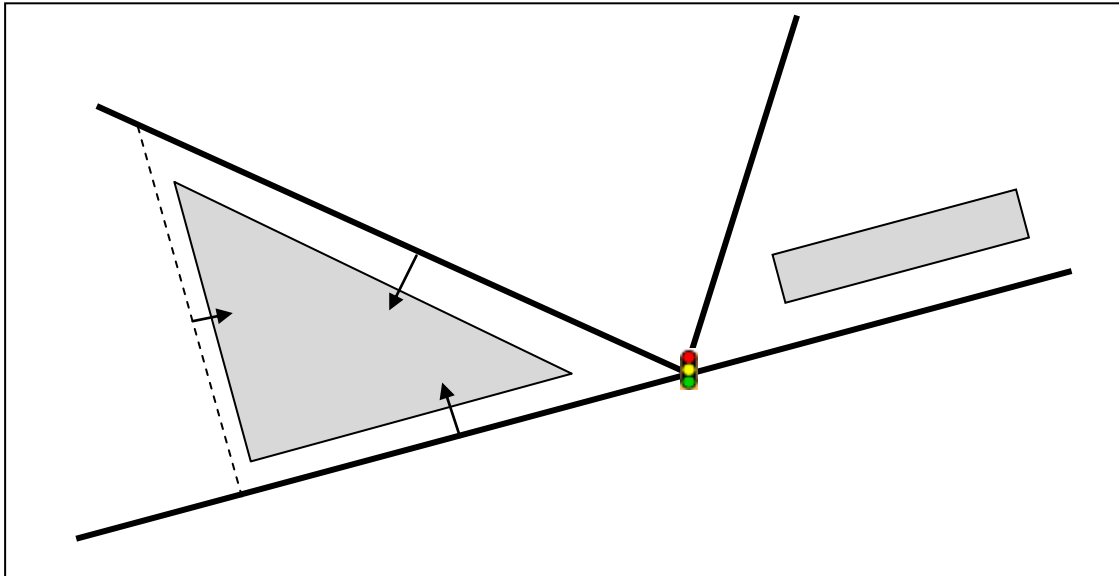
6.5 Mitcham's Corner

Despite improvements in 2003/4 to mitigate problems experienced by cyclists here, the area remains a hostile late-1960s racetrack with a poor public realm.



Map: OpenStreetMap, Licence CC-BY-SA

Only removal of the gyratory and reversion to a signalised junction would really address the problems here.



Replacement of Croft Holme Lane with a pedestrian/cycle path could enable some land to be reclaimed to the west of the current Staples site. It would also make the current retail site more easily accessible.

We think the authorities need to consider the possibility of a S.106 agreement to fund rearrangement of the surrounding highways in exchange for a land swap which would enable a developer to reclaim the land to the west.

6.6 Arbury Road to Orchard Park Junction

There is no pedestrian access from Arbury Road, and a number of shops and community facilities on the west side of Arbury Road, to Chariot Way in Orchard Park. There is a double signalized pedestrian crossing on the east side of this junction, but there are no signalized crossings of Arbury Road to the community facilities.

6.7 Newmarket Road / Ditton Lane Junction

There is a cycleway along the north of Newmarket Road that crosses Ditton Lane without any provision for cyclists using this junction. A safe crossing for cyclists, and pedestrians, at this junction needs to be provided.

6.8 Pembroke Street / Trumpington Street Junction

The primary flow through this junction for cyclists is from Mill Lane through Pembroke Street to Downing Street. The recent core stage four changes have significantly reduced the volume of private motor vehicle use in the area, the priority should be given to bicycle movements in the area as this is now the dominant vehicle flow. Therefore, the junction

should be changed to make the main road continue from Pembroke Street to Mill Lane, linking the cycleway from Newnham and the West Cambridge area to the City Centre area.

6.9 Case study: Horningsea A14 Slip Roads

The Horningsea Road / A14 junction has a wide cycleway on the west side of the road but no priority over car traffic travelling at up to 60mph that is turning onto the A14. A toucan crossing should be installed at this location, with bicycle detectors to allow the lights to turn to green for the bicycle before they arrive at the lights.



This safety improvement would link the villages of Horningsea and Waterbeach with the airport area of Cambridge, and to the hospital area once other safety improvements are made.

6.10 Histon A14 Slip Roads

The entrance ramps onto the A14 from the B1049 (Cambridge to Histon) have no priority for cycles crossing in front of motorised vehicles. A toucan crossing at this location would immediately solve the safety problems without causing tailbacks on to the A14 (the excuse often used for not doing this). In addition, pedestrian and cycle facing lights should be added to the lights at the top of the exit ramps, so that users of the cycleway can tell when it is safe to cross, especially when travelling against the traffic flow. Additional engineering could be done later to completely separate the cycling traffic from the high-speed

motorized vehicle traffic. This additional engineering could take the form of a cycling tunnel under the A14 along the line of the old Cambridge to Histon road.



This improvement would link two of the largest villages, Histon and Impington, with the new developments on the northern edge of Cambridge and with the City centre.

7 Residential Speed Reduction

“Twenty’s plenty for us.”

When a car hits a bicycle, regardless of fault, the bicycle and its rider will come off worse. Cars have been made progressively safer over the years with seat belts, air bags and anti-lock braking, yet at the same time their weight has increased. It is the weight and speed difference that causes the injury to cyclists rather than car drivers.

Given that the kinetic energy in a car is transferred to a bicycle when they collide, reducing the kinetic energy of that car before it hits the bicycle is key to reducing the severity of car and bicycle crashes. The kinetic energy of a car is proportional to the square of its speed. For example, a car travelling at 40mph has four times as much kinetic energy as a car travelling at 20mph, even though it is travelling only twice as fast.

A simple way to reduce the severity of collisions between cars and bicycles is therefore to reduce the speed of cars. To do this, blanket 20mph speed limits should be introduced in areas where there is insufficient space to provide a high quality cycle lane. These speed limits are most appropriate in residential areas, where children may also be playing in the street.

Within Cambridge, the residential areas of Coleridge and Newnham would be excellent examples of where these safety measures can be introduced.

With any reduction in speed limits, the ability for a car driver to recognise that a given location has a 20mph limit is important. It is therefore proposed that at any junction between a 20mph and a 30mph road the pedestrian footway and any cycleway should be continuous across the junction. This would mean that the car leaving the 30mph limit would have to travel over the pedestrian footpath giving an unambiguous indication of a change in priority.

This would also mean that pedestrians would have *explicit* priority over cars turning into the side streets, increase the safety for pedestrians, and making walking a viable alternative for many people.

Implementing 20mph zones in residential areas throughout the city will make little difference to a driver’s overall journey. This is because only the edges of the journey would be affected – the rest of it would remain as 30mph sections. Yet, walking and cycling would become hugely more attractive.

8 Necklace Village Links

8.1 Denny End to Waterbeach

Denny Abbey is a tourist attraction that is unlinked from the cycle network. Additionally, the IQ Cambridge business park is currently only accessible by car, and so has had difficulty attracting tenants. It is therefore important that a high quality segregated cycle route is provided that links Denny End, via the IQ Cambridge business park to Waterbeach, and then on to Milton. This would provide an alternative to the private motor car for people wishing to visit local leisure facilities, and employment sites.

8.2 Hauxton to Shelford

Shelford has a train station that provides access into London Liverpool Street station. Hauxton is the location of a new housing development that would benefit from having a safe cycleway to this train station.

By linking this new development to the train station, the option of cycling to the station would be available for everyone in this development.

8.3 Haslingfield to Granchester

Haslingfield is partially linked to Granchester via Cantelupe Road and a farm access crossing of the M11. By upgrading this link to be a high quality cycle route, Haslingfield would be connected to Cambridge. This would enable people in Haslingfield the option to cycle into Cambridge along a safe and traffic free route.

8.4 Coton to Comberton

Coton has a link to a Cambridge via a bridge over the M11. Extending this link to Comberton would link this village with the west Cambridge area. This would provide an excellent alternative for children wishing to cycle to school.

8.5 Histon to Cottenham

Cottenham is the third largest village in Cambridgeshire yet has no purpose built cycle infrastructure linking it to Cambridge, even though it is only 5 km away. A segregated cycleway should be built along the side of the B1049 from the centre of the village to Histon where an existing cycleway exists.

8.6 Wandlebury to Granta Park

Wandlebury is now connected to Cambridge via the Park and Ride site. However, a large business park next to the A11, called Granta Park is not connected. A segregated cycleway

should be built from Wandlebury Country Park to Granta Park, with a new bridge over the A11 for cyclists to be able to cross this major obstacle in safety.

8.7 Coton to Hardwick / Highfields / Cambourne

As the A428 becomes filled with traffic, a result of a car dependent development at Cambourne, there will increasingly be a need to build a continuous cycleway from Cambourne to Coton, and then on to the western University area and the city centre.

8.8 Newmarket Road to Burwell

There is no high quality cycleway from Burwell towards the Airport area and the Eastern Retail area. The old dismantled railway line would provide an excellent link from Burwell through Swaffham Prior, Lode, Anglesey Abbey, through to Fen Ditton and Cambridge. This would require a new cycle bridge to be built over the A14. This bridge would also need to be able to accommodate pedestrians who would be able to walk easily from the eastern areas of Cambridge to Anglesey Abbey and the excellent countryside in this area.

8.9 Melbourn to Cambridge

The A10 is a very busy road with space available to provide a high quality segregated cycleway all the way from the high technology business parks in Melbourn to Cambridge. A new cycleway bridge over the railway line at Foxton would be needed, and would be significantly less expensive than an equivalent road bridge. This may also require additional cycle parking spaces to be provided at Foxton station, as the catchment area for this station would be significantly increased after the cycleways are built.

9 Cycle Parking

Providing higher quality cycle routes for people to use is just part of the vision. When people arrive at their destination they need to be able to secure their bicycle. There are three areas within the city where bicycle parking is currently highly limited: at the railway station, in the city centre and in the retail area along Newmarket Road.

9.1 Railway Station Cycle Parking

There is a very severe shortage of cycle parking at the train station. The use of a bicycle to access the train station should be encouraged, along with walking and public transport, as it is the most sustainable method to travel to or from the station, an area that currently can be highly congested.

It is proposed that a phased plan to provide cycle parking for 40% of the people who arrive at the station every day. This would require a minimum of approximately 4,150 cycle parking spaces. The number of people using Cambridge station is increasing, and therefore this number will increase over time. For example, in 2007/08 there were 6.5m entries and exits from the station. In 2009/10 there were 7.6m entries and exits.

If this trend continues, passenger numbers in 2014 upwards could exceed 10m people, requiring 5,500 cycle parking spaces. If these spaces are not built, then Cambridge railway station would be progressively more unsustainable and unusable over time.

9.2 City Centre Cycle Parking

Cycle parking in the city centre is vital to the economic success of the business and retail economies. At the moment, cycle parking is in very short supply as evidenced by bicycles parked all over the streets. It is therefore essential, for the continued economic strength of Cambridge, that an additional large cycle parking structure is provided in the city centre. A cycle parking structure that can accommodate 1000 bicycles securely should be the minimum requirement.

There is concern about the possible loss of the Park Street cycle parking facility, as the car park building which houses it is reaching the end of its design life. It is proposed that if this were to be removed, then whatever replaces it must provide at least the cycle parking that is currently provided at this location.

The Grand Arcade cycle park is very successful. So much so that on a typical working day, or shopping day, the cycle park is over full. It is proposed that this facility needs to be extended, perhaps by reallocating some space away from the cycle shop back to the public cycle parking which was originally intended for the space. It is also proposed that additional cycle parking be found around the same location.

9.3 Cycle parking around the City

The Cycling Sorted website, set up as a partnership between Cambridgeshire County Council, the Campaign, and CycleStreets, has led to hundreds of locations being identified where cycle parking is non-existent or where it needs to be upgraded.

A major programme to implement as many of these locations as possible needs to be undertaken. Only with this do we have any chance to deal with the massive level of cycle theft (currently over 10% of reported crime).

A target of 250 spaces per year should be the minimum. Even this will leave substantial shortages compared to the amount of car parking provision in the city.

The areas of terraced housing such as Romsey and Petersfield are in particularly desperate need of cycle parking. A single car parking space on each street should be removed, for each of the next five years, with the space being given over to secure, on-street cycle parking. This would redress the massive inequity issue, unblock pavements, reduce cycle theft, and would not cause too many car parking problems because of the high rate of resident turnover in the area.

9.4 Newmarket Road retail area

This is a case study of how cycle parking in a development has been poorly located. Where stores provide cycle parking near their entrance, for example B&Q, this cycle parking is well used. Where cycle parking is remotely provided, most bicycles are fly parked near the entrance to the stores. Therefore, a rolling programme of moving the cycle parking to immediately adjacent to the entrances of stores is needed.

The same issues can be seen in some other developments around the city

10 Conclusions

By investing relatively small amounts of money in high quality cycling infrastructure, it is possible radically to improve the number of people cycling. This has a range of benefits including healthier employees, fitter children, reduced motor traffic congestion, reduced pollution within and around the city, and the ability to build Cambridge's reputation as the bicycle capital of the UK. This enhances the vision of Cambridge as the innovative centre of the UK and Europe. It increases the value of Cambridge as a tourism destination, not just for a day trip, but for a week long cycling bonanza.

It is the quality of the infrastructure that counts. Cambridgeshire needs to invest in world class infrastructure to remain the economic heart of the eastern counties. Cycleways that link the main employment centres, the main retail centres, and the new housing developments are essential to avoid the traffic gridlock that would be inevitable without such investment. By enabling people to choose cycling over driving, the cycleways free up road space for people who have chosen to drive. This is only possible if the infrastructure is of the highest possible standard, to make people feel safe. Only when people feel safe cycling will they adopt cycling in the levels required to achieve the 40% goal.

People love Cambridgeshire because of what it represents: its open space, its shopping, the employment and educational opportunities. In essence, it is the environment that matters. Cycling is the only transport option that can enhance the environment of Cambridge and the surrounding area.