

Poster Presentation: Modern Urban and Regional Development

32a: Expanding Cycle Networks to accommodate major Growth - Cambridge City, England

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The Cambridge region has one of the fastest growing economies and populations in Britain. In the past a tightly drawn 'Green Belt' protected the countryside surrounding the city and so growth was limited. Most of the population increase was directed to the villages beyond the Green Belt leading to an increase in commuters travelling by car into Cambridge City.

Recent strategic planning decisions have released parts of the greenbelt to allow the building of around 12,500 new houses around the edges of the city over the next 10 years. This is likely to lead to a 40% increase in population in the Cambridge area by 2021, all of whom (with sufficient encouragement) are potential cyclists.

Cambridge already has a very strong culture of cycling with 26% of residents cycling to work in the city compared to the national average of 3%. It is vital that this cycling culture expands into the new urban extensions with the provision of high quality, safe and convenient cycle routes linking the developments with the city network and surrounding villages. These large new developments present a unique opportunity to prioritise cycling as a mode of transport and plan a wider city cycle network for the future. The Cambridge Local Plan adopted in 2006 sets out the City Council policy regarding cycling and walking provision for new developments:

New developments will safeguard land along identified routes for the expansion of the walking and cycling network. In addition funding for high quality physical provision of these routes will be required, both within and adjacent to the proposed development site. Any existing routes should be retained and improved wherever possible.'

A planning guidance document 'Protection and Funding of Routes for the Future Expansion of the City Cycle Network' supports this policy, mapping out the proposed expanded network with notes detailing each link.

This paper outlines the objectives and methodology of the planning guidance document and its use by transport consultants STEER DAVIES GLEAVE who are working on transport studies for new developments in Cambridge East and the City of Cambridge as a whole.

These transport studies are being developed to deal with the projected housing growth and are based on maximising the role of sustainable modes, including cycling. To achieve the objectives of the studies, a doubling of current cycling numbers is required over the next ten to fifteen years.

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1. Protection and Funding of Routes for the Future Expansion of the City Cycle Network.

The objectives of the guidelines are to expand and enhance the current city cycle network by:

- Identifying and safeguarding strategic cycle routes through the city's urban expansions as defined in the Local Plan and ensuring their delivery by developers.
- Identifying potential new cycle links and improvements to existing links to and from these areas of urban expansion to be funded through planning obligations.

Methodology

The city has been divided into four main areas of urban expansion – northern, southern, eastern and western – with the addition of a fifth area of regeneration which runs along the north-south railway corridor.

All routes described in the document are strategic in nature corresponding to strong desire lines, linking transport generators such as residential areas, colleges and large employers with the current network. Although the document only details routes within the city boundary they link to cross boundary routes both through the urban expansions that continue into South Cambridgeshire and connecting with the surrounding villages.

There are three different types of new routes, which are detailed in the tables and maps within the document. The first two relate to identified and indicative routes within the urban expansions whilst the third relates to routes which connect the urban expansions to the city cycle network but are outside the urban expansions themselves.

Identified cycle routes within the urban expansions

Generally these routes use existing infrastructure such as rights of way, permissive cycle paths, disused railway lines, and existing or proposed bridges.

Indicative cycle routes within the urban expansions

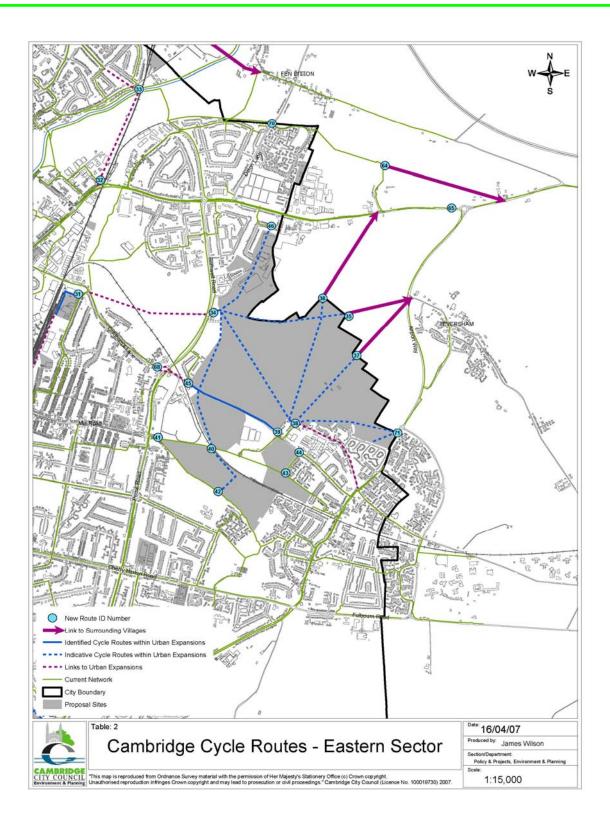
These routes within the urban expansions are mapped as direct lines linking transport generators and/or current cycle network routes. The alignment of these routes will not be agreed until there is more information about the layout of the site itself as the dispersal of residential blocks, community facilities etc. may effect the lines of desire.

Links to the urban expansions

These links would provide convenient and direct routes where none or poor quality options currently exist. Most of these links have already been identified as gaps in the current network, some use existing infrastructure and many of them are currently used on an informal basis. They are outside the urban expansions and therefore subject to negotiation with landowners, consideration of issues such as environmental sensitivities, maintenance and cost, and local consultation.

The following excerpts taken from the document show a diagrammatic map of the east of Cambridge with accompanying text that illustrates the above principles.





Eastern Sector (Table Excerpt)

The eastern urban expansion is within the former greenbelt on what is currently Marshall's airport. The development site as a whole will be divided between the City and South Cambridgeshire and should ensure good links to Teversham, and through the South Cambridgshire part of the site, to the National Cycle Network route 51 out to Stow Cum Quy and Bottisham.



Link	Description	Comments
Teversham to Abbey Pool/Newmarket Rd/City Centre via Coldham's Common		
34-35	Link from Barnwell Rd across Marshall's Airport and through to Teversham.	
34-31	Link across Coldhams Common	A toucan crossing may be needed across Barnwell Rd to the existing entrance into Coldham's Common. This is a definitive footpath, which would need negotiation to make a permissive cycle path. The existing bridge has steep steps so either a ramp for cycle wheels or new bridge would be necessary with permission from Network Rail.
Teversham/Cherry Hinton to City Centre via S.E. Cycle Route.		
38-37	Link from Rosemary Lane across Marshall's Airport and onto Teversham.	This roughly follows the line of a definitive footpath although the footpath ends at March Lane.
38-39	Link along Rosemary Lane to Coldham's Lane and new leisure site.	Traffic calming measures may be necessary here and down to Cherry Hinton High Street as there is evidence of rat-running. Work may be needed on the junction to improve it for cyclists heading for the Tins path.
39-40-41	Link along new road to the Tins path.	Need for new, wider bridge over the railway (40), and to negotiate some land to improve access ramps up to the bridge. The western side of the path needs to be widened (40-41) with a new bridge at Burnside (41).
38-71	Direct link from Cherry Hinton to the city centre route via the Tins path.	
Barnwell Rd to Cherry Hinton.		
45	Existing link through Uphall Rd.	
39-45	Link along Coldham's Lane Coldham's Lane.	Coldham's Lane is a fast, busy road and the development will provide an opportunity to build an off-road route.
45-68	Link along Coldham's Lane.	There is a pinch point under the railway bridge. The cost of widening the bridge or constructing an underpass through the embankment would be likely to cost at least £1m. The roundabout is a hot spot for accidents involving cyclists so improvements such as signalisation should be considered.

2. Cambridge East

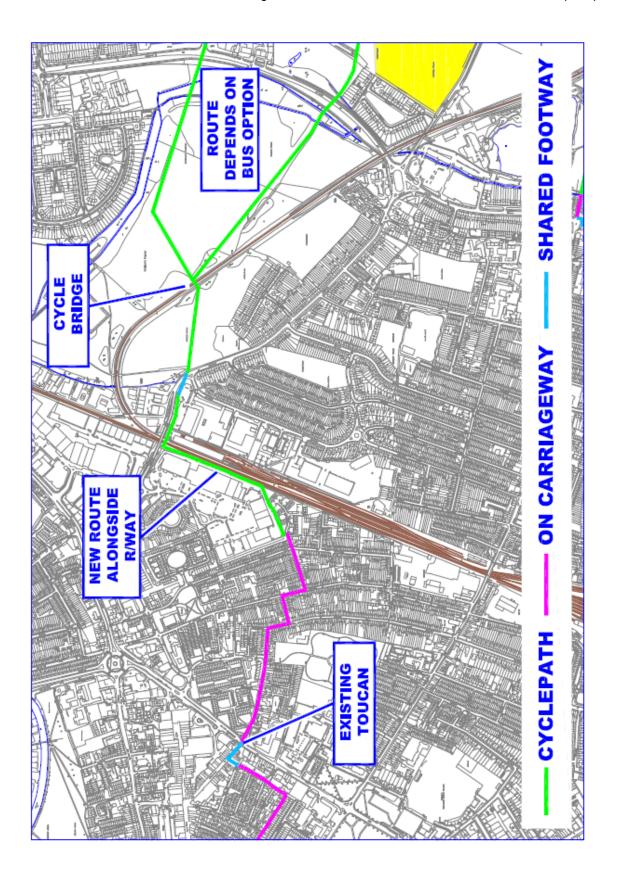
The 'Cambridge East Sustainable Transport Study' (Nov 2006, STEER DAVIES GLEAVE) identifies sustainable transport options to serve the planned development to the east of the city. Its aims are to maximise the potential for sustainable transport use and uptake through the development of appropriate public transport services and walking and cycling infrastructure, with a specific target of achieving a 60% non-car use.

The study, which has used the planning guidance document as its basis, proposes to provide state of the art cycling links, which are capable of accommodating the volume of cycling trips required to ensure that a majority of trips are made by sustainable modes. The three destinations of the City Centre, Northern Fringe and Southern Fringe are those that have been primarily addressed. In creating high quality, predominantly



segregated routes to these destinations, Cambridge East will effectively be plugged into the rest of the Cambridge network as well as national routes.

The following diagrammatic map, taken from the study, shows preferred cycling links to the City centre via Coldham's Common from East Cambridge and illustrates the studies connection with Local plan policies.





3. Cambridge Area Transport Study (CATS)

The Cats study, an ongoing study which is yet to be published or adopted, will look at the specific measures needed to address congestion in Cambridge and to ensure that high quality transport is available for those needing to access the city. There are three strands to this work:

- Measures to provide high quality alternatives to the private car. These will include public transport links, segregated where necessary, improved walking and cycling provision and 'soft' measures to promote alternatives. Crucial to this work is an examination as to how those living outside of Cambridge can most conveniently access the city.
- Measures looking at improvements to the road network around Cambridge.
- Demand management measures necessary to support the other measures, including in particular the consideration of road pricing in Cambridge itself.

CATS is seeking to double cycling levels to help accommodate the major growth planned for Cambridge whilst keeping traffic volumes at today's levels. It is thus considering infrastructure proposals including:

- Completing a network of off-road and quiet road cycle routes around Cambridge that will provide an appropriate facility for less confident and new cyclists;
- Providing enhanced on-road facilities on the main radial and orbital links.
- Providing enhanced on or off road facilities at specific conflict points on the network, such as major junctions or river crossings.

The study begins by mapping the existing off-road/quiet road network together with new route proposals contained in the planning guidance document. This network is then being audited and gaps in the network examined to assess how the complete Cambridge-wide network can be accomplished.

4. Conclusion

The work undertaken to map out potential new cycle routes connecting to and through the large proposed developments around Cambridge has proved to be a useful starting point for developers, consultants and planners when considering the immediate and long term needs of new and existing cyclists. The document is not meant to be the final word on what the provision for cyclists should be - some of the routes will be left out and others proposed instead - but the document has been an important part of the process of ensuring that cyclists needs are high on the agenda and that the opportunity that the new areas of urban expansion provide to expand and enhance the network is not missed.